LAND USE APPLICATION

VILLAGE OF LIBERTYVILLE
COMMUNITY DEVELOPMENT DEPARTMENT
200 EAST COOK AVENUE
LIBERTYVILLE, IL 60048
(847) 918-2028
(847) 367-5148 (Fax)

DATE: 1/7/2024

REQUESTED ACTION(S) (check all that apply)

____	Comp. Plan	X	Preliminary/Final Plat
X	Comp. Plan Amendment	____	Plat of Consolidation
X	Map Amendment	____	Site Plan Permit
X	Planned Dev. (Concept/Final)	X	Special Use Permit
____	Planned Dev. (Final Amendment)	____	Text Amendment
____	Planned Dev. (Adjustment)	X	Variation
____	Planned Dev. (Master Plan)	____	Zoning Appeal
____	Planned Dev. (Master Plan Amendment)		

TO THE VILLAGE PRESIDENT, VILLAGE BOARD OF TRUSTEES AND THE ZONING BOARD OF APPEALS OF THE VILLAGE OF LIBERTYVILLE, LAKE COUNTY, ILLINOIS 60048.

The applicant(s) Pulte Home Company, LLC represents that they are the OWNER ____, CONTRACT PURCHASER X, LESSEE ____, AUTHORIZED AGENT ____ (please check correct term) of the following described real estate: (Insert or attach legal description of the real estate)

PROPERTY TAX IDENTIFICATION NUMBER (P.I.N. #): 11-08-100-014; 11-08-100-012; 11-08-100-036 11-08-100-035; 11-08-200-001

The property is also known as: (street address) 610 Peterson Rd, Libertyville, IL 60048 .

If someone other than the applicant(s) has the title to the property, include the name, address, trust number with beneficiaries (if applicable), and phone number of such owner(s). **A written, notarized statement from the owner(s) which acknowledges and consents to this request must be provided.**

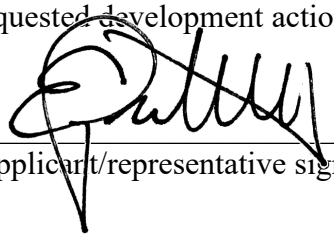
LAND USE APPLICATION
PAGE 2

The property is now classified under the Libertyville Zoning Code and is located in the IB Institutional Buildings District.

FOR VARIATION ONLY: Please check the type of variation(s) requested:

x	Front Yard Setback		Sign
x	Corner Side Yard Setback		Fence
x	Side Yard Setback	x	Lot Coverage
x	Rear Yard Setback	x	Building Coverage
	Perimeter Landscaped Open Space		Building Height
	Other (specify) Lot Area, Lot Width		

Please attach a detailed narrative description of the requested development action(s).



applicant/representative signature

Eric Prechtel, attorney for Applicant
please print full name

445 Jackson Avenue, Naperville, IL 60540
address of applicant/representative

630-355-4600
phone number

eric@rw-attorneys.com
e-mail

NOTE! If several parties are involved with the project (i.e., architect, engineer, consultant, etc.), please attach a list including the names, addresses and phone numbers of such parties. This application must be complete before it will be accepted by the Village.

Rev. 11.2023

PARCEL 1:

THAT PART OF THE NORTHEAST QUARTER OF SECTION 8, TOWNSHIP 44 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: BEGINNING AT A POINT ON THE SOUTH LINE OF AND6.82 CHAINS WEST FROM THE SOUTHEAST CORNER OF SAID NORTHEAST QUARTER; THENCE WEST ALONGSAID SOUTH LINE, 2229.68 FEET TO THE SOUTHWEST CORNER OF SAID NORTHEAST QUARTER; THENCE NORTH ALONG THE WEST LINE OF SAID NORTHEAST QUARTER, 1410.30 FEET; THENCE EAST 2230.38 FEET TO A POINT WHICH IS 6.82 CHAINS WEST FROM THE EAST LINE OF SAID NORTHEAST QUARTER AND 1405.2 FEET NORTH FROM THE SOUTH LINE OF SAID NORTHEAST QUARTER; THENCE SOUTH TO THE PLACE OF BEGINNING (EXCEPTING THEREFROM THE FOLLOWING: (A) THE EAST 1920.68 FEET THEREOF; (B) THAT PARTTHEREOF, IF ANY, FALLING IN BROOKHILL PARK, A SUBDIVISION OF PARTS OF SECTIONS 8 AND 9, TOWNSHIPAND RANGE AFORESAID, RECORDED APRIL 24, 1925, AS DOCUMENT 256105, IN BOOK "M" OF PLATS, PAGE 100; AND ALSO (C) EXCEPTING THEREFROM THAT PART CONVEYED BY WARRANTY DEED DATED SEPTEMBER25,1967, TO THE STATE OF ILLINOIS FOR THE USE OF DEPARTMENT OF PUBLIC WORKS AND BUILDINGS DESCRIBED AS FOLLOWS: PART OF THE NORTHEAST QUARTER OF SECTION 8, TOWNSHIP 44 NORTH, RANGE11 EAST OF THE THIRD PRINCIPAL MERIDIAN, BOUNDED AND FULLY DESCRIBED AS FOLLOWS: BEGINNING ATTHE SOUTHWEST CORNER OF SAID NORTHEAST QUARTER; THENCE EASTERLY ALONG THE SOUTH LINE OFSAID NORTHEAST QUARTER, 309.00 FEET; THENCE NORTHERLY PARALLEL TO THE EAST LINE OF SAID NORTHEAST QUARTER, 74.81 FEET; THENCE WESTERLY TOWARD A POINT ON THE WEST LINE OF SAID NORTHEAST QUARTER, SAID POINT BEING 75.00 FEET NORTHERLY FROM THE SOUTHWEST CORNER OF SAIDNORTHEAST QUARTER, 217.17 FEET TO A POINT OF CURVE TOWARD THE SOUTH; THENCE ON SAID CURVETO THE SOUTH, THE RADIUS OF WHICH IS 17,263.74 FEET, 91.83 FEET TO A POINT ON THE WEST LINE OF SAIDNORTHEAST QUARTER, THIS POINT BEING 74.76 FEET NORTHERLY FROM THE SOUTHWEST CORNER OF SAIDNORTHEAST QUARTER; THENCE SOUTHERLY ON THE WEST LINE OF SAID NORTHEAST QUARTER, 74.76 FEETTO SAID POINT OF BEGINNING), IN LAKE COUNTY, ILLINOIS,

PARCEL 2:

THE EAST 462.0 FEET OF THE SOUTH 1410.30 FEET (AS MEASURED ALONG THE EAST AND SOUTH LINES, RESPECTIVELY) OF THE NORTH WEST 1/4 OF SECTION 8, TOWNSHIP 44 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, (EXCEPT THE SOUTH 1079.60 FEET THEREOF), ALL IN LAKE COUNTY, ILLINOIS.

AND

THE WEST 420.5 FEET OF THE EAST 882.50 FEET OF THE SOUTH 1410.30 FEET (AS MEASURED ALONG THE EAST AND SOUTH LINES, RESPECTIVELY) OF THE NORTH WEST 1/4 OF SECTION 8, TOWNSHIP 44 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN (EXCEPT THAT PART DESCRIBED AS FOLLOWS, TO-WIT:BEGINNING AT THE SOUTH EAST CORNER OF THE SAID WEST 420.5 FEET OF THE EAST 882.50 FEET OF THESOUTH 1410.30 FEET OF THE NORTH WEST 1/4 OF SECTION 8; THENCE NORTHERLY ALONG THE EAST LINE OF THE SAID WEST 420:5 FEET OF THE EAST 882.50 FEET OF THE SOUTH 1410.30 FEET OF THE NORTH WEST1/4 OF SECTION 8 FOR A DISTANCE OF 898.19 FEET; THENCE WESTERLY ALONG A LINE TO THE WEST LINE OF THE SAID EAST 882.50 FEET OF THE NORTH WEST 1/4 OF SECTION 8 TO A POINT WHICH IS 896.80 FEET NORTHERLY OF THE SOUTH LINE OF THE SAID NORTH WEST 1/4 OF SECTION 8 (AS MEASURED ALONG THESAID WEST LINE OF THE EAST 882.50 FEET); THENCE SOUTHERLY ALONG THE SAID WEST LINE OF THE EAST882.50 FEET OF THE SOUTH 1410.30 FEET OF THE NORTH WEST 1/4 OF SECTION 8 FOR A DISTANCE OF 896.80FEET TO THE SAID SOUTH LINE OF THE NORTH WEST 1/4 OF SECTION 8; THENCE EASTERLY ALONG THE SAIDSOUTH LINE OF THE NORTH WEST 1/4 OF SECTION 8 FOR A DISTANCE OF 420.5 FEET TO THE POINT OF BEGINNING OF THIS EXCEPTION), IN LAKE COUNTY, ILLINOIS.

PARCEL 3:

THAT PART OF THE EAST 1/2 OF THE NORTH WEST 1/4 OF SECTION 8, TOWNSHIP 44 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS BEGINNING AT A POINT ON THE WEST LINE OF THE EAST1/2 OF SAID NORTH WEST 1/4 WHICH IS 1755 FEET SOUTH OF THE NORTH WEST CORNER THEREOF; THENCEEAST ALONG THE SOUTH LINE OF THE NORTH 1755 FEET OF SAID EAST 1/2 OF THE NORTH WEST 1/4, A DISTANCE OF 453.98 FEET TO THE WEST LINE OF THE EAST 882.50 FEET OF THE NORTH WEST 1/4 OF SAID SECTION 8; THENCE NORTH ALONG SAID WEST LINE OF THE EAST 882.50 FEET, A DISTANCE OF 512.66 FEETTO THE NORTH LINE OF THE SOUTH 1410.30 FEET OF THE NORTH WEST 1/4 OF SAID SECTION 8; THENCE WEST ALONG SAID NORTH LINE OF THE SOUTH 1410.30 FEET OF THE NORTH WEST 1/4, 454.51 FEET TO THEWEST LINE OF THE EAST 1/2 OF THE NORTH WEST 1/4 OF SAID SECTION 8; THENCE SOUTH ALONG SAID WEST LINE OF THE EAST 1/2 OF SAID NORTH WEST 1/4, A DISTANCE OF 513.26 FEET TO THE POINT OF BEGINNING, IN LAKE COUNTY, ILLINOIS.

PARCEL 4:

THE WEST 432 FEET OF THE EAST 462 FEET OF THE SOUTH 701 FEET OF THE NORTHWEST 1/4 OF SECTION 8,TOWNSHIP 44 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, EXCEPT THEREFROM THAT PART OF THE

NORTHWEST 1/4 OF SECTION 8, TOWNSHIP 44 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, BOUNDED AND FULLY DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE EAST LINE OF SAID NORTHWEST 1/4 SAID POINT BEING 74.76 FEET NORTH OF THE SOUTHEAST CORNER THEREOF; THENCE SOUTH ON THE EAST LINE OF SAID NORTHWEST 1/4, 74.76 FEET TO THE SOUTHEAST CORNER THEREOF; THENCE WESTERLY ON THE SOUTH LINE OF SAID NORTHWEST 1/4, 462.00 FEET; THENCE NORTHERLY PARALLEL WITH THE EAST LINE OF SAID NORTHWEST 1/4, 66.61 FEET; THENCE EASTERLY ON A CURVE VARYING TOWARD THE SOUTH. THE RADIUS OF WHICH IS 17,263.74 FEET TO SAID POINT OF BEGINNING), IN LAKE COUNTY, ILLINOIS.

PARCEL 5:

THE WEST 420.5 FEET OF THE EAST 882.5 FEET OF THAT PART OF THE EAST 1/2 OF THE NORTH WEST 1/4 OFSECTION 8, TOWNSHIP 44 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, LYING SOUTH OF THE NORTH 1755 FEET THEREOF, (EXCEPT THAT PART THEREOF DESCRIBED AS FOLLOWS: BEGINNING AT APOINT ON THE EAST LINE OF SAID PARCEL, 66.61 FEET NORTHERLY FROM THE SOUTH LINE OF SAID NORTHWEST 1/4; THENCE SOUTHERLY ALONG SAID EAST LINE, 66.61 FEET TO THE SOUTH LINE OF SAID NORTH WEST 1/4; THENCE WESTERLY ON THE SOUTH LINE OF SAID NORTH WEST 1/4, 420.50 FEET; THENCE NORTHERLY PARALLEL TO THE EAST LINE OF SAID NORTH WEST 1/4, 47.99 FEET; THENCE EASTERLY ON A CURVE VARYING TOWARD THE SOUTH, THE RADIUS OF WHICH IS 17,263.74 FEET TO THE POINT OF BEGINNING) IN LAKE COUNTY, ILLINOIS.

PARCEL 6:

THE EAST 462.0 FEET OF THE SOUTH 1079.6 FEET OF THE NORTHWEST 1/4 OF SECTION 8, TOWNSHIP 44NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, (EXCEPT THE WEST 432.0 FEET OF THE SOUTH701.0 FEET THEREOF AND ALSO EXCEPTING ANY PART THEREOF FALLING WITHIN THE RIGHT OF WAY OFFEDERAL AID ROUTE 22 (ILLINOIS ROUTE 137)), IN LAKE COUNTY, ILLINOIS.

VILLAGE OF LIBERTYVILLE
PROPERTY OWNER'S AUTHORIZATION
FOR PC/ZBA/ARC/HPC

DATE: January 2, 2025

I, Debra Stokovich, Owner of the
Property Owner

property located at 610 Peterson Rd, Libertyville, IL 60048, do hereby
Address/Location

authorize Pulte Home Company, LLC, and its attorneys, Rosanova & Whitaker, Ltd. to represent me in the following
Authorized Agent

PC/ZBA/ARC/HPC matter(s),

Annexation, Comprehensive Plan Amendment, Zoning Map Amendment, Special Use for a Planned Development, Planned Development Concept Plan, Special Use Permit for Senior Citizen Housing, and Preliminary Plat of Subdivision
Action(s)

in the Village of Libertyville.

Barbara L. Sellers
Notary Signature

X Debra A Stokovich
Property Owner Signature

(SEAL)

OFFICIAL SEAL
BARBARA L SELLERS
NOTARY PUBLIC, STATE OF ILLINOIS
MY COMMISSION EXPIRES: 04/17/2026

Deborah A Stokovich
Property Owner Printed Name

388 St. Mary's Road in Libertyville IL 60048
Address

847-530-0573
Phone Number

Rev. 11.2023

PROPERTY OWNER'S AUTHORIZATION
FOR THE POSTING OF PUBLIC HEARING SIGNS

DATE: January 2, 2025

I, Deborah A Stokovich, Owner of the property located at 610 Peterson Rd, Libertyville, IL 60048, do hereby authorize the VILLAGE OF LIBERTYVILLE, COMMUNITY DEVELOPMENT DEPARTMENT, to post a sign(s) on the property listed above in order to comply with Section II.C. of Ordinance No. 85-O-26, which requires the POSTING OF A PUBLIC HEARING SIGN.

X Deborah A. Stokovich
Signature

Deborah A Stokovich
Printed Name

PROOF OF
SERVICE OF NOTICE
FOR PUBLIC HEARING SIGNS

VILLAGE OF LIBERTYVILLE COMMUNITY DEVELOPMENT DEPARTMENT
200 E. COOK AVENUE
LIBERTYVILLE, IL 60048-2090

I, _____, employee of the VILLAGE OF LIBERTYVILLE, COMMUNITY DEVELOPMENT DEPARTMENT, have complied with Section II.C. of Ordinance No. 85-O-26, which requires the POSTING OF A PUBLIC HEARING SIGN, for property located at _____, and filed as Case No. _____.

_____
Signature

Date Sign was Posted:_____

STATE OF ILLINOIS)
)
COUNTY OF LAKE)
)
VILLAGE OF LIBERTYVILLE)

PETITION TO THE LIBERTYVILLE VILLAGE BOARD, APPEARANCE REVIEW COMMISSION, AND PLANNING AND ZONING COMMISSION FOR DEVELOPMENT APPROVAL

THE UNDERSIGNED Petitioner, Pulte Home Company, LLC, a Michigan limited liability company ("**Petitioner**" or "**Pulte**"), as the contract purchaser of the property legally described on **Exhibit A** ("**Subject Property**"), respectfully petitions the Village of Libertyville ("**Village**") to:

(i) Annex an unincorporated 13.82-acre portion the Subject Property to the Village pursuant to a separate petition submitted by the owners of record;

(ii) Upon annexation of the Annexation Property, rezone the Subject Property to the Village's R-7 "Single-Family Attached Residential District";

(iii) Amend the Comprehensive Plan Future Land Use Map to "Single-Family Attached Residential";

(iv) Approve a Special Use for a Planned Development for the development of Greenway Chase, a one hundred thirty-four (134) unit mixed-residential development with associated deviations as more specifically detailed on **Exhibit B** ("**Requested Deviations**") and depicted on the submitted development plans;

(v) Approve a Planned Development Concept Plan;

(vi) Approve a Special Use to permit Senior Citizen Housing in the R-7 zoning district;

(vii) Approve a Preliminary Plat of Subdivision, a copy of which is attached as **Exhibit C** ("**Subdivision Plat**"); and

(viii) Approve such other relief from the Libertyville, Illinois Municipal Code ("**Village**

Code") as may be deemed necessary and appropriate to develop the Subject Property consistent with the plans submitted herewith.

In support of this Petition, the Petitioner states to the Village of Libertyville as follows:

1. SB Reserve Properties, Inc., and Illinois corporation (owner of Parcels 1, 2, 3, and 6 as legally described on Exhibit A) and SB Holdings, Ltd., an Illinois corporation (owner of Parcels 4 and 5 as legally described on Exhibit A) are the owners of the Subject Property and shall be collectively referred to as "**Owner**".

2. The Petitioner, Pulte Home Company, LLC, whose address is 1900 E. Golf Road, Suite 300, Schaumburg, IL 60173, is the contract purchaser of the Subject Property.

3. The Subject Property consists of approximately 42.11 acres of real property located north of Peterson Road/IL Route 137 and west of Milwaukee Avenue/ IL Route 21, and has a common address of 610 Peterson Rd, Libertyville, IL 60048.

4. The Subject Property is currently improved with the approximately 174-bed Libertyville Manor Extended Care facility ("**Libertyville Manor**").

5. Petitioner seeks to acquire the Subject Property to demolish Libertyville Manor and redevelop the Subject Property with sixty-four (64) single-family homes and seventy (70) age-restricted duplex units.

6. That part of the Subject Property being described as Parcels 2 and 3 on Exhibit A ("**Annexation Property**"), which comprises approximately 13.82 acres of the Subject Property, is located in unincorporated Lake County and zoned R-1 "Residential District".

7. Owner separately filed a petition for annexation of the Annexation Property to the Village.

8. That part of the Subject Property being described as Parcels 1, 4, 5, and 6 on Exhibit

A ("**Annexed Property**") is located in the Village and zoned IB "Institutional Buildings District", R-1 "Single-Family Residential District," and C-3 "General Commercial District" as depicted on the zoning exhibit attached as **Exhibit D** ("**Zoning Exhibit**").

9. Petitioner seeks to rezone the Subject Property to the R-7 "Single-family Attached Residential District" with a special use for a planned development.

10. The existing land uses surrounding the Subject Property are as follows:

a. North: R-1 "Residential District" in unincorporated Lake County – ComEd Substation.

b. East: R-1 "Single-Family Residential District" and C-3 "General Commercial District" in the Village of Libertyville – Forest Creek Subdivision (townhomes) and various commercial uses.

c. South: R-4 "Single-Family Residential District" in the Village of Libertyville – Wineberry Subdivision (single-family detached).

d. West: IB "Institutional Buildings District" in the Village of Libertyville – Victoria Park Subdivision (townhomes, 55+ age-restricted).

11. The proposed entitlement requests meet all Village and State requirements for the development of property and will facilitate the beneficial use of the Subject Property as stated below.

SUMMARY OF DEVELOPMENT

The Petitioner and builder is Pulte Home Company, LLC. Pulte is a multi-brand homebuilding company capable of serving homeowners during all phases of life. Pulte has been building homes in the Chicago area since the 1960s, bringing decades of construction and development experience to each project. Petitioner has found success building communities that

offer quality housing options designed to serve the diverse needs of the local community. Petitioner looks forward to providing new housing options for Libertyville's existing residents as well as those that would like to live in a well-respected municipality with excellent schools and park facilities.

Petitioner seeks Village approval of a mixed-use residential development consisting of sixty-four (64) single-family homes and seventy (70) age-restricted duplex units to be known as Greenway Chase ("**Greenway Chase**" or "**Development**"). The proposed Development will provide the Village with additional housing options, will help support retail uses along Peterson Road, and will complement the surrounding residential subdivisions, including the Forest Creek townhomes to the east and age-restricted townhomes in the Victoria Park subdivision to the west.

Greenway Chase has been strategically designed to prioritize large contiguous common open spaces. These common open spaces serve multiple purposes. To the north, the common open space minimizes the impact of the Development on natural features such as wetlands and wooded areas. To the east and west, common open spaces will provide a landscape buffer or transitional yard to minimize impact on surrounding development. To the south, the common open space will feature a rolling berm with new manicured landscaping that will both improve the character of the roadway frontage and serve as a buffer yard for the benefit of future residents. Within the development, common open space includes a newly dedicated park, a private amenity lawn for the age-restricted portion of the community, and a tree preservation zone. In total, forty-two percent (42%) of the area of the Subject Property will be preserved as common open space that is either dedicated to preservation, landscape enhancement, or recreational spaces designed to meet the needs of future residents. This represents 140% of the open space required under the Village's PUD standards.

There are five (5) wetland located on the Subject Property. These wetlands are primarily located along the northern perimeter of the Subject Property. The Development entirely avoids impact to jurisdictional U.S. Army Corps of Engineers' wetlands and minimizes impact to lower quality wetlands regulated by the Lake County Stormwater Management Commission (SMC). Two (2) stormwater basins are proposed within the northern section of the Subject Property, proximate to the preserved wetlands. The naturalized detention basins will both serve the stormwater needs of the Development and support the continued function of the wetlands. While the basins will be manmade, they are designed with wetland signatures and will be improved with native plantings, making them complimentary to the existing wetlands and open space to the north. Post development, the combination of the wetlands and associated native detention basins will improve drainage and water quality while creating new habitat for the benefit of the broader community.

The common open space provided by the Development will help to satisfy the recreational needs of future residents of the Development. The preserved wetlands and new native detention basins will provide passive open space for the benefit of residents. Two (2) separate amenity/park spaces are intended to provide more active recreational space within the Development. Within the age-restricted portion of the Development, a 1.41-acre private amenity space is planned. This space will feature a pedestrian pathway, yoga lawn, and outdoor seating/bench area. A separate 1.14-acre public park area has also been planned near the west entrance of the Development. This park space is anticipated to be improved with playground equipment and will be ultimately dedicated to the Village for use by the public. While the park spaces are compact, they are strategically located and appropriately sized to provide recreational opportunities for Greenway Chase residents.

The aforementioned natural features and proposed common open space guides the ultimate layout and design of the proposed Development. Of the 134 homes in the Development, ninety-three percent (93%) back up to open space! The adjacent common open space will make individual lots feel larger than their dimensions would otherwise suggest. As depicted on the Subdivision Plat, the single-family homes have been strategically placed at the west end of the Development adjacent to the Victoria Park Subdivision to the west. The duplexes have been placed in transitionary locations between the proposed single-family homes and adjacent retail uses and Forest Creek townhomes. While Greenway Chase is bound by ComEd property to the north, the ComEd property consists primarily of sprawling open space that can be reasonably anticipated to remain in its current condition. Beyond the ComEd property are the Donnelley Prairies and Oaks Preserve, Casey Trail and Greenway, and Timber Creek Park areas, which total over 300 acres. A Village easement has been provided for a potential future pathway connection from Greenway Chase to the existing pathway network in the park and open space areas to the north and northwest.

Landscape treatments will be utilized to enhance the visual appeal of the community, including a mix of parkway trees, shade trees, and shrubs. The landscape design enhancements will include decorative plantings around the perimeter of the Development. Existing landscape buffers will be preserved where feasible and enhanced throughout the perimeter of the community to create the feel of a residential enclave and separate the single-family homes from the age-restricted duplexes. Extra care has been taken to provide additional landscape buffering between the Development and Peterson Road to the south. Within the community, Pulte plans foundation landscape plantings for all of the homes. A typical foundation planting plan is included within submittal materials, but is not intended to be a controlling PUD document. Pulte intends to depict the nature of the foundation or on-lot plantings that are proposed, but wants homeowners to have

ultimate flexibility to modify plantings as may be appropriate.

The Subject Property is located in close proximity to key transportation corridors like US Route 45, Milwaukee Avenue, and I-94, and will be easily accessible via two access points off Peterson Road. Both access points will align with the subdivision entrances to the south of Peterson Road to address and avoid conflicting traffic movements and provide safe and convenient access to and from the Development. The curvilinear roadway internal to the Development will provide a more interesting streetscape and ensure homes are not all identically situated along street frontage. The streets will be dedicated to the Village and have been designed to circulate traffic efficiently and safely.

As part of the Greenway Chase development, sidewalks throughout will provide interconnectivity within the Development. The future residents will benefit from the development's proximity to shopping districts, recreational amenities, and employment centers. Within a 3-mile radius, there are a large variety of retail establishments, groceries, restaurants, entertainment opportunities, and recreational amenities. Nearby employment corridors offer future residents the additional feature of conveniently located employment opportunities.

Pulte proposes two distinct housing lines – the "**Springs Series**" (single-family homes) and the "**Landings Series**" (age-restricted duplexes). Pulte strategically identified these homes as being appropriate for the Subject Property based on both demographic trends in the Community and the direction set forth in the Village's 2030 Comprehensive Plan. According to Chicago Metropolitan Agency for Planning ("**CMAP**") data, the Village had a net loss of population between 2000 and 2022, with the Village's total population shrinking by about one percent. In that same timeframe, the Village's population of 50+ year olds grew by 10%, and as of 2022, 58.8% of Village households were 1-2 persons. Despite the aging population and small household

size of the Village, only 2.7% of the homes in the Village are duplexes. Further, the percentage of attached single-family homes in the Village's housing stock shrank over the past 15 years. At the same time, houses have been getting larger, with the share of 3-, 4-, and 5-bedroom homes all increasing, with the largest growth percentage being for homes with 5 or more bedrooms. Given the statistical data, there is a need for new housing in the Village, specifically for smaller single-family homes and duplexes as proposed for Greenway Chase.

The Springs Series homes will consist of sixty-four (64) single-family detached homes located on the west half of the Development. The Landings Series will consist of seventy (70) age-restricted duplex units (35 buildings) located along the east half of the Development.

The Springs Series single-family detached homes will consist of 30'-wide homes on a standard 41'-wide and 4,500 square foot lot. The Springs Series will offer five (5) model options ranging in size from 1,678 to 2,567 square feet, 3 to 5 bedrooms, 2.5 to 4 baths, and feature a two-car garage. The smaller footprint of the Springs Series homes will help address a gap in the Village's housing market. The architecture of the Springs Series can be characterized as modern American and will be based on traditional styling that includes farmhouse, low country, heritage, and craftsman designs. While not new to Pulte, the Springs Series was only recently introduced to the Chicago region (being first approved for Naperville's "Polo Club" subdivision) to promote lower cost options targeted at the young professional demographic. The smaller 41' lots of the Springs Series reduce development costs by requiring less road, less watermain, less sewer, and less overall infrastructure per lot. This reduction in infrastructure also translates to reduction in long-term maintenance expenses for public improvements.

As a national leader in new home construction, Pulte has first-hand knowledge of the changing dynamics in the residential real estate market. Trends toward a more "experiential"

lifestyle have affected buying patterns, particularly for younger homebuyers. Younger homebuyers are likely to avoid the maintenance and repair associated with older homes. Younger homebuyers generally prioritize amenitized common open space over large private yards. Young families tend to lead much busier lives and prioritize spending time and money on "experiential" activities rather than possessions – like a large private yard. These trends have been reflected in Pulte's residential subdivisions, particularly over the last decade, which emphasize common amenities over private yards. This shift from private space to community space lessens residents' maintenance obligations without sacrificing amenities. With less time and money spent on yard maintenance, Pulte has seen an increase in purchaser demand for housing that features more options associated with the livability of the home, including sunrooms, smart home upgrades, upgraded flooring, gourmet kitchens, and upgraded bathroom options.

In addition to the single-family detached homes in the Springs Series, Pulte also proposes its age-restricted Landings Series duplex homes to satisfy demand in the community for age-restricted housing. In the age-restricted residential market, homebuyers are interested in smaller lots, which in turn reduce homeowners' association fees for maintenance and upkeep. Age-restricted communities have gained in residential market share as our population ages. Given the trend of demographics in Libertyville, there is a need to add housing product that is specifically targeted to the aging population.

The Landings Series duplexes will vary in size from 1,577 square feet to 2,697 square feet, 2 to 4 bedrooms, and 2 to 4 baths, and will feature a two-car garage. The architecture of the duplex homes will be consistent with market trends for age-restricted communities, with low maintenance exteriors and quality materials that will withstand the test of time. These age-restricted homes will be developed in accordance with the Fair Housing Amendments Act of 1988, as amended

from time-to-time ("**FHAA**"), including, but not limited to, the provisions of the "Housing for Older Persons Act of 1995" ("**HOPA**").

As previously mentioned, the duplexes will include a separate, private outdoor amenity space consisting of approximately 1.41 acres that will feature a yoga lawn, pedestrian pathway, and seating area with benches; affording an outdoor recreational opportunity for the residents within the age-restricted community. A homeowners' association with two separate committees and budgets will be established for Greenway Chase, with each committee being responsible for either the single-family or age-restricted pod within the community. The HOA will perform maintenance on the amenity spaces, open areas, and green space areas of the Greenway Chase neighborhood. Snow removal, lawn mowing, landscape maintenance, and exterior maintenance will be provided for the age-restricted duplexes.

The proposed mixed-use residential community will be an appropriate transitional use along a principal arterial roadway corridor like Peterson Road. While the area further east along Peterson Road towards Milwaukee Avenue is generally retail/commercial, the area surrounding Greenway Chase hosts a variety of residential housing developments. Greenway Chase will complement these subdivisions, which include the Forest Creek townhomes to the east and age-restricted townhomes in the Victoria Park subdivision to the west. In addition, the proposed homes will help support the existing retail and commercial uses to the east, which are easily accessible via Peterson Road. Given the proposed Development's location and accessibility to nearby commercial uses and local parks, the Subject Property presents an excellent housing opportunity that is suitable for a variety of homebuyers, including some of the fastest growing housing segments of our population – young professionals and the 55+ demographic.

APPROVAL OF A MAP AMENDMENT REZONING THE SUBJECT PROPERTY TO R-7 AND AN AMENDMENT TO THE COMPREHENSIVE PLAN'S FUTURE LAND USE PLAN TO SINGLE-FAMILY ATTACHED RESIDENTIAL

The requested zoning map amendment from R-1 "Single-Family Residential District" and IB "Institutional Buildings District" to the R-7 Single-family Attached Residential District meets the requirements for a rezoning pursuant to Village Code Section 26-16-14.5 and is appropriate based upon the following factors:

a. The consistency of the proposed amendment with the purposes of this chapter.

The proposed map amendment (rezoning) and amendment to the Future Land Use Map ("**Future Land Use Map**") contained in the Libertyville 2030 Comprehensive Plan adopted March 23, 2021 ("**Comprehensive Plan**") (collectively, the "**Map Amendment**") are consistent with the purposes of Village Code. A stated purpose of the map amendment process is to provide a means for making changes the zoning map in light of changing, newly discovered or newly important conditions, situations or knowledge. In this case, the existing Libertyville Manor is obsolete, rendering the land value of the Subject Property greater than the value of the Subject Property as currently improved.

The Annexation Property comprising approximately 13.82 acres of the Subject Property is currently zoned R-1 "Residential District" in unincorporated Lake County. Upon its annexation to the Village, it will be automatically zoned R-1 "Single-Family Residential District."

The Annexed Property comprising the remainder of the Subject Property is zoned IB "Institutional Buildings District", R-1 "Single-Family Residential District," and C-3 "General Commercial District" in the Village of Libertyville as depicted on Exhibit D.

In addition to the existing zoning designations of the Annexation Property and Annexed Property, the Future Land Use Map contained in the Comprehensive Plan slates the future use of

the Subject Property for institutional, destination commercial corridor, and single-family attached residential ("**SFAR**"). The zoning and future land use designations are inconsistent with the proposed Development, such that upon annexation of the Annexation Property, Petitioner seeks to rezone the entire Subject Property to the Village's R-7 "Single-Family Attached Residential District" and amend the Future Land Use Map's designation to SFAR.

While commercial and retail uses exist further east and west along Peterson Road, the immediately adjacent properties have been largely developed with residential subdivisions, including the Forest Creek townhomes to the east, single-family homes in the Wineberry subdivision to the south, and age-restricted townhomes in the Victoria Park subdivision to the west. The requested Map Amendment will facilitate redevelopment of the Subject Property with a mixed-residential development. The proposed development will be consistent with trends in the market, will complement the surrounding residential uses, and will help support the commercial and retail uses in the area, providing for the Subject Property's highest and best use.

b. The existing uses and zoning classifications of properties in the vicinity of the subject property.

The proposed Map Amendment will facilitate development of the Subject Property consistent with the uses and zoning classifications of properties in the vicinity of the Subject Property. While commercial uses exist to the east and west along Peterson Road, the Subject Property is isolated from those commercial and retail uses. The Subject Property is bound by residential uses on its east, south, and west sides, such that commercial development on the Subject Property would be out of character with the trend in development.

The properties to the east are currently zoned R-1 and C-3 with Future Land Use Map designations of SFAR and destination commercial corridor. This includes the townhome

development in the Forest Creek Subdivision. The duplexes in the proposed Development have been strategically located adjacent to this townhome development to provide a logical transition between Forest Creek and the single-family detached homes in Greenway Chase. Various commercial and retail uses are located east of the Subject Property along Peterson Road, which uses the proposed Development will help support. The properties to the south of the proposed development are zoned R-4 and comprise the single-family detached homes in the Wineberry Subdivision. Finally, while the property to the west is zoned IB with a future land use designation as institutional, its use is residential and comprised of a 55+ age-restricted community commonly known as Victoria Park.

c. The trend of development in the vicinity of the subject property, including changes, if any, in such trend since the subject property was placed in its present zoning classification.

The proposed Map Amendment is consistent with the trend of development in the vicinity of the Subject Property since the Subject Property was placed in its present zoning classification. Libertyville Manor on the Subject Property was constructed in the early 1980's. While technically institutional, it is residential in nature. Since Libertyville Manor's construction, the surrounding properties have been developed with residential uses – the Forest Creek Subdivision to the east was developed in the late 1980's, the Wineberry Subdivision to the south was developed in the 1990's, and the Victoria Park Subdivision to the west was developed in the mid 2000's. The proposed Map Amendment will bring the zoning designation and Future Land Use Map designation of the Subject Property up-to-date and consistent with the proposed use and existing residential uses of the adjacent properties.

d. The extent to which the value of the subject property is diminished by its present zoning classification.

The value of the Subject Property is diminished by its present zoning classification. As noted, Libertyville Manor was constructed in the early 1980's but is now obsolete, rendering the land value of the Subject Property greater than the value of the Subject Property as currently improved. As such, the Petitioner has been provided with the opportunity to purchase and redevelop the Subject Property with its highest and best use as a mixed residential development. The proposed Map Amendment and Development will improve the Village's housing stock, serve under-represented demographics, and create new revenue streams through property, utility, and sales taxes. Further, the proposed Greenway Chase subdivision will provide a seamless transition between the surrounding residential uses while supporting the existing retail and commercial uses along Peterson Road.

e. The extent to which such diminution in value is offset by an increase in the public health, safety and welfare.

The diminution in value of the Subject Property under its present zoning classification is not offset by an increase in public health, safety and welfare. As noted, the existing Libertyville Manor is obsolete and an underutilized use of the Subject Property. In comparison, Petitioner's proposed redevelopment of the Subject Property with a mixed residential use will benefit the public health, safety, and welfare of the community. The development of Greenway Chase will improve the Village's housing stock, serve under-represented demographics, and create new revenue streams through property, utility, and sales taxes. Further, the proposed Greenway Chase subdivision will provide a seamless transition between the surrounding residential uses while supporting the existing retail and commercial uses along Peterson Road.

f. The extent, if any, to which the use and enjoyment of adjacent properties would be adversely affected by the proposed amendment.

The use and enjoyment of adjacent properties will not be adversely affected by the proposed Map Amendment. As previously noted, the proposed Development is consistent with the uses of the adjacent properties, which are largely residential. The Forest Creek townhome community is situated east of the Subject Property and townhomes in the age-restricted Victoria Park townhome community are located to the west. The proposed Greenway Chase Subdivision will complement these developments and will provide a logical transition between uses. In addition, while Greenway Chase is bound by the ComEd property to the north, the ComEd property consists primarily of sprawling open space that can be reasonably anticipated to remain in its current condition. Beyond the ComEd property are the Donnelley Prairies and Oaks Preserve, Casey Trail and Greenway, and Timber Creek Park areas, which total over 300 acres. A Village easement has been provided for a potential future pathway connection from Greenway Chase to the existing pathway network in the park and open space areas to the north and northwest. Finally, the proposed Development will be an appropriate transitional use along a principal arterial roadway corridor like Peterson Road. The uses along Peterson Road become more retail and commercial in nature the further east you travel, which uses the proposed Development will help support.

g. *The extent, if any, to which the value of adjacent properties would be adversely affected by the proposed amendment.*

The value of adjacent properties will not be adversely affected by the proposed Map Amendment. To the contrary, the proposed Development and requisite Map Amendment will enhance the value of the adjacent properties. The Libertyville Manor building was constructed in the1980's, but its use is now obsolete. Petitioner now has the opportunity to purchase and redevelop the Subject Property with its highest and best use as a mixed residential development.

The surrounding area is largely residential in nature, making the proposed R-7 zoning and Map Amendment consistent with the use of the adjacent properties.

The Forest Creek subdivision to the east was developed in the late 1980's, the Wineberry subdivision to the south was developed in the 1990's, and the Victoria Park subdivision to the west was developed in the mid 2000's. Development of the Subject Property with a new, up-to-date mixed residential subdivision that is complementary to the surrounding uses will attract a variety of homebuyers, including some of the fastest growing housing segments of our population – young professionals and the 55+ demographic.

Landscape treatments will be utilized to enhance the visual appeal of the community, including a mix of parkway trees, shade trees, and shrubs. The landscape design enhancements will include decorative plantings around the perimeter of the Development to improve the character of the roadway frontage and serve as a buffer yard for the benefit of future residents. Existing landscape buffers will be preserved where feasible and enhanced throughout the perimeter of the community to create the feel of a residential enclave and separate the single-family homes from the age-restricted duplexes. Extra care has been taken to provide additional landscape buffering between the Development and Peterson Road to the south to provide an attractive roadway façade for residents and passerby's.

h. The extent, if any, to which the future orderly development of adjacent properties would be adversely affected by the proposed amendment.

The future orderly development of adjacent properties will not be adversely affected by the proposed amendment. To the contrary, the proposed zoning designation permitted by the Map Amendment will be more consistent with the trend in development of the area as compared to the existing zoning and Future Land Use Map designations. Libertyville Manor was constructed in

the early 1980's. While technically institutional, its use is residential in nature. While commercial uses exist to the east and west along Peterson Road, the Subject Property is isolated from those commercial and retail uses. The Subject Property is bound by residential uses on its east, south, and west sides, such that commercial development in this location would be out of character with the trend in development of the area. The proposed Map Amendment will provide a zoning and future land use designation consistent with the development and use of the adjacent properties and promote orderly development of the Subject Property and surrounding area.

i. The suitability of the subject property for uses permitted or specially permitted under its zoning classification.

The Subject Property is not suitable for uses permitted or specially permitted under its current zoning classification. The Subject Property is currently zoned R-1 in unincorporated Lake County and IB, R-1, and C-3 in the Village of Libertyville. The Future Land Use Map designations for the Subject Property are institutional, destination commercial corridor, and SFAR. While commercial uses exist to the east and west along Peterson Road, the Subject Property is isolated from those commercial and retail uses. The Subject Property is bound by residential uses on its east, south, and west sides, such that commercial development in this location would be out of character with the trend in development. The proposed Map Amendment will zone and designate the Subject Property in a manner consistent with the adjacent uses to promote redevelop of the Subject Property with a mixed residential community complementary of the surrounding uses.

j. The availability of adequate ingress to and egress from the subject property and the extent to which traffic conditions in the immediate vicinity of the subject property would be affected by the proposed amendment.

There is adequate ingress to and egress from the Subject Property and the traffic conditions in the immediate vicinity will not be negatively affected by the proposed Map Amendment. The

Subject Property is located in close proximity to key transportation corridors like US Route 45, Milwaukee Avenue, and I-94, and will be easily accessible via two access points off Peterson Road. Both access points will align with the subdivision entrances to the south of Peterson Road to address and avoid conflicting traffic movements and provide safe and convenient access to and from the Development. The curvilinear roadway internal to the Development will be dedicated to the Village and is designed to circulate traffic efficiently and safely.

Further, a Traffic Impact Study dated December 20, 2024 ("**Traffic Study**") was completed by Lindgren, O'Hara, Aboona, Inc. ("**KLOA**") and included with the submittal material. The Traffic Study contemplates existing and proposed roadway conditions and concludes the traffic that will be generated by the proposed development will be sufficiently accommodated by the area roadway system.

k. The availability of adequate utilities and essential public services to the subject property to accommodate the uses permitted or specially permitted under its present and proposed zoning classification.

Adequate utilities and essential public services to the Subject Property are available to accommodate the uses permitted or specially permitted under its proposed zoning classification. Petitioner has coordinated with the Village's engineering, public utility, and public works departments to coordinate easements and associated infrastructure to ensure adequate utilities and public services are available to adequately serve Greenway Chase. Utility service necessary for the service of the subdivision will be constructed by Petitioner consistent with the Village's design standards.

l. The length of time, if any, that the subject property has been vacant, considered in the context of the pace of development in the vicinity of the subject property.

Not applicable. The Libertyville Manor has been situated on the Subject Property since

the 1980's.

m. The community need for the proposed amendment and for the uses and development it would allow.

There is a community need for the proposed Map Amendment and the uses and development it would allow. The Development will consist of two distinct housing lines – the Springs Series (single-family homes) and the Landings Series (age-restricted duplexes) to satisfy market demand within the Village. According to CMAP data, the Village had a net loss of population between 2000 and 2022, with the Village's total population shrinking by about one percent. In that same timeframe, the Village's population of 50+ year olds grew by 10%, and as of 2022, 58.8% of Village households were 1-2 persons. Despite the aging population and small household size of the Village, only 2.7% of the homes in the Village are duplexes. Further, the percentage of attached single-family homes in the Village's housing stock shrank over the past 15 years. At the same time, houses have been getting larger, with the share of 3-, 4-, and 5-bedroom homes all increasing, with the largest growth percentage being for homes with 5 or more bedrooms. Given the statistical data, there is a need for new housing in the Village, specifically for smaller single-family homes and duplexes as proposed for Greenway Chase.

The Springs Series homes will consist of sixty-four (64) single-family detached homes located on the west half of the Development. The Landings Series will consist of seventy (70) age-restricted duplex units (35 buildings) located along the east half of the Development.

The Springs Series single-family detached homes will consist of 30'-wide homes on a standard 41'-wide and 4,500 square foot lot. The Springs Series will offer five (5) model options ranging in size from 1,678 to 2,567 square feet, 3 to 5 bedrooms, 2.5 to 4 baths, and feature a two-car garage. The smaller lots, slightly smaller homes, and variety of upgrades and options will meet

the diverse needs of the community. The architecture of the Springs Series can be characterized as American and will be based on traditional styling that includes farmhouse, low country, heritage, and craftsman designs. While not new to Pulte, the Springs Series was only recently introduced to the Chicago region (being first approved for Naperville's "Polo Club" subdivision) to promote lower cost options targeted at the young professional demographic. The smaller 41' lots of the Springs Series reduce development costs by requiring less road, less watermain, less sewer, and less overall infrastructure per lot. This reduction in infrastructure also translates to savings on future maintenance expenses.

As a national leader in new home construction, Pulte has first-hand knowledge of the changing dynamics in the residential real estate market. Trends toward a more "experiential" lifestyle have affected buying patterns, particularly for younger homebuyers. Younger homebuyers are likely to avoid the maintenance and repair associated with older homes. Younger homebuyers generally prioritize amenitized common open space over large private yards. Young families tend to lead much busier lives and prioritize spending time and money on "experiential" activities rather than possessions – like a large private yard. These trends have been reflected in Pulte's residential subdivisions, particularly over the last decade, which emphasize common amenities over private yards. This shift from private space to community space lessens residents' maintenance obligations without sacrificing amenities. With less time and money spent on yard maintenance, Pulte has seen an increase in purchaser demand for housing that features more options associated with the livability of the home, including sunrooms, smart home upgrades, upgraded flooring, gourmet kitchens, and upgraded bathroom options.

In addition to the single-family detached homes in the Springs Series, Pulte also proposes its age-restricted Landings Series duplex homes to satisfy demand in the community for age-

restricted housing. In the age-restricted residential market, homebuyers are interested in smaller lots, which in turn reduce homeowners' association fees for maintenance and upkeep. Age-restricted communities have gained in residential market share as our population ages. Given the trend of demographics in Libertyville, there is a need to add housing product that is specifically targeted to the aging population.

The Landings Series duplexes will vary in size from 1,577 square feet to 2,697 square feet, 2 to 4 bedrooms, and 2 to 4 baths, and will feature a two-car garage. The architecture of the duplex homes will be consistent with market trends for age-restricted communities, with low maintenance exteriors and quality materials that will withstand the test of time. These age-restricted homes will be developed in accordance with the FHAA, including, but not limited to, the provisions of the HOPA.

APPROVAL OF A SPECIAL USE FOR A PLANNED DEVELOPMENT AND APPROVAL OF A PLANNED DEVELOPMENT CONCEPT PLAN

Pursuant to Section 26-16-13.5(a) of Village Code, the approval of a Special Use Permit for a Planned Development is appropriate based on the following factors:

a. Code and plan purposes. *The proposed use and development will be in harmony with the general and specific purposes for which this chapter was enacted and for which the regulations of the district in question were established and with the general purpose and intent of the official comprehensive plan.*

The proposed use and Development will be in harmony with the general and specific purposes for which the Village Code was enacted and with the general purpose and intent of the Comprehensive Plan. A stated purpose of the Village Code is to perpetuate the existing high quality residential character of the Village by preserving established neighborhoods while

encouraging new residential development. Planned development objectives include the creation of desirable environments, efficient use of land, and promotion of a creative approach to the use of land and related physical facilities resulting in better design and development. Further, a reoccurring theme of the Comprehensive Plan is the need for diversity in housing, particularly housing that targets empty-nesters and young professionals.

The proposed Development satisfies these objectives. Petitioner seeks Village approval of a mixed-use residential development consisting of sixty-four (64) single-family homes and seventy (70) age-restricted duplex units to be known as Greenway Chase. The proposed Development will provide the Village with additional housing options, will help support retail uses along Peterson Road, and will complement the surrounding residential subdivisions.

Greenway Chase has been strategically designed to prioritize large contiguous common open spaces. These common open spaces serve multiple purposes. To the north, the common open space minimizes the impact of the Development on natural features such as wetlands and wooded areas. To the east and west, common open spaces will provide a landscape buffer or transitional yard to minimize impact on surrounding development. To the south, the common open space will feature a rolling berm with new manicured landscaping that will both improve the character of the roadway frontage and serve as a buffer yard for the benefit of future residents. Within the development, common open space includes a newly dedicated park, a private amenity lawn for the age-restricted portion of the community, and a tree preservation zone. In total, forty-two percent (42%) of the area of the Subject Property will be preserved as common open space that is either dedicated to preservation, landscape enhancement, or recreational spaces designed to meet the needs of future residents. This represents 140% of the open space required under the Village's PUD standards.

There are five (5) wetland located on the Subject Property. These wetlands are primarily located along the northern perimeter of the Subject Property. The Development entirely avoids impact to jurisdictional U.S. Army Corps of Engineers' wetlands and minimizes impact to lower quality wetlands regulated by the Lake County Stormwater Management Commission (SMC). Two (2) stormwater basins are proposed within the northern section of the Subject Property, proximate to the preserved wetlands. The naturalized detention basins will both serve the stormwater needs of the Development and support the continued function of the wetlands. While the basins will be manmade, they are designed with wetland signatures and will be improved with native plantings, making them complimentary to the existing wetlands and open space to the north. Post development, the combination of the wetlands and associated native detention basins will improve drainage and water quality while creating new habitat for the benefit of the broader community.

The common open space provided by the Development will help to satisfy the recreational needs of future residents of the Development. The preserved wetlands and new native detention basins will provide passive open space for the benefit of residents. Two (2) separate amenity/park spaces are intended to provide more active recreational space within the Development. Within the age-restricted portion of the Development, a 1.41-acre private amenity space is planned. This space will feature a pedestrian pathway, yoga lawn, and outdoor seating/bench area. A separate 1.14-acre public park area has also been planned near the west entrance of the Development. This park space is anticipated to be improved with playground equipment and will be ultimately dedicated to the Village for use by the public. While the park spaces are compact, they are strategically located and appropriately sized to provide recreational opportunities for Greenway Chase residents.

The aforementioned natural features and proposed common open space guides the ultimate layout and design of the proposed Development. Of the 134 homes in the Development, ninety-three percent (93%) back up to open space! The adjacent common open space will make individual lots feel larger than their dimensions would otherwise suggest. As depicted on the Subdivision Plat, the single-family homes have been strategically placed at the west end of the Development adjacent to the Victoria Park Subdivision to the west. The duplexes have been placed in transitionary locations between the proposed single-family homes and adjacent retail uses and Forest Creek townhomes. While Greenway Chase is bound by ComEd property to the north, the ComEd property consists primarily of sprawling open space that can be reasonably anticipated to remain in its current condition. Beyond the ComEd property are the Donnelley Prairies and Oaks Preserve, Casey Trail and Greenway, and Timber Creek Park areas, which total over 300 acres. A Village easement has been provided for a potential future pathway connection from Greenway Chase to the existing pathway network in the park and open space areas to the north and northwest.

Landscape treatments will be utilized to enhance the visual appeal of the community, including a mix of parkway trees, shade trees, and shrubs. The landscape design enhancements will include decorative plantings around the perimeter of the Development. Existing landscape buffers will be preserved where feasible and enhanced throughout the perimeter of the community to create the feel of a residential enclave and separate the single-family homes from the age-restricted duplexes. Extra care has been taken to provide additional landscape buffering between the Development and Peterson Road to the south. Within the community, Pulte plans foundation landscape plantings for all of the homes. A typical foundation planting plan is included within submittal materials, but is not intended to be a controlling PUD document. Pulte intends to depict the nature of the foundation or on-lot plantings that are proposed, but wants homeowners to have

ultimate flexibility to modify plantings as may be appropriate.

The Subject Property is located in close proximity to key transportation corridors like US Route 45, Milwaukee Avenue, and I-94, and will be easily accessible via two access points off Peterson Road. Both access points will align with the subdivision entrances to the south of Peterson Road to address and avoid conflicting traffic movements and provide safe and convenient access to and from the Development. The curvilinear roadway internal to the Development will provide a more interesting streetscape and ensure homes are not all identically situated along street frontage. The streets will be dedicated to the Village and have been designed to circulate traffic efficiently and safely.

As part of the Greenway Chase development, sidewalks throughout will provide interconnectivity within the Development. The future residents will benefit from the development's proximity to shopping districts, recreational amenities, and employment centers. Within a 3-mile radius, there are a large variety of retail establishments, groceries, restaurants, entertainment opportunities, and recreational amenities. Nearby employment corridors offer future residents the additional feature of conveniently located employment opportunities.

The Development will consist of two distinct housing lines – the "Springs Series" (single-family homes) and the "Landings Series" (age-restricted duplexes) to satisfy market demand within the Village. The Springs Series homes will consist of sixty-four (64) single-family detached homes located on the west half of the Development. The Landings Series will consist of seventy (70) age-restricted duplex units (35 buildings) located along the east half of the Development.

The proposed mixed-use residential community will be an appropriate transitional use along a principal arterial roadway corridor like Peterson Road. While the area further east along Peterson Road towards Milwaukee Avenue is generally retail/commercial, the area surrounding

Greenway Chase hosts a variety of residential housing developments. Greenway Chase will complement these subdivisions, which include the Forest Creek townhomes to the east and age-restricted townhomes in the Victoria Park subdivision to the west. In addition, the proposed homes will help support the existing retail and commercial uses to the east, which are easily accessible via Peterson Road. Given the proposed Development's location and accessibility to nearby commercial uses and local parks, the Subject Property presents an excellent housing opportunity that is suitable for a variety of homebuyers, including some of the fastest growing housing segments of our population – young professionals and the 55+ demographic.

b. Adverse impact. The proposed use and development will not have a substantial adverse effect upon adjacent property, the character of the area, or the public health, safety, and general welfare.

The proposed use and Dvelopment will not have an adverse effect upon adjacent property, the character of the area, or the public health, safety, and general welfare. The proposed Development will complement the surrounding residential subdivisions, including the Forest Creek townhomes to the east and age-restricted townhomes in the Victoria Park subdivision to the west.

Libertyville Manor was constructed in the 1980's but has since become obsolete. Compared to this underutilized use of the Subject Property, Petitioner's proposed redevelopment of the Subject Property with a mixed residential use will provide an increase in the benefit to the public health, safety, and welfare of the community. The development of Greenway Chase will improve the Village's housing stock, serve under-represented demographics, and create new revenue streams through property, utility, and sales taxes.

c. *Interference with surrounding development. The proposed use and development will be constructed, arranged, and operated so as not to dominate the immediate vicinity or to interfere with the use and development of neighboring property in accordance with the applicable district regulations.*

The proposed use and development will be constructed, arranged, and operated so as not to dominate the immediate vicinity or to interfere with the use and development of neighboring properties. The proposed Development is consistent with the uses of the adjacent properties, which are largely residential. The Forest Creek townhome community is situated east of the subject property, detached single-family homes in the Wineberry subdivision are located to the south, and townhomes in the age-restricted Victoria Park 55+ townhome community are located to the west. The proposed Greenway Chase Subdivision will complement these developments and will provide a logical transition between uses. Extra care has been taken to provide perimeter vegetation and landscaping for separation between Greenway Chase and the adjacent uses, and significant landscape buffer is provided for between the development and Peterson Road.

d. *Adequate public facilities. The proposed use and development will be served adequately by essential public facilities and services such as streets, public utilities, drainage structures, police and fire protection, refuse disposal, parks, libraries, and schools, or the applicant will provide adequately for such services.*

The proposed Development will be served adequately by essential public facilities and services such as streets, public utilities, drainage structures, police and fire protection, refuse disposal, parks, libraries, and schools, or the applicant will provide adequately for such services.

Public utility capacity is available to the Subject Property in sufficient volume and all utility service necessary for the service of the subdivision will be constructed by Petitioner consistent with the Village's design standards. A private trash service will utilized and tenants will keep their trash bins in their garage and bring them out on garbage day.

e. *Traffic congestion. The proposed use and development will not cause undue traffic congestion nor draw significant amounts of traffic through local streets and will, when required by the board of trustees, incorporate appropriate vehicular trip reduction features such as, but not limited to, pedestrian/bicycle linkages within and between land uses, the use of traffic mitigation plans, and the incorporation of elements to encourage and facilitate the use of public transportation.*

The proposed use and development will not cause undue traffic congestion nor draw significant amounts of traffic through local streets. The Subject Property is located in close proximity to key transportation corridors like US Route 45, Milwaukee Avenue, and I-94, and will be easily accessible via two access points off Peterson Road. Both access points will align with the subdivision entrances to the south of Peterson Road to address and avoid conflicting traffic movements and provide safe and convenient access to and from the Development. The curvilinear roadway internal to the Development will provide a more interesting streetscape and ensure homes are not all identically situated along street frontage. The streets will be dedicated to the Village and have been designed to circulate traffic efficiently and safely.

Further, a Traffic Study was completed by KLOA and was included with the submittal material. The Traffic Study contemplates existing and proposed roadway conditions and concludes the traffic that will be generated by the proposed development will be sufficiently

accommodated by the area roadway system.

f. *Destruction of significant features. The proposed use and development will not result in the destruction, loss, or damage of any natural, scenic, or historic feature of significant importance.*

The proposed use and development will not result in the destruction, loss, or damage of any natural, scenic, or historic feature of significant importance. The existing Libertyville Manor has been situated on the Subject Property since the 1980's. Petitioner intends to demolish the facility and redevelop the Subject Property with a mixed residential use. No natural, scenic, or historic feature of significant importance are located on the Subject Property. Trees will be preserved where feasible and existing wetlands will be avoided to minimize any detrimental environmental impact. This has been accomplished by emphasizing preservation and creation of open space to be shared by future residents over the size of individual private yards. Approximately 42% of the proposed Development's acreage is dedicated to open space. While five (5) wetland sites are currently located on the Subject Property, the Development entirely avoids jurisdictional U.S. Army Corps of Engineers' wetlands and minimizes impact to those lesser quality wetlands regulated by the Lake County Stormwater Management Commission (SMC).

g. *Compliance with standards. The proposed use and development complies with all additional standards imposed on it by the particular provision of this chapter authorizing such use.*

See below.

ADDITIONAL STANDARDS FOR PLANNED DEVELOPMENT APPROVAL

Pursuant to Section 26-16-13.5(b) of Village Code, the approval of a Special Use Permit for a Planned Development is appropriate based on the following additional standards:

h. *Unified ownership required.* The proposed Development meets the ownership and control requirements. Petitioner is the contract purchaser of the Subject Property.

i. *Minimum area.* The configuration of the PUD provides for a cohesive development and does not lend itself to a separate calculation of lot area.

j. *Covenants and restrictions to be enforceable by Village.* All covenants, deed restrictions, easements, and similar restrictions to be recorded in connection with the planned development shall provide that they may not be modified, removed, or released without the express consent of the board of trustees and that they may be enforced by the village as well as by future landowners within the proposed development.

k. *Public open space and contributions.* Per the Village's request, a 1.14-acre public park area has been planned near the west entrance of the Development. This park space is anticipated to be improved with playground equipment and will be ultimately dedicated to the Village for use by the public.

l. *Common open space.*

(i) *Amount, location, and use.* *T*wo (2) separate amenity/park spaces are planned for the Development. The first consists of a 1.41-acre private amenity space for the age-restricted portion of the Development. This space will feature a pedestrian pathway, yoga lawn, and outdoor seating/bench area. A separate 1.14-acre public park area has also been planned for near the west entrance of

the Development. This park space is anticipated to be improved with playground equipment and will be ultimately dedicated to the Libertyville Park District for use by the public. While the park spaces are relatively compact, they are strategically located within distinct neighborhoods that comprise the Development to provide open lawn space, creating recreational opportunities for Greenway Chase residents.

(ii) Preservation. Adequate safeguards, including recorded covenants or dedication of development rights, shall be provided to prevent the subsequent use of common open space for any use, structure, improvement, or development other than that shown on the approved final plan.

(iii) *Ownership and maintenance.* Common open space shall be owned and maintained by a homeowners' association to be formed for the Development.

(iv) Property owners' association. Petitioner agrees the requirements set forth in Section 26-16-13.5(b)(5)d of the Village Code shall be satisfied.

(v) Landscaping and perimeter treatment. Landscape treatments will be utilized to enhance the visual appeal of the community, including a mix of parkway trees, shade trees, and shrubs. The landscape design enhancements will include decorative plantings around the perimeter of the Development as buffer between the uses. Existing landscape buffers will be preserved where feasible and enhanced throughout the perimeter of the community to create the feel of a residential enclave separate from the adjacent subdivisions and Peterson Road.

(vi) Building spacing. No part of any building shall be closer to any other building by less than ten (10) feet.

(vii) *Private streets.* All streets will be made public and dedicated to the Village.

(viii) Sidewalks. With the exception of the deviation request to waive the requirement for a sidewalk along Peterson Road, Village Code compliant sidewalks will be provided throughout the Development to provide interconnectivity within the neighborhood.

(ix) Utilities. All utilities will be installed underground.

m. *Vehicular trip reduction features.* Two (2) park/amenity sites will be located within the Development so residents do not have to leave the neighborhood for recreational opportunities. An easement will be provided for the potential future connection of Greenway Chase to the pathway network to the northwest of the Subject Property. For commuting residents, three train stations are located in the Village. The Milwaukee District North line serves both the downtown station on Milwaukee Avenue and the Prairie Crossing station on the west side of the Village, offering service north to Fox Lake and south to Chicago's Union Station. The North Central line serves a second Prairie Crossing station, offering service north to Antioch and south to Union Station, including a stop at O'Hare International Airport.

APPROVAL OF A SPECIAL USE TO PERMIT SENIOR CITIZEN HOUSING IN THE R-7 ZONING DISTRICT

Pursuant to Sections 26-4-8.3 of Village Code, a Special Use is required to permit Senior Citizen Housing in the R-7 zoning district. Pursuant to Section 26-16-9, the approval of a Special Use Permit to permit Senior Citizen Housing in the R-7 zoning district is appropriate based on the following factors:

a. Code and plan purposes. The proposed use and development will be in harmony with

the general and specific purposes for which this chapter was enacted and for which the regulations of the district in question were established and with the general purpose and intent of the official comprehensive plan.

The proposed use and Development will be in harmony with the general and specific purposes for which the Village Code was enacted and with the general purpose and intent of the Comprehensive Plan. A stated purpose of the Village Code is to perpetuate the existing high quality residential character of the Village by preserving established neighborhoods while encouraging new residential development. Further, a reoccurring theme of the Comprehensive Plan is the need for diversity in housing, particularly housing that targets empty-nesters and young professionals.

Pulte's age-restricted Landings Series duplex homes have been included as part of Greenway Chase to satisfy demand in the community for age-restricted housing. In the age-restricted residential market, homebuyers are interested in smaller lots, which in turn reduce homeowners' association fees for maintenance and upkeep. These active 55+ homeowners lead active, busy lives, choose to spend time and money on other activities, and have little interest in doing yardwork. Age-restricted communities have gained in residential market share as our population ages, and minimum lot sizes have been steadily decreasing as previously mentioned.

The Landings Series duplexes will vary in size from 1,577 square feet to 2,697 square feet, 2 to 4 bedrooms, and 2 to 4 baths, and will feature a two-car garage. The architecture of the duplex homes will be consistent with market trends for age-restricted communities, with low maintenance exteriors and quality materials that will withstand the test of time. These age-restricted homes will be developed in accordance with the FHAA, including, but not limited to, the provisions of the HOPA.

As mentioned, the duplexes will include a separate, private outdoor amenity space consisting of approximately 1.41 acres that will feature a yoga lawn, pedestrian pathway, and seating area with benches to provide residents an outdoor recreational opportunity within the age-restricted community. A homeowners' association will be established for Greenway Chase with a separate committee for the age-restricted duplex pod. The HOA will perform maintenance on the amenity spaces, open areas, and green space areas of the Greenway Chase neighborhood. Snow removal, lawn mowing, landscape maintenance, and exterior maintenance will be provided for the age-restricted duplexes.

b. Adverse impact. The proposed use and development will not have a substantial adverse effect upon adjacent property, the character of the area, or the public health, safety, and general welfare.

The proposed use and Development will not have an adverse effect upon adjacent property, the character of the area, or the public health, safety, and general welfare. Libertyville Manor was constructed in the early 1980's. Since then, its use has become obsolete, providing Petitioner with the opportunity to purchase and redevelop the Subject Property with its highest and best use as a mixed residential development. The proposed Development and use will complement the surrounding residential subdivisions, including the Forest Creek townhomes to the east and townhomes in the Victoria Park subdivision to the west. Like the proposed age-restricted duplexes, the Victoria Park townhomes are also restricted to the 55+ demographic.

In addition, perimeter vegetation will be preserved and added to provide separation between Greenway Chase and the adjacent uses. Tree preservation zones will also be utilized to provide additional buffer between the single-family and duplex homes internal to the community.

c. *Interference with surrounding development. The proposed use and development will be constructed, arranged, and operated so as not to dominate the immediate vicinity or to interfere with the use and development of neighboring property in accordance with the applicable district regulations.*

The proposed use and development will be constructed, arranged, and operated so as not to dominate the immediate vicinity or to interfere with the use and development of neighboring properties. The proposed Development is consistent with the uses of the adjacent properties, which are largely residential. The Forest Creek townhome community is situated east of the subject property, detached single-family homes in the Wineberry subdivision are located to the south, and townhomes in the age-restricted Victoria Park 55+ townhome community are located to the west. The proposed Greenway Chase Subdivision will complement these developments and will provide a logical transition between uses. Perimeter vegetation will be preserved and added to provide separation between Greenway Chase and the adjacent uses. Tree preservation zones will also be utilized to provide additional buffer between the single-family and duplex homes internal to the community. In addition, the proposed Development will be an appropriate transitional use along a principal arterial roadway corridor like Peterson Road. The uses along Peterson Road become more retail and commercial in nature the further east you travel, which uses the proposed Development will help support.

d. *Adequate public facilities. The proposed use and development will be served adequately by essential public facilities and services such as streets, public utilities, drainage structures, police and fire protection, refuse disposal, parks, libraries, and*

schools, or the applicant will provide adequately for such services.

The proposed Development will be served adequately by essential public facilities and services such as streets, public utilities, drainage structures, police and fire protection, refuse disposal, parks, libraries, and schools, or the applicant will provide adequately for such services. Public utility capacity is available to the Subject Property in sufficient volume and all utility service necessary for the service of the subdivision will be constructed by Petitioner consistent with the Village's design standards. A private trash service will utilized and tenants will keep their trash bins in their garage and bring them out on garbage day.

e. *Traffic congestion. The proposed use and development will not cause undue traffic congestion nor draw significant amounts of traffic through local streets and will, when required by the board of trustees, incorporate appropriate vehicular trip reduction features such as, but not limited to, pedestrian/bicycle linkages within and between land uses, the use of traffic mitigation plans, and the incorporation of elements to encourage and facilitate the use of public transportation.*

The Subject Property is located in close proximity to key transportation corridors like US Route 45, Milwaukee Avenue, and I-94, and will be easily accessible via two access points off Peterson Road. Both access points will align with the subdivision entrances to the south of Peterson Road to address and avoid conflicting traffic movements and provide safe and convenient access to and from the Development. The curvilinear roadway internal to the Development will provide a more interesting streetscape and ensure homes are not all identically situated along street frontage. The streets will be dedicated to the Village and have been designed to circulate traffic efficiently and safely.

Further, a Traffic Study was completed by KLOA and was included with the submittal material. The Traffic Study contemplates existing and proposed roadway conditions and concludes the traffic that will be generated by the proposed development will be sufficiently accommodated by the area roadway system.

f. Destruction of significant features. The proposed use and development will not result in the destruction, loss, or damage of any natural, scenic, or historic feature of significant importance.

The proposed use and development will not result in the destruction, loss, or damage of any natural, scenic, or historic feature of significant importance. The existing Libertyville Manor has been situated on the Subject Property since the 1980's. Petitioner intends to demolish the facility and redevelop the Subject Property with a mixed residential use. No natural, scenic, or historic feature of significant importance are located on the Subject Property. Trees will be preserved where feasible and existing wetlands will be avoided to minimize any detrimental environmental impact. This has been accomplished by emphasizing preservation and creation of open space to be shared by future residents over the size of individual private yards. Approximately 42% of the proposed Development's acreage is dedicated to open space. While five (5) wetland sites are currently located on the Subject Property, the Development avoids jurisdictional U.S. Army Corps of Engineers' wetlands and minimizes impact to those lesser quality wetlands regulated by the Lake County Stormwater Management Commission (SMC).

g. Compliance with standards. The proposed use and development complies with all additional standards imposed on it by the particular provision of this chapter

authorizing such use.

Not applicable. No additional standards are required for a Special Use Permit for Senior Housing.

APPROVAL OF A PRELIMINARY PLAT OF SUBDIVISION

Petitioner seeks approval of the Preliminary Plat of Subdivision, a copy of which has been submitted herewith, to subdivide the Property to allow the construction of sixty-four (64) single-family homes and seventy (70) age-restricted duplex units. As the proposed Preliminary Plat of Subdivision is compliant with Village Code, Petitioner requests the Preliminary Plat of Subdivision be approved.

APPROVAL OF BULK REGULATION DEVIATIONS

Pursuant to Section 26-16-13.7 of Village Code, the Board of Trustees has the authority, to change, alter, vary, modify or waive any provisions of Village Zoning Code or Village Subdivision Code as they apply to an approved planned development. Approval of the requested deviations is appropriate based on the following factors:

a. *Will achieve the purposes for which planned developments may be approved pursuant to subsection 26-16-13.1;*

The requested deviations will achieve the purposes for which planned developments may be approved. Reoccurring themes highlighted in Village Code Section 26-16-13.1 include creation of a more desirable environment, efficient use of land resulting in smaller networks of utilities and streets to lower development and housing costs, the promotion of a creative approach to the use of land and related physical facilities resulting in better design and development, including aesthetic

amenities, and preservation of conservation areas and open space.

As more specifically set forth on Exhibit B, Petitioner requests deviations to the bulk regulations for the R-7 zoning district and planned developments. These include deviations to lot area, lot width, building setbacks, building coverage, lot coverage, and minimum perimeter landscaping requirements. A deviation has also been requested to waive the requirement for installation of a sidewalk along Peterson Road. The requested deviations will support the development of Greenway Chase in furtherance of the above-listed objectives.

The proposed Development promotes the creative use and development of the Subject Property. Generally speaking, Petitioner's desire to preserve the natural features and provide open space and amenities within the Development guides the layout and design of Greenway Chase. Greenway Chase has been strategically designed to create larger contiguous spaces to be shared by the community that maximize open space and minimize impact to the Subject Property's wetlands, natural features, and conservation areas. This has been accomplished by emphasizing preservation and creation of open space over the size of individual private yards. The result is smaller lots, but smaller lots promote reduced maintenance, preservation and creation of open space, and creation of and park/amenity sites. The smaller lot sizes and associated deviations also reduce development costs by requiring less road, less watermain, less sewer, and less overall infrastructure per lot. This reduction in infrastructure also translates to savings on future maintenance expenses.

While Petitioner also requests a deviation to the perimeter landscaping requirements, there is ample open space and landscaping planned for the Development to provide the necessary buffering within the community and between adjacent uses. The adjacent uses to the east and west are townhomes and compatible with the proposed Development, such that there is no need to

substantially landscape between similar uses. Regardless, perimeter vegetation and landscaping will be preserved where possible and additional landscape treatments will be provided along the perimeter of the community. While Village Code requires 20' of perimeter landscaping, only 19' was possible along portions of the west perimeter due to site constraints. Petitioner has taken extra care to include additional landscaping treatments at this location to ensure separation and privacy are provided between Greenway Chase and the subdivision to the west.

Petitioner has also requested a deviation to the requirement that a sidewalk be installed along Peterson Road. While sidewalks will be installed interior to the Development, there is no need for a sidewalk along Peterson Road. No sidewalk currently exists or is planned for along Peterson Road in the general vicinity of the Subject Property, such that even if Petitioner were to install a sidewalk on the Subject Property, it would have nothing to tie into and would provide no additional benefit to residents of the Development. In lieu of a sidewalk along Peterson Road, Petitioner has provided additional landscaping along Peterson Road to provide an attractive buffer and facade along the roadway. Sidewalks and amenity space have been included within the Development for recreational opportunities. In addition, a Village easement has been provided for a potential future pathway connection from Greenway Chase to the existing pathway network in the park and open space areas to the north for an additional recreational amenity.

b. Will not violate the general purposes, goals, and objectives of this chapter and the official comprehensive plan; and

The proposed Development will not violate the general purposes, goals, and objectives of this chapter and the official comprehensive plan. A stated purpose of the Village Code is to perpetuate the existing high quality residential character of the Village by preserving established neighborhoods while encouraging new residential development. Further, a reoccurring theme of

the Comprehensive Plan is the need for diversity in housing, particularly housing that targets empty-nesters and young professionals. The proposed Development and associated deviations will help satisfy these objectives and generate creation of desirable environments, efficient use of land, and promote a creative approach to the use of land and related physical facilities resulting in better design and development. With both single-family detached and age-restricted offerings, the proposed Development will provide the Village with additional housing options that target multiple demographics, including young professionals and empty-nesters. Greenway Chase will complement the surrounding residential subdivisions, including the Forest Creek townhomes to the east and age-restricted townhomes in the Victoria Park subdivision to the west. Aside from improving the Village's housing stock, Greenway Chase will create new revenue streams through property, utility, and sales taxes.

c. Will result in a development providing compensating amenities to the village.

The proposed Development and deviations will provide compensating amenities to the Village. The proposed Development will provide the Village with additional housing options, will help support retail uses along Peterson Road, and will complement the surrounding residential subdivisions, including the Forest Creek townhomes to the east and age-restricted townhomes in the Victoria Park subdivision to the west.

In total, forty-two percent (42%) of the area of the Subject Property will be preserved as common open space, either dedicated to preservation, landscape enhancement, or recreational spaces designed to meet the needs of future residents. This represents 140% of the open space required under the Village's PUD standards. The result is that of the 134 homes in the Development, ninety-three percent (93%) back up to open space!

In addition, two (2) separate amenity/park spaces are planned for the Development. The

first consists of a 1.41-acre private amenity space for the age-restricted portion of the Development. This space will feature a pedestrian pathway, yoga lawn, and outdoor seating/bench area. A separate 1.14-acre public park area has also been planned for near the west entrance of the Development. This park space is anticipated to be improved with playground equipment and will be ultimately dedicated to the Libertyville Park District for use by the public. While the park spaces are relatively compact, they are strategically located within distinct neighborhoods that comprise the Development to provide open lawn space, creating recreational opportunities for Greenway Chase residents.

APPROVAL OF DESIGN STANDARD DEVIATIONS

Pursuant to Section 26-16-13.7 of Village Code, the Board of Trustees has the authority, to change, alter, vary, modify or waive any provisions of Village Zoning Code or Village Subdivision Code as they apply to an approved planned development. Approval of the requested deviations is appropriate based on the following factors:

a. *Will achieve the purposes for which planned developments may be approved pursuant to subsection 26-16-13.1;*

The requested deviations will achieve the purpose for which planned developments may be approved. A core objective of the Village is the creation of a more desirable environment than would be possible through strict application of other Village land use regulations. To achieve this objective, Petitioner requests deviations to the Village's design standards for the R-7 zoning district. Specifically, Petitioner is requesting deviations to Village Code provisions related to anti-monotony standards, size and location of garage doors, and individual dormer width. The proposed Greenway Chase includes housing designed to meet unique market needs within the community. It has been Petitioner's experience in recent years that in the residential market, homebuyers are

interested in smaller lots, reducing the time and money spent on maintenance and upkeep of larger lots. Families lead much busier lives and choose to spend time and money on other activities and products rather than the upkeep of a large yard. Over the last ten (10) years, Pulte's residential subdivisions have emphasized common amenities over private yards.

The smaller lots provided in Greenway Chase will offer modern lifestyle layouts and amenities in a compact footprint, allowing a broader spectrum of buyers access to quality new construction in Libertyville. To cost-effectively deliver these homes, thereby reducing sale prices, deviations to the architectural design standards are required. The proposed lots will be narrower than typical developments. Given the width of the Springs Series homes, there is limited flexibility with respect to the configuration of the ground floor level. The garage door and front entrance become dominant features by means of necessity. With this, there is little leeway to generate the variety of forms and elements required by Village Code to the extent described.

In lieu of the Village Code requirements, Pulte has provided its own anti-monotony standards for the Village's approval. The proposed anti-monotony standards provide restrictions for both location of different elevations/configurations and colors to provide the community and Village with ample architectural diversity within the Development. A deviation to permit individual dormers with a width exceeding eight (8) feet has also been included to provide additional architectural variety within the community.

b. Will not violate the general purposes, goals, and objectives of this chapter and the official comprehensive plan; and

The requested deviations to the design standards will not violate the general purposes, goals, and objectives of Village Code and the official comprehensive plan. A stated objective of planned developments is the combination and coordination of architectural styles, building forms,

and building relationships. Further, the Comprehensive Plan supports diversity of housing typologies at various price points to accommodate various demographics, specifically empty-nesters and young professionals. The proposed Development and associated deviations support and work to promote these objectives within the Village.

While design standard deviations have been requested, the proposed single-family elevations provide ample diversity and housing options. The Springs Series will offer five (5) model options ranging in size from 1,678 to 2,567 square feet, 3 to 5 bedrooms, 2.5 to 4 baths, and feature a two-car garage to meet the diverse needs of the community. The architecture of the Springs Series can be characterized as modern American and will be based on traditional styling that includes farmhouse, low country, heritage, and craftsman designs to bring a new and refreshing housing option to the Village. As noted, in lieu of the Village Code requirements, Pulte has provided its own anti-monotony standards for the Village's approval. The proposed anti-monotony standards provide restrictions for both location of different elevations/configurations and home colors to provide the community and Village with ample architectural diversity within the community. A deviation to permit individual dormers with a width exceeding eight (8) feet has also been included to provide additional architectural variety within the community.

In addition, a common theme in the Comprehensive Plan is preservation and protection of existing neighborhoods. Notably, Greenway Chase has no connection or real relationship to either the Victoria Park or Forest Creek subdivisions. Given the nature of access and connectivity of Greenway Chase to the adjacent subdivisions, the requested deviations will not impair the adjacent neighborhoods and underlying purpose and intent of the design standards.

c. Will result in a development providing compensating amenities to the village.

The proposed deviations will result in a development providing compensating amenities to

the Village. The proposed architectural and design standard deviations will not undercut the overall benefit of the proposed to the Village. Pulte's proposed anti-monotony standards have promoted successful developments across the Chicagoland area, providing communities with diversity in housing while appealing to a wide range of prospective home buyers. While Petitioner could build large homes on large lots consistent with the trend of teardown activity in the Village, the 2030 Comprehensive Plan specifically identifies the need for diversity in housing product. The development of Greenway Chase will compensate for the deviations through satisfaction of the Village's goal toward diversity of housing stock.

WHEREFORE, by reason of the foregoing, the undersigned Petitioner, Pulte Home Company, LLC, respectfully petitions the Village of Libertyville to:

(i) Annex the Annexation Property to the Village pursuant to a separate petition submitted by the owners of record;

(ii) Upon annexation of the Annexation Property, rezone the entire Subject Property to the Village's R-7 "Single-Family Attached Residential District";

(iii) Amend the Comprehensive Plan Future Land Use Map to "Single-Family Attached Residential";

(iv) Approve a Special Use for a Planned Development for the development of Greenway Chase, a one hundred thirty-four (134) unit mixed-residential development with associated deviations as more specifically detailed on Exhibit B and depicted on the submitted development plans;

(v) Approve a Planned Development Concept Plan;

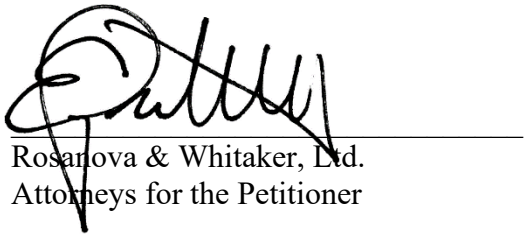
(vi) Approve a Special Use to permit Senior Citizen Housing in the R-7 zoning district;

(vii) Approve a Preliminary Plat of Subdivision; and

(viii) Approve such other relief from the Village Code as may be deemed necessary and appropriate to develop the Subject Property consistent with the plans submitted herewith.

RESPECTFULLY SUBMITTED this 28th day of February, 2025.

PETITIONER:
PULTE HOME COMPANY, LLC,
a Michigan limited liability company



Rosanova & Whitaker, Ltd.
Attorneys for the Petitioner

EXHIBIT A

LEGAL DESCRIPTION – SUBJECT PROPERTY

PARCEL 1:

THAT PART OF THE NORTHEAST QUARTER OF SECTION 8, TOWNSHIP 44 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: BEGINNING AT A POINT ON THE SOUTH LINE OF AND 6.82 CHAINS WEST FROM THE SOUTHEAST CORNER OF SAID NORTHEAST QUARTER; THENCE WEST ALONG SAID SOUTH LINE, 2229.68 FEET TO THE SOUTHWEST CORNER OF SAID NORTHEAST QUARTER; THENCE NORTH ALONG THE WEST LINE OF SAID NORTHEAST QUARTER, 1410.30 FEET; THENCE EAST 2230.38 FEET TO A POINT WHICH IS 6.82 CHAINS WEST FROM THE EAST LINE OF SAID NORTHEAST QUARTER AND 1405.2 FEET NORTH FROM THE SOUTH LINE OF SAID NORTHEAST QUARTER; THENCE SOUTH TO THE PLACE OF BEGINNING (EXCEPTING THEREFROM THE FOLLOWING: (A) THE EAST 1920.68 FEET THEREOF; (B) THAT PART THEREOF, IF ANY, FALLING IN BROOKHILL PARK, A SUBDIVISION OF PARTS OF SECTIONS 8 AND 9, TOWNSHIP AND RANGE AFORESAID, RECORDED APRIL 24, 1925, AS DOCUMENT 256105, IN BOOK "M" OF PLATS, PAGE 100; AND ALSO (C) EXCEPTING THEREFROM THAT PART CONVEYED BY WARRANTY DEED DATED SEPTEMBER 25,1967, TO THE STATE OF ILLINOIS FOR THE USE OF DEPARTMENT OF PUBLIC WORKS AND BUILDINGS DESCRIBED AS FOLLOWS: PART OF THE NORTHEAST QUARTER OF SECTION 8, TOWNSHIP 44 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, BOUNDED AND FULLY DESCRIBED AS FOLLOWS: BEGINNING AT THE SOUTHWEST CORNER OF SAID NORTHEAST QUARTER; THENCE EASTERLY ALONG THE SOUTH LINE OF SAID NORTHEAST QUARTER, 309.00 FEET; THENCE NORTHERLY PARALLEL TO THE EAST LINE OF SAID NORTHEAST QUARTER, 74.81 FEET; THENCE WESTERLY TOWARD A POINT ON THE WEST LINE OF SAID NORTHEAST QUARTER, SAID POINT BEING 75.00 FEET NORTHERLY FROM THE SOUTHWEST CORNER OF SAID NORTHEAST QUARTER, 217.17 FEET TO A POINT OF CURVE TOWARD THE SOUTH; THENCE ON SAID CURVE TO THE SOUTH, THE RADIUS OF WHICH IS 17,263.74 FEET, 91.83 FEET TO A POINT ON THE WEST LINE OF SAID NORTHEAST QUARTER, THIS POINT BEING 74.76 FEET NORTHERLY FROM THE SOUTHWEST CORNER OF SAID NORTHEAST QUARTER; THENCE SOUTHERLY ON THE WEST LINE OF SAID NORTHEAST QUARTER, 74.76 FEET TO SAID POINT OF BEGINNING), IN LAKE COUNTY, ILLINOIS,

PARCEL 2:

THE EAST 462.0 FEET OF THE SOUTH 1410.30 FEET (AS MEASURED ALONG THE EAST AND SOUTH LINES, RESPECTIVELY) OF THE NORTHWEST 1/4 OF SECTION 8, TOWNSHIP 44 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, (EXCEPT THE SOUTH 1079.60 FEET THEREOF), ALL IN, LAKE COUNTY, ILLINOIS. AND THE WEST 420.5 FEET OF THE EAST 882.50 FEET OF THE SOUTH 1410.30 FEET (AS MEASURED ALONG THE EAST AND SOUTH LINES, RESPECTIVELY) OF THE

NORTH WEST 1/4 OF SECTION 8, TOWNSHIP 44 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN (EXCEPT THAT PART DESCRIBED AS FOLLOWS, TO-WIT: BEGINNING AT THE SOUTH EAST CORNER OF THE SAID WEST 420.5 FEET OF THE EAST 882.50 FEET OF THE SOUTH 1410.30 FEET OF THE NORTH WEST 1/4 OF SECTION 8; THENCE NORTHERLY ALONG THE EAST LINE OF THE SAID WEST 420:5 FEET OF THE EAST 882.50 FEET OF THE SOUTH 1410.30 FEET OF THE NORTH WEST 1/4 OF SECTION 8 FOR A DISTANCE OF 898.19 FEET; THENCE WESTERLY ALONG A LINE TO THE WEST LINE OF THE SAID EAST 882.50 FEET OF THE NORTH WEST 1/4 OF SECTION 8 TO A POINT WHICH IS 896.80 FEET NORTHERLY OF THE SOUTH LINE OF THE SAID NORTH WEST 1/4 OF SECTION 8 (AS MEASURED ALONG THE SAID WEST LINE OF THE EAST 882.50 FEET); THENCE SOUTHERLY ALONG THE SAID WEST LINE OF THE EAST 882.50 FEET OF THE SOUTH 1410.30 FEET OF THE NORTH WEST 1/4 OF SECTION 8 FOR A DISTANCE OF 896.80 FEET TO THE SAID SOUTH LINE OF THE NORTH WEST 1/4 OF SECTION 8; THENCE EASTERLY ALONG THE SAID SOUTH LINE OF THE NORTH WEST 1/4 OF SECTION 8 FOR A DISTANCE OF 420.5 FEET TO THE POINT OF BEGINNING OF THIS EXCEPTION), IN LAKE COUNTY, ILLINOIS.

PARCEL 3:

THAT PART OF THE EAST 1/2 OF THE NORTH WEST 1/4 OF SECTION 8, TOWNSHIP 44 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS BEGINNING AT A POINT ON THE WEST LINE OF THE EAST 1/2 OF SAID NORTH WEST 1/4 WHICH IS 1755 FEET SOUTH OF THE NORTH WEST CORNER THEREOF; THENCE EAST ALONG THE SOUTH LINE OF THE NORTH 1755 FEET OF SAID EAST 1/2 OF THE NORTH WEST 1/4, A DISTANCE OF 453.98 FEET TO THE WEST LINE OF THE EAST 882.50 FEET OF THE NORTH WEST 1/4 OF SAID SECTION 8; THENCE NORTH ALONG SAID WEST LINE OF THE EAST 882.50 FEET, A DISTANCE OF 512.66 FEET TO THE NORTH LINE OF THE SOUTH 1410.30 FEET OF THE NORTH WEST 1/4 OF SAID SECTION 8; THENCE WEST ALONG SAID NORTH LINE OF THE SOUTH 1410.30 FEET OF THE NORTH WEST 1/4, 454.51 FEET TO THE WEST LINE OF THE EAST 1/2 OF THE NORTH WEST 1/4 OF SAID SECTION 8; THENCE SOUTH ALONG SAID WEST LINE OF THE EAST 1/2 OF SAID NORTH WEST 1/4, A DISTANCE OF 513.26 FEET TO THE POINT OF BEGINNING, IN LAKE COUNTY, ILLINOIS.

PARCEL 4:

THE WEST 432 FEET OF THE EAST 462 FEET OF THE SOUTH 701 FEET OF THE NORTHWEST 1/4 OF SECTION 8, TOWNSHIP 44 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, EXCEPT THEREFROM THAT PART OF THE NORTHWEST 1/4 OF SECTION 8, TOWNSHIP 44 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, BOUNDED AND FULLY DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE EAST LINE OF SAID NORTHWEST 1/4 SAID POINT BEING 74.76 FEET NORTH OF THE SOUTHEAST CORNER THEREOF; THENCE SOUTH ON THE EAST LINE OF SAID NORTHWEST 1/4, 74.76 FEET TO THE SOUTHEAST

CORNER THEREOF; THENCE WESTERLY ON THE SOUTH LINE OF SAID NORTHWEST 1/4, 462.00 FEET; THENCE NORTHERLY PARALLEL WITH THE EAST LINE OF SAID NORTHWEST 1/4, 66.61 FEET; THENCE EASTERLY ON A CURVE VARYING TOWARD THE SOUTH. THE RADIUS OF WHICH IS 17,263.74 FEET TO SAID POINT OF BEGINNING), IN LAKE COUNTY, ILLINOIS.

PARCEL 5:

THE WEST 420.5 FEET OF THE EAST 882.5 FEET OF THAT PART OF THE EAST 1/2 OF THE NORTH WEST 1/4 OF SECTION 8, TOWNSHIP 44 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, LYING SOUTH OF THE NORTH 1755 FEET THEREOF, (EXCEPT THAT PART THEREOF DESCRIBED AS FOLLOWS: BEGINNING AT A POINT ON THE EAST LINE OF SAID PARCEL, 66.61 FEET NORTHERLY FROM THE SOUTH LINE OF SAID NORTH WEST 1/4; THENCE SOUTHERLY ALONG SAID EAST LINE, 66.61 FEET TO THE SOUTH LINE OF SAID NORTH WEST 1/4; THENCE WESTERLY ON THE SOUTH LINE OF SAID NORTH WEST 1/4, 420.50 FEET; THENCE NORTHERLY PARALLEL TO THE EAST LINE OF SAID NORTH WEST 1/4, 47.99 FEET; THENCE EASTERLY ON A CURVE VARYING TOWARD THE SOUTH, THE RADIUS OF WHICH IS 17,263.74 FEET TO THE POINT OF BEGINNING) IN LAKE COUNTY, ILLINOIS.

PARCEL 6:

THE EAST 462.0 FEET OF THE SOUTH 1079.6 FEET OF THE NORTHWEST 1/4 OF SECTION 8, TOWNSHIP 44 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, (EXCEPT THE WEST 432.0 FEET OF THE SOUTH 701.0 FEET THEREOF AND ALSO EXCEPTING ANY PART THEREOF FALLING WITHIN THE RIGHT OF WAY OF FEDERAL AID ROUTE 22 (ILLINOIS ROUTE 137)), IN LAKE COUNTY, ILLINOIS.

EXHIBIT B
REQUESTED DEVIATIONS

Bulk Regulation Deviation(s):

- Section 26-4-8.5(b) for a reduction of the minimum lot area requirements of single-family attached and detached dwelling units.
- Section 26-4-8.5(c) for a reduction of the minimum lot width requirements of single-family attached and detached dwelling units.
- Section 26-4-8.5(d) for a reduction of the minimum front, interior side, corner side, and rear setback requirements of single-family attached and detached dwelling units.
- Section 26-4-8.5(e) for an increase of the maximum building coverage requirements of single-family attached and detached dwelling units.
- Section 26-4-8.5(f) for an increase of the maximum lot coverage requirements of single-family attached and detached dwelling units.
- Section 26-16-13.5(b)(5)(e) for a reduction in the minimum depth of the perimeter landscaped open space.
- Section 26-16-13.5(b)(5)(h) to waive the requirement that a sidewalk shall be provided along each side of every street in or abutting a planned development.
- Section 26-11-7 to permit two (2) marketing signs along Peterson Road (IL Route 137) as depicted on the Signage Plan included with the submittal material.

Design Standard Deviation(s):

- Section 26-4-8.4(a)(1) exterior design standards to approve Petitioner's Anti-Monotony Code and Elevation and Color Package Restrictions.
- Section 26-4-8.4(a)(3) to permit individual dormers with a width exceeding eight (8) feet as measured from the exterior framing dimension of the vertical edges of the dormer.
- Section 26-4-8.4(a)(4) to permit garage door(s) on a single-family home to constitute more than 30% of the area of the front face of the dwelling to which such garage is attached.
- Section 26-4-8.4(a)(4) to permit garage door(s) on a single-family home to be oriented on the zoning lot so that the garage door(s) face the front or corner property lines abutting the public right-of-way.

EXHIBIT C
SUBDIVISION PLAT

EXHIBIT D
ZONING EXHIBIT

STATE OF ILLINOIS)
) **SS.**
COUNTY OF LAKE)

PETITION FOR ANNEXATION

TO: Mayor & Village Board
Village of Libertyville
Lake County, Illinois

Now comes the undersigned Petitioner, **SB Reserve Properties, Inc.**, an Illinois corporation (the "**Petitioner**"), which is the sole and exclusive owner of record of the approximately 13.82 acres of land located at 610 Peterson Rd, Libertyville, IL 60048, said land being located in unincorporated Lake County, Illinois and legally described as set forth on **Exhibit A**, attached hereto and made a part hereof (the "**Property**"). Petitioner hereby requests that the Property be annexed to the **Village of Libertyville**, Illinois (the "**Village**"), subject to the terms of a mutually agreeable annexation agreement.

In support of this Petition for Annexation, the Petitioner hereby swears to the following under oath and penalty of perjury:

1. SB Reserve Properties, Inc., an Illinois corporation, is the sole owner of the Property legally described on Exhibit A;
2. The Property is unincorporated and is not presently located in the jurisdiction of any other municipality;
3. The Property is contiguous to the Village of Libertyville, lies within the planning jurisdiction of the Village of Libertyville, and is identified in the Village's Comprehensive Plan for development within the corporate limits of the Village of Libertyville; and
4. There are no electors residing on the Property.

WHEREFORE, The Petitioner hereby respectfully requests that the Village take such action as is necessary and appropriate to annex the Property to the Village of Libertyville, subject to the mutually agreed upon terms of an annexation agreement, which annexation agreement shall: i) be drawn by and between the Village of Libertyville and Pulte Home Company, LLC, a Michigan limited liability company or its assignee ("**Developer**"); ii) become effective only upon Developer's acquisition of the Property; iii) set forth the terms upon which the Property shall be annexed to the Village of Libertyville; and iv) set forth such other rights and obligations with respect to the Property as the Village and Developer may mutually agree.

Dated this 2nd day of January, 2025

PETITIONER:

SB Reserve Properties, Inc., an Illinois corporation

By _____

Deborah A Stokovich, Principal
SB Reserve Properties Inc.

Signed and sworn to before me on this 2nd day of January, 2025

(Seal)

OFFICIAL SEAL
BARBARA L SELLERS
NOTARY PUBLIC, STATE OF ILLINOIS
MY COMMISSION EXPIRES: 04/17/2026

_____
Notary Public

EXHIBIT A
LEGAL DESCRIPTION OF THE PROPERTY

ANNEXATION LEGAL DESCRIPTION:

PARCEL 1:

THAT PART OF THE EAST 1/2 OF THE NORTH WEST 1/4 OF SECTION 8, TOWNSHIP 44 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS BEGINNING AT A POINT ON THE WEST LINE OF THE EAST 1/2 OF SAID NORTH WEST 1/4 WHICH IS 1755 FEET SOUTH OF THE NORTH WEST CORNER THEREOF; THENCE EAST ALONG THE SOUTH LINE OF THE NORTH 1755 FEET OF SAID EAST 1/2 OF THE NORTH WEST 1/4, A DISTANCE OF 453.98 FEET TO THE WEST LINE OF THE EAST 882.50 FEET OF THE NORTH WEST 1/4 OF SAID SECTION 8; THENCE NORTH ALONG SAID WEST LINE OF THE EAST 882.50 FEET, A DISTANCE OF 512.66 FEET TO THE NORTH LINE OF THE SOUTH 1410.30 FEET OF THE NORTH WEST 1/4 OF SAID SECTION 8; THENCE WEST ALONG SAID NORTH LINE OF THE SOUTH 1410.30 FEET OF THE NORTH WEST 1/4, 454.51 FEET TO THE WEST LINE OF THE EAST 1/2 OF THE NORTH WEST 1/4 OF SAID SECTION 8; THENCE SOUTH ALONG SAID WEST LINE OF THE EAST 1/2 OF SAID NORTH WEST 1/4, A DISTANCE OF 513.26 FEET TO THE POINT OF BEGINNING, IN LAKE COUNTY, ILLINOIS.

PARCEL 2:

THE EAST 462.0 FEET OF THE SOUTH 1410.30 FEET (AS MEASURED ALONG THE EAST AND SOUTH LINES, RESPECTIVELY) OF THE NORTHWEST 1/4 OF SECTION 8, TOWNSHIP 44 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, (EXCEPT THE SOUTH 1079.60 FEET THEREOF), ALL IN, LAKE COUNTY, ILLINOIS. AND THE WEST 420.5 FEET OF THE EAST 882.50 FEET OF THE SOUTH 1410.30 FEET (AS MEASURED ALONG THE EAST AND SOUTH LINES, RESPECTIVELY) OF THE NORTH WEST 1/4 OF SECTION 8, TOWNSHIP 44 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN (EXCEPT THAT PART DESCRIBED AS FOLLOWS, TO-WIT: BEGINNING AT THE SOUTH EAST CORNER OF THE SAID WEST 420.5 FEET OF THE EAST 882.50 FEET OF THE SOUTH 1410.30 FEET OF THE NORTH WEST 1/4 OF SECTION 8; THENCE NORTHERLY ALONG THE EAST LINE OF THE SAID WEST 420:5 FEET OF THE EAST 882.50 FEET OF THE SOUTH 1410.30 FEET OF THE NORTH WEST 1/4 OF SECTION 8 FOR A DISTANCE OF 898.19 FEET; THENCE WESTERLY ALONG A LINE TO THE WEST LINE OF THE SAID EAST 882.50 FEET OF THE NORTH WEST 1/4 OF SECTION 8 TO A POINT WHICH IS 896.80 FEET NORTHERLY OF THE SOUTH LINE OF THE SAID NORTH WEST 1/4 OF SECTION 8 (AS MEASURED ALONG THE SAID WEST LINE OF THE EAST 882.50 FEET); THENCE SOUTHERLY ALONG THE SAID WEST LINE OF THE EAST 882.50 FEET OF THE SOUTH 1410.30 FEET OF THE NORTH WEST 1/4 OF SECTION 8 FOR A DISTANCE OF 896.80 FEET TO THE SAID SOUTH LINE OF THE NORTH WEST 1/4 OF SECTION 8; THENCE EASTERLY ALONG THE SAID SOUTH LINE OF THE NORTH WEST 1/4 OF SECTION 8 FOR A DISTANCE OF 420.5 FEET TO THE POINT OF BEGINNING OF THIS EXCEPTION), IN LAKE COUNTY, ILLINOIS.

PINS: 11-08-100-014, 11-08-100-012

ANNEXATION LEGAL DESCRIPTION:

PARCEL 1:

THAT PART OF THE EAST 1/2 OF THE NORTH WEST 1/4 OF SECTION 8, TOWNSHIP 44 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS BEGINNING AT A POINT ON THE WEST LINE OF THE EAST 1/2 OF SAID NORTH WEST 1/4 WHICH IS 1755 FEET SOUTH OF THE NORTH WEST CORNER THEREOF; THENCE EAST ALONG THE SOUTH LINE OF THE NORTH 1755 FEET OF SAID EAST 1/2 OF THE NORTH WEST 1/4, A DISTANCE OF 453.98 FEET TO THE WEST LINE OF THE EAST 882.50 FEET OF THE NORTH WEST 1/4 OF SAID SECTION 8; THENCE NORTH ALONG SAID WEST LINE OF THE EAST 882.50 FEET, A DISTANCE OF 512.66 FEET TO THE NORTH LINE OF THE SOUTH 1410.30 FEET OF THE NORTH WEST 1/4 OF SAID SECTION 8; THENCE WEST ALONG SAID NORTH LINE OF THE SOUTH 1410.30 FEET OF THE NORTH WEST 1/4, 454.51 FEET TO THE WEST LINE OF THE EAST 1/2 OF THE NORTH WEST 1/4 OF SAID SECTION 8; THENCE SOUTH ALONG SAID WEST LINE OF THE EAST 1/2 OF SAID NORTH WEST 1/4, A DISTANCE OF 513.26 FEET TO THE POINT OF BEGINNING, IN LAKE COUNTY, ILLINOIS.

PARCEL 2:

THE EAST 462.0 FEET OF THE SOUTH 1410.30 FEET (AS MEASURED ALONG THE EAST AND SOUTH LINES, RESPECTIVELY) OF THE NORTHWEST 1/4 OF SECTION 8, TOWNSHIP 44 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, (EXCEPT THE SOUTH 1079.60 FEET THEREOF), ALL IN, LAKE COUNTY, ILLINOIS. AND THE WEST 420.5 FEET OF THE EAST 882.50 FEET OF THE SOUTH 1410.30 FEET (AS MEASURED ALONG THE EAST AND SOUTH LINES, RESPECTIVELY) OF THE NORTH WEST 1/4 OF SECTION 8, TOWNSHIP 44 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN (EXCEPT THAT PART DESCRIBED AS FOLLOWS, TO-WIT: BEGINNING AT THE SOUTH EAST CORNER OF THE SAID WEST 420.5 FEET OF THE EAST 882.50 FEET OF THE SOUTH 1410.30 FEET OF THE NORTH WEST 1/4 OF SECTION 8; THENCE NORTHERLY ALONG THE EAST LINE OF THE SAID WEST 420:5 FEET OF THE EAST 882.50 FEET OF THE SOUTH 1410.30 FEET OF THE NORTH WEST 1/4 OF SECTION 8 FOR A DISTANCE OF 898.19 FEET; THENCE WESTERLY ALONG A LINE TO THE WEST LINE OF THE SAID EAST 882.50 FEET OF THE NORTH WEST 1/4 OF SECTION 8 TO A POINT WHICH IS 896.80 FEET NORTHERLY OF THE SOUTH LINE OF THE SAID NORTH WEST 1/4 OF SECTION 8 (AS MEASURED ALONG THE SAID WEST LINE OF THE EAST 882.50 FEET); THENCE SOUTHERLY ALONG THE SAID WEST LINE OF THE EAST 882.50 FEET OF THE SOUTH 1410.30 FEET OF THE NORTH WEST 1/4 OF SECTION 8 FOR A DISTANCE OF 896.80 FEET TO THE SAID SOUTH LINE OF THE NORTH WEST 1/4 OF SECTION 8; THENCE EASTERLY ALONG THE SAID SOUTH LINE OF THE NORTH WEST 1/4 OF SECTION 8 FOR A DISTANCE OF 420.5 FEET TO THE POINT OF BEGINNING OF THIS EXCEPTION), IN LAKE COUNTY, ILLINOIS.

PINS: 11-08-100-014, 11-08-100-012

3816384

TRUSTEE'S DEED

Filed for Record in:
LAKE COUNTY, IL
FRANK J. MUSTRA-RECORDER
On Apr 25 1996
At 3:27pm
Receipt #: 17304
Doc/Type : TRU
Deputy - Cashier #5

THIS INDENTURE, dated **APRIL 11, 1996** between **AMERICAN NATIONAL BANK AND TRUST COMPANY OF CHICAGO**, a National Banking Association, duly authorized to accept and execute trusts within the State of Illinois, not personally but as Trustee under the provisions of a deed or deeds in trust duly recorded and delivered to said Bank in pursuance of a certain Trust Agreement dated **DECEMBER 30, 1994** known as Trust Number **119910-07** party of the first part, and

(Reserved for Recorders Use Only)

S.B. HOLDINGS, LTD., AN ILLINOIS CORPORATION
610 PETERSON ROAD, LIBERTYVILLE, ILLINOIS
party/parties of the second part. WITNESSETH, that said party of the first part, in consideration of the sum of TEN ($10.00) Dollars and other good and valuable consideration in hand paid, does hereby convey and **QUIT-CLAIM** unto said party/parties of the second part, the following described real estate, situated in **LAKE** County, Illinois, to-wit:

SEE ATTACHED LEGAL DESCRIPTION

Commonly Known As **REAR 610 PETERSON ROAD, LIBERTYVILLE, ILLINOIS**
Property Index Number **11-08-100-009**
together with the tenements and appurtenances thereunto belonging.

TO HAVE AND TO HOLD, the same unto said party of the second part, and to the proper use, benefit and behoof, forever, of said party of the second part.

This deed is executed by the party of the first part, as Trustee, as aforesaid, pursuant to and in the exercise of the power and authority granted to and vested in it by the terms of said Deed or Deeds in Trust and the provisions of said Trust Agreement above mentioned, and of every other power and authority thereunto enabling. This deed is made subject to the liens of all trust deeds and/or mortgages upon said real estate, if any, recorded or registered in said county.

IN WITNESS WHEREOF, said party of the first part has caused its corporate seal to be hereto affixed, and has caused its name to be signed to these presents by one of its officers, the day and year first above written.

AMERICAN NATIONAL BANK AND TRUST COMPANY OF CHICAGO
as Trustee, as aforesaid, and not personally,

By: _____
ANITA M. LUTKUS, TRUST OFFICER

STATE OF ILLINOIS)
COUNTY OF COOK) I, the undersigned, a Notary Public in and for said County and State, do hereby certify **ANITA M. LUTKUS,** an officer of American National Bank and Trust Company of Chicago personally known to me to be the same person whose name is subscribed to the foregoing instrument, appeared before me this day in person and acknowledged that said officer of said association signed and delivered this instrument as a free and voluntary act, for the uses and purposes therein set forth.

GIVEN under my hand and seal, dated **April 11, 1996**

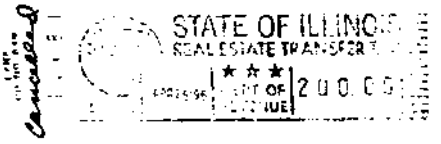
_____
RONDOLYN R. HAWKINS, NOTARY PUBLIC

Prepared By: American National Bank & Trust Company of Chicago 33 North LaSalle St Chicago IL 60690
MAIL TO: 610 Peterson Rd Libertyville

Jeffrey M Seidler Esq
Chuhak & Tecson #1700
30 N LaSalle Street
Chicago IL 60602

31 PA

COUNTY OF LAKE
Real Estate Transfer Tax
$100.00 PAID



Cancelled

$200.00

Exhibit B

3816384

Legal Description - S.B. Holdings

The East 462.0 feet of the South 1079.6 feet of the Northwest 1/4 of Section 8, Township 44 North, Range 11, East of the Third Principal Meridian, (except the West 432.0 feet of the South 701.0 feet thereof and also excepting any part thereof falling within the right of way of Federal Aid Route 22 (Illinois Route 137), in Lake County, Illinois.

Address: Rear 610 Peterson Road, Libertyville, Illinois

Tax ID No: 11-08-100-009

c:\1170\[illegible].wpd

PLAT ACT AFFIDAVIT

STATE OF ILLINOIS } SS.
COUNTY OF LAKE

3816384

DOCUMENT NO. _____

I Bishop Ivy Kovacevich, being duly sworn on oath, states that _____ resides at P.O. Box 771 Grayslake, Illinois. That the attached deed is not in violation of 765 ILCS 205/1 for one of the following reasons:

(1) The division or subdivision of the land into parcels or tracts of five acres or more in size which does not involve any new streets or easements of access;

2. The divisions of lots or blocks of less than one acre in any recorded subdivision which does not involve any new streets or easements of access;

3. The sale or exchange of parcels of land between owners of adjoining and contiguous land;

4. The conveyance of parcels of land or interests therein for use as right of way for railroads or other public utility facilities and other pipe lines which does not involve any new streets or easement of access;

5. The conveyance of land owned by a railroad or other public utility which does not involve any new streets or easements of access;

6. The conveyance of land for highway or other public purposes or grants or conveyances relating to the dedication of land for public use or instruments relating to the vacation of land impressed with a public use;

7. Conveyances made to correct descriptions in prior conveyances;

8. The sale or exchange of parcels or tracts of land following the division into no more than two parts of a particular parcel or tract of land existing on July 17, 1959 and not involving any new streets or easements of access;

9. The sale of a single lot of less than five acres from a larger tract when a survey is made by a registered surveyor; provided, however, that this exemption shall not apply to the sale of any subsequent lots from the same larger tract of land, as determined by the dimensions and configuration of the larger tract on October 1, 1973, and provided also that this exemption does not invalidate any local requirements applicable to the subdivision of land.

Amended by P.A. 80-318, Paragraph 1, effective October 1, 1977.

CIRCLE NUMBER ABOVE WHICH IS APPLICABLE TO ATTACHED DEED.

Affiant further states that _____ makes this affidavit for the purpose of inducing the Recorder of Deeds of Lake County, Illinois, to accept the attached deed for recording.

Bishop Ivy Kovacevich

"OFFICIAL SEAL"
KARLA A. BROWN
Notary Public, State of Illinois
My Commission Expires Oct. 26, 1997

SUBSCRIBED AND SWORN TO BEFORE ME
this 19 day of June, 19 96.

Karla A. Brown
Notary Public

PLATAF

Image# 053940770004 Type: DW
Recorded: 05/13/2015 at 11:50:27 AM
Receipt#: 2015-00028049
Page 1 of 4
Fees: $39.00
IL Rental Housing Fund: $9.00
Lake County IL Recorder
Mary Ellen Vanderventer Recorder
File 7194196

THIS INSTRUMENT WAS PREPARED BY AND AFTER RECORDING SHOULD BE RETURNED TO:
John P. Fadden
Tenney & Bentley, LLC
111 West Washington St., Ste. 1900
Chicago, IL 60602

SEND SUBSEQUENT TAX BILLS TO:
SB Reserve Properties, Inc.
610 Peterson Road
Libertyville, IL 60048
Attention: Milan Stokovich, President

WARRANTY DEED

THE GRANTOR, SB HOLDINGS, LTD., an Illinois corporation, of the Village of Libertyville, County of Lake, State of Illinois in consideration of the payment of TEN AND NO/100 DOLLARS ($10.00) and other good and valuable considerations in hand received, hereby CONVEYS and WARRANTS to SB RESERVE PROPERTIES, INC., an Illinois corporation, of 610 Peterson Road, Libertyville, IL 60048, the following described unimproved real estate situated in the County of Lake, State of Illinois, to wit:

Parcel 1: That part of the East Half of the Northwest Quarter of Section 8, Township 44 North, Range 11 East of the Third Principal Meridian, described as beginning at a point on the West line of the East Half of said Northwest Quarter which is 1755 feet South of the Northwest corner thereof; thence East along the South line of the North 1755 feet of said East Half of the Northwest Quarter, a distance of 453.98 feet to the West line of the East 882.50 feet of the Northwest Quarter of said Section 8; thence North along said West line of the East 882.50 feet, a distance of 512.66 feet to a point on the North line of the South 1410.3 feet of the Northwest Quarter of said Section 8; thence Westerly along said North line, a distance of 454.51 feet, more or less to a point on the West line of the East Half of said Northwest Quarter of Section 8; thence South along said West line of the East Half of said Northwest Quarter, a distance of 513.72 feet to the point of beginning, in Lake County, Illinois

Permanent Index No. 11-08-100-014
Address of Real Estate: 17710 West Peterson Road, Libertyville, Illinois 60048

Parcel 2A: The West 420.50 feet of the East 882.50 feet of the South 1410.30 feet as measured along the East and South lines respectively of the Northwest Quarter of Section 8, Township 44 North, Range 11 East of the Third Principal Meridian, except that part described as follows, to-wit: Beginning at the Southeast corner of said West 420.50 feet of the East 882.50 feet of the South 1410.30 feet of the Northwest Quarter of Section 8; thence Northerly along the East line of said West 420.50 feet of the East 882.50 feet of the South 1410.30 feet of the Northwest Quarter of Section 8 for a distance of 898.19 feet; thence Westerly along a line to the West line of said 882.50 feet of the Northwest quarter of Section 8 to a

(4)

point which is 896.80 feet Northerly of the South line of said Northwest Quarter of Section 8, as measured along the said West line of the East 882.50 feet; thence Southerly along the said West line of the East 882.50 feet of the South 1410.30 feet of the Northwest Quarter of Section 8 for a distance of 896.80 feet to the said South line of the Northwest Quarter of Section 8; thence Easterly along the said South line of the Northwest Quarter of Section 8 for a distance of 420.5 feet to the place of beginning of this exception, all in Lake County, Illinois

and

Parcel 2B: The East 462.0 feet of the South 1410.30 feet as measured along the East and South lines respectively of the Northwest Quarter of Section 8, Township 44 North, Range 11 East of the Third Principal Meridian, except the South 1079.60 feet of the East 462.0 feet thereof, all in Lake County, Illinois

EXCEPTING, however, and RESERVING unto Commonwealth Edison Company, its successors and assigns, the perpetual right, easement and authority to construct, install, operate, use, maintain, repair, replace, relocate, renew and remove poles, crossarms, wires, cables, conduit and other overhead and underground equipment, or both, for the transmission and distribution of electric energy in, upon, under, over, across and along the North 10 feet of Parcel 2B and the North and West 10 feet of Parcel 2A, together with the right of access thereto at all times for any and all such purposes, and also the right to trim or cut down from time to time such trees, bushes, shrubs and saplings which interfere or threaten to interfere with any of the rights reserved hereunder.

Permanent Index No. 11-08-100-012
Address of Real Estate: 17590 West Peterson Road, Libertyville, Illinois 60048

Parcel 3: The South 1079.60 feet of the East 462.0 feet as measured along the East and South lines respectively, of the Northwest Quarter of Section 8, Township 44 North, Range 11 East of the Third Principal Meridian, except the West 432.0 feet of the South 701.0 feet, and except that part thereof taken for highway purposes, all in Lake County, Illinois

Permanent Index No. 11-08-100-036
Address of Real Estate: Rear 610 Peterson Road, Libertyville, Illinois 60048

Parcel 4: That part of the Northeast Quarter of Section 8, Township 44 North, Range 11 East of the Third Principal Meridian, described as follows: Beginning at a point on the South line of and 6.82 chains West from the Southeast corner of said Northeast Quarter; thence West along said South line, 2229.68 feet to the Southwest corner of said Northeast Quarter; thence North along the West line of said Northeast Quarter, 1410.30 feet; thence East 2230.38 feet to a point which is 6.82 chains West from the East line of said Northeast Quarter and 1405.2 feet North from the South line of said Northeast Quarter; thence South to the place of beginning (excepting therefrom the following: (a) the East 1920.68 feet thereof; (b) that part thereof, if any, falling in Brookhill Park, a subdivision of parts of Sections 8 and 9, Township and Range aforesaid, recorded April 24, 1925, as Document 256105, in Book "M" of Plats, page 100; and also (c) excepting therefrom that part conveyed by Warranty Deed dated September 25, 1967, to the State of Illinois for the use of Department of Public Works and Buildings described as follows: Part of the

Northeast Quarter of Section 8, Township 44 North, Range 11 East of the Third Principal Meridian, bounded and fully described as follows: Beginning at the Southwest corner of said Northeast Quarter; thence Easterly along the South line of said Northeast Quarter, 309.00 feet; thence Northerly parallel to the East line of said Northeast Quarter, 74.81 feet; thence Westerly toward a point on the West line of said Northeast Quarter, said point being 75.00 feet Northerly from the Southwest corner of said Northeast Quarter, 217.17 feet to a point of curve toward the South; thence on said curve to the South, the radius of which is 17,263.74 feet, 91.83 feet to a point on the West line of said Northeast Quarter, this point being 74.76 feet Northerly from the Southwest corner of said Northeast Quarter; thence Southerly on the West line of said Northeast Quarter, 74.76 feet to said point of beginning), in Lake County, Illinois

Permanent Index No. 11-08-200-001
Address of Real Estate: 540 Peterson Road, Libertyville, Illinois 60048

DATED this 20Th. day of April, 2015.

SB HOLDINGS, LTD

By: Milan Stokovich
MILAN STOKOVICH, President

ATTEST:
JOHN STOKOVICH, Secretary

State of Illinois, County of Lake ss.

I, the undersigned, a Notary Public in and for the County and State aforesaid, DO HEREBY CERTIFY that Milan Stokovich, President, and John Stokovich, Secretary, of SB Holdings, Ltd., personally known to me to be the same persons whose names are subscribed to the foregoing instrument, appeared before me this day in person and acknowledged that as such President and Secretary, they signed and delivered the said instrument, pursuant to authority given by the Board of Directors of said corporation, as their free and voluntary act, and as the free and voluntary act and deed of said corporation, for the uses and purposes therein set forth.

GIVEN under my hand and official seal, this 20th day of April, 2015.

Laura Ferrigan
Notary Public

My commission expires August 5, 2015

Exempt under provisions of paragraph e, 35 ILCS 200/31-45, Real Estate Transfer Tax Act and Lake County Ordinance.

Date

Milan Stokovich 04/20/2015
Buyer, Seller or Representative

Official Seal
Laura Ferrigan
Notary Public, State of Illinois
Lake County
My Commission Expires August 5, 2015

3

PLAT ACT AFFIDAVIT

STATE OF ILLINOIS)
) SS
COUNTY OF LAKE)

Milan Stokovich, being duly sworn on oath, state that I reside at 217 Church Street, Libertyville, Illinois, and that the attached deed is not in violation of the Plat Act, Ch. 765 ILCS 205/1.1(b), as the provisions of this Act do not apply and no plat is required due to the following allowed exception **(Circle the number applicable to the attached deed):**

1. The division of subdivision of land into parcels or tracts of five (5) acres or more in size which does not involve any new streets or easements of access.

2. The divisions of lots of blocks of less than one (1) acre in any recorded subdivision which does not involve any new streets or easements of access.

(3.) The sale or exchange of parcels of land between owners of adjoining and contiguous land.

4. The conveyance of parcels of land or interest therein for use as right of way for railroads or other public utility facilities, which does not involve any new streets or easements of access.

5. The conveyance of land owned by a railroad or other public utility which does not involve any new streets or easements of access;

6. The conveyance of land for highway or other public purposes or grants or conveyances relating to the dedication of land for public use or instruments relating to the vacation of land impressed with a public use.

7. Conveyances made to correct descriptions in prior conveyances.

8. The sale or exchange of parcels or tracts of land following onto no more than 2 parts of a particular parcel or tract of land existing on July 17, 1959 and not involving any new streets or easements of access.

9. The sale of a single lot of less than five (5) acres from a larger tract when a survey is made by an Illinois Registered Land surveyor; provided, that this exemption shall not apply to the sale of any subsequent lots from the same larger tract of land, as determined by the dimensions and configuration of the larger tract on October 1, 1973 and provided also that this exemption does not invalidate any local requirements applicable to the subdivision of land.

10. The conveyance of land does not involve any land division and is described in the same manner as title was taken by grantor(s).

APPLICANT further states that this affidavit is made for the purpose of inducing the RECORDER OF LAKE COUNTY, ILLINOIS, to accept the attached deed for recording. (This affidavit is not applicable to Facsimile Assignment of Beneficial Interest.)

Milan Stokovich
Milan Stokovich

Subscribed and sworn to before me
this 13th day of May, 2015.

Laura Ferrigan
Notary Public
My commission expires: August 5, 2015

Official Seal
Laura Ferrigan
Notary Public, State of Illinois
Lake County
My Commission Expires August 5, 2015

JPF:sar/2454

LEGAL DESCRIPTION:

PARCEL 1:

THAT PART OF THE NORTHEAST QUARTER OF SECTION 8, TOWNSHIP 44 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: BEGINNING AT A POINT ON THE SOUTH LINE OF AND 6.82 CHAINS WEST FROM THE SOUTHEAST CORNER OF SAID NORTHEAST QUARTER; THENCE WEST ALONG SAID SOUTH LINE, 2229.68 FEET TO THE SOUTHWEST CORNER OF SAID NORTHEAST QUARTER; THENCE NORTH ALONG THE WEST LINE OF SAID NORTHEAST QUARTER, 1410.30 FEET; THENCE EAST 2230.38 FEET TO A POINT WHICH IS 6.82 CHAINS WEST FROM THE EAST LINE OF SAID NORTHEAST QUARTER AND 1405.2 FEET NORTH FROM THE SOUTH LINE OF SAID NORTHEAST QUARTER; THENCE SOUTH TO THE PLACE OF BEGINNING (EXCEPTING THEREFROM THE FOLLOWING: (A) THE EAST 1920.68 FEET THEREOF; (B) THAT PART THEREOF, IF ANY, FALLING IN BROOKHILL PARK, A SUBDIVISION OF PARTS OF SECTIONS 8 AND 9, TOWNSHIP AND RANGE AFORESAID, RECORDED APRIL 24, 1925, AS DOCUMENT 256105, IN BOOK "M" OF PLATS, PAGE 100; AND ALSO (C) EXCEPTING THEREFROM THAT PART CONVEYED BY WARRANTY DEED DATED SEPTEMBER 25,1967, TO THE STATE OF ILLINOIS FOR THE USE OF DEPARTMENT OF PUBLIC WORKS AND BUILDINGS DESCRIBED AS FOLLOWS: PART OF THE NORTHEAST QUARTER OF SECTION 8, TOWNSHIP 44 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, BOUNDED AND FULLY DESCRIBED AS FOLLOWS: BEGINNING AT THE SOUTHWEST CORNER OF SAID NORTHEAST QUARTER; THENCE EASTERLY ALONG THE SOUTH LINE OF SAID NORTHEAST QUARTER, 309.00 FEET; THENCE NORTHERLY PARALLEL TO THE EAST LINE OF SAID NORTHEAST QUARTER, 74.81 FEET; THENCE WESTERLY TOWARD A POINT ON THE WEST LINE OF SAID NORTHEAST QUARTER, SAID POINT BEING 75.00 FEET NORTHERLY FROM THE SOUTHWEST CORNER OF SAID NORTHEAST QUARTER, 217.17 FEET TO A POINT OF CURVE TOWARD THE SOUTH; THENCE ON SAID CURVE TO THE SOUTH, THE RADIUS OF WHICH IS 17,263.74 FEET, 91.83 FEET TO A POINT ON THE WEST LINE OF SAID NORTHEAST QUARTER, THIS POINT BEING 74.76 FEET NORTHERLY FROM THE SOUTHWEST CORNER OF SAID NORTHEAST QUARTER; THENCE SOUTHERLY ON THE WEST LINE OF SAID NORTHEAST QUARTER, 74.76 FEET TO SAID POINT OF BEGINNING), IN LAKE COUNTY, ILLINOIS,

PARCEL 2:

THE EAST 462.0 FEET OF THE SOUTH 1410.30 FEET (AS MEASURED ALONG THE EAST AND SOUTH LINES, RESPECTIVELY) OF THE NORTHWEST 1/4 OF SECTION 8, TOWNSHIP 44 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, (EXCEPT THE SOUTH 1079.60 FEET THEREOF), ALL IN, LAKE COUNTY, ILLINOIS. AND THE WEST 420.5 FEET OF THE EAST 882.50 FEET OF THE SOUTH 1410.30 FEET (AS MEASURED ALONG THE EAST AND SOUTH LINES, RESPECTIVELY) OF THE NORTH WEST 1/4 OF SECTION 8, TOWNSHIP 44 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN (EXCEPT THAT PART DESCRIBED AS FOLLOWS, TO-WIT: BEGINNING AT THE SOUTH EAST CORNER OF THE SAID WEST 420.5 FEET OF THE EAST 882.50 FEET OF THE SOUTH 1410.30 FEET OF THE NORTH WEST 1/4 OF SECTION 8; THENCE NORTHERLY ALONG THE EAST LINE OF THE SAID WEST 420:5 FEET OF THE EAST 882.50 FEET OF THE SOUTH 1410.30 FEET OF THE NORTH WEST 1/4 OF SECTION 8 FOR

A DISTANCE OF 898.19 FEET; THENCE WESTERLY ALONG A LINE TO THE WEST LINE OF THE SAID EAST 882.50 FEET OF THE NORTH WEST 1/4 OF SECTION 8 TO A POINT WHICH IS 896.80 FEET NORTHERLY OF THE SOUTH LINE OF THE SAID NORTH WEST 1/4 OF SECTION 8 (AS MEASURED ALONG THE SAID WEST LINE OF THE EAST 882.50 FEET); THENCE SOUTHERLY ALONG THE SAID WEST LINE OF THE EAST 882.50 FEET OF THE SOUTH 1410.30 FEET OF THE NORTH WEST 1/4 OF SECTION 8 FOR A DISTANCE OF 896.80 FEET TO THE SAID SOUTH LINE OF THE NORTH WEST 1/4 OF SECTION 8; THENCE EASTERLY ALONG THE SAID SOUTH LINE OF THE NORTH WEST 1/4 OF SECTION 8 FOR A DISTANCE OF 420.5 FEET TO THE POINT OF BEGINNING OF THIS EXCEPTION), IN LAKE COUNTY, ILLINOIS.

PARCEL 3:

THAT PART OF THE EAST 1/2 OF THE NORTH WEST 1/4 OF SECTION 8, TOWNSHIP 44 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS BEGINNING AT A POINT ON THE WEST LINE OF THE EAST 1/2 OF SAID NORTH WEST 1/4 WHICH IS 1755 FEET SOUTH OF THE NORTH WEST CORNER THEREOF; THENCE EAST ALONG THE SOUTH LINE OF THE NORTH 1755 FEET OF SAID EAST 1/2 OF THE NORTH WEST 1/4, A DISTANCE OF 453.98 FEET TO THE WEST LINE OF THE EAST 882.50 FEET OF THE NORTH WEST 1/4 OF SAID SECTION 8; THENCE NORTH ALONG SAID WEST LINE OF THE EAST 882.50 FEET, A DISTANCE OF 512.66 FEET TO THE NORTH LINE OF THE SOUTH 1410.30 FEET OF THE NORTH WEST 1/4 OF SAID SECTION 8; THENCE WEST ALONG SAID NORTH LINE OF THE SOUTH 1410.30 FEET OF THE NORTH WEST 1/4, 454.51 FEET TO THE WEST LINE OF THE EAST 1/2 OF THE NORTH WEST 1/4 OF SAID SECTION 8; THENCE SOUTH ALONG SAID WEST LINE OF THE EAST 1/2 OF SAID NORTH WEST 1/4, A DISTANCE OF 513.26 FEET TO THE POINT OF BEGINNING, IN LAKE COUNTY, ILLINOIS.

PARCEL 4:

THE WEST 432 FEET OF THE EAST 462 FEET OF THE SOUTH 701 FEET OF THE NORTHWEST 1/4 OF SECTION 8, TOWNSHIP 44 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, EXCEPT THEREFROM THAT PART OF THE NORTHWEST 1/4 OF SECTION 8, TOWNSHIP 44 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, BOUNDED AND FULLY DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE EAST LINE OF SAID NORTHWEST 1/4 SAID POINT BEING 74.76 FEET NORTH OF THE SOUTHEAST CORNER THEREOF; THENCE SOUTH ON THE EAST LINE OF SAID NORTHWEST 1/4, 74.76 FEET TO THE SOUTHEAST CORNER THEREOF; THENCE WESTERLY ON THE SOUTH LINE OF SAID NORTHWEST 1/4, 462.00 FEET; THENCE NORTHERLY PARALLEL WITH THE EAST LINE OF SAID NORTHWEST 1/4, 66.61 FEET; THENCE EASTERLY ON A CURVE VARYING TOWARD THE SOUTH. THE RADIUS OF WHICH IS 17,263.74 FEET TO SAID POINT OF BEGINNING), IN LAKE COUNTY, ILLINOIS.

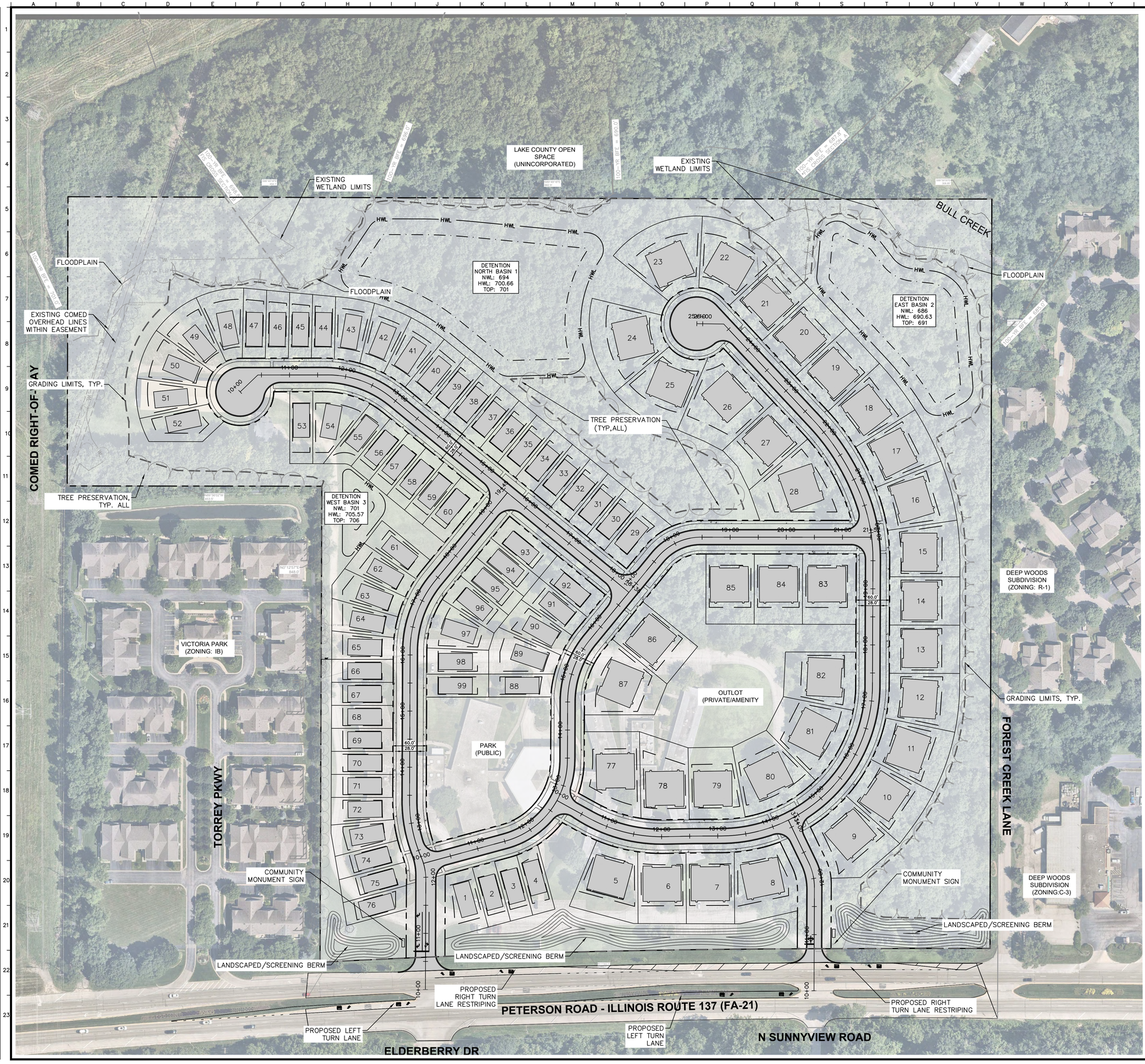
PARCEL 5:

THE WEST 420.5 FEET OF THE EAST 882.5 FEET OF THAT PART OF THE EAST 1/2 OF THE NORTH WEST 1/4 OF SECTION 8, TOWNSHIP 44 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, LYING SOUTH OF THE NORTH 1755 FEET THEREOF,

(EXCEPT THAT PART THEREOF DESCRIBED AS FOLLOWS: BEGINNING AT A POINT ON THE EAST LINE OF SAID PARCEL, 66.61 FEET NORTHERLY FROM THE SOUTH LINE OF SAID NORTH WEST 1/4; THENCE SOUTHERLY ALONG SAID EAST LINE, 66.61 FEET TO THE SOUTH LINE OF SAID NORTH WEST 1/4; THENCE WESTERLY ON THE SOUTH LINE OF SAID NORTH WEST 1/4, 420.50 FEET; THENCE NORTHERLY PARALLEL TO THE EAST LINE OF SAID NORTH WEST 1/4, 47.99 FEET; THENCE EASTERLY ON A CURVE VARYING TOWARD THE SOUTH, THE RADIUS OF WHICH IS 17,263.74 FEET TO THE POINT OF BEGINNING) IN LAKE COUNTY, ILLINOIS.

PARCEL 6:

THE EAST 462.0 FEET OF THE SOUTH 1079.6 FEET OF THE NORTHWEST 1/4 OF SECTION 8, TOWNSHIP 44 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, (EXCEPT THE WEST 432.0 FEET OF THE SOUTH 701.0 FEET THEREOF AND ALSO EXCEPTING ANY PART THEREOF FALLING WITHIN THE RIGHT OF WAY OF FEDERAL AID ROUTE 22 (ILLINOIS ROUTE 137)), IN LAKE COUNTY, ILLINOIS.



NORTH

GRAPHIC SCALE IN FEET
0 40 80 160

Call Before You Dig
JULIE
1-800-892-0123

GENERAL NOTES

1. ALL DIMENSIONS REFER TO THE BACK OF CURB UNLESS OTHERWISE NOTED.
2. BUILDING DIMENSIONS ARE TO THE OUTSIDE FACE OF BUILDING UNLESS OTHERWISE NOTED.
3. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS TO VERIFY ALL BUILDING DIMENSIONS.
4. REFER TO LANDSCAPE ARCHITECT PLANS FOR MONUMENT SIGN DETAILS.

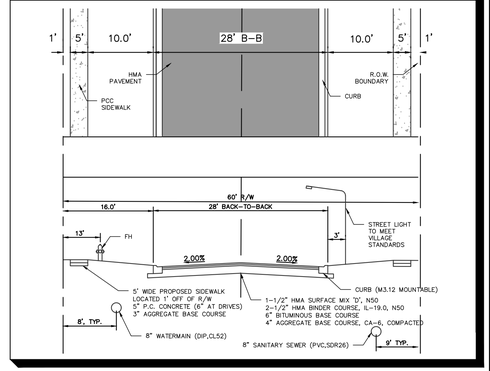
PROPERTY SUMMARY TABLE

SITE AREA	= 42.11	ACRES
R/W DEDICATION	= 6.55	ACRES
LOT AREA (CUMULATIVE)	= 17.69	ACRES
PARK DISTRICT DEDICATION	= 1.14	ACRES
PRIVATE AMENITY SPACE	= 1.41	ACRES
OPEN SPACE/DETENTION	= 2.92	ACRES
OPEN SPACE/UNDISTURBED AREA	= 12.40	ACRES
TOTAL LOTS PROVIDED	= 99	LOTS
UNIT COUNT	= 134	UNITS
ZONING SUMMARY:		
EXISTING ZONING DISTRICT	= MIXED (IB/R1/C3/UNINCORPORATED)	
PROPOSED ZONING DISTRICT	= R-7 PUD	
SINGLE FAMILY (41' X 110')	= 64	UNITS
GREENWAY CHASE SPRINGS		
FRONT YARD SETBACK	= 20	FEET
REAR YARD SETBACK	= 20	FEET
CORNER SIDE YARD SETBACK	= 15	FEET
SIDE YARD SETBACK	= 5	FEET*
*(MINIMUM 10 FT BUILDING SEPARATION)		
DUPLEXES (86' X 125')	= 70	UNITS
GREENWAY CHASE LANDINGS		
FRONT YARD SETBACK	= 20	FEET
REAR YARD SETBACK	= 30	FEET
CORNER SIDE YARD SETBACK	= 15	FEET
SIDE YARD SETBACK	= 6	FEET*
*(MINIMUM 12 FT BUILDING SEPARATION)		
MAXIMUM BUILDING COVERAGE SINGLE FAMILY	= 45%	
MAXIMUM IMPERVIOUS COVERAGE SINGLE FAMILY	= 50%	
MAXIMUM BUILDING COVERAGE DUPLEX	= 50%	
MAXIMUM IMPERVIOUS COVERAGE DUPLEX	= 55%	

FEMA NOTE

PER FLOOD INSURANCE RATE MAP PANEL NO. 17097C0161K EFFECTIVE DATE 9/19/2013, A PORTION OF THE SITE IS LOCATED IN ZONE 'AE' WITH A VARYING BASE FLOOD ELEVATION RANGING FROM 701.0 ON THE WEST SIDE TO 684.0 ON THE EAST SIDE, AS NOTED HEREIN. THE REMAINDER OF THE SITE IS LOCATED WITHIN ZONE 'X' (AREA OF MINIMAL FLOOD HAZARD).

TYPICAL ROADWAY CROSS-SECTION



No.	REVISIONS	DATE	BY

Kimley»Horn

© 2024 KIMLEY-HORN AND ASSOCIATES, INC.

570 LAKE COOK ROAD, SUITE 200
DEERFIELD, IL 60015
PHONE: 847.520.5504
WWW.KIMLEY-HORN.COM

SCALE: AS NOTED
DESIGNED BY: INS
DRAWN BY: KTRM
CHECKED BY: RNM

PULTE HOME COMPANY, LLC

OVERALL SITE PLAN

GREENWAY CHASE
610 PETERSON ROAD
LIBERTYVILLE, IL 60048

ORIGINAL ISSUE: 12/16/2024
KHA PROJECT NO. 168247001
SHEET NUMBER
C2.0

Drawing name: K:\CHS_LDE\V\168247001_Pulte_Libertyville_JL\2 Design\CAD\PlanSheets\C2.0 SITE PLAN.dwg C2.0 Jan 02, 2025, 10:53am by: Ian.Spence
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.


PETERSON ROAD (R. RT. 137)
137
N Sunnyview Rd

March 31st, 2025

Community Development Department
Tony Repp, Community Development Director
200 E. Cook Ave.
Libertyville, IL 60048

Re: Pulte Homes Redevelopment of Liberty Manor
Proposed Residential Subdivision (Greenway Chase)

Dear Mr. Repp,
We are in receipt of your review comments dated March 14th, 2025 for the proposed Pulte Homes – Greenway Chase site located at 610 Peterson Drive, Libertyville, IL. Below is a summary of the actions taken in response to these comments.

General:

1. **Storm Sewer** – The proposed layout of storm sewers should be revised to address the following comments for further review:
    a. Public Storm Sewer shall be located within the public right of way whenever possible. Where necessary, public storm sewer should connect as directly as possible to a detention basin via an appropriately sized side yard easement (15' minimum easement width over Village-owned utilities).
    Response: The storm sewer layout has been reviewed and revised to the extent possible. We understand that storm sewer within right-of-way is the preferred Village approach from a maintenance standpoint, however, allowing roadway drainage to be conveyed through rear yard storm sewers eliminates the need for additional drainage infrastructure (i.e., double lines of storm sewer). The latest design provided herein provides the most efficient layout to decrease redundant infrastructure. It shall be noted that within the Covenants, Conditions, and Restrictions, the Homeowner's Association will be required to provide proper maintenance of the storm sewer system within rear yards. Language will be provided within the CCRs that note if improper maintenance leads to drainage issues, the Village will have authority within drainage easements to properly maintain the infrastructure. Additionally, emergency overland flood routes are properly provided within the right-of-way and are now more clearly identified in the grading plans. More to come on this in future sections.

    b. Roadway drainage and sump pump discharges should be connected to public storm sewer, typically within the right of way.
    Response: Sump connections are identified in the typical utility layout details on sheet C4.0. Intent is for sumps to connect in the rear yards given the space constraints with the existing water and sanitary services, as well as, proposed landscaping/trees proposed within front yards. Additionally, storm sewer does not front all proposed buildings and therefore consistent connections to the public storm sewer main are not feasible.

    c. It's anticipated that any storm sewer proposed for rear yard drainage would be privately owned and maintained by the association of property owners.
    Response: Comment noted and agreed. Further detail has been provided by the applicant regarding HOA documentation and responsibilities—please see Example HOA Covenant and BMP provided in submittal. Additionally, an operations and maintenance manual (O&M) will be required per the Lake County WDO to be recorded for future maintenance purposes.

    d. Staff understands the challenges in drainage design and is open to discussions with the applicant regarding potential design alternatives.
    Response: Comment noted. We look forward to future collaboration on these items and appreciate the opportunity to review the design in more detail with staff.

2. **Emergency Overland Flood Routing** – Additional detail must be provided regarding the emergency overland flood routing as described below:
    a. The proposed grading plan shows emergency flood routing through side yards. These side yards need to be sized to accommodate the flow fully within a drainage easement or stormwater restriction.
    Response: Comment noted – formal sizing will be provided with final engineering, however, minor modifications to create overland flood route outlots/easements when within side yards has been considered. For instance, a designated outlot between lots 42/43 and lots 19/20 has been added for drainage considerations.

    b. Staff recommends any side yard overflow route be sized to convey flow assuming storm sewer is not functioning (clogged-inlet scenario).
    Response: Comment noted and agreed – overland flood route calculations provided with final engineering will assume total storm sewer failure and 100-year rainfall events.

    c. The applicant should explore the possibility for the west cul-du-sac (Roadway B) to overflow directly to Detention Basin #1 (perhaps though a side yard near Lots 42 and 43).
    Response: Agreed – overland flood route pathway has been simplified as noted. An outlot between lots 42/43 has been added.

3. **Traffic & Roadway Geometry**

    a. A Traffic Impact Study (TIS) was submitted by the applicant and reviewed by the Village's traffic consultant. Please be sure to address the comments within the Technical Memorandum dated February 14, 2025, prepared by Civiltech Engineering, Inc.
    Response: Comment noted – TIS responses will be provided under separate cover by the applicants Traffic Consultant, KLOA.

    b. The Village received a "Traffic Signal Warrant Analysis" on 3/7/2025, which is still under review and comments will be provided once a review is completed.
    Response: Comment noted.

    c. IDOT approval would be required for the final plat of subdivision, and an IDOT permit would be needed based on work required in the IL 137 (Peterson Rd) right-of-way. Due to the lengthy review/approval times from IDOT, the Village would strongly recommend that the developer submit to IDOT as early as possible to begin the review and permitting process. Please provide a copy of the application to IDOT, and CC the Village Engineering department on all correspondence with IDOT.
    Response: Comment noted – coordination with IDOT is on-going. The Concept Geometric Roadway Exhibit for improvements within the Peterson Road right-of-way is included herein for reference.

    d. Auto-turn diagrams only show one of the two cul-de-sacs. Please provide an additional diagram or confirm that both cul-de-sacs are of the exact same configuration.
    Response: The fire truck turning exhibit has been updated to include the eastern cul-de-sac. Please note, however, that both cul-de-sacs are the same diameter per International Fire Code sizing as previously discussed with the Fire Department.

    e. Please note that any significant change to the proposed access points (including location and/or movement restrictions) after Village Board Approval (including preliminary site plan or PUD approval) would likely be considered a 'major change' to the original site plan approval, thus requiring the applicants to go back through the Village approval process for said change. For this reason, staff stresses the importance of vetting allowable access points with IDOT as soon as possible.
    Response: Comment noted.

4. **Sanitary Sewer Main** – Staff notes the following regarding proposed public sanitary sewer, and additional comments should be anticipated upon review of future plan submittals:
    a. Based on review comments from the Village's sanitary sewer consultant and subsequent discussion between staff and the design engineer, it's anticipated that a new sanitary lift station will need to be constructed within the subdivision. Flows from upstream areas and a portion of the development would be directed to a sanitary sewer that crosses Peterson Road and connects to the existing public sewer within Elderberry Drive. The proposed layout should show a force main with no bends.
    Response: The sanitary sewer routing and addition of a proposed lift station has been incorporated into the most recent plan set. The proposed forcemain routing is straight/without bends as requested. Further detail will be provided with final engineering.

    b. Typically, sanitary main should be located underneath the roadway pavement to allow for separation from other utilities (gas, electric, etc.) that need to be located within the parkway. Also, extra sanitary manholes (and shorter lengths of sewer between them) should be avoided wherever possible. Staff is open to discussions about the ideal location(s) for Sanitary main.
    Response: Coordination with franchise utilities is on-going to locate dry utilities in the rear yards. Therefore no separation considerations are necessary and the sanitary sewer can remain as previously shown within the public right-of-way parkway.

5. Driveway Locations – To confirm the layout of proposed lots works with the proposed roadway configuration, the size and location of all driveways should be shown. Specifically, Lot 80 seems to be situated such that the driveway would be located directly within a tee intersection, which would not be acceptable.
Response: Comment noted - driveways for more challenging configurations are provided (i.e., lots 15, 80, and 86). Geometry has been revised as necessary to eliminate concerns with intersections/crosswalks conflicting with driveway locations.

6. On-Street Parking for Public Park – Please provide a curb bump-out on Road A to accommodate on-street parking near the public park. A conceptual markup is provided below for preliminary consideration:
Response: On-street parking has been added as noted. The site plan (sheet C2.0) identifies the location and parking count/dimensions.



7. **Existing Utilities and Easements** – The preliminary engineering plans indicate that various existing utilities and easements within the property would be abandoned. Copies of existing easement documents should be provided for verification of the rights granted, and any approval of the Preliminary Plat would be conditional on proper written authorization for the abandonment(s), from each utility owner or beneficiary of an

easement. Should any existing easements or utilities need to remain within the property, the plans will need to demonstrate how these are accommodated by the proposed subdivision layout.
Response: Coordination is on-going to vacate said easements. ComEd and Nicor have both agreed to vacation upon recording of Final Plat. The easements do not include any significant utility lines. Once available, a Plat of Easement Vacation will be provided for Village review. Note that included in the submittal documents are copies of all easement agreements that currently exist on the site.

8. **Easement for potential future Watermain Extension** – The subdivision plat should identify a Watermain Easement which could accommodate a potential future extension of the Village water system to the north property line of the development. The minimum width of a Village watermain easement is 15 feet. Staff's initial thoughts are that this easement could be located near or adjacent to Lot 23.
Response: Comment noted – agreed that the outlot south of lot 23 provides the best access for potential future connection of proposed public watermain. This easement has been added to the final site plan (C2.0 in the preliminary engineering plans) and the preliminary plat of subdivision enclosed.

9. **Sewer & Water Recapture Fees** – The proposed development limits include "Parcel 25" as identified within Village Ordinance 91-O-56 and therefore appears to be subject to water and sewer recapture fees. A preliminary estimate of the fee due per the ordinance is $810,675.81 (which had been calculated based on a payment date of January 1, 2025). This amount was calculated for only the property within Parcel 25, totaling approximately 25.48 acres.
Response: Comment noted.

10. **Preliminary Plat / Plat of Annexation** – The preliminary plat should be revised as needed to address all comments, for further review. It should be noted that staff has not reviewed provisions or certificates on the Preliminary Plat or Plat of Annexation. In general, these items would not be considered finalized on the subdivision plat until they are reviewed and approved in conjunction with the Final Engineering Plans. Any comments on the Plat of Annexation would be provided prior to its execution. Further comments on these items should be anticipated during review of subsequent submittals.
Response: Comment noted – the Preliminary Plat of Subdivision has been updated based on the revisions identified herein.

11. **Annexation Agreement** – The proposed subdivision plat depends on annexation of unincorporated property, and staff anticipates that both annexation and development agreements would need to be finalized prior to approval of the Final Plat of Subdivision. It would be a condition of any approval of the Preliminary Plat that completion of an annexation agreement is required.
Response: Comment noted.

We trust these responses and the description of changes above adequately address your comments. If you have any questions or require any additional information, please contact me at (331) 425-8039.

Sincerely,



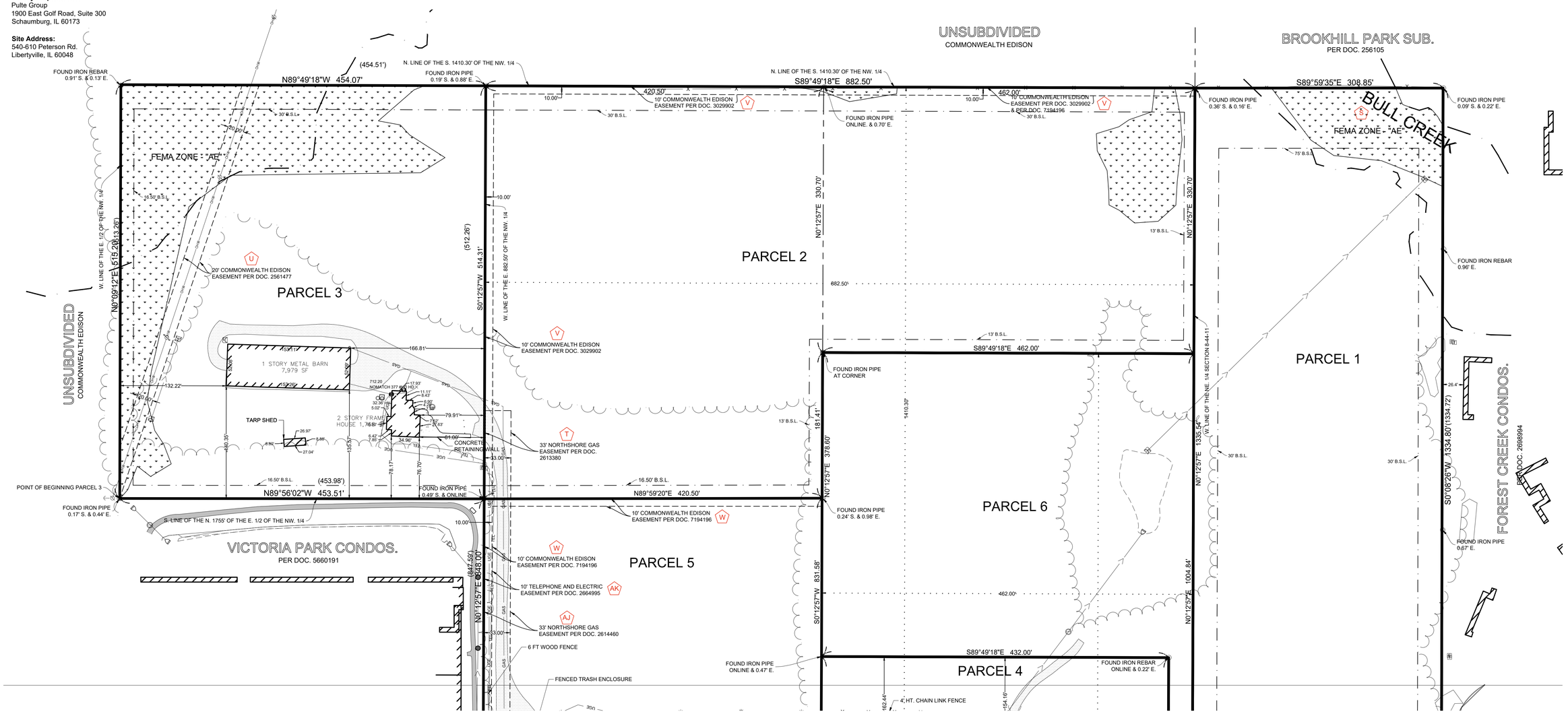
Ryan Martin
Project Manager, P.E.
Kimley-Horn and Associates, Inc.
Phone: 331-425-8039
Email: ryan.martin@kimley-horn.com

ALTA / NSPS LAND TITLE SURVEY

Tax PINs:
11-08-100-012
11-08-100-014
11-08-100-035
11-08-100-036
11-08-200-001

Survey Prepared For:
Pulte Group
1900 East Golf Road, Suite 300
Schaumburg, IL 60173

Site Address:
540-610 Peterson Rd.
Libertyville, IL 60048



LEGEND

BOUNDARY SYMBOLS	
	FOUND IRON PIPE
	FOUND IRON REBAR
	FOUND CONCRETE MONUMENT
ELECTRIC SYMBOLS	
	LIGHT POLE W/ ARM
	POWER POLE W/ LIGHT
	POWER POLE W/ TRANSFORMER
	GUY WIRE ANCHOR
	UTILITY POLE
	ELECTRIC METER
	ELECTRIC BOX
CONTROL SYMBOLS	
	SURVEY BENCHMARK
COMMUNICATIONS SYMBOLS	
	TELECOM MANHOLE
	TELECOM. PEDESTAL
GAS SYMBOLS	
	GAS VENT
	GAS VALVE
	GAS METER
WATER SYMBOLS	
	WATER VALVE VAULT
	WATER VALVE
	FIRE HYDRANT
	WATER UTILITY MARKER
SANITARY SYMBOLS	
	SANITARY MANHOLE
	SANITARY SEWER CLEAN OUT
STORM SYMBOLS	
	STORM MANHOLE
	STORM CULVERT END
	STORM FLARED END SECTION
	STORM INLET
	STORM INLET - B-HIVE
	STORM INLET - RECTANGULAR
MISC. SYMBOLS	
	TREE (DECIDUOUS)

HATCH LEGEND

	BUILDING OUTLINE AREA
	CONCRETE AREA
	ASPHALT PAVEMENT AREA
	GRAVEL AREA
	PAVER AREA
	WETLAND AREA

LINE TYPE LEGEND

	BOUNDARY LINE
	ADJACENT PROPERTY LINE
	EASEMENT LINE
	BUILDING LINE
	BUILDING SETBACK
	PROPERTY SETBACK
	ROAD CENTERLINE
W	WATER LINE
	SANITARY SEWER LINE
	STORM SEWER LINE
GAS	UNDERGROUND GAS LINE
OHE	OVERHEAD UTILITY LINE
UGE	UNDERGROUND ELECTRIC LINE
TEL	UNDERGROUND TELEPHONE LINE
	FENCE
	EDGE OF TREELINE

NORTH

BASIS OF BEARINGS

North American Datum of 1983 (2011)
Illinois State Plane East Zone (1201)

GRAPHIC SCALE IN FEET
60 0 30 60 120
1"=60' @ 24"X36"

No.	DATE	REVISION DESCRIPTION
1		-

Kimley»Horn
4201 Winfield Road
Warrenville, Illinois 60555
DESIGN FIRM # 184002012-0006
Tel. No. (630) 487-5550
www.kimley-horn.com

Scale	Drawn by	Checked by	Date	Project No.	Sheet No.
1"=100'	MGJ	BAS	11/08/24	168247001	2 OF 3

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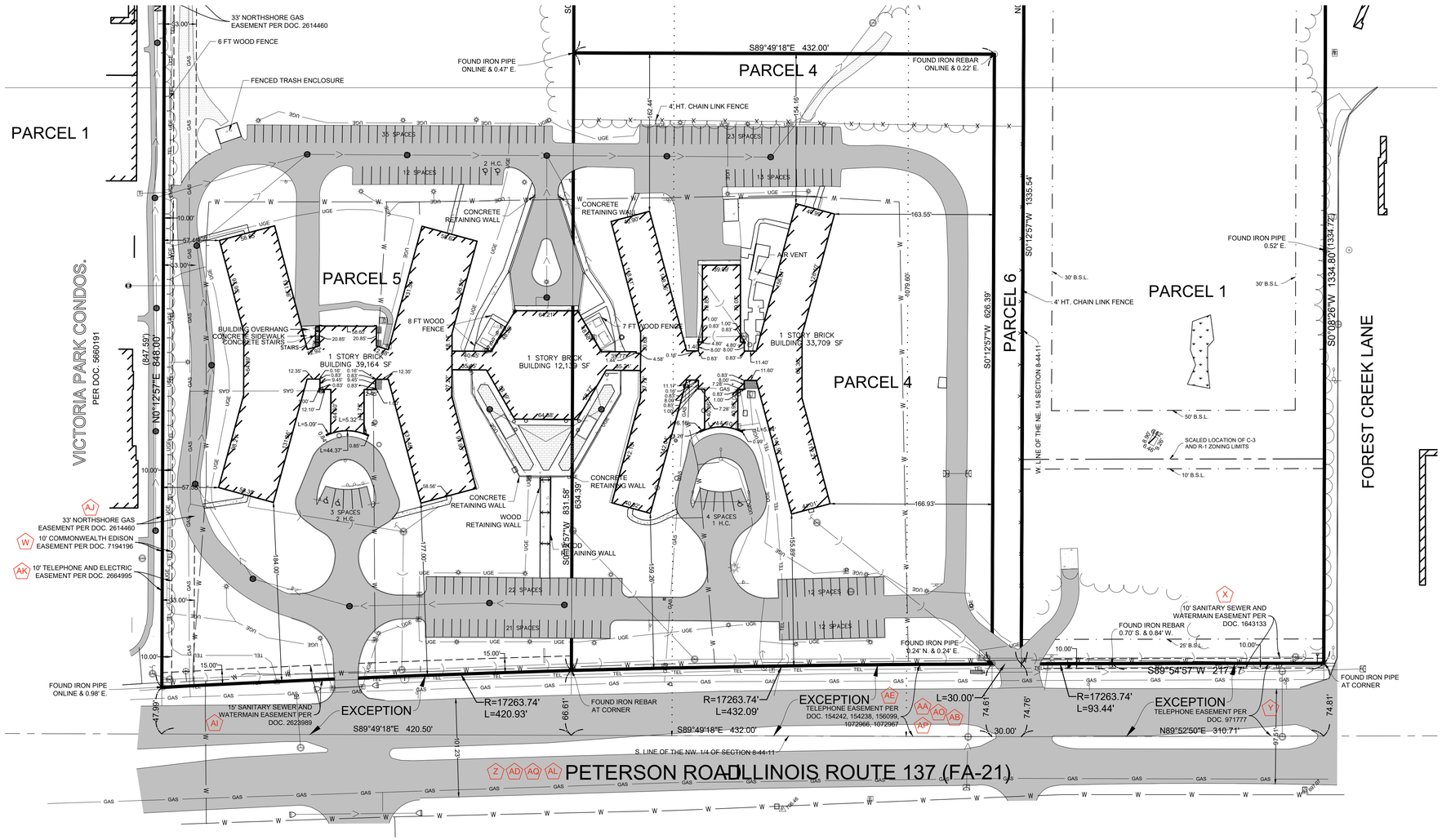
D:\05 NAME - K:\CHS_LDC\168247001_PULTE_LIBERTYVILLE_ALT\DESIGN\CADD\SURVEY\SURVEY DESIGN\ALTA - 168247001 SHEETS 3 ALDWG PLOTTED BY - MOLLER, KIMBATH 3/7/2025 10:59 AM LAST SAVED - 3/7/2025 10:57 AM

ALTA / NSPS LAND TITLE SURVEY

Tax PINs:
11-08-100-012
11-08-100-014
11-08-100-035
11-08-100-036
11-08-200-001

Survey Prepared For:
Pulte Group
1900 East Golf Road, Suite 300
Schaumburg, IL 60173

Site Address:
540-610 Peterson Rd.
Libertyville, IL 60048



LEGEND

BOUNDARY SYMBOLS	
	FOUND IRON PIPE
	FOUND IRON REBAR
	FOUND CONCRETE MONUMENT
ELECTRIC SYMBOLS	
	LIGHT POLE W/ ARM
	POWER POLE W/ LIGHT
	POWER POLE W/ TRANSFORMER
	GUY WIRE ANCHOR
	UTILITY POLE
	ELECTRIC METER
	ELECTRIC BOX
CONTROL SYMBOLS	
	SURVEY BENCHMARK
COMMUNICATIONS SYMBOLS	
	TELECOM MANHOLE
	TELECOM PEDESTAL
GAS SYMBOLS	
	GAS VENT
	GAS VALVE
	GAS METER
WATER SYMBOLS	
	WATER VALVE VAULT
	WATER VALVE
	FIRE HYDRANT
	WATER UTILITY MARKER
SANITARY SYMBOLS	
	SANITARY MANHOLE
	SANITARY SEWER CLEAN OUT
STORM SYMBOLS	
	STORM MANHOLE
	STORM CULVERT END
	STORM FLARED END SECTION
	STORM INLET
	STORM INLET - B-HIVE
	STORM INLET - RECTANGULAR
MISC. SYMBOLS	
	TREE (DECIDUOUS)

HATCH LEGEND

	BUILDING OUTLINE AREA
	CONCRETE AREA
	ASPHALT PAVEMENT AREA
	GRAVEL AREA
	PAVER AREA
	WETLAND AREA

LINE TYPE LEGEND

	BOUNDARY LINE
	ADJACENT PROPERTY LINE
	EASEMENT LINE
	BUILDING LINE
	BUILDING SETBACK
	PROPERTY SETBACK
	ROAD CENTERLINE
W	WATER LINE
	SANITARY SEWER LINE
	STORM SEWER LINE
GAS	UNDERGROUND GAS LINE
OHP	OVERHEAD UTILITY LINE
UGE	UNDERGROUND ELECTRIC LINE
TEL	UNDERGROUND TELEPHONE LINE
	FENCE
	EDGE OF TREELINE

NORTH

BASIS OF BEARINGS

North American Datum of 1983 (2011)
Illinois State Plane East Zone (1201)

GRAPHIC SCALE IN FEET
60 0 30 60 120
1"=60' @ 24"X36"

No.	DATE	REVISION DESCRIPTION
1		.

Kimley»Horn
4201 Winfield Road
Warrenville, Illinois 60555
Tel. No. (630) 487-5550
DESIGN FIRM # 184002012-0006
www.kimley-horn.com

Scale	Drawn by	Checked by	Date	Project No.	Sheet No.
1"=100'	MGJ	BAS	11/08/24	168247001	3 OF 3

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DWG NAME: K:\CHS_LDEV\168247001_PULTE_LIBERTYVILLE_IL\2 DESIGN\CAD\SURVEY\SURVEY DESIGN\XA1A - 168247001 SHEETS 3-4.DWG PLOTTED BY: MOLLER, KAARA ATE 3/7/2025 11:00 AM LAST SAVED: 3/7/2025 10:57 AM

PRELIMINARY PLAT OF SUBDIVISION
GREENWAY CHASE

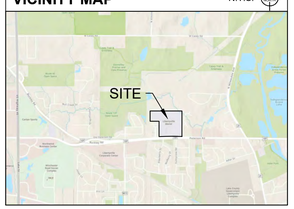
THAT PART OF THE NORTHEAST QUARTER OF SECTION 8,
TOWNSHIP 44 NORTH, RANGE 11 EAST OF THE
THIRD PRINCIPAL MERIDIAN, LAKE COUNTY, ILLINOIS.

Tax PINs:
11-08-100-012
11-08-100-014
11-08-100-035
11-08-100-036
11-08-200-001

Plat Prepared For:
Pulte Group
1900 East Golf Road, Suite 300
Schaumburg, IL 60173

Site Address:
540-610 Peterson Rd.
Libertyville, IL 60048

VICINITY MAP N.T.S.



SURVEY NOTES:

Underground utilities shown hereon are from record drawings obtained from the Village of Libertyville and the engineer of record and the surveyor cannot guarantee the locations of said utilities, except those that are observed on the surface at the time of this survey.

Measurements are made in feet and decimal feet, measurements shown in parentheses ex.(100.00') are record dimensions.

This service meets the Illinois minimum requirements for a boundary and topographic survey.

Field work was completed on October 30, 2024.

Parking Summary: There are 159 parking spaces and 5 handicapped parking spaces.

Iron Pipes set at all corners unless otherwise denoted.

AREA SUMMARY

PARCEL 1: 413,510 SQ.FT. 9.493 AC.
PARCEL 2: 368,588 SQ.FT. 8.461 AC.
PARCEL 3: 233,588 SQ.FT. 5.362 AC.
PARCEL 4: 271,940 SQ.FT. 6.243 AC.
PARCEL 5: 352,772 SQ.FT. 8.099 AC.
PARCEL 6: 193,703 SQ.FT. 4.447 AC.

TOTAL AREA: 1,834,101 SQ.FT. 42.105 AC.

REFERENCE DATUM

North American Vertical Datum 1988

Benchmark #1 Elevation = 755.97'

Chiseled square cut on east side of concrete traffic signal post at the Northwest corner of the intersection of N. Prospect Ave. and the entrance to Baytowne Shopping Square (Southeast corner of site).

Benchmark #2 Elevation = 759.02'

Chiseled square cut on south edge of concrete light pole base at the Northwest corner of site.

FLOOD STATEMENT:

According to Federal Emergency Management Agency's Flood Insurance Rate Map No. 17097C0161K, for Lake County, Illinois and incorporated areas, both dated September 18, 2013, this property is located within

Zone AE defined as "Special Flood Hazard Areas" Areas determined to be within the 1.0% annual chance flood plain with base flood elevations established.

Zone X (unshaded) defined as "Areas determined to be outside the 0.2% annual chance floodplain"

If this site is not within an identified special flood hazard area, this flood statement does not imply that the property and/or the structures thereon will be free from flooding or flood damage. On rare occasions, greater floods can and will occur and flood heights may be increased by man-made or natural causes. This flood statement shall not create liability on the part of the surveyor.

NORTH

BASIS OF BEARINGS

North American Datum of 1983 (2011)
Illinois State Plane East Zone (1201)

LINE TABLE

NO.	BEARING	LENGTH
L1	S61°06'44"E	63.97'
L2	N88°50'17"E	48.71'
L3	N89°40'35"E	52.78'
L4	N74°47'13"E	28.14'
L6	S61°06'44"E	36.47'
L7	S89°49'18"E	7.91'
L8	N88°50'17"E	37.24'
L9	N88°50'17"E	11.25'
L10	N89°40'35"E	52.56'
L11	S89°49'18"E	9.67'
L12	N36°19'42"W	13.48'
L13	N80°56'26"W	40.67'
L14	S86°14'27"W	44.97'
L15	S45°50'35"W	44.97'
L16	S06°55'23"W	44.79'
L17	S33°18'16"E	44.79'
L18	S44°58'21"E	33.09'
L19	S73°57'04"E	33.85'
L20	S42°59'38"E	39.49'
L21	S26°04'16"E	46.46'
L22	N50°38'08"W	6.45'
L23	N52°52'49"W	36.59'
L24	N59°05'49"W	33.91'
L25	N64°57'35"W	31.55'
L26	N71°17'08"W	39.07'
L27	N77°52'51"W	34.56'
L28	N84°11'50"W	35.96'

LINE TABLE

NO.	BEARING	LENGTH
L29	N85°06'47"W	41.09'
L30	N84°35'59"W	41.11'
L31	N84°35'59"W	41.11'
L32	N84°35'59"W	41.10'
L33	S85°03'05"W	43.51'
L34	S71°43'26"W	43.51'
L35	S57°27'00"W	48.36'
L36	S43°05'42"W	44.10'
L37	S29°04'21"W	46.23'
L38	S14°43'03"W	46.23'
L39	S02°03'26"W	36.16'
L40	S09°24'30"E	36.16'
L41	S21°40'27"E	44.07'
L42	N89°54'57"E	3.84'
L43	N89°54'57"E	28.42'
L44	N89°54'57"E	18.84'
L45	S89°47'29"E	18.72'
L46	S89°47'29"E	37.18'
L47	S70°37'01"E	13.14'
L48	N50°38'44"W	14.55'
L49	N14°52'55"W	40.79'
L51	S61°06'44"E	36.51'
L52	N88°50'17"E	44.39'
L53	N88°50'17"E	4.53'
L54	S89°40'35"W	53.00'
L55	N16°55'51"E	32.09'

CURVE TABLE

NO.	RADIUS	LENGTH	CHORD BEARING	CHORD
C1	100.75'	29.63'	N08°18'22"W	29.52'
C2	100.75'	11.81'	N20°05'14"W	11.80'
C3	250.00'	103.21'	N11°39'41"W	102.48'
C4	199.91'	137.60'	N19°38'04"E	134.90'
C5	180.00'	123.90'	S70°21'54"E	121.47'
C6	150.00'	120.27'	S51°49'05"W	117.07'
C7	150.00'	75.75'	S14°22'57"W	74.94'
C8	175.00'	119.54'	S19°47'07"W	117.23'
C9	100.00'	88.39'	S64°40'38"W	85.54'
C10	270.00'	141.61'	S76°08'14"E	139.99'
C11	270.00'	123.00'	N76°38'24"E	121.94'
C12	270.00'	293.01'	N32°30'01"E	278.84'
C13	284.95'	36.95'	N03°51'43"W	36.93'
C14	303.29'	79.72'	N14°31'33"W	79.49'
C15	434.50'	151.62'	N32°08'08"W	150.85'
C16	100.00'	45.14'	N12°42'58"W	44.76'
C17	135.75'	8.84'	N01°43'55"W	8.84'
C18	180.00'	12.87'	N72°44'18"E	12.87'
C19	180.00'	41.85'	N64°01'46"E	41.75'
C20	180.00'	59.44'	N47°54'33"E	59.17'
C21	300.00'	32.53'	S64°13'06"E	32.51'
C22	300.00'	75.89'	S74°34'16"E	75.69'
C23	300.00'	48.93'	S86°29'24"E	48.87'
C24	299.98'	22.21'	N87°34'07"E	22.21'
C25	299.17'	84.01'	N77°24'30"E	83.73'

CURVE TABLE

NO.	RADIUS	LENGTH	CHORD BEARING	CHORD
C26	70.00'	31.60'	N12°42'58"W	31.33'
C27	130.00'	16.46'	N03°24'43"W	16.45'
C28	130.00'	42.22'	N16°20'38"W	42.04'
C29	300.00'	85.06'	N49°47'58"E	84.78'
C30	300.00'	79.28'	N34°06'20"E	79.05'
C31	300.00'	78.46'	N19°02'31"E	78.24'
C32	298.89'	53.86'	N06°23'47"E	53.79'
C33	332.78'	49.20'	N04°29'27"W	49.16'
C34	345.88'	79.14'	N15°15'21"W	78.97'
C35	464.50'	80.93'	N27°07'37"W	80.83'
C36	464.50'	80.44'	N37°04'45"W	80.34'
C37	65.00'	65.28'	N71°45'16"W	62.57'
C38	65.00'	61.13'	S52°32'08"W	58.90'
C39	65.00'	13.22'	S19°46'10"W	13.20'
C40	65.00'	60.75'	S12°49'50"E	58.56'
C41	65.00'	75.44'	S72°51'15"E	71.28'
C42	65.00'	35.50'	N58°15'00"E	35.06'
C43	404.50'	12.76'	N41°11'51"W	12.76'
C44	404.50'	128.15'	N31°13'04"W	127.62'
C45	273.29'	37.55'	N18°06'53"W	37.52'
C46	131.29'	52.41'	S78°30'24"W	52.06'
C47	130.00'	62.53'	S53°08'06"W	61.93'
C48	210.00'	39.69'	N56°03'36"W	39.63'
C49	210.00'	38.48'	N66°43'26"W	38.43'
C50	210.00'	39.17'	N81°20'56"W	39.11'

CURVE TABLE

NO.	RADIUS	LENGTH	CHORD BEARING	CHORD
C51	210.00'	12.43'	N88°23'17"W	12.43'
C52	60.00'	26.23'	S77°23'31"W	26.02'
C53	60.00'	30.07'	S50°30'47"W	29.75'
C54	60.00'	30.07'	S21°48'11"W	29.75'
C55	60.00'	30.07'	S06°54'25"E	29.75'
C56	60.00'	41.98'	S41°18'26"E	41.13'
C57	60.00'	124.34'	N59°16'54"E	103.25'
C58	150.00'	80.27'	N74°45'14"W	79.31'
C59	196.73'	30.14'	N53°59'27"W	30.11'
C60	229.91'	20.20'	S36°50'10"W	20.20'
C61	229.91'	37.70'	S29°37'14"W	37.66'
C62	229.91'	37.70'	S20°13'28"W	37.66'
C63	229.91'	37.70'	S10°49'41"W	37.66'
C64	229.91'	24.86'	S03°01'58"W	24.84'
C65	279.94'	33.42'	S03°15'06"E	33.40'
C66	279.94'	37.74'	S10°31'59"E	37.71'
C67	100.00'	31.30'	N08°47'53"W	31.17'
C68	180.00'	60.69'	N09°36'05"E	60.41'
C69	240.00'	84.06'	S71°08'47"E	83.63'
C70	240.00'	41.81'	S86°10'17"E	41.76'
C71	240.02'	42.18'	N84°39'26"E	42.12'
C72	240.00'	143.47'	N62°29'52"E	141.34'
C73	240.00'	143.45'	N28°14'54"E	141.33'
C74	240.00'	40.39'	N06°18'16"E	40.34'
C75	254.95'	6.83'	N00°56'06"W	6.83'
C76	70.00'	61.88'	S64°40'38"W	59.88'
C77	145.41'	96.75'	S20°14'56"W	94.98'
C78	169.91'	18.82'	S36°10'48"W	18.81'
C79	169.91'	91.76'	S17°32'06"W	90.65'
C80	169.91'	6.45'	S00°58'36"W	6.45'
C81	205.00'	14.20'	S37°22'11"W	14.20'
C82	207.85'	40.30'	S29°45'11"W	40.24'
C83	205.00'	35.48'	S19°09'45"W	35.44'
C84	205.00'	41.48'	S08°24'27"W	41.41'
C85	205.00'	8.57'	S01°24'49"W	8.57'
C86	120.00'	156.88'	N37°20'01"E	145.95'
C87	220.06'	76.81'	S09°50'12"E	76.42'
C88	210.00'	7.00'	S75°03'06"E	6.99'
C89	240.00'	30.36'	S76°00'00"W	30.34'
C90	240.00'	142.38'	N55°22'52"E	140.30'
C91	240.00'	154.58'	S19°56'06"W	151.92'
C92	240.00'	42.18'	N84°39'28"E	42.12'

LOT TABLE

LOT NO.	ACRES	SQ. FT.
1	0.163	7,087
2	0.104	4,510
3	0.104	4,513
4	0.107	4,656
5	0.289	12,569
6	0.248	10,793
7	0.249	10,866
8	0.304	13,262
9	0.303	13,186
10	0.270	11,773
11	0.274	11,947
12	0.266	11,592
13	0.247	10,765
14	0.247	10,750
15	0.262	11,429
16	0.269	11,716
17	0.263	11,466
18	0.265	11,534
19	0.247	10,750
20	0.247	10,749
21	0.245	10,665
22	0.372	16,211
23	0.350	15,250
24	0.342	14,883
25	0.295	12,849
26	0.385	16,767

LOT TABLE

LOT NO.	ACRES	SQ. FT.
27	0.255	11,112
28	0.378	16,465
29	0.135	5,895
30	0.104	4,510
31	0.104	4,510
32	0.104	4,510
33	0.104	4,510
34	0.104	4,510
35	0.104	4,510
36	0.104	4,510
37	0.104	4,510
38	0.104	4,510
39	0.104	4,510
40	0.124	5,409
41	0.129	5,600
42	0.136	5,909
43	0.130	5,644
44	0.105	4,571
45	0.108	4,723
46	0.112	4,885
47	0.116	5,044
48	0.167	7,257
49	0.174	7,583
50	0.174	7,583
51	0.146	6,365
52	0.158	6,901

LOT TABLE

LOT NO.	ACRES	SQ. FT.
53	0.120	5,247
54	0.187	8,130
56	0.104	4,509
57	0.104	4,510
58	0.104	4,510
59	0.104	4,510
60	0.129	5,607
61	0.118	5,156
62	0.124	5,382
63	0.137	5,976
64	0.126	5,500
65	0.114	4,949
66	0.104	4,510
67	0.104	4,510
68	0.104	4,510
69	0.104	4,510
70	0.104	4,510
71	0.104	4,510
72	0.112	4,899
73	0.123	5,371
74	0.112	4,859
75	0.113	4,912
76	0.107	4,658
77	0.321	14,003
78	0.281	12,223
79	0.262	11,401

LOT TABLE

LOT NO.	ACRES	SQ. FT.
80	0.314	13,661
81	0.335	14,585
82	0.249	10,864
83	0.274	11,925
84	0.247	10,747
85	0.246	10,732
86	0.248	10,823
87	0.310	13,515
88	0.106	4,635
91	0.118	5,130
92	0.129	5,610
93	0.129	5,610
94	0.109	4,744
95	0.109	4,753
97	0.158	6,865
98	0.113	4,902
99	0.104	4,519
OUTLOT A	14.337	624,531
OUTLOT B	1.008	43,910
OUTLOT C	1.141	49,687
OUTLOT D	1.401	61,022
ROADWAY	6.556	285,569

SHEET DETAIL INDEX

SHEET 1 TITLE, LINE-CURVE, AREA TABLE SHEET
SHEETS 2-3 BOUNDARY AND EXISTING CONDITIONS DETAIL SHEETS
SHEETS 4-5 PROPOSED LOT GEOMETRY AND IMPROVEMENTS
SHEET 6 APPROVAL CERTIFICATES AND LEGAL DESCRIPTION SHEET

GRAPHIC SCALE IN FEET
60 0 30 60 120
1"=60' @ 24"X36"

No.	DATE	REVISION DESCRIPTION
1	3/31/25	REVISED OUTLOT GEOMETRY

Kimley»Horn
4201 Winfield Road
Warrenville, Illinois 60555
DESIGN FIRM # 184002012-0006
Tel. No. (630) 487-5550
www.kimley-horn.com

Scale	Drawn by	Checked by	Date	Project No.	Sheet No.
1"=60'	MGJ	BAS	01/06/25	168247001	1 OF 6

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$DWG NAME: K:\CHS_LDEV\168247001_PULTE_LIBERTYVILLE_IL\2 DESIGN\CAD\SURVEY\SURVEY DESIGN\XREL\MPLAT - 168247001.DWG PLOTTED BY STROHL, BRAD 3/31/2025 1:43 PM LAST SAVED 3/31/2025 1:40 PM

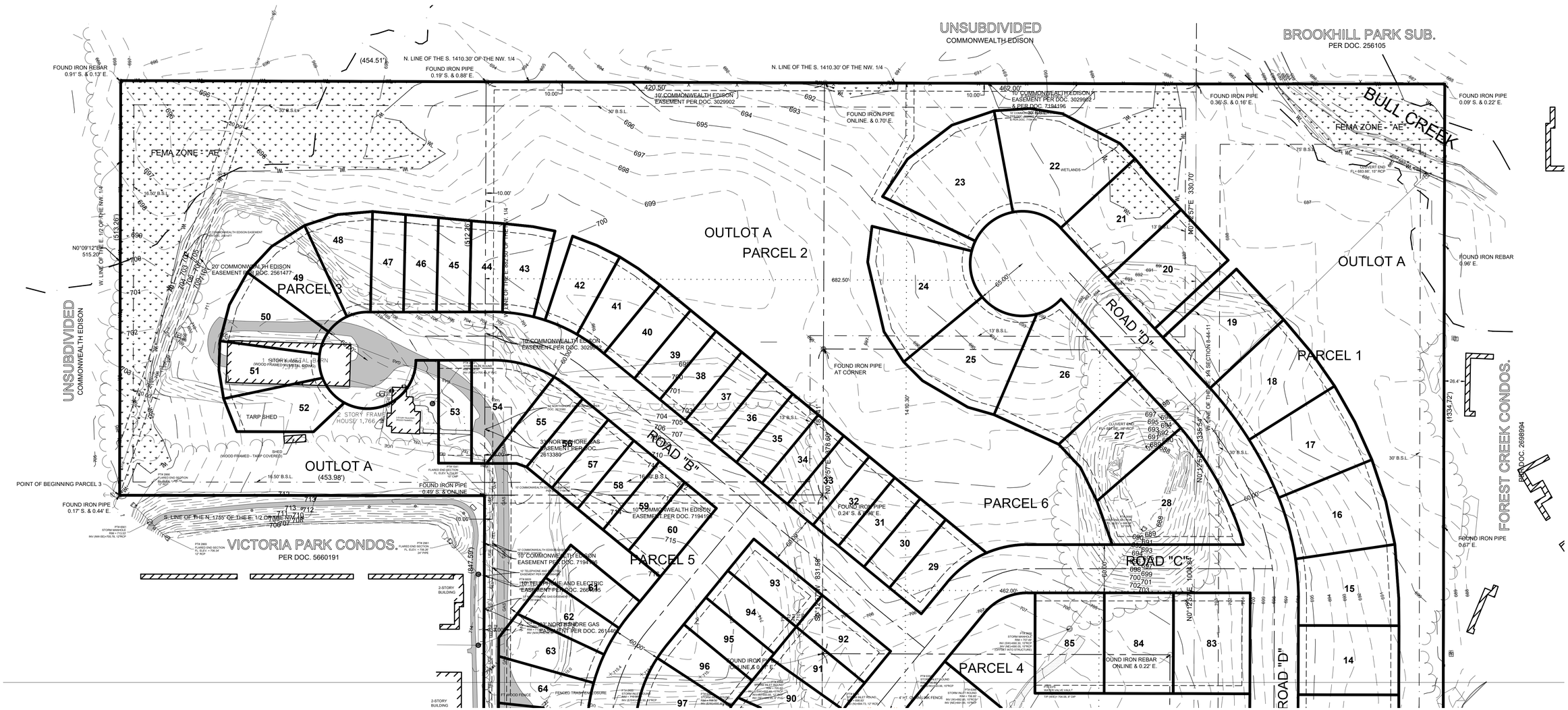
Tax PINs:
11-08-100-012
11-08-100-014
11-08-100-035
11-08-100-036
11-08-200-001

Plat Prepared For:
Pulte Group
1900 East Golf Road, Suite 300
Schaumburg, IL 60173

Site Address:
540-610 Peterson Rd.
Libertyville, IL 60048

PRELIMINARY PLAT OF SUBDIVISION
GREENWAY CHASE

THAT PART OF THE NORTHEAST QUARTER OF SECTION 8,
TOWNSHIP 44 NORTH, RANGE 11 EAST OF THE
THIRD PRINCIPAL MERIDIAN, LAKE COUNTY, ILLINOIS.


UNSUBDIVIDED
COMMONWEALTH EDISON
BROOKHILL PARK SUB.
PER DOC. 256105
BULL CREEK
FEMA ZONE - "AE"
OUTLOT A
PARCEL 2
PARCEL 3
PARCEL 1
PARCEL 4
PARCEL 5
PARCEL 6
OUTLOT A
(453.98')
VICTORIA PARK CONDOS
PER DOC. 5660191
FOREST CREEK CONDOS.
ROAD "B"
ROAD "C"
ROAD "D"
ROAD "D"
FOUND IRON REBAR 0.91' S. & 0.13' E.
FOUND IRON PIPE 0.19' S. & 0.88' E.
FOUND IRON PIPE ONLINE. & 0.70' E.
FOUND IRON PIPE 0.36' S. & 0.16' E.
FOUND IRON PIPE 0.09' S. & 0.22' E.
FOUND IRON REBAR 0.96' E.
FOUND IRON PIPE 0.67' E.
FOUND IRON PIPE 0.17' S. & 0.44' E.
FOUND IRON PIPE 0.49' S. & ONLINE
FOUND IRON PIPE 0.24' S. & 0.58' E.
FOUND IRON PIPE AT CORNER
FOUND IRON REBAR ONLINE & 0.22' E.
POINT OF BEGINNING PARCEL 3
N. LINE OF THE S. 1410.30' OF THE NW. 1/4
S. LINE OF THE N. 1755' OF THE E. 1/2 OF THE NW. 1/4
W. LINE OF THE E. 1/2 OF THE NW. 1/4
N0°09'12"E 515.20'
(513.26')
(454.51')
(512.26')
(847.53')
420.50'
462.00'
682.50'
831.56'
330.70'
1335.54'
(1334.72')
N0°12'57"E
N0°12'57"E
N0°12'57"E
N0°12'57"E
N00°57'E
78.69'
65.00'
60.00'
60.00'
60.00'
60.00'
22.50'
10.00'
10.00'
10.00'
10.00'
10.00'
10.00'
10' COMMONWEALTH EDISON EASEMENT PER DOC. 3029902
10' COMMONWEALTH EDISON EASEMENT PER DOC. 3029902 & PER DOC. 7194196
20' COMMONWEALTH EDISON EASEMENT PER DOC. 2561477
10' COMMONWEALTH EDISON EASEMENT PER DOC. 7194196
10' COMMONWEALTH EDISON EASEMENT PER DOC. 7194196
10' TELEPHONE AND ELECTRIC EASEMENT PER DOC. 2661045
10' NORTHERN ILLINOIS GAS EASEMENT PER DOC. 2613380
10' NORTHERN ILLINOIS GAS EASEMENT PER DOC. 2614482
10' COMMONWEALTH EDISON EASEMENT PER DOC. 7194196
FENCED TRANSFORMER
1 STORY FRAME BARN (WOOD FRAMED W/METAL SIDING)
2 STORY FRAME HOUSE 1,766 SQ. FT.
TARP SHED
SHED (WOOD FRAMED - TARP COVERED)
2-STORY BUILDING
2-STORY BUILDING
WOOD FENCE
4' HT. CHAIN LINK FENCE
WETLANDS
16.50' B.S.L.
30' B.S.L.
75' B.S.L.
13' B.S.L.
30' B.S.L.
30' B.S.L.
30' B.S.L.
30' B.S.L.
13' B.S.L.
13' B.S.L.
13' B.S.L.
16.50' B.S.L.
16.50' B.S.L.
16.50

Tax PINs:
11-08-100-012
11-08-100-014
11-08-100-035
11-08-100-036
11-08-200-001

Plat Prepared For:
Pulte Group
1900 East Golf Road, Suite 300
Schaumburg, IL 60173

Site Address:
540-610 Peterson Rd.
Libertyville, IL 60048

PRELIMINARY PLAT OF SUBDIVISION
GREENWAY CHASE

THAT PART OF THE NORTHEAST QUARTER OF SECTION 8,
TOWNSHIP 44 NORTH, RANGE 11 EAST OF THE
THIRD PRINCIPAL MERIDIAN, LAKE COUNTY, ILLINOIS.



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BASIS OF BEARINGS

North American Datum of 1983 (2011)
Illinois State Plane East Zone (1201)

GRAPHIC SCALE IN FEET
60 0 30 60 120
1"=60' @ 24"X36"

No.	DATE	REVISION DESCRIPTION
1	3/31/25	REVISED OUTLOT GEOMETRY

Kimley»Horn
4201 Winfield Road
Warrenville, Illinois 60555
Tel. No. (630) 487-5550
DESIGN FIRM # 184002012-0006
www.kimley-horn.com

Scale	Drawn by	Checked by	Date	Project No.	Sheet No.
1"=60'	MGJ	BAS	01/06/25	168247001	3 OF 6

J:\DWG NAME: K:\CHS_LDEV\168247001_PULTE_LIBERTYVILLE_IL\3 DESIGN\CAD\SURVEY\SURVEY DESIGN\PRELIM\PLAT - 168247001.DWG PLOTTED BY: STROHL, BRAD 3/31/2025 1:50 PM LAST SAVED 3/31/2025 1:49 PM

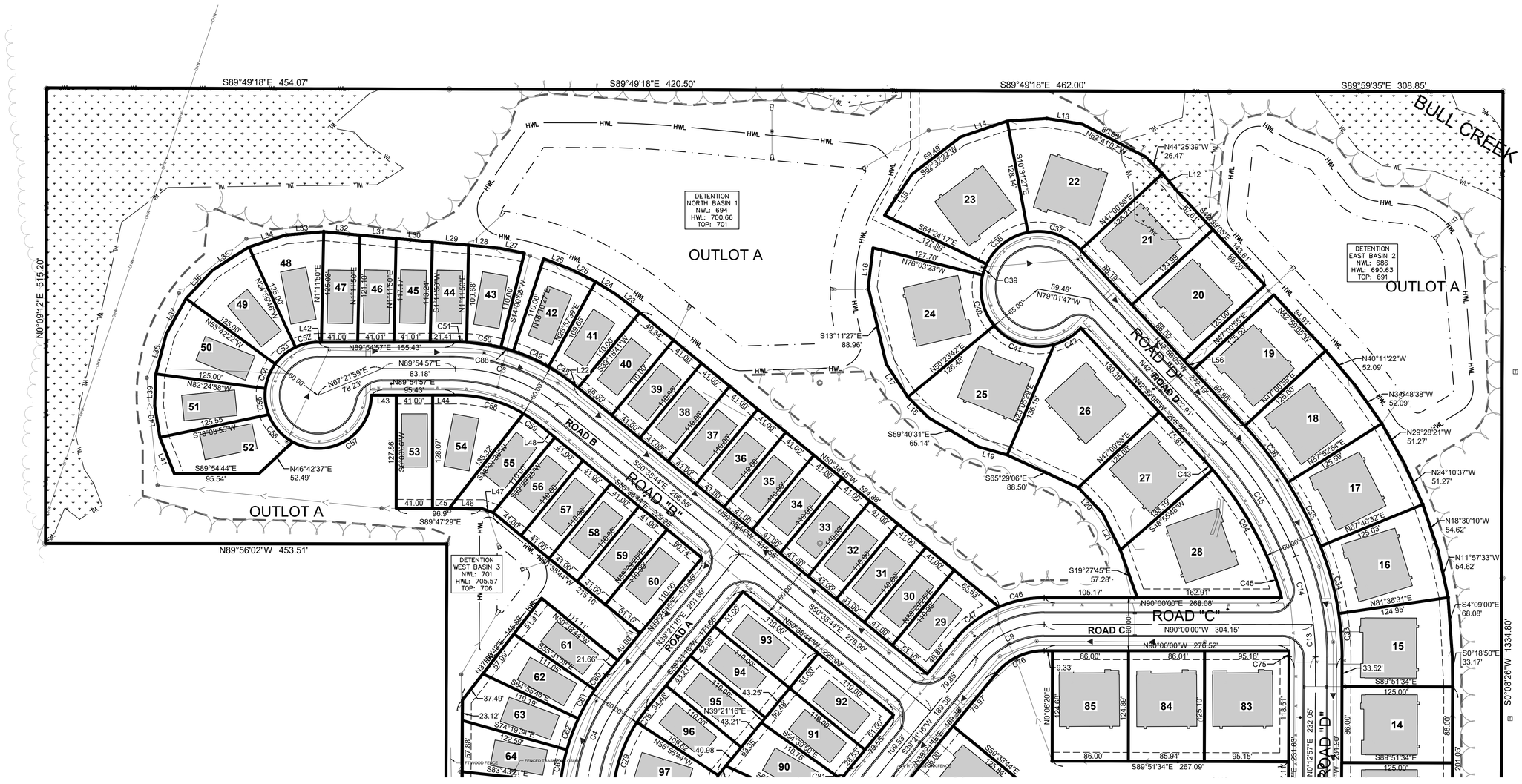
PRELIMINARY PLAT OF SUBDIVISION
GREENWAY CHASE

THAT PART OF THE NORTHEAST QUARTER OF SECTION 8,
TOWNSHIP 44 NORTH, RANGE 11 EAST OF THE
THIRD PRINCIPAL MERIDIAN, LAKE COUNTY, ILLINOIS.

Tax PINs:
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11-08-100-036
11-08-200-001

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1"=60' @ 24"X36"

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1"=60'	MGJ	BAS	01/06/25	168247001	2 OF 6

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SAVED NAME: K:\CHS_LDEV\168247001_PULTE_LIBERTYVILLE_IL\2 DESIGN\CAD\SURVEY\SURVEY DESIGN\XREL\MPLAT - 168247001.DWG PLOTTED BY: STROHL, BRAD 3/31/2025 1:52 PM LAST SAVED 3/31/2025 1:40 PM

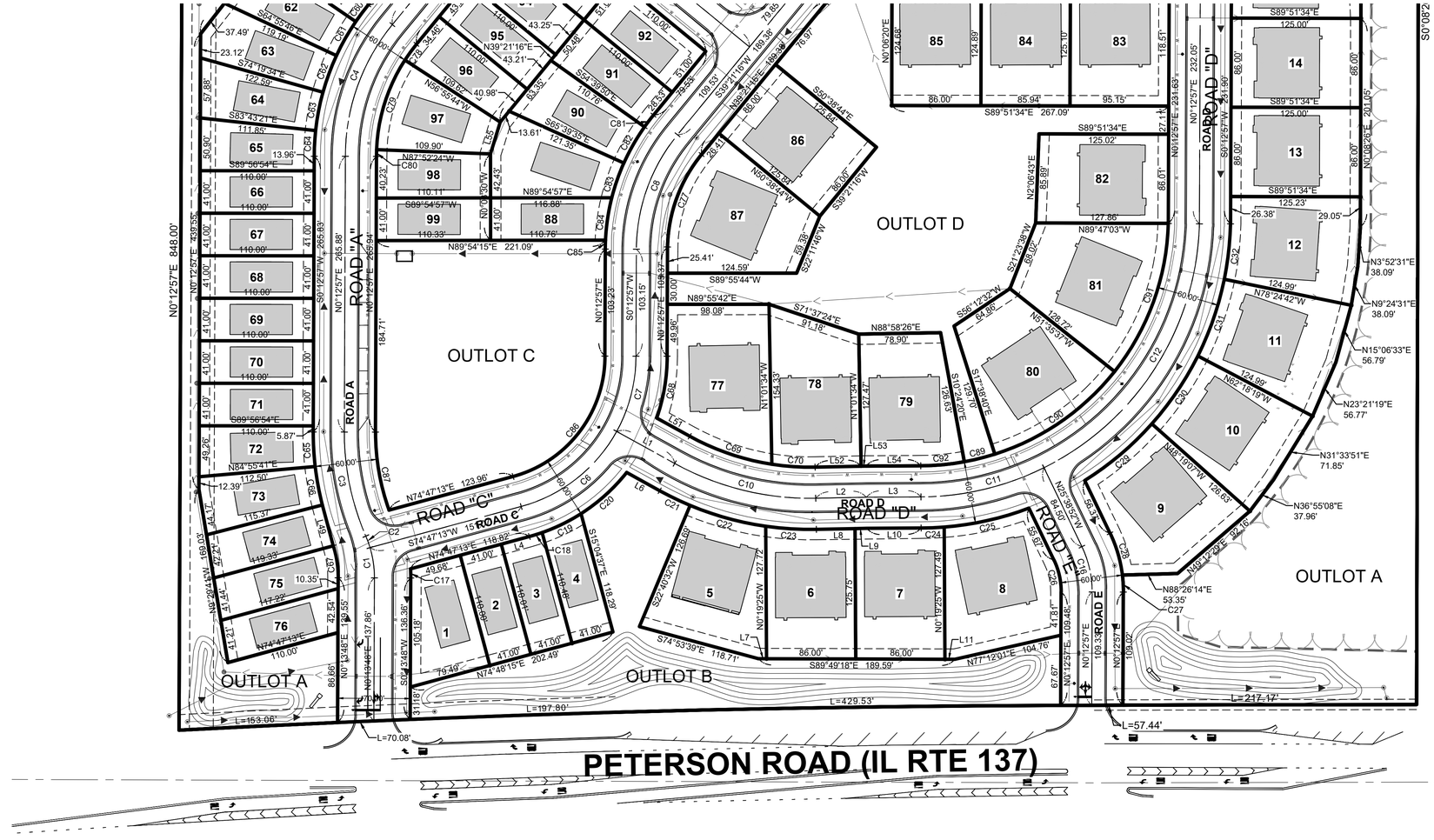
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11-08-100-012
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11-08-100-035
11-08-100-036
11-08-200-001

Plat Prepared For:
Pulte Group
1900 East Golf Road, Suite 300
Schaumburg, IL 60173

Site Address:
540-610 Peterson Rd.
Libertyville, IL 60048

PRELIMINARY PLAT OF SUBDIVISION
GREENWAY CHASE

THAT PART OF THE NORTHEAST QUARTER OF SECTION 8,
TOWNSHIP 44 NORTH, RANGE 11 EAST OF THE
THIRD PRINCIPAL MERIDIAN, LAKE COUNTY, ILLINOIS.



BASIS OF BEARINGS

North American Datum of 1983 (2011)
Illinois State Plane East Zone (1201)

NORTH

GRAPHIC SCALE IN FEET
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1"=60' @ 24"X36"

No.	DATE	REVISION DESCRIPTION
1	3/31/25	REVISED OUTLOT GEOMETRY

Kimley»Horn
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Scale	Drawn by	Checked by	Date	Project No.	Sheet No.
1"=60'	MGJ	BAS	01/06/25	168247001	3 OF 6

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All rights reserved

DWG NAME: K:\CHS_LDEV\168247001_PULTE_LIBERTYVILLE_IL\2 DESIGN\CAD\SURVEY\SURVEY DESIGN\XPRELIMPLAT - 168247001.DWG PLOTTED BY STROHL, BRAD 3/31/2025 1:53 PM LAST SAVED 3/31/2025 1:49 PM

PRELIMINARY PLAT OF SUBDIVISION
GREENWAY CHASE

THAT PART OF THE NORTHEAST QUARTER OF SECTION 8,
TOWNSHIP 44 NORTH, RANGE 11 EAST OF THE
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11-08-200-001

Plat Prepared For:
Pulte Group
1900 East Golf Road, Suite 300
Schaumburg, IL 60173

Site Address:
540-610 Peterson Rd.
Libertyville, IL 60048

OWNER'S CONSENT

STATE OF _____)
)SS
COUNTY OF _____)

THE UNDERSIGNED, _____, HEREBY CERTIFIES THAT HE/SHE/THEY/IT IS THE HOLDER OF THE LEGAL TITLE OF ALL OF THE PROPERTY DESCRIBED
HEREON AND THAT IT HAS CAUSED SAID PROPERTY TO BE SURVEYED AND SUBDIVIDED AS

SHOWN ON THE PLAT HEREON DRAWN. THIS IS TO ALSO CERTIFY THAT_____

AS OWNER OF THE PROPERTY DESCRIBED AS _____ AND LEGALLY DESCRIBED ON THE PLAT OF THE SAME NAME, HAVE DETERMINED TO THE BEST OF OUR KNOWLEDGE THE SCHOOL DISTRICT IN WHICH EACH OF THE FOLLOWING LOTS LIE.

LOT NUMBER(S)	SCHOOL DISTRICT	
ALL	GRADE SCHOOL DISTRICT NO.	70 (LIBERTYVILLE)
	HIGH SCHOOL DISTRICT NO.	128 (LIBERTYVILLE)
	JUNIOR COLLEGE DISTRICT NO.	CO3532 (LAKE CO. COMM. COLL.)

DATED THIS ___ DAY OF _____, A.D., 20____.

BY: _____

BY: _____

NOTARY PUBLIC

STATE OF _____)
)SS
COUNTY OF _____)

I, _____, A NOTARY PUBLIC IN AND FOR THE COUNTY AND STATE AFORESAID, DO HEREBY CERTIFY THAT

_____ AND _____

OF _____ WHO IS/ARE PERSONALLY KNOWN TO ME TO BE THE SAME WHOSE NAME(S) IS/ARE SUBSCRIBED TO THE FOREGOING CERTIFICATE, APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT HE/SHE/THEY DID SIGN AND DELIVER THIS INSTRUMENT AS A FREE AND VOLUNTARY ACT FOR THE USES AND PURPOSES HEREIN SET FORTH.

GIVEN UNDER MY HAND AND NOTORIAL SEAL THIS ___ DAY OF _____, A.D., 20___.

_____
NOTARY PUBLIC

VILLAGE ENGINEER/PLAT OFFICER CERTIFICATE

STATE OF ILLINOIS)
)SS
COUNTY OF LAKE)

I, _____, VILLAGE PLAT OFFICER/ENGINEER OF THE VILLAGE OF LIBERTYVILLE, DO HEREBY CERTIFY THAT ALL PROVISIONS PERTAINING TO THE LIBERTYVILLE SUBDIVISION ORDINANCE, INSOFAR AS THEY PERTAIN TO THE ACCOMPANYING PLAT, HAVE BEEN SATISFACTORILY COMPLIED WITH.

ATTESTED TO THIS _____ DAY OF _____, AD 20__.

_____
VILLAGE PLAT OFFICER/ENGINEER VILLAGE OF LIBERTYVILLE

VILLAGE BOARD CERTIFICATE

STATE OF ILLINOIS)
)SS
COUNTY OF LAKE)

APPROVED BY THE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF LIBERTYVILLE, LAKE COUNTY, ILLINOIS AT A MEETING, HELD THIS _____ DAY OF _____, AD 20__

_____
VILLAGE PRESIDENT

_____
PRINTED NAME

_____
VILLAGE CLERK

_____
PRINTED NAME

PLAN COMMISSION CERTIFICATE

STATE OF ILLINOIS)
)SS
COUNTY OF LAKE)

APPROVED BY THE PLAN COMMISSION OF THE VILLAGE OF LIBERTYVILLE, LAKE COUNTY, ILLINOIS AT A MEETING, HELD THIS _____DAY OF _____, AD 20__.

_____
CHAIRMAN

_____
PRINTED NAME

_____
SECRETARY

_____
PRINTED NAME

PARCEL 1:

THAT PART OF THE NORTHEAST QUARTER OF SECTION 8, TOWNSHIP 44 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: BEGINNING AT A POINT ON THE SOUTH LINE OF AND 6.82 CHAINS WEST FROM THE SOUTHEAST CORNER OF SAID NORTHEAST QUARTER; THENCE WEST ALONG SAID SOUTH LINE, 2229.68 FEET TO THE SOUTHWEST CORNER OF SAID NORTHEAST QUARTER; THENCE NORTH ALONG THE WEST LINE OF SAID NORTHEAST QUARTER, 1410.30 FEET; THENCE EAST 2230.38 FEET TO A POINT WHICH IS 6.82 CHAINS WEST FROM THE EAST LINE OF SAID NORTHEAST QUARTER AND 1405.2 FEET NORTH FROM THE SOUTH LINE OF SAID NORTHEAST QUARTER; THENCE SOUTH TO THE PLACE OF BEGINNING (EXCEPTING THEREFROM THE FOLLOWING: (A) THE EAST 1920.68 FEET THEREOF; (B) THAT PART THEREOF, IF ANY, FALLING IN BROOKHILL PARK, A SUBDIVISION OF PARTS OF SECTIONS 8 AND 9, TOWNSHIP AND RANGE AFORESAID, RECORDED APRIL 24, 1925, AS DOCUMENT 256105, IN BOOK "M" OF PLATS, PAGE 100; AND ALSO (C) EXCEPTING THEREFROM THAT PART CONVEYED BY WARRANTY DEED DATED SEPTEMBER 25,1967, TO THE STATE OF ILLINOIS FOR THE USE OF DEPARTMENT OF PUBLIC WORKS AND BUILDINGS DESCRIBED AS FOLLOWS: PART OF THE NORTHEAST QUARTER OF SECTION 8, TOWNSHIP 44 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, BOUNDED AND FULLY DESCRIBED AS FOLLOWS: BEGINNING AT THE SOUTHWEST CORNER OF SAID NORTHEAST QUARTER; THENCE EASTERLY ALONG THE SOUTH LINE OF SAID NORTHEAST QUARTER, 309.00 FEET; THENCE NORTHERLY PARALLEL TO THE EAST LINE OF SAID NORTHEAST QUARTER, 74.81 FEET; THENCE WESTERLY TOWARD A POINT ON THE WEST LINE OF SAID NORTHEAST QUARTER, SAID POINT BEING 75.00 FEET NORTHERLY FROM THE SOUTHWEST CORNER OF SAID NORTHEAST QUARTER, 217.17 FEET TO A POINT OF CURVE TOWARD THE SOUTH; THENCE ON SAID CURVE TO THE SOUTH, THE RADIUS OF WHICH IS 17,263.74 FEET, 91.83 FEET TO A POINT ON THE WEST LINE OF SAID NORTHEAST QUARTER, THIS POINT BEING 74.76 FEET NORTHERLY FROM THE SOUTHWEST CORNER OF SAID NORTHEAST QUARTER; THENCE SOUTHERLY ON THE WEST LINE OF SAID NORTHEAST QUARTER, 74.76 FEET TO SAID POINT OF BEGINNING), IN LAKE COUNTY, ILLINOIS,

PARCEL 2:

THE EAST 462.0 FEET OF THE SOUTH 1410.30 FEET (AS MEASURED ALONG THE EAST AND SOUTH LINES, RESPECTIVELY) OF THE NORTH WEST 1/4 OF SECTION 8, TOWNSHIP 44 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, (EXCEPT THE SOUTH 1079.60 FEET THEREOF), ALL IN LAKE COUNTY, ILLINOIS. AND THE WEST 420.5 FEET OF THE EAST 882.50 FEET OF THE SOUTH 1410.30 FEET (AS MEASURED ALONG THE EAST AND SOUTH LINES, RESPECTIVELY) OF THE NORTH WEST 1/4 OF SECTION 8, TOWNSHIP 44 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN (EXCEPT THAT PART DESCRIBED AS FOLLOWS, TO-WIT: BEGINNING AT THE SOUTH EAST CORNER OF THE SAID WEST 420.5 FEET OF THE EAST 882.50 FEET OF THE SOUTH 1410.30 FEET OF THE NORTH WEST 1/4 OF SECTION 8; THENCE NORTHERLY ALONG THE EAST LINE OF THE SAID WEST 420:5 FEET OF THE EAST 882.50 FEET OF THE SOUTH 1410.30 FEET OF THE NORTH WEST 1/4 OF SECTION 8 FOR A DISTANCE OF 898.19 FEET; THENCE WESTERLY ALONG A LINE TO THE WEST LINE OF THE SAID EAST 882.50 FEET OF THE NORTH WEST 1/4 OF SECTION 8 TO A POINT WHICH IS 896.80 FEET NORTHERLY OF THE SOUTH LINE OF THE SAID NORTH WEST 1/4 OF SECTION 8 (AS MEASURED ALONG THE SAID WEST LINE OF THE EAST 882.50 FEET); THENCE SOUTHERLY ALONG THE SAID WEST LINE OF THE EAST 882.50 FEET OF THE SOUTH 1410.30 FEET OF THE NORTH WEST 1/4 OF SECTION 8 FOR A DISTANCE OF 896.80 FEET TO THE SAID SOUTH LINE OF THE NORTH WEST 1/4 OF SECTION 8; THENCE EASTERLY ALONG THE SAID SOUTH LINE OF THE NORTH WEST 1/4 OF SECTION 8 FOR A DISTANCE OF 420.5 FEET TO THE POINT OF BEGINNING OF THIS EXCEPTION), IN LAKE COUNTY, ILLINOIS.

PARCEL 3:

THAT PART OF THE EAST 1/2 OF THE NORTH WEST 1/4 OF SECTION 8, TOWNSHIP 44 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS BEGINNING AT A POINT ON THE WEST LINE OF THE EAST 1/2 OF SAID NORTH WEST 1/4 WHICH IS 1755 FEET SOUTH OF THE NORTH WEST CORNER THEREOF; THENCE EAST ALONG THE SOUTH LINE OF THE NORTH 1755 FEET OF SAID EAST 1/2 OF THE NORTH WEST 1/4, A DISTANCE OF 453.98 FEET TO THE WEST LINE OF THE EAST 882.50 FEET OF THE NORTH WEST 1/4 OF SAID SECTION 8; THENCE NORTH ALONG SAID WEST LINE OF THE EAST 882.50 FEET, A DISTANCE OF 512.66 FEET TO THE NORTH LINE OF THE SOUTH 1410.30 FEET OF THE NORTH WEST 1/4 OF SAID SECTION 8; THENCE WEST ALONG SAID NORTH LINE OF THE SOUTH 1410.30 FEET OF THE NORTH WEST 1/4, 454.51 FEET TO THE WEST LINE OF THE EAST 1/2 OF THE NORTH WEST 1/4 OF SAID SECTION 8; THENCE SOUTH ALONG SAID WEST LINE OF THE EAST 1/2 OF SAID NORTH WEST 1/4, A DISTANCE OF 513.26 FEET TO THE POINT OF BEGINNING, IN LAKE COUNTY, ILLINOIS.

PARCEL 4:

THE WEST 432 FEET OF THE EAST 462 FEET OF THE SOUTH 701 FEET OF THE NORTHWEST 1/4 OF SECTION 8, TOWNSHIP 44 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, EXCEPT THEREFROM THAT PART OF THE NORTHWEST 1/4 OF SECTION 8, TOWNSHIP 44 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, BOUNDED AND FULLY DESCRIBED AS FOLLOWS:
BEGINNING AT A POINT ON THE EAST LINE OF SAID NORTHWEST 1/4 SAID POINT BEING 74.76 FEET NORTH OF THE SOUTHEAST CORNER THEREOF; THENCE SOUTH ON THE EAST LINE OF SAID NORTHWEST 1/4, 74.76 FEET TO THE SOUTHEAST CORNER THEREOF; THENCE WESTERLY ON THE SOUTH LINE OF SAID NORTHWEST 1/4, 462.00 FEET; THENCE NORTHERLY PARALLEL WITH THE EAST LINE OF SAID NORTHWEST 1/4, 66.61 FEET; THENCE EASTERLY ON A CURVE VARYING TOWARD THE SOUTH. THE RADIUS OF WHICH IS 17,263.74 FEET TO SAID POINT OF BEGINNING), IN LAKE COUNTY, ILLINOIS.

PARCEL 5:

THE WEST 420.5 FEET OF THE EAST 882.5 FEET OF THAT PART OF THE EAST 1/2 OF THE NORTH WEST 1/4 OF SECTION 8, TOWNSHIP 44 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, LYING SOUTH OF THE NORTH 1755 FEET THEREOF, (EXCEPT THAT PART THEREOF DESCRIBED AS FOLLOWS: BEGINNING AT A POINT ON THE EAST LINE OF SAID PARCEL, 66.61 FEET NORTHERLY FROM THE SOUTH LINE OF SAID NORTH WEST 1/4; THENCE SOUTHERLY ALONG SAID EAST LINE, 66.61 FEET TO THE SOUTH LINE OF SAID NORTH WEST 1/4; THENCE WESTERLY ON THE SOUTH LINE OF SAID NORTH WEST 1/4, 420.50 FEET; THENCE NORTHERLY PARALLEL TO THE EAST LINE OF SAID NORTH WEST 1/4, 47.99 FEET; THENCE EASTERLY ON A CURVE VARYING TOWARD THE SOUTH, THE RADIUS OF WHICH IS 17,263.74 FEET TO THE POINT OF BEGINNING) IN LAKE COUNTY, ILLINOIS.

PARCEL 6:

THE EAST 462.0 FEET OF THE SOUTH 1079.6 FEET OF THE NORTHWEST 1/4 OF SECTION 8, TOWNSHIP 44 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, (EXCEPT THE WEST 432.0 FEET OF THE SOUTH 701.0 FEET THEREOF AND ALSO EXCEPTING ANY PART THEREOF FALLING WITHIN THE RIGHT OF WAY OF FEDERAL AID ROUTE 22 (ILLINOIS ROUTE 137)), IN LAKE COUNTY, ILLINOIS.

ILLINOIS DEPARTMENT OF TRANSPORTATION CERTIFICATE

THIS PLAT HAS BEEN APPROVED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION WITH RESPECT TO ROADWAY ACCESS PURSUANT TO PARAGRAPH 2 OF "AN ACT TO REVISE THE LAW IN RELATION TO PLATS," AS AMENDED. A PLAN THAT MEETS THE REQUIREMENTS CONTAINED IN THE DEPARTMENT'S "POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS" WILL BE REQUIRED BY THE DEPARTMENT.

_____
DIRECTOR OF HIGHWAYS
REGION ONE ENGINEER

LAKE COUNTY RECORDER'S CERTIFICATE

STATE OF ILLINOIS)
) S.S.
COUNTY OF LAKE)

THIS INSTRUMENT NUMBER_____WAS FILED FOR RECORD

IN THE RECORDER'S OFFICE OF LAKE COUNTY, ILLINOIS, THIS_____DAY

OF_____, A.D., 20____, AT_____O'CLOCK___M.

_____
RECORDER

COUNTY CLERK CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF LAKE)

I, _____ COUNTY CLERK OF LAKE COUNTY, ILLINOIS, DO HEREBY CERTIFY THAT THERE ARE NO DELINQUENT GENERAL TAXES, NO UNPAID, NO UNPAID FORFEITED TAXES AND NO REDEEMABLE TAX SALES AGAINST ANY OF THE LAND INCLUDED IN THE ATTACHED PLAT. I FURTHER CERTIFY THAT I HAVE RECEIVED ALL STATUTORY FEES IN CONNECTION WITH THE ANNEXED PLAT.

DATED THIS _____ DAY OF _____, A.D., 20___.

BY: _____
COUNTY CLERK

PERMISSION TO RECORD

STATE OF ILLINOIS)
)SS
COUNTY OF DUPAGE)

I, BRADLEY A. STROHL, ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 3686,
HEREBY GRANT PERMISSION TO A REPRESENTATIVE OF THE VILLAGE OF LIBERTYVILLE, ILLINOIS,
TO RECORD THIS PLAT ON OR BEFORE DECEMBER 31, 2025.
SHALL SHOW PROPER IDENTIFICATION AND PROVIDE THIS SURVEYOR WITH A RECORDED COPY
OF SAID PLAT.

DATED THIS ____ DAY OF _____, A.D. 20___.

_____
ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 3686
LICENSE EXPIRES: NOVEMBER 30, 2026

DESIGN FIRM PROFESSIONAL REGISTRATION NO. 184002012-0006
EXPIRES APRIL 30, 2025

SURVEYOR'S CERTIFICATE

STATE OF ILLINOIS)
)SS
COUNTY OF DUPAGE)

THIS IS TO DECLARE THAT THE FOLLOWING DESCRIBED PROPERTY WAS SURVEYED AND SUBDIVIDED BY KIMLEY-HORN, INC., UNDER THE SUPERVISION OF AN ILLINOIS PROFESSIONAL LAND SURVEYOR AND THAT THE PLAT HEREON DRAWN IS A CORRECT REPRESENTATION OF SAID SURVEY:

LEGAL DESCRIPTION OF PROPERTY BEING SUBDIVIDED INCLUDED HEREON

SUBDIVIDED PROPERTY CONTAINS 42.105 ACRES, MORE OR LESS AND ALL DISTANCES ARE SHOWN IN FEET AND DECIMAL PARTS THEREOF.

½ DIAMETER BY 24" LONG IRON PIPES WILL BE SET AT ALL SUBDIVISION CORNERS, LOT CORNERS, POINTS OF CURVATURE AND POINTS OF TANGENCY IN COMPLIANCE WITH ILLINOIS STATUTES AND APPLICABLE ORDINANCES, UNLESS OTHERWISE NOTED.

THIS IS ALSO TO DECLARE THAT THE PROPERTY AS DESCRIBED ON THE ANNEXED PLAT LIES WITHIN THE CORPORATE LIMITS OF THE VILLAGE OF LIBERTYVILLE, ILLINOIS WHICH HAS ADOPTED A VILLAGE PLAN AND IS EXERCISING THE SPECIAL POWER AUTHORIZED BY DIVISION 12 OF ARTICLE 11 OF THE ILLINOIS MUNICIPAL CODE.

GIVEN UNDER MY HAND AND SEAL THIS ____ DAY OF _____.A.D. 20__.

_____
ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 3686
LICENSE EXPIRES: NOVEMBER 30, 2026

DESIGN FIRM PROFESSIONAL REGISTRATION NO. 184002012-0006
EXPIRES APRIL 30, 2025

COMMONWEALTH EDISON AND SBC EASEMENT PROVISIONS

AN EASEMENT FOR SERVING THE SUBDIVISION AND OTHER PROPERTY WITH ELECTRIC AND COMMUNICATION SERVICE IS HEREBY RESERVED FOR AND GRANTED TO:

COMMONWEALTH EDISON COMPANY
AND
SBC ILLINOIS, A.K.A. AMERITECH ILLINOIS,
A.K.A. ILLINOIS BELL TELEPHONE COMPANY, GRANTEES,

THEIR RESPECTIVE LICENSEES, SUCCESSORS, AND ASSIGNS, JOINTLY AND SEVERALLY, TO CONSTRUCT, OPERATE, REPAIR, MAINTAIN, MODIFY, RECONSTRUCT, REPLACE, SUPPLEMENT, RELOCATE AND REMOVE, FROM TIME TO TIME, POLES, GUYS, ANCHORS, WIRES, CABLES, CONDUITS, MANHOLES, TRANSFORMERS, PEDESTALS, EQUIPMENT CABINETS OR OTHER, FACILITIES USED IN CONNECTION WITH OVERHEAD AND UNDERGROUND TRANSMISSION AND DISTRIBUTION OF ELECTRICITY COMMUNICATIONS, SOUNDS AND SIGNALS IN, OVER, UNDER, ACROSS, ALONG AND UPON THE SURFACE OF THE PROPERTY SHOWN WITHIN THE DASHED OR DOTTED LINES (OR SIMILAR DESIGNATION) ON THE PLAT AND MARKED "EASEMENT", "UTILITY EASEMENT", "PUBLIC UTILITY EASEMENT", "P.U.E." (OR SIMILAR DESIGNATION), THE PROPERTY DESIGNATED IN THE DECLARATION OF CONDOMINIUM AND/OR ON THIS PLAT AS "COMMON ELEMENTS", AND THE PROPERTY DESIGNATED ON THE PLAT AS "COMMON AREA OR AREAS", AND THE PROPERTY DESIGNATED ON THE PLAT FOR STREETS AND ALLEYS, WHETHER PUBLIC OR PRIVATE, TOGETHER WITH THE RIGHT TO INSTALL REQUIRED SERVICE CONNECTIONS OVER OR UNDER THE SURFACE OF EACH LOT AND COMMON AREA OR AREAS TO SERVE IMPROVEMENTS THEREON, OR ON ADJACENT LOTS, AND COMMON AREA OR AREAS, THE RIGHT TO CUT, TRIM OR REMOVE TREES, BUSHES, ROOTS AND SAPLINGS AND TO CLEAR OBSTRUCTIONS FROM THE SURFACE AND SUBSURFACE AS MAY BE REASONABLY REQUIRED INCIDENT TO THE RIGHTS HEREIN GIVEN, AND THE RIGHT TO ENTER UPON THE SUBDIVIDED PROPERTY FOR ALL SUCH PURPOSES. OBSTRUCTIONS SHALL NOT BE PLACED OVER GRANTEES' FACILITIES OR IN, UPON OR OVER THE PROPERTY WITHIN THE DASHED OR DOTTED LINES (OR SIMILAR DESIGNATION) MARKED "EASEMENT", "UTILITY EASEMENT", "PUBLIC UTILITY EASEMENT", "P.U.E." (OR SIMILAR DESIGNATION), WITHOUT THE PRIOR WRITTEN CONSENT OF GRANTEES. AFTER INSTALLATION OF ANY SUCH FACILITIES, THE GRADE OF THE SUBDIVIDED PROPERTY SHALL NOT BE ALTERED IN A MANNER SO AS TO INTERFERE WITH THE PROPER OPERATION AND MAINTENANCE THEREOF.

THE TERM "COMMON ELEMENTS" SHALL HAVE THE MEANING SET FORTH IN SUCH TERM IN THE "CONDOMINIUM PROPERTY ACT", CHAPTER 765 ILCS 605/2, AS AMENDED FROM TIME TO TIME.

THE TERM "COMMON AREA OR AREAS" IS DEFINED AS A LOT, PARCEL OR AREA OF REAL PROPERTY, THE BENEFICIAL USE AND ENJOYMENT OF WHICH IS RESERVED IN WHOLE AS AN APPORTIONMENT TO THE SEPARATELY OWNED LOTS, PARCEL OR AREAS WITHIN THE PLANNED DEVELOPMENT, EVEN THOUGH SUCH BE OTHERWISE DESIGNATED ON THE PLAT BY TERMS SUCH AS "OUTLOTS", "COMMON ELEMENTS", "OPEN SPACE", "OPEN AREA", "COMMON GROUND", "PARKING" AND "COMMON AREA". THE TERM "COMMON AREA OR AREAS", AND "COMMON ELEMENTS" INCLUDES REAL PROPERTY SURFACED WITH INTERIOR DRIVEWAYS AND WALKWAYS, BUT EXCLUDES REAL PROPERTY PHYSICALLY OCCUPIED BY A BUILDING. SERVICE BUSINESS DISTRICT OR STRUCTURES SUCH AS A POOL OR RETENTION POND OR MECHANICAL EQUIPMENT.

RELOCATION OF FACILITIES WILL BE DONE BY GRANTEES AT COST OF GRANTOR/LOT OWNER, UPON WRITTEN REQUEST.

PERPETUAL EASEMENT

A PERPETUAL EASEMENT APPURTENANT IS HEREBY GRANTED TO THE VILLAGE OF LIBERTYVILLE, ITS SUCCESSORS AND ASSIGNS, OVER, UPON, ACROSS, THROUGH AND UNDER THOSE PORTIONS OF THE ABOVE DESCRIBED REAL ESTATE DESIGNATED AS PUBLIC UTILITY AND/OR DRAINAGE EASEMENT (P.U. & D.E.) ON THIS PLAT FOR THE PURPOSE OF INSTALLING, LAYING, CONSTRUCTING, OPERATING, MAINTAINING, REPAIRING, RENEWING AND REPLACING WATER MAINS, SANITARY SEWER LINES, FORCE MAIN LINES, STORM SEWER LINES, PIPES, STREET LIGHT POWER CABLES, DITCHES, SWALES, STORM WATER DETENTION FACILITIES, AND ANY OTHER VILLAGE UTILITIES, TOGETHER WITH ALL APPURTENANT STRUCTURES, INCLUDING, BUT NOT LIMITED TO, MANHOLES, WET WELLS, LIFT STATIONS, FIRE HYDRANTS, VALVE VAULTS, STREET LIGHTING EQUIPMENT AND ANY AND ALL OTHER FIXTURES AND EQUIPMENT REQUIRED FOR THE PURPOSE OF SERVING THE ABOVE DESCRIBED REAL ESTATE WITH WATER SERVICE, SANITARY SEWER SERVICE, STORM WATER MANAGEMENT, STREET LIGHTING AND OTHER MUNICIPAL SERVICES AND FOR THE PURPOSE OF PROVIDING INGRESS TO AND EGRESS FROM ALL OF THE LOTS IN THE SUBDIVISION FOR EMERGENCY VEHICLES OF ANY AND ALL TYPES WHATSOEVER. IN NO EVENT SHALL ANY PERMANENT BUILDING BE PLACED UPON THE SAID EASEMENT AREAS, BUT THEY MAY BE USED FOR GARDENS, SHRUBS, LANDSCAPING AND SUCH OTHER PURPOSES THAT DO NOT, AND WILL NOT IN THE FUTURE, INTERFERE UNREASONABLY WITH THE EASEMENT RIGHTS HEREIN GRANTED.

NORTHERN ILLINOIS GAS COMPANY EASEMENT PROVISIONS

AN EASEMENT IS HEREBY RESERVED FOR AND GRANTED TO NORTHERN ILLINOIS GAS COMPANY, ITS SUCCESSORS AND ASSIGNS ("NI-GAS") TO INSTALL, OPERATE, MAINTAIN, REPAIR, REPLACE AND REMOVE, FACILITIES USED IN CONNECTION WITH THE TRANSMISSION AND DISTRIBUTION OF NATURAL GAS IN, OVER, UNDER, ACROSS, ALONG AND UPON THE SURFACE OF THE PROPERTY SHOWN ON THIS PLAT MARKED "EASEMENT", "COMMON AREA OR AREAS" AND STREETS AND ALLEYS, WHETHER PUBLIC OR PRIVATE, AND THE PROPERTY DESIGNATED IN THE DECLARATION OF CONDOMINIUM AND/OR ON THIS PLAT AS "COMMON ELEMENTS", TOGETHER WITH THE RIGHT TO INSTALL REQUIRED SERVICE CONNECTIONS OVER OR UNDER THE SURFACE OF EACH LOT AND COMMON AREA OR AREAS TO SERVE IMPROVEMENTS THEREON, OR ON ADJACENT LOTS, AND COMMON AREA OR AREAS, AND THE RIGHT TO REMOVE OBSTRUCTIONS, INCLUDING BUT NOT LIMITED TO, TREES, BUSHES, ROOTS AND FENCES AS MAY BE REASONABLY REQUIRED INCIDENT TO THE RIGHTS HEREIN GIVEN, AND THE RIGHT TO ENTER UPON THE PROPERTY FOR ALL SUCH PURPOSES. OBSTRUCTIONS SHALL NOT BE PLACED OVER NI-GAS' FACILITIES OR IN, UPON OR OVER THE PROPERTY IDENTIFIED ON THIS PLAT FOR UTILITY PURPOSES WITHOUT THE PRIOR WRITTEN CONSENT OF NI-GAS. AFTER INSTALLATION OF ANY SUCH FACILITIES, THE GRADE OF THE SUBDIVIDED PROPERTY SHALL NOT BE ALTERED IN A MANNER SO AS TO INTERFERE WITH THE PROPER OPERATION AND MAINTENANCE THEREOF.

THE TERM "COMMON ELEMENTS" SHALL HAVE THE MEANING SET FORTH FOR SUCH TERM IN THE *"CONDOMINIUM PROPERTY ACT"*, CHAPTER 765 ILCS 605/2, AS AMENDED FROM TIME TO TIME.

THE TERM "COMMON AREA OR AREAS" IS DEFINED AS A LOT, PARCEL OR AREA OF REAL PROPERTY, INCLUDING REAL PROPERTY SURFACED WITH INTERIOR DRIVEWAYS AND WALKWAYS, THE BENEFICIAL USE AND ENJOYMENT OF WHICH IS RESERVED IN WHOLE AS AN APPURTENANCE TO THE SEPARATELY OWNED LOTS, PARCELS OR AREAS WITHIN THE PROPERTY, EVEN THOUGH SUCH BE OTHERWISE DESIGNATED ON THE PLAT BY TERMS.

NORTH

BASIS OF BEARINGS

North American Datum of 1983 (2011)
Illinois State Plane East Zone (1201)

GRAPHIC SCALE IN FEET
60 0 30 60 120
1"=60' @ 24"X36"

No.	DATE	REVISION DESCRIPTION
1	3/31/25	REVISED OUTLOT GEOMETRY

Kimley»Horn
4201 Winfield Road
Warrenville, Illinois 60555
DESIGN FIRM # 184002012-0006
Tel. No. (630) 487-5550
www.kimley-horn.com

Scale	Drawn by	Checked by	Date	Project No.	Sheet No.
1"=60'	MGJ	BAS	01/06/25	168247001	6 OF 6

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DWG NAME: K:\CHS_LDEV\168247001_PULTE_LIBERTYVILLE_ILD\ DESIGN\CAD\SURVEY\SURVEY DESIGN\PRELIM PLAT - 168247001.DWG PLOTTED BY STROHL, BRAD 3/31/2025 1:51 PM LAST SAVED 3/31/2025 1:40 PM

PRELIMINARY ENGINEERING PLANS

GREENWAY CHASE

610 PETERSON ROAD
LIBERTYVILLE, IL 60048

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UTILITY AND GOVERNING AGENCY CONTACTS

PUBLIC WORKS DEPARTMENT
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LIBERTYVILLE, IL 60048
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STORM SEWER SERVICE
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LIBERTYVILLE, IL 60048
TEL: (847) 918-2100

FIRE DEPARTMENT
VILLAGE OF LIBERTYVILLE
1551 N MILWAUKEE AVENUE
LIBERTYVILLE, IL 60048
TEL: (847) 362-5664

ROADWAY AUTHORITY
ILLINOIS DEPARTMENT OF TRANSPORTATION
201 WEST CENTER COURT
SCHAUMBURG, IL 60196
TEL: (847) 705-4147

POWER COMPANY
COMED
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NATURAL GAS COMPANY
NORTH SHORE GAS
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DK ENVIRONMENTAL SERVICES
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JOHNSTOWN, PA 15901
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CONTACT: DANIEL J. KRILL

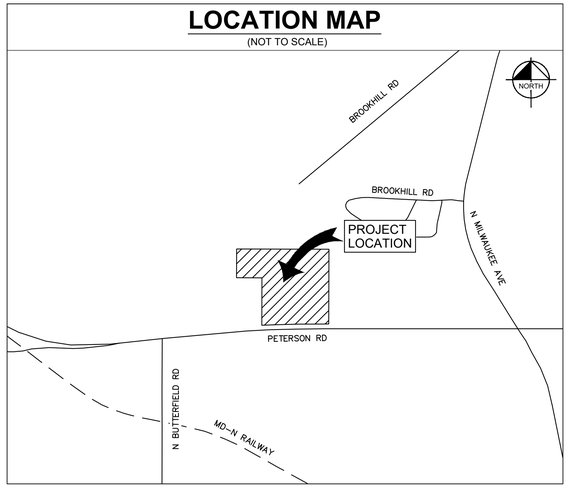
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EMAIL: BRAD.STROHL@KIMLEY-HORN.COM
CONTACT: BRAD STROHL, PLS

Sheet List Table	
Sheet Number	Sheet Title
C0.0	COVER SHEET
C1.0	EXISTING CONDITIONS & DEMOLITION PLAN
C2.0	OVERALL SITE PLAN
C3.0	OVERALL GRADING & DRAINAGE PLAN
C3.1	PRELIMINARY GRADING & DRAINAGE PLAN
C3.2	PRELIMINARY GRADING & DRAINAGE PLAN
C3.3	PRELIMINARY GRADING & DRAINAGE PLAN
C3.4	PRELIMINARY GRADING & DRAINAGE PLAN
C3.5	PRELIMINARY GRADING & DRAINAGE PLAN
C3.6	PRELIMINARY GRADING & DRAINAGE PLAN
C4.0	UTILITY PLAN

LOCATION MAP
(NOT TO SCALE)



No.	REVISIONS	DATE	BY
1	VILLAGE RESUBMITTAL	03/28/25	RNM
2	ARC RE-SUBMITTAL	03/07/25	DG

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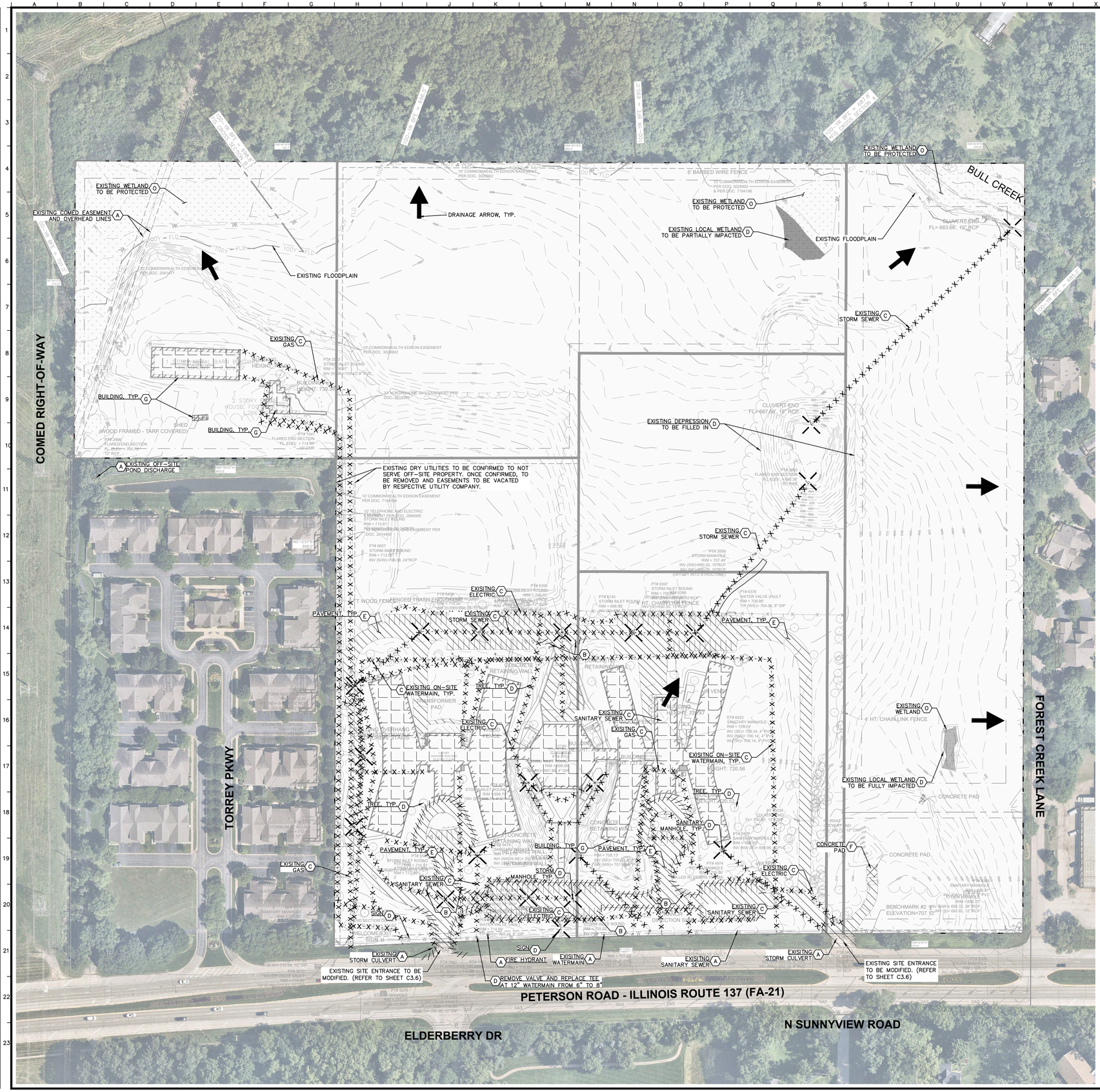
PULTE HOME COMPANY, LLC

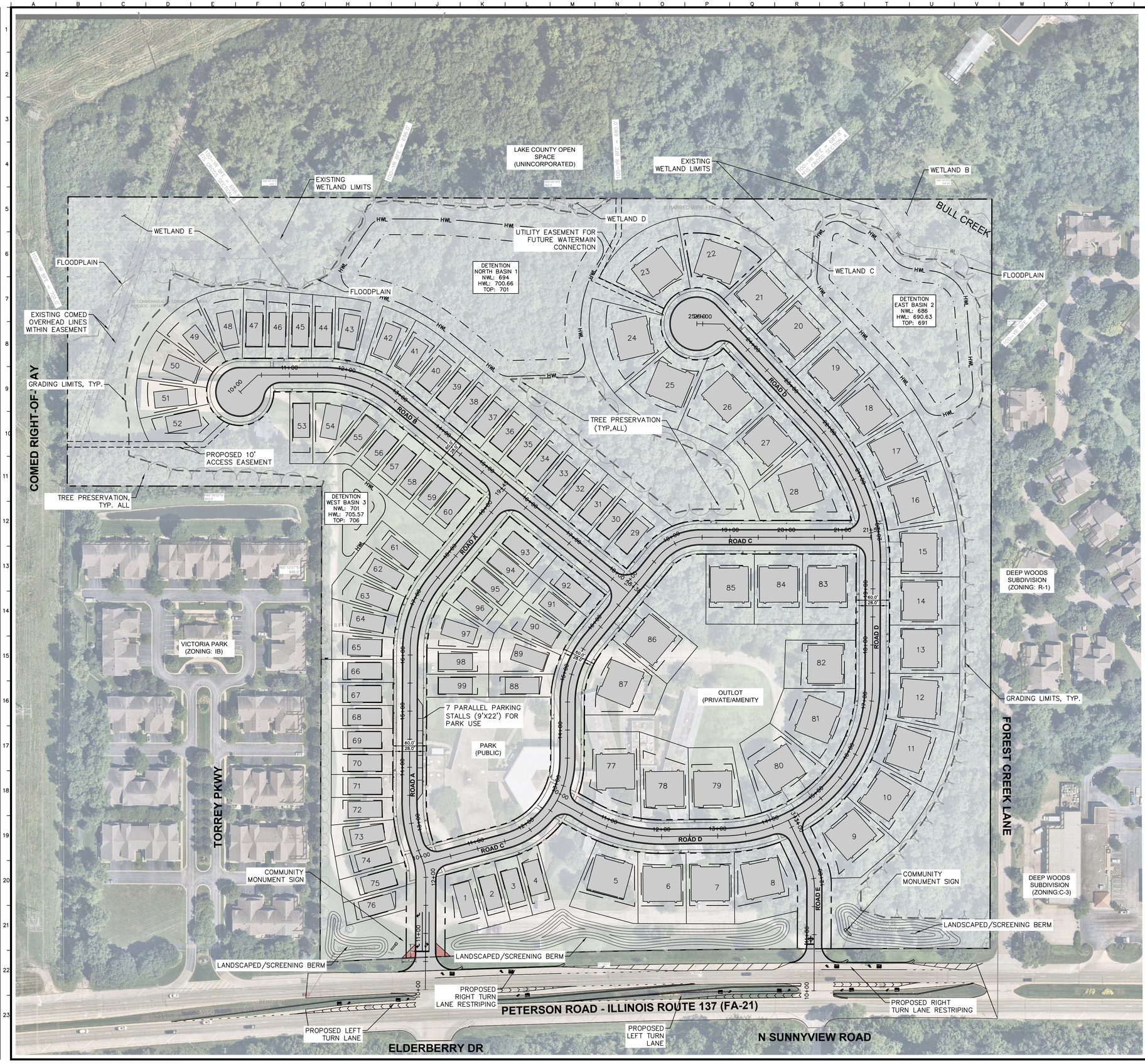
COVER SHEET

GREENWAY CHASE
610 PETERSON ROAD
LIBERTYVILLE, IL 60048

ORIGINAL ISSUE: 01/03/2025
KHA PROJECT NO. 168247001
SHEET NUMBER
C0.0

Drawing name: K:\CHS_LDEV\168247001_Pulte_Libertyville_JL\2 Design\CAD\PlanSheets\C0.0 COVER SHEET.dwg C0.0 Mar 31, 2025 10:43am by KtranTR.Miller
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COMED RIGHT-OF-WAY
TORREY PKWY
FOREST CREEK LANE
BULL CREEK
PETERSON ROAD - ILLINOIS ROUTE 137 (FA-21)
ELDERBERRY DR
N SUNNYVIEW ROAD
EXISTING WETLAND TO BE PROTECTED
EXISTING COMED EASEMENT AND OVERHEAD LINES
EXISTING FLOODPLAIN
DRAINAGE ARROW, TYP.
EXISTING LOCAL WETLAND TO BE PARTIALLY IMPACTED
EXISTING LOCAL WETLAND TO BE FULLY IMPACTED
EXISTING WETLAND
EXISTING STORM SEWER
EXISTING GAS
EXISTING ELECTRIC
EXISTING SANITARY SEWER
EXISTING WATERMAIN
EXISTING ON-SITE WATERMAIN, TYP.
EXISTING STORM CULVERT
EXISTING DEPRESSION TO BE FILLED IN
EXISTING OFF-SITE POND DISCHARGE
EXISTING DRY UTILITIES TO BE CONFIRMED TO NOT SERVE OFF-SITE PROPERTY. ONCE CONFIRMED, TO BE REMOVED AND EASEMENTS TO BE VACATED BY RESPECTIVE UTILITY COMPANY.
EXISTING SITE ENTRANCE TO BE MODIFIED. (REFER TO SHEET C3.6)
REMOVE VALVE AND REPLACE TEE AT 12" WATERMAIN FROM 6" TO 8"
FIRE HYDRANT
PAVEMENT, TYP.
BUILDING, TYP.
SHED (WOOD FRAMED - TARP COVERED)
2 STORY BRICK HOUSE, TOP OF ROOF HEIGHT: 730.39
STEEL METAL BARN, TOP OF ROOF HEIGHT: 730.39
TREE, TYP.
SANITARY MANHOLE, TYP.
STORM MANHOLE, TYP.
CONCRETE PAD
CULVERT END FL= 683.66', 15" RCP
CULVERT END FL= 687.66', 15" RCP
BENCHMARK #2 ELEVATION=707.12'
6' BARBED WIRE FENCE
4' HT. CHAIN LINK FENCE
WOOD FENCE
ENCLOSED TRASH ENCLOSURE
RETAINING WALL
10' COMMONWEALTH EDISON EASEMENT PER DOC. 3029602
10' COMMONWEALTH EDISON EASEMENT PER DOC. 2561477
33' NORTHERN GAS EASEMENT PER DOC. 2613390
10' TELEPHONE AND ELECTRIC EASEMENT PER DOC. 2664995
10' COMMONWEALTH EDISON EASEMENT PER DOC. 7194196
100-YR BFE = 696.0
100-YR BFE = 696.5
100-YR BFE = 697.0
100-YR BFE = 697.5
100-YR BFE = 698.0
100-YR BFE = 698.5
100-YR BFE = 699.0
100-YR BFE = 699.5
100-YR BFE = 700.0
100-YR BFE = 700.5
100-YR BFE =



NORTH

GRAPHIC SCALE IN FEET
0 40 80 160

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GENERAL NOTES

1. ALL DIMENSIONS REFER TO THE BACK OF CURB UNLESS OTHERWISE NOTED.
2. BUILDING DIMENSIONS ARE TO THE OUTSIDE FACE OF BUILDING UNLESS OTHERWISE NOTED.
3. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS TO VERIFY ALL BUILDING DIMENSIONS.
4. REFER TO LANDSCAPE ARCHITECT PLANS FOR MONUMENT SIGN DETAILS.

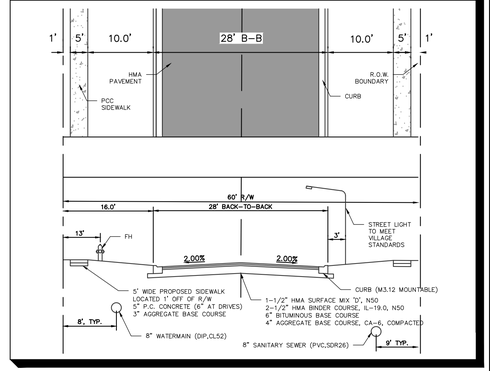
PROPERTY SUMMARY TABLE

SITE AREA	= 42.11	ACRES
R/W DEDICATION	= 6.55	ACRES
LOT AREA (CUMULATIVE)	= 17.69	ACRES
PARK DISTRICT DEDICATION	= 1.14	ACRES
PRIVATE AMENITY SPACE	= 1.41	ACRES
OPEN SPACE/DETENTION	= 2.92	ACRES
OPEN SPACE/UNDISTURBED AREA	= 12.40	ACRES
TOTAL LOTS PROVIDED	= 99	LOTS
UNIT COUNT	= 134	UNITS
ZONING SUMMARY:		
EXISTING ZONING DISTRICT	= MIXED (IB/R1/C3/UNINCORPORATED)	
PROPOSED ZONING DISTRICT	= R-7 PUD	
SINGLE FAMILY (41' X 110')	= 64	UNITS
GREENWAY CHASE SPRINGS		
FRONT YARD SETBACK	= 20	FEET
REAR YARD SETBACK	= 20	FEET
CORNER SIDE YARD SETBACK	= 15	FEET
SIDE YARD SETBACK	= 5	FEET*
*(MINIMUM 10 FT BUILDING SEPARATION)		
DUPLEXES (86' X 125')	= 70	UNITS
GREENWAY CHASE LANDINGS		
FRONT YARD SETBACK	= 20	FEET
REAR YARD SETBACK	= 30	FEET
CORNER SIDE YARD SETBACK	= 15	FEET
SIDE YARD SETBACK	= 6	FEET*
*(MINIMUM 12 FT BUILDING SEPARATION)		
MAXIMUM BUILDING COVERAGE SINGLE FAMILY	= 45%	
MAXIMUM IMPERVIOUS COVERAGE SINGLE FAMILY	= 50%	
MAXIMUM BUILDING COVERAGE DUPLEX	= 50%	
MAXIMUM IMPERVIOUS COVERAGE DUPLEX	= 55%	

FEMA NOTE

PER FLOOD INSURANCE RATE MAP PANEL NO. 17097C0161K EFFECTIVE DATE 9/19/2013, A PORTION OF THE SITE IS LOCATED IN ZONE 'AE' WITH A VARYING BASE FLOOD ELEVATION RANGING FROM 701.0 ON THE WEST SIDE TO 684.0 ON THE EAST SIDE, AS NOTED HEREIN. THE REMAINDER OF THE SITE IS LOCATED WITHIN ZONE 'X' (AREA OF MINIMAL FLOOD HAZARD).

TYPICAL ROADWAY CROSS-SECTION



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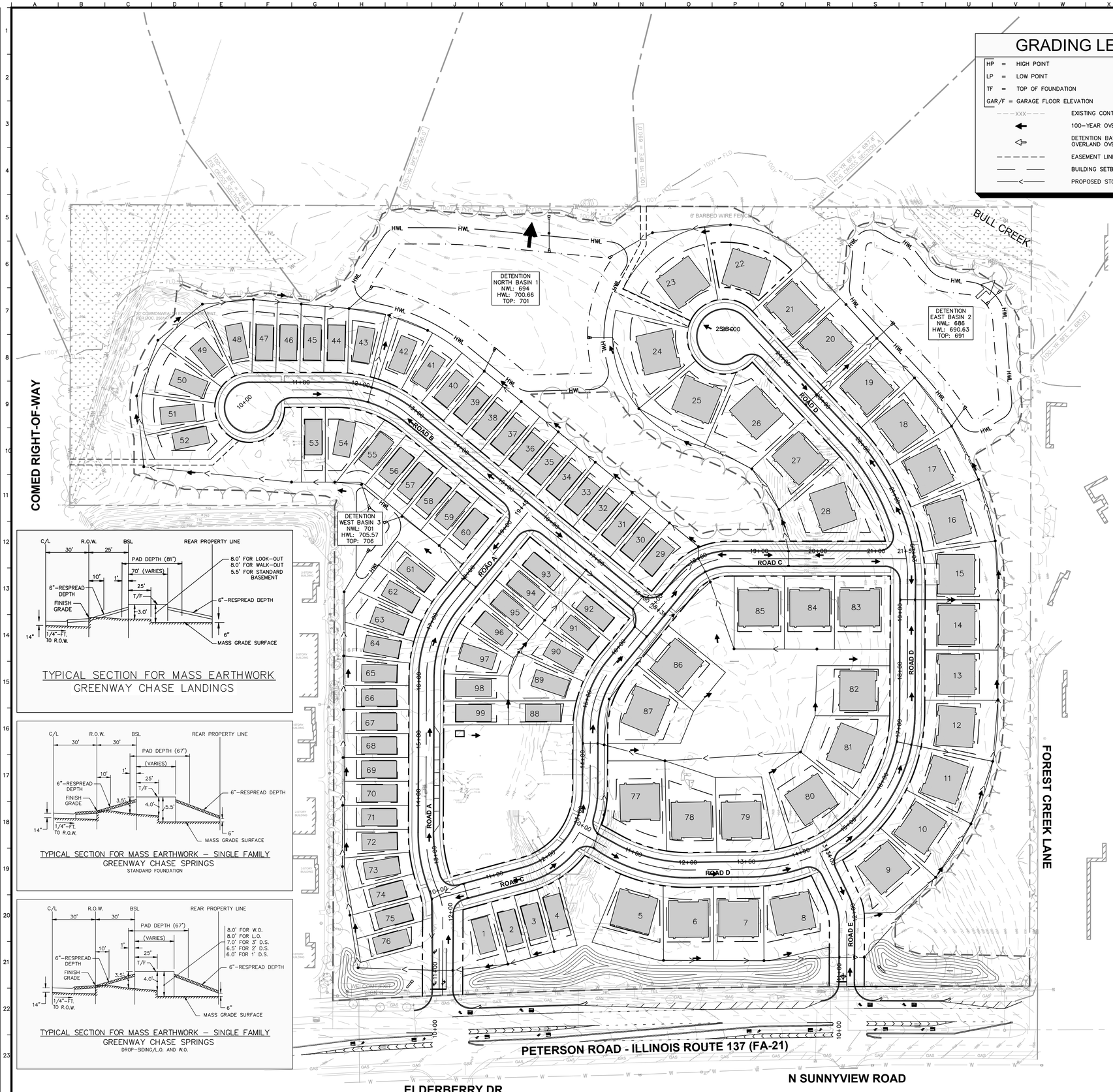
PULTE HOME COMPANY, LLC

OVERALL SITE PLAN

GREENWAY CHASE
610 PETERSON ROAD
LIBERTYVILLE, IL 60048

ORIGINAL ISSUE: 01/03/2025
KHA PROJECT NO. 168247001
SHEET NUMBER
C2.0

Drawing name: K:\CHS_LDE\V\168247001_Pulte_Libertyville_JL\2 Design\CAD\PlanSheets\C2.0 SITE PLAN.dwg C2.0 Mar 31, 2025 10:44am by: KlaraTrMoller
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GRADING LEGEND

HP =	HIGH POINT
LP =	LOW POINT
TF =	TOP OF FOUNDATION
GAR/F =	GARAGE FLOOR ELEVATION
---XXX---	EXISTING CONTOUR
	100-YEAR OVERLAND OVERFLOW ROUTE
	DETENTION BASIN 100-YEAR EMERGENCY OVERLAND OVERFLOW ROUTE
	EASEMENT LINE
	BUILDING SETBACK LINE
	PROPOSED STORM SEWER LINE

NORTH

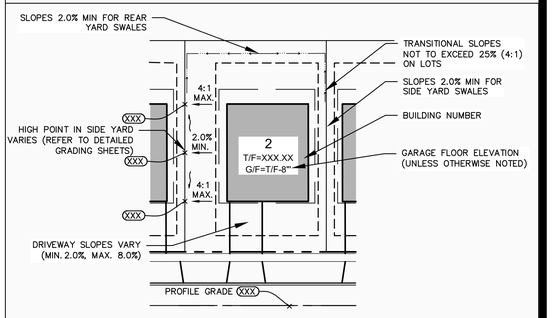
GRAPHIC SCALE IN FEET
0 40 80 160

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GRADING NOTES

1. CONTRACTOR TO VERIFY ALL EXISTING TOPOGRAPHY AND STRUCTURES IDENTIFIED WITHIN THE TOPOGRAPHIC EXHIBIT AND IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO STARTING WORK.
2. ALL PAVEMENT SPOT GRADE ELEVATIONS AND RIM ELEVATIONS WITHIN OR ALONG CURB AND GUTTER REFER TO FLOW LINE ELEVATIONS UNLESS OTHERWISE NOTED.
3. ALL CURB ELEVATIONS ARE TO BE TOP OF CURB. ALL GUTTER ELEVATIONS ARE 0.25' BELOW TOP OF CURB ELEVATION UNLESS OTHERWISE NOTED.
4. ALL ELEVATIONS SHOWN DEPICT FINISHED GRADE UNLESS OTHERWISE NOTED. GENERAL CONTRACTOR TO COORDINATE WITH EXCAVATION, LANDSCAPE AND PAVING SUBCONTRACTORS REGARDING TOPSOIL THICKNESS FOR LANDSCAPE AREAS AND PAVEMENT SECTION THICKNESS FOR PAVED AREAS TO PROPERLY ENSURE ADEQUATE CUT TO ESTABLISH SUBGRADE ELEVATIONS.
5. NO EARTHEN SLOPE SHALL BE GREATER THAN 3:1, EXCEPT FOR WITHIN THE DETENTION BASIN OR FOR LANDSCAPE SCREENING BERMS.
6. MINIMUM SLOPE SHALL BE 2% ON ALL PRIVATE LOTS.
7. MAXIMUM RUNNING SLOPE SHALL NOT EXCEED 5% AND CROSS SLOPE SHALL NOT EXCEED 2% ON ALL SIDEWALKS AND ACCESSIBLE ROUTES.
8. CONTRACTOR TO MATCH EXISTING ELEVATIONS AT THE PROPERTY LIMITS, UNLESS OTHERWISE NOTED AS GRADING LIMITS. CONTRACTOR TO NOTIFY ENGINEER OF ANY DISCREPANCIES WITH FIELD CONDITIONS PRIOR TO GRADING.
9. WINDOW WELLS ARE NOT ALLOWED ALONG SIDE YARD OVERLAND FLOOD ROUTES.
10. ALL DISTURBED AREAS SHALL BE RESTORED WITH MINIMUM 6-INCHES OF TOPSOIL AND SEEDED, UNLESS OTHERWISE NOTED.
11. SUMP PUMP CONNECTIONS TO THE REAR YARD STORM SEWER ARE REQUIRED FOR ALL LOTS.
12. DRIVEWAY SLOPES FROM RIGHT-OF-WAY SHALL BE A MINIMUM OF 2% AND A MAXIMUM OF 8% FINAL HOUSE LOCATION TO BE SET BACK UP TO 5' FROM BUILDING SETBACK LINE IF REQUIRED TO MEET MAXIMUM DRIVEWAY SLOPE.
13. ALL DRAIN TILE ENCOUNTERED DURING MASS GRADING / UTILITY WORK MUST BE CONNECTED TO THE PROPOSED STORM SEWER SYSTEM. A RECORD MUST BE KEPT, OF ANY DRAIN TILE ENCOUNTERED, TO BE INCLUDED IN RECORD DRAWINGS.
14. DO NOT INTERRUPT DRAINAGE FROM OFF-SITE DURING CONSTRUCTION OPERATIONS. PROVIDE TEMPORARY DRAINAGE DITCHES WHERE REQUIRED.
15. GRADING INDICATED MAY NEED TO BE ADJUSTED BASED ON FIELD CONDITIONS. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES WITH FIELD CONDITIONS PRIOR TO GRADING.

TYPICAL LOT / UNIT GRADING



*NOTE: SLOPE BETWEEN TWO POINTS MARKED ON GRADING PLAN SHOULD BE UNIFORM. THERE SHOULD BE NO CHANGE IN SLOPE OR REVERSAL OF SLOPE BETWEEN MARKED POINTS ON THE GRADING PLAN.

TYPICAL SECTION FOR MASS EARTHWORK
GREENWAY CHASE LANDINGS

TYPICAL SECTION FOR MASS EARTHWORK – SINGLE FAMILY
GREENWAY CHASE SPRINGS
STANDARD FOUNDATION

TYPICAL SECTION FOR MASS EARTHWORK – SINGLE FAMILY
GREENWAY CHASE SPRINGS
DROP-SIDING/L.O. AND W.O.

Drawing name: K:\CHS_LDEV\168247001_Pulte_Libertyville_IL\2 Design\CAD\PlanSheets\C3.0 GRADING & DRAINAGE PLAN.dwg C3.0 Mar 31, 2025 10:45am by: KtrnTR.Miller
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2	ARC RE-SUBMITTAL	03/07/25	DG

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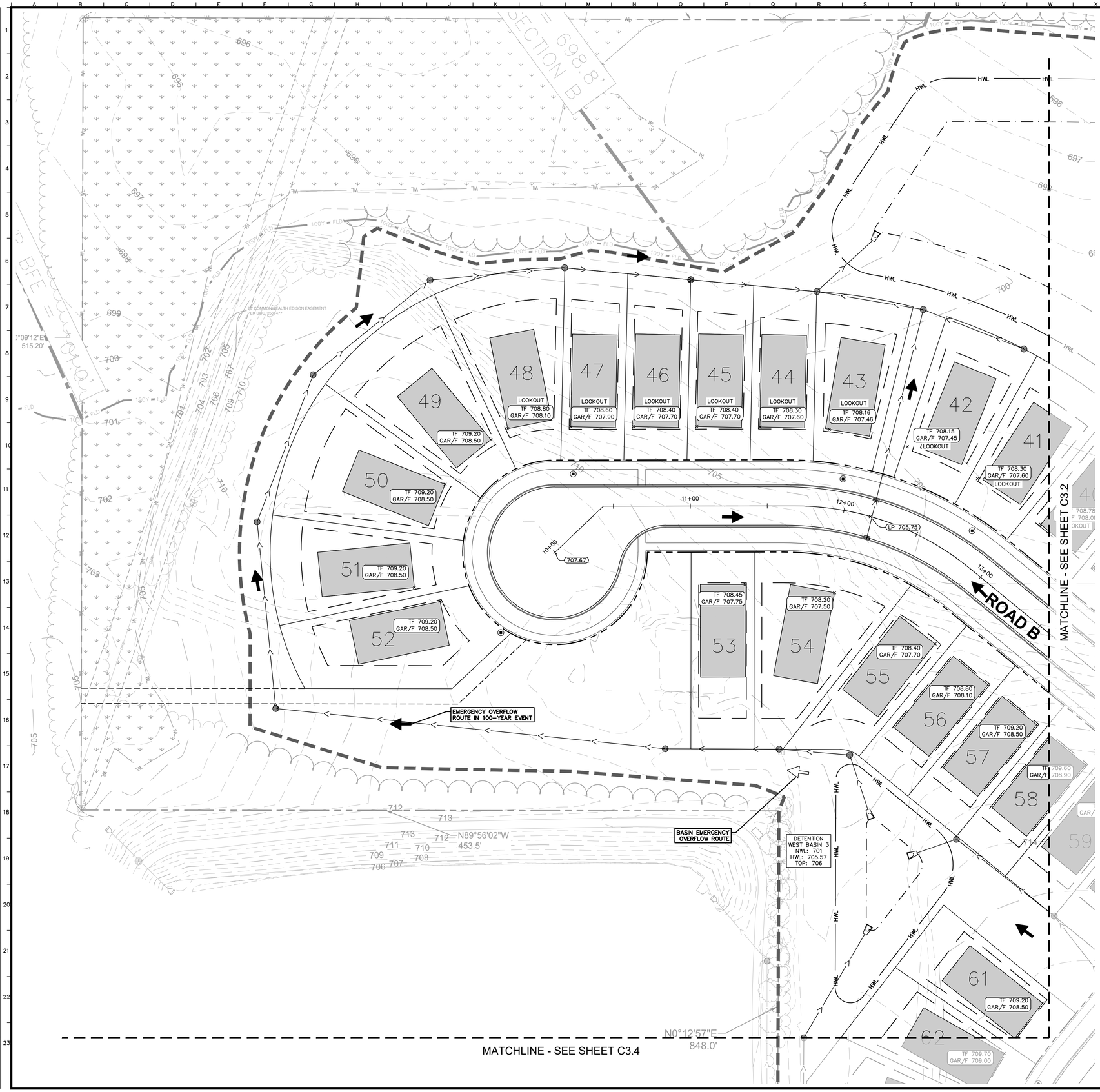
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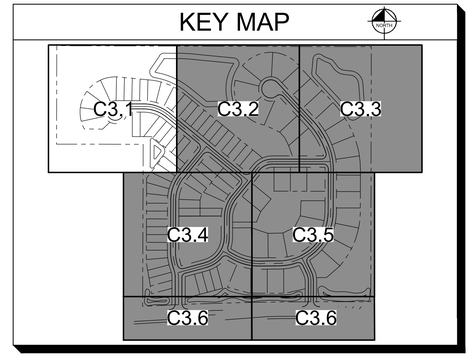
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OVERALL GRADING & DRAINAGE PLAN

GREENWAY CHASE
610 PETERSON ROAD
LIBERTYVILLE, IL 60048

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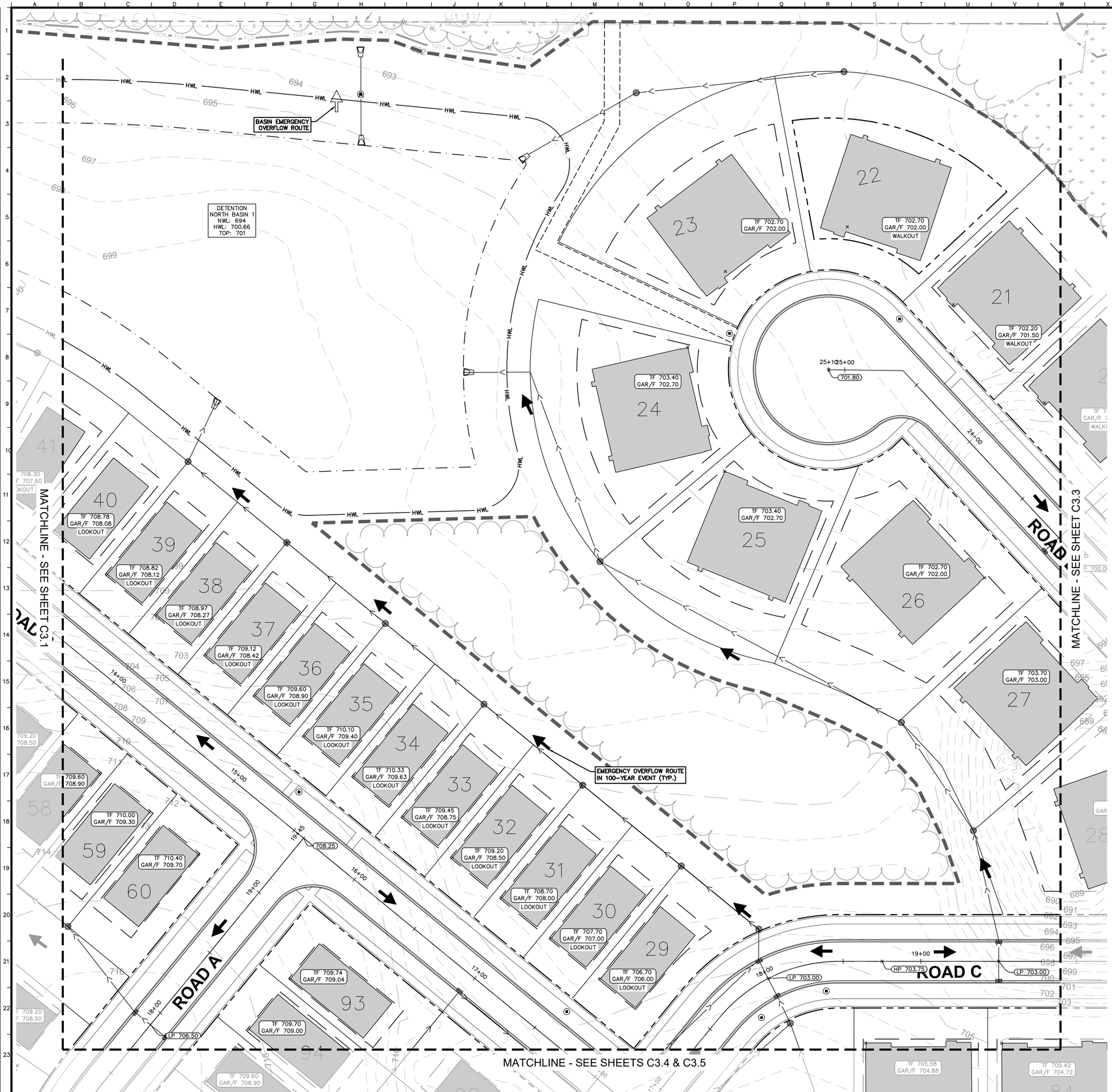
PULTE HOME COMPANY, LLC

PRELIMINARY GRADING & DRAINAGE PLAN

GREENWAY CHASE
610 PETERSON ROAD
LIBERTYVILLE, IL 60048

ORIGINAL ISSUE: 01/03/2025
KHA PROJECT NO. 168247001
SHEET NUMBER
C3.1

Drawing name: K:\CHS_LDEV\168247001_Pulte_Libertyville_IL\2 Design\CAD\PlanSheets\C3.1 DETAILED GRADING & DRAINAGE PLAN.dwg C3.1 Mar 31, 2025 10:46am by: KtrmTR.Moller
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NORTH

GRAPHIC SCALE IN FEET
0 15 30 60

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JULIE
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GRADING NOTES

1. REFER TO SHEET C3.0 FOR ALL GRADING AND DRAINAGE NOTES AND SYMBOL LEGEND.

NO.	REVISIONS	DATE	BY
2	VILLAGE RESUBMITTAL	03/28/25	RNM
1	ARC RE-SUBMITTAL	03/07/25	DG

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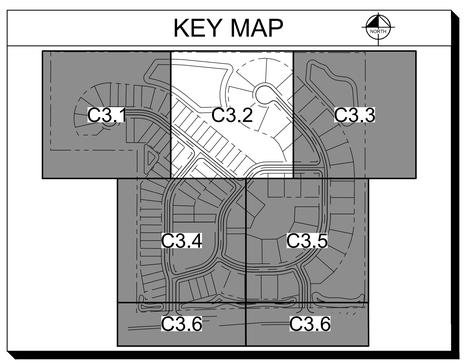
PULTE HOME COMPANY, LLC

PRELIMINARY GRADING & DRAINAGE PLAN

GREENWAY CHASE
610 PETERSON ROAD
LIBERTYVILLE, IL 60048

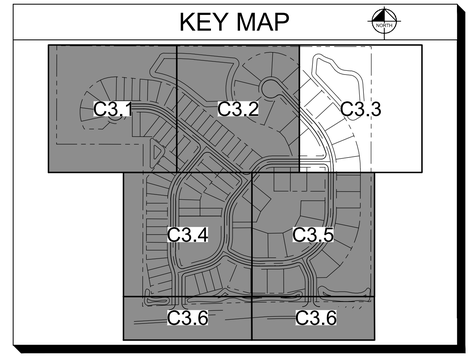
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KHA PROJECT NO.
168247001
SHEET NUMBER
C3.2

KEY MAP



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PRELIMINARY GRADING & DRAINAGE PLAN

GREENWAY CHASE
610 PETERSON ROAD
LIBERTYVILLE, IL 60048

ORIGINAL ISSUE: 01/03/2025
KHA PROJECT NO. 168247001
SHEET NUMBER
C3.3

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MATCHLINE - SEE SHEETS C3.1 & C3.2

N0°12'57"E
848.0'

TF 709.20
GAR/F 708.50

TF 709.70
GAR/F 709.00

TF 710.20
GAR/F 709.50

TF 710.40
GAR/F 709.70

LOT WOOD FENCE

TF 710.60
GAR/F 709.90

TF 710.70
GAR/F 710.00

TF 710.80
GAR/F 710.10

TF 711.60
GAR/F 710.90

TF 712.20
GAR/F 711.50

TF 712.70
GAR/F 712.00

TF 713.74
GAR/F 713.04

TF 714.70
GAR/F 714.00

TF 715.35
GAR/F 714.65

TF 714.87
GAR/F 714.17

TF 714.66
GAR/F 713.96

TF 715.53
GAR/F 714.83

TF 709.60
GAR/F 708.90

TF 710.20
GAR/F 709.50

TF 710.50
GAR/F 709.80

TF 710.90
GAR/F 710.20

TF 711.20
GAR/F 710.50

TF 709.70
GAR/F 709.00

TF 706.66
GAR/F 705.96

TF 707.13
GAR/F 706.43

TF 707.52
GAR/F 706.82

TF 707.91
GAR/F 707.21

TF 708.21
GAR/F 707.51

TF 707.55
GAR/F 706.85

TF 712.20
GAR/F 711.50

TF 711.80
GAR/F 711.10

TF 714.66
GAR/F 713.96

TF 715.70
GAR/F 715.00

TF 715.20
GAR/F 714.50

TF 714.50
GAR/F 713.80

LIFTSTATION

EMERGENCY OVERFLOW ROUTE
IN 100-YEAR EVENT (TYP.)

ROAD A

ROAD C

HP 713.25

HP 713.50

HP 711.01

LP 711.90

712.25

710.50

704.00

17+00

16+00

15+00

14+00

13+00

12+00

11+00

10+00

18+00

18+38

PT# 6535
SANITARY MANHOLE
RIM = 716.14'
INV (W, SE)= 703.34, 8" PVC

PT# 5608
WATER VALVE VAULT
RIM = 717.01'
T/P (N,S)= 710.91, 10" DIP

PT# 5611
SANITARY MANHOLE
RIM = 717.09'
INV (NW)= 703.74, 8" PVC

MATCHLINE - SEE SHEET C3.5

MATCHLINE - SEE SHEET C3.6

NORTH

GRAPHIC SCALE IN FEET
0 15 30 60

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GRADING NOTES

1. REFER TO SHEET C3.0 FOR ALL GRADING AND DRAINAGE NOTES AND SYMBOL LEGEND.

KEY MAP

C3.1 C3.2 C3.3 C3.4 C3.5 C3.6 C3.6

NO.	REVISIONS	DATE	BY
1	VILLAGE RESUBMITTAL	03/28/25	RNM
2	ARC RE-SUBMITTAL	03/07/25	DG

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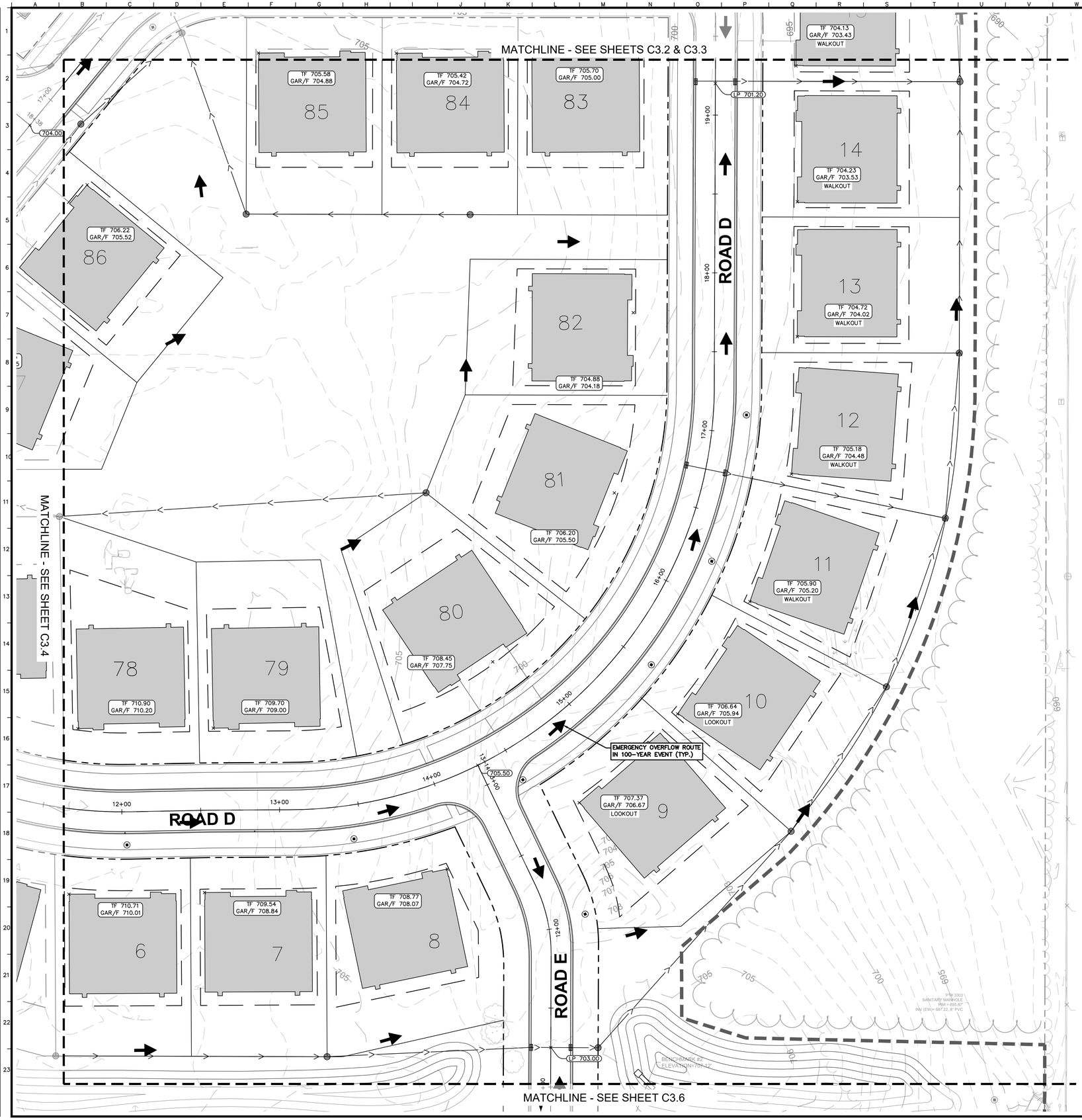
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PRELIMINARY GRADING & DRAINAGE PLAN

GREENWAY CHASE
610 PETERSON ROAD
LIBERTYVILLE, IL 60048

ORIGINAL ISSUE:
01/03/2025
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168247001
SHEET NUMBER
C3.4

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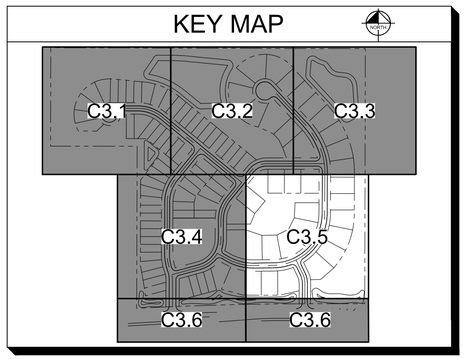
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GRADING NOTES

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KEY MAP



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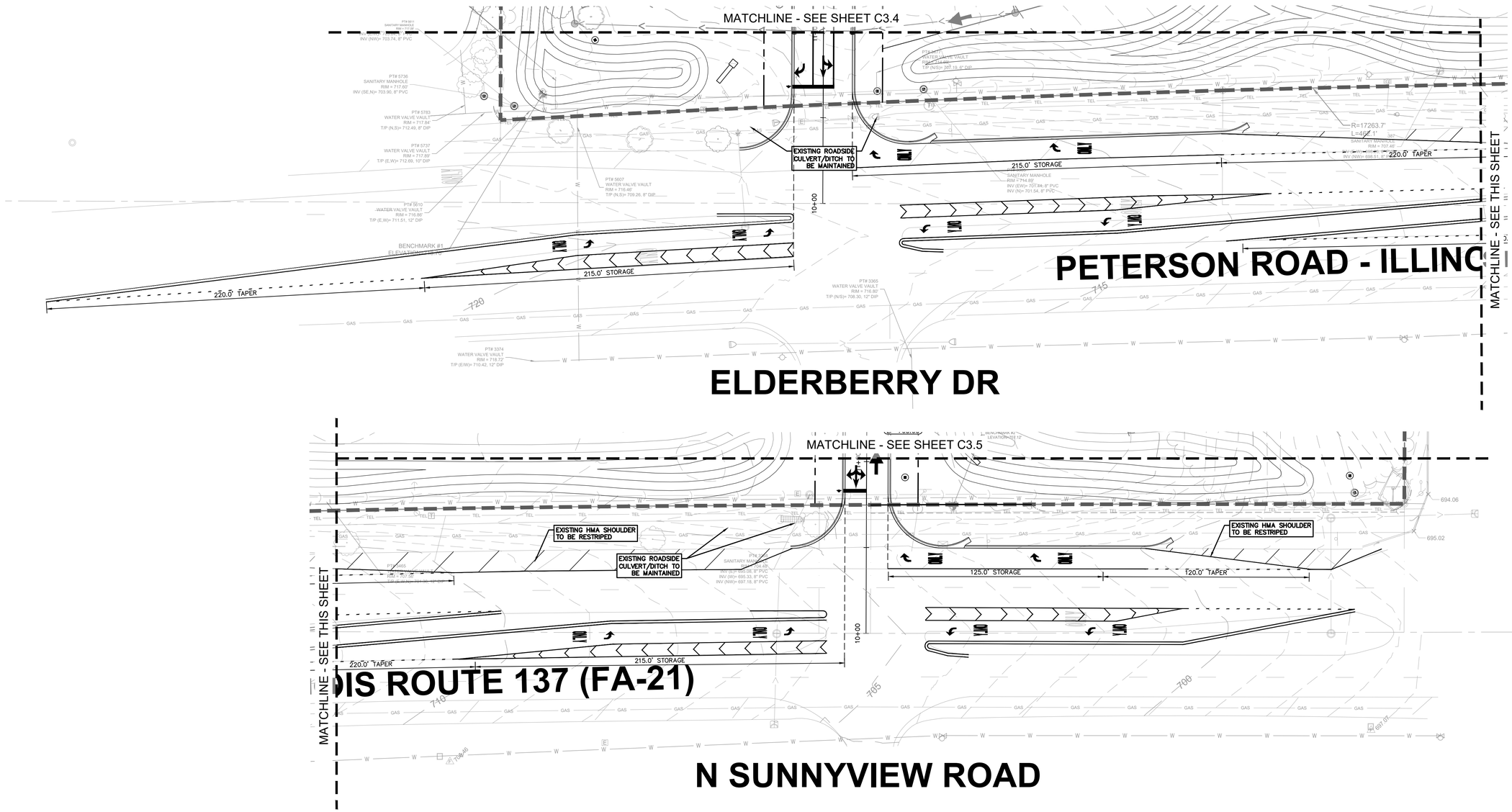
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PRELIMINARY GRADING & DRAINAGE PLAN

GREENWAY CHASE
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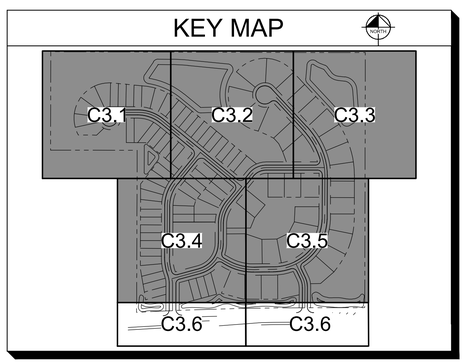
ORIGINAL ISSUE: 01/03/2025
KHA PROJECT NO. 168247001
SHEET NUMBER
C3.5

Drawing name: K:\CHS_LDEV\168247001_Pulte_Libertyville_IL\2 Design\CAD\PlanSheets\C3.1 DETAILED GRADING & DRAINAGE PLAN.dwg C3.5 Mar 31, 2025 10:47am by KiaraTR.Meller
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GRAPHIC SCALE IN FEET
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PRELIMINARY GRADING & DRAINAGE PLAN

GREENWAY CHASE
610 PETERSON ROAD
LIBERTYVILLE, IL 60048

ORIGINAL ISSUE: 01/03/2025
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SHEET NUMBER
C3.6

Drawing name: K:\CHS_LDEV\168247001_Pulte_Libertyville_IL\2 Design\CAD\PlanSheets\C3.1 DETAILED GRADING & DRAINAGE PLAN.dwg C3.6 Mar 31, 2025 10:47am by: KtrmTrMaller
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COMED RIGHT-OF-WAY

BULL CREEK

FOREST CREEK LANE

DETENTION NORTH BASIN 1
NWL: 694
HWL: 700.66
TOP: 701

DETENTION EAST BASIN 2
NWL: 686
HWL: 690.63
TOP: 691

DETENTION WEST BASIN 3
NWL: 701
HWL: 705.57
TOP: 706

ROAD A
ROAD B
ROAD C
ROAD D
ROAD E

FIRE HYDRANT (MAX 300' SPACING), TYP.

LIFT STATION TO BE DESIGNED IN FINAL ENGINEERING

8" PVC SDR-26 SANITARY @0.40% MIN SLOPE, TYP.

8" DIP WATERMAIN, TYP.

REMOVE EXISTING VALVE AND REPLACE TEE AT 12" MAIN FROM 6" TO 8"

CONNECT PROPOSED 8" WATERMAIN TO EXISTING 12" WATERMAIN

PROPOSED FORCEMAIN

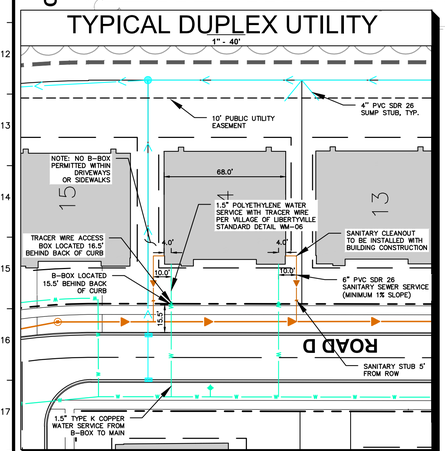
PETERSON ROAD - ILLINOIS ROUTE 137 (FA-21)

ELDERBERRY DR

N SUNNYVIEW ROAD

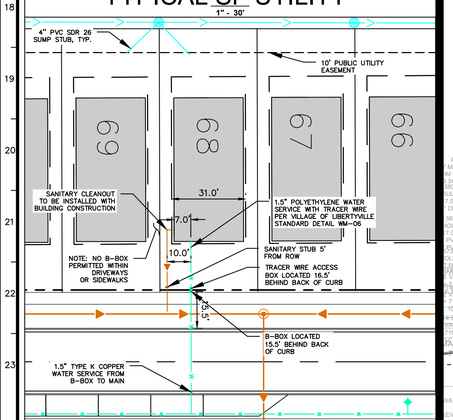
TYPICAL DUPLEX UTILITY

1" - 40'



TYPICAL SF UTILITY

1" - 30'



NORTH

GRAPHIC SCALE IN FEET
0 40 80 160

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UTILITY LEGEND

- EX. WATER LINE
- EX. STORM SEWER LINE
- EX. SANITARY SEWER LINE
- EX. HYDRANT
- EX. WATER VALVE
- EX. SANITARY MANHOLE
- EX. STORM MANHOLE/STRUCTURE
- EX. STORM INLET/CATCH BASIN
- EX. OVERHEAD ELECTRIC LINE
- EX. LIGHT POLE
- EX. WETLAND MARKER
- EX. WATER VALVE
- EX. SANITARY CLEANOUT
- PROPOSED UNDERGROUND ELECTRIC LINE
- GAS LINE (BY GAS COMPANY)
- PROPOSED PHONE LINE
- PROPOSED STORM SEWER LINE
- PROPOSED OPEN LID STORM STRUCTURE (PAVEMENT USE NEENAH R-2540) (GRASS USE NEENAH R-4340-B BEEHIVE)
- PROPOSED CLOSED LID STORM STRUCTURE (PAVEMENT USE NEENAH R-1713) (GRASS USE NEENAH R-1786)
- PROPOSED COMBINATION CURB INLET (M3.12 C&G USE NEENAH R-3501-E2) (B6.12 C&G USE NEENAH R-3281-A)
- PROPOSED FLARED END SECTION (ALL REQUIRED GRATING PER IDOT STANDARDS 542301, 542306, 542311)
- PROPOSED SANITARY SEWER LINE
- PROPOSED SANITARY MANHOLE
- PROPOSED STORM/SANITARY CLEANOUT
- PROPOSED WATER LINE
- PROPOSED VALVE VAULT
- PROPOSED VALVE BOX
- PROPOSED FIRE HYDRANT
- PROPOSED TRENCH BACKFILL
- PROPOSED LIGHT POLE
- RIP RAP (SEE DETAILS)

UTILITY NOTES

1. ALL WATER LINES ≥ 3" SHALL BE DUCTILE IRON PIPE, CLASS 52.
2. ALL SANITARY SEWER LINES SHALL BE PVC MEETING, ASTM D-3034 SDR 26 EXCEPT FOR SANITARY SEWER THAT CROSSES ABOVE WATER MAIN, THIS PIPE SHALL BE AWWA C900 (UNLESS WATER MAIN CASING IS UTILIZED). PROVIDE 42" MINIMUM COVER.
3. CONTRACTOR SHALL COORDINATE ANY DISRUPTIONS TO EXISTING UTILITY SERVICES WITH ADJACENT PROPERTY OWNERS.
4. ALL ELECTRIC AND TELEPHONE EXTENSIONS INCLUDING SERVICE LINES SHALL BE CONSTRUCTED TO THE APPROPRIATE UTILITY COMPANY SPECIFICATIONS. ALL UTILITY DISCONNECTIONS SHALL BE COORDINATED WITH THE DESIGNATED UTILITY COMPANIES.
5. CONSTRUCTION SHALL NOT START ON ANY PUBLIC UTILITY SYSTEM UNTIL WRITTEN APPROVAL HAS BEEN RECEIVED BY THE ENGINEER FROM THE APPROPRIATE GOVERNING AUTHORITY AND CONTRACTOR HAS BEEN NOTIFIED BY THE ENGINEER.
6. CONTRACTOR TO CALL "JULIE" (1-800-892-0123) TO COORDINATE FIELD LOCATIONS OF EXISTING UNDERGROUND UTILITIES BEFORE ORDERING MATERIALS OR COMMENCING CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES IMMEDIATELY.
7. PRIOR TO THE CONSTRUCTION OF OR CONNECTION TO ANY STORM DRAIN, SANITARY SEWER, WATER MAIN OR ANY OTHER UTILITIES, THE CONTRACTOR SHALL EXCAVATE, VERIFY AND CALCULATE ALL POINTS OF CONNECTION AND ALL UTILITY CROSSINGS AND INFORM THE ENGINEER AND THE OWNER/DEVELOPER OF ANY CONFLICT OR REQUIRED DEVIATIONS FROM THE PLAN. NOTIFICATION SHALL BE MADE A MINIMUM OF 72 HOURS PRIOR TO CONSTRUCTION. THE ENGINEER AND ITS CLIENTS SHALL BE HELD HARMLESS IN THE EVENT THAT THE CONTRACTOR FAILS TO MAKE SUCH NOTIFICATION. THE MUNICIPALITY SHALL BE NOTIFIED OF ANY AND ALL CHANGES TO THE DESIGN PLANS.
8. CONTRACTOR SHALL COMPLY COMPLETELY WITH THE LATEST STANDARDS OF OSHA DIRECTIVES OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURES. THE CONTRACTOR SHALL USE SUPPORT SYSTEMS, SLOPING, BENCHING AND OTHER MEANS OF PROTECTION. THIS IS TO INCLUDE, BUT NOT LIMITED FOR ACCESS AND EGRESS FROM ALL EXCAVATION AND TRENCHING. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH PERFORMANCE CRITERIA AS REQUIRED BY OSHA.
9. CONTRACTOR TO AVOID DISRUPTION OF ANY ADJACENT TENANT'S TRAFFIC OPERATIONS DURING INSTALLATION OF UTILITIES.
10. ALL DIMENSIONS ARE TO CENTERLINE OF PIPE OR CENTER OF MANHOLE UNLESS NOTED OTHERWISE.
11. SEE ARCHITECTURAL AND MEP PLANS FOR EXACT UTILITY CONNECTION LOCATIONS AT BUILDING.
12. LIGHT POLES SHOWN FOR COORDINATION PURPOSES ONLY AND DO NOT REPRESENT ACTUAL SIZE. SEE SITE LIGHTING PLANS BY OTHERS FOR MORE INFORMATION.
13. SEE DETAILS FOR LOCATING STORM STRUCTURES WITHIN THE CURB LINE.
14. STORMWATER FACILITIES MUST BE FUNCTIONAL BEFORE BUILDING CONSTRUCTION BEGINS IF REQUIRED BY AUTHORITY HAVING JURISDICTION.

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2	ARC RE-SUBMITTAL	03/07/25	DG

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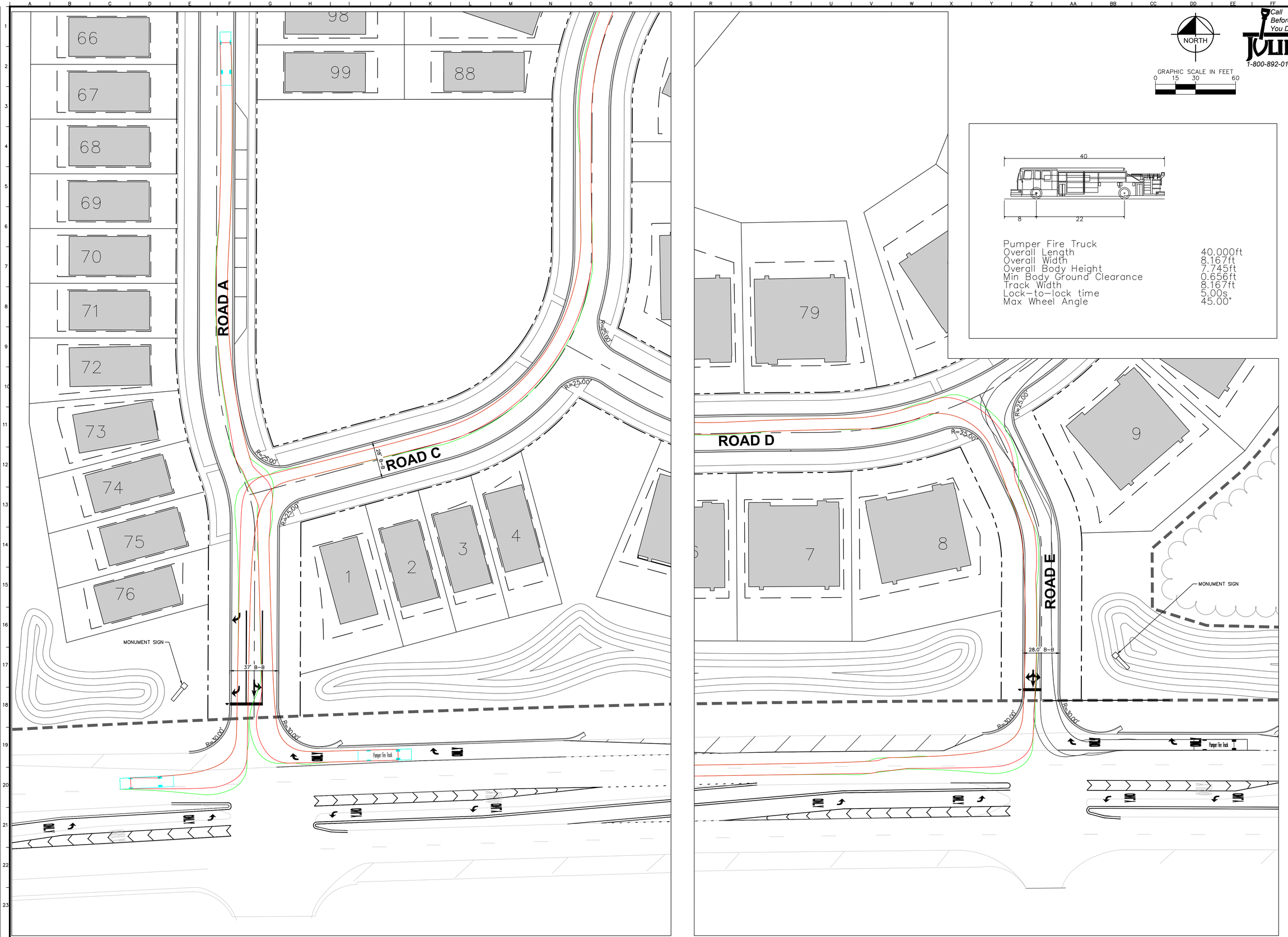
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PULTE HOME COMPANY, LLC

UTILITY PLAN

GREENWAY CHASE
610 PETERSON ROAD
LIBERTYVILLE, IL 60048

ORIGINAL ISSUE: 01/03/2025
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PULTE HOME COMPANY, LLC

FIRETRUCK AUTOTURN EXHIBIT

GREENWAY CHASE
610 PETERSON ROAD
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ORIGINAL ISSUE: 01/03/2025
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SHEET NUMBER
EXH.1

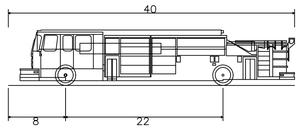
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NORTH BASIN 1
NWL: 694
HWL: 700.66
TOP: 701

NORTH

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0 15 30 60

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Pumper Fire Truck	
Overall Length	40.000ft
Overall Width	8.167ft
Overall Body Height	7.745ft
Min Body Ground Clearance	0.656ft
Track Width	8.167ft
Lock-to-lock time	5.00s
Max Wheel Angle	45.00°

ROAD B
ROAD D
ROAD C
ROAD A
R=30.00'
R=25.00'
96'
Target fit test

No.	REVISIONS	DATE	BY
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FIRETRUCK AUTOTURN EXHIBIT

GREENWAY CHASE
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EXH.2

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dimension radii

Is CC&G proposed along the right turn lane?

Please add a 10-foot multi-use path across entire site, show crosswalks

add stop sign

Minimum 150 ft on SRA, use shorter taper to accommodate

Is CC&G proposed along the right turn lane?

add stop sign

PETERSON ROAD (IL RTE 137)

PROPOSED – 215' STORAGE

PROPOSED – 220' TAPER

PROPOSED RESTRIPING FOR TURN LANE

PROPOSED – 125' STORAGE

PROPOSED – 120' TAPER

259'-10 3/4"

CHEVRON STRIPING

ELDERBERRY DR

4' PAVEMENT C&G ALONG STORAGE

N SUNNYVIEW ROAD

Please revise the left turn lane design to provide a neutral or positive offset (preferred) per BDE Chapter 36.

in addition to graphic scale, write out scale, e.g. 1"=100'

2024-1211 – IN PROGRESS (FOR CLIENT REVIEW ONLY)

Kimley»Horn

610 PETERSON ROAD - LIBERTYVILLE, IL

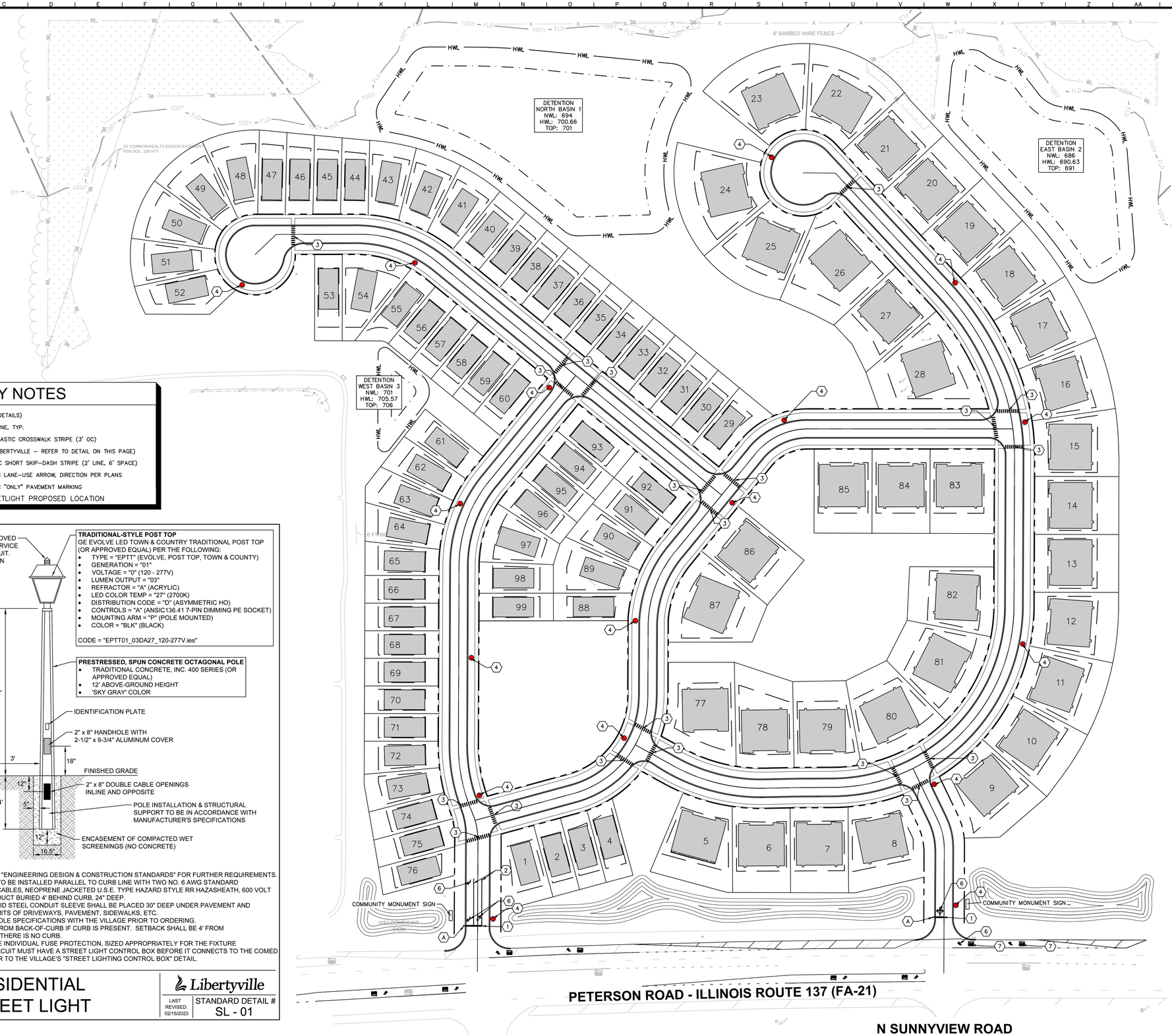
CONCEPT GEOMETRICS EXHIBIT

12/11/2024

0 20 40 80 120

NORTH

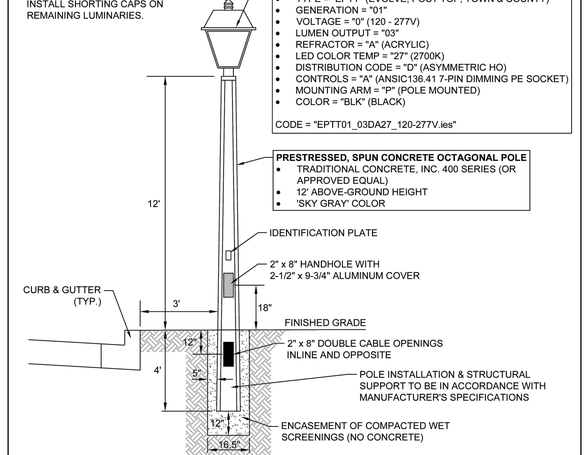
Drawing name: K:\CHS_LDEV\168247001_Pulte_Libertyville_IL\2 Design\CAD\Exhibits\168247001--Signage Striping & Lighting Plan Exhibit.dwg Sign Exhibit Jan 03, 2025 11:41am by: KlemTR.Meller
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



KEY NOTES

1. 24" WIDE STOP BAR, TYP. (SEE DETAILS)
2. 6" WIDE THERMOPLASTIC SOLID LINE, TYP.
3. INSTALL 1' X 6' WHITE THERMOPLASTIC CROSSWALK STRIPE (3' OC)
4. LIGHT POLES (PER VILLAGE OF LIBERTYVILLE – REFER TO DETAIL ON THIS PAGE)
5. INSTALL 6" WHITE THERMOPLASTIC SHORT SKIP–DASH STRIPE (2' LINE, 6' SPACE)
6. INSTALL 8' WHITE THERMOPLASTIC LANE–USE ARROW, DIRECTION PER PLANS
7. INSTALL 8' WHITE THERMOPLASTIC "ONLY" PAVEMENT MARKING

VILLAGE STANDARD STREETLIGHT PROPOSED LOCATION



NOTES:

1. REFER TO THE VILLAGE "ENGINEERING DESIGN & CONSTRUCTION STANDARDS" FOR FURTHER REQUIREMENTS.
2. 1" DIAMETER UNIDUCT TO BE INSTALLED PARALLEL TO CURB LINE WITH TWO NO. 6 AWG STANDARD CONDUCTOR COPPER CABLES, NEOPRENE JACKETED U.S.E. TYPE HAZARD STYLE RR HAZASHEATH, 600 VOLT CABLE IN 1-1/4" I.D. UNIDUCT BURIED 4' BEHIND CURB, 24" DEEP.
3. 2" DIA. GALVANIZED RIGID STEEL CONDUIT SLEEVE SHALL BE PLACED 30" DEEP UNDER PAVEMENT AND EXTENDED 18" PAST LIMITS OF DRIVEWAYS, PAVEMENT, SIDEWALKS, ETC.
4. VERIFY FIXTURE AND POLE SPECIFICATIONS WITH THE VILLAGE PRIOR TO ORDERING.
5. SETBACK SHALL BE 3' FROM BACK-OF-CURB IF CURB IS PRESENT. SETBACK SHALL BE 4' FROM EDGE-OF-PAVEMENT IF THERE IS NO CURB.
6. EACH POLE SHALL HAVE INDIVIDUAL FUSE PROTECTION, SIZED APPROPRIATELY FOR THE FIXTURE
7. EACH STREETLIGHT CIRCUIT MUST HAVE A STREET LIGHT CONTROL BOX BEFORE IT CONNECTS TO THE COMED POWER SOURCE. REFER TO THE VILLAGE'S "STREET LIGHTING CONTROL BOX" DETAIL.

RESIDENTIAL STREET LIGHT

Libertyville

LAST REVISED:	STANDARD DETAIL #
02/15/2023	SL - 01

STREET LIGHTING TO FOLLOW VILLAGE STANDARDS (SECTION 8 OF THE ENGINEERING MANUAL). STREET LIGHTING SPACING SHALL NOT EXCEED 300'.

No.	REVISIONS	DATE	BY

Kimley»Horn

© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
570 LAKE COOK ROAD, SUITE 200
DEERFIELD, IL 60015
PHONE: 847-405-2504
WWW.KIMLEY-HORN.COM

SCALE: AS NOTED
DESIGNED BY: INS
DRAWN BY: KTRM
CHECKED BY: RNM

PULTE HOME COMPANY, LLC

R.O.W. LIGHTING PLAN

GREENWAY CHASE
610 PETERSON ROAD
LIBERTYVILLE, IL 60048

ORIGINAL ISSUE: 01/03/2025
KHA PROJECT NO. 168247001
SHEET NUMBER
EXH.

DRAINAGE MEMORANDUM

To: Village of Libertyville

From: Ryan Martin, P.E.
Ian Spence, P.E.
Kimley-Horn and Associates, Inc.

Date: January 3, 2025

Re: ***Proposed 42-Acre Townhome Community***
610 Peterson Road – North of Elderberry Drive & Peterson Road
Libertyville, Illinois

Introduction

Kimley-Horn and Associates, Inc., serves as the engineering consultant for Pulte Home Company, LLC, who is proposing to develop approximately 42 acres into a residential community. The sitework includes demolition of existing buildings/pavement, grading, stormwater management facilities, water, sanitary sewer, paving, landscaping, and construction of single-family homes and duplexes.

This memo assesses the post-development runoff in accordance with the stormwater regulations of Lake County and the Village of Libertyville. This memo summarizes the preliminary stormwater calculations for the site and is not intended to be a comprehensive design of all final engineering requirements. The objective is to illustrate that the proposed site layout can adequately handle the necessary stormwater detention volume and adhere to the prescribed release rates mandated by regulations. Analysis of the proposed stormwater detention basins were conducted using HydroCAD Version 10.20-5c.

1. Existing Conditions

The existing site is currently about 10.5 acres of developed land that is used for extended care facilities. The remaining site is primarily undeveloped wooded area and has remained largely undisturbed since before 1990. It is bound by Peterson Road to the south, Victoria Park housing complex and COMED right-of-way to the West, unincorporated Lake County land to the north, and Forest Creek housing complex and a business park to the east.

The site generally drains from south to north. Runoff captured from the developed area is captured via existing storm infrastructure and is conveyed to an existing constructed basin. Runoff from the IDOT right-of-way (Peterson Road) is directed east via a drainage ditch. A drainage ditch will be maintained in the proposed conditions.

A wetland map was initially pulled from U.S. Fish and Wildlife Service National Wetlands Inventory and was then supplemented with a delineated wetland map prepared by DK Environmental Services, Inc. (see **Exhibit 1**). There are multiple wetlands identified on site. This development will cause impacts to the existing wetlands and will likely require permitting from Lake County Stormwater

Commission. Additional information regarding the jurisdiction and allowable wetland impacts will be provided by the client's wetland consultant in a subsequent submittal.

A majority of the site is classified by FEMA as Zone X, an area of minimal flood hazard. However, the northeast and northwest corners are classified by FEMA as Zone AE, special flood hazard areas (see **Exhibit 1)**.

A soils survey was obtained from the Natural Resources Conservation Service (NRCS), which shows that the majority of the site is underlain with Varna silt loam (group C) and Pella silty clay loam (group B/D). See **Exhibit 1** for a detailed breakdown of the soil groups. The existing conditions is modelled with consideration to the existing soil groups.

1.1 Existing Depressional Storage (Constructed Basin)

As noted, review of the existing site topography determined that there is an existing, constructed depressional storage area that is drained to the northeast corner of the project site via a 15-inch diameter storm sewer. While we feel that this would not fall under the classification of a depressional storage area, we feel that this is a constructed storage basin that will be disturbed during the future site development. As part of our existing site analysis, it was determined that the storage basin provides 1.88 ac-ft of stormwater storage. This lost stormwater storage will be maintained and provided within a proposed stormwater management basin. See **Exhibit 2** for details.

1.2 Pre-1992 Impervious Surface

A portion of the site is currently developed with a building and associated parking lots. The previously disturbed area equates to approximately 5.66 acres of impervious surface. Per section 300.06 of the Lake County Watershed Development Ordinance, this area is exempt from current stormwater detention requirements.

Table 1 summarizes the Pre-1992 impervious surface associated with each proposed condition sub-watershed delineation. The existing impervious area is calculated as a combination of existing building, sheds, gravel, concrete, brick pavement, and asphalt pavement. See **Exhibit 2** for details.

Table 1: Pre-1992 Impervious Surface Summary

	Sub catchment A	Sub catchment B	Sub catchment C
Existing Impervious Area	0.44 Ac	3.29 Ac	2.93 Ac
Actual Area	3.30 Ac	20.79 Ac	11.24 Ac
Theoretical Area*	2.86 Ac	17.50 Ac	9.31 Ac

*Refers to the area required for detention volume sizing less the existing impervious area on-site. See Page 5 for details.

1.3 Federal Emergency Management Agency Regulatory Floodplain

The Federal Emergency Management Agency (FEMA) Regulatory Flood Insurance Rate Map (FIRM) for Bull Creek was reviewed with respect to the updated site-specific topography. The flood profile was obtained from the FEMA Flood Insurance Study (FIS); specifically, FIS Profile 036P of Bull Creek Tributary. The portion of Bull Creek, immediately north of the development site has FEMA Zone AE regulatory floodplain that extends from Buckley Road crossing east towards North Milwaukee Avenue. The effective floodplain elevations relative to this site are included in Table 2 below. See **Exhibit 2** for details.

Table 2: FEMA FIS Regulatory Floodplain Elevations		
	10-Yr	100-Yr
A	686.50	687.80
B	697.90	698.80
C	706.00	707.00
Basin 1 Outfall	689.00	690.00
Basin 2 Outfall	683.80	684.80

The floodplain elevations listed on Table 2 were delineated using a combination of the site-specific topography and 2017 Lake County aerial topography. When comparing the floodplain limits and elevation to both topographic sources, it was determined that the FEMA floodplain shown on the effective FIRM By Map is understated when compared to the delineation using the site-specific topography. The floodplain limits have been updated and are shown throughout the engineering plans and within the existing and proposed conditions exhibits. See **Exhibit 2** and **Exhibit 3** for details.

Our proposed site plan shows no disturbance to the existing regulatory floodplain associated with the construction of the stormwater management basin. As a preventive measure, an extends of grading delineation has been proposed 5’ off of the existing floodplain delineation. Compensatory storage will not be required within the stormwater management basin.

2. Proposed Conditions

The proposed development will consist of three drainage areas and three stormwater detention basins that will be required to capture runoff from the site. All drainage will be routed to the basins via storm sewer or overland flow. After being collected in the detention basins, drainage will be released at or below the maximum allowable release rate to the existing wetlands and flooplains and ultimately continue flow northeast of the property.

The proposed stormwater management system will be designed to meet the requirements of the WDO. Stormwater management, compensatory storage, runoff volume reduction and water quality standards will all be met as part of the final design. As part of the preliminary engineering design, the stormwater management basins were designed per the following:

- Maximum percent impervious for duplex & single-family lots to be 55% & 50% respectively
- Time of Concentration: 15 minutes
- 2-year and 100-year rainfall events per Illinois State Water Survey Bulletin 75
- Allowable release rate of 0.04 cfs/acre for the 2-year, 24-hour, rainfall event
- Allowable release rate of 0.15 cfs/acre for the 100-year, 24-hour, rainfall event
- Natively planted grass bottoms to provide water quality benefit and runoff volume reduction

The runoff curve numbers for the site have been calculated utilizing TR-55 methodology as well as the Village of Libertyville standards for lot coverage. Refer to Table 3 below for summary of the areas used to calculate composite curve numbers.

Table 3: Curve Number Calculations

Coverage Type	**Pervious ROW**	**Impervious ROW**	Total (per 10 LF)	
Area	230	370	600	
CN Value	80	98	91	per LF
Roadway ROW Area:	**6.17**	Ac		
Coverage Type	**Single Family (64)**	**Duplex (70)**		
Area	7.75	9.94	17.69	Ac
Calculated Max % Impervious	50.00%	55.00%		
CN Value	89	89.9	89.5	per Lot
Lot Coverages Area:	**17.69**	Ac		
Coverage Type	**Pervious**	**Impervious**		
Outlots, Parks, Landscape Buffer Areas	7.75	0		
Stormwater Management Areas	3.72			
CN Value	80	98		
Additional Outlots and Greenspace	**11.47**	Ac		
Composite Area	**35.33**	Ac		
Composite CN Value (Lots)	**87**	CN		

As noted in the calculation above, a curve number of 80 has been calculated for the stormwater management areas, as well as for out lots, parks, and landscape buffers on site. The composite CN value for the site is 87.

As noted, the development parcel had approximately 5.66 acres of existing impervious area. This area will be excluded from any required stormwater detention calculations per the WDO. Refer to Table 4 for summary of the tributary areas used in determining the required stormwater storage volume. See **Exhibit 3** for details.

Table 4: Stormwater Management Basins Hydrologic Parameters

Sub Basin ID	Total Tributary Area	Pre 1992 Impervious Area	Area used to determine stormwater detention	Runoff Curve Number	Time of Concentration
	Acres	Acres	Acres	(CN)	(Hrs)
A	3.30	0.44	2.86	87	.25
B	20.79	3.29	17.50	87	.25
C	11.24	1.93	9.31	87	.25

Stormwater detention calculations were performed using HydroCAD Version 10.20-5c. The required volume was determined using both the 2-year and 100-year allowable release rates and Lake County Bulletin 75 effective rainfall data. The current configuration routes stormwater management Basin 3 to Basin 1 at the northern limits of the development. Basin 1 is sized to meet the allowable release rate of the developable area of both Sub catchments A and B. Stormwater management Basin 2 is sized for the tributary area associated with the subbasin C.

The required volume is based off the *Proposed Conditions – Theoretical Model.* The theoretical model is utilized to calculate the required storage volume less the existing impervious area. Once the required storage volume was determined, a *Proposed Conditions – Actual Model* was performed to ensure the actual area (additional existing impervious area) tributary towards each basin is released at the appropriate net allowable release. The orifice sizes and high-water levels associated with the *Proposed Conditions – Actual Model* shall be considered the design / construction parameters. Refer to table 5 and table 6 below for a breakdown of Theoretical & Actual volumes and release rates. See **Exhibit 3** for details.

Table 5: Stormwater Management Analysis Summary – Volume

	Actual Area	Theoretical Area	Theoretical 2 Yr	Actual 2 Year	Theoretical 100 Yr	Plus (+) Volume SF	Actual 100 YR
Allowable Release (0.15 cfs/ac)	*Acres*	*Acres*	*AC-FT*	*AC-FT*	*AC-FT*	*AC-FT*	*AC-FT*
A	3.30	2.86	N/A	N/A	N/A	N/A	N/A
B	20.79	17.50	2.76	3.25	8.97	9.12	11.00
C	11.24	9.31	1.27	1.52	4.17	4.21	5.00
Total Site Release	35.33	29.67	**4.03**	**4.77**	**13.14**	**13.34**	**16.00**
		A + B Combined:					

Table 6: Stormwater Management Analysis Summary – Release Rates

	Actual Area	Theoretical Area	Theoretical 100 Yr	Theoretical 2 Yr	Actual 100 Yr	Actual 2 Yr
Allowable Release (0.15 cfs/ac)	*Acres*	*Acres*	*CFS*	*CFS*	*CFS*	*CFS*
A	3.30	2.86	0.43	0.11	0.50	0.13
B	20.79	17.50	2.62	0.70	3.12	0.83
C	11.24	9.31	1.40	0.37	1.69	0.45
Total Site Release	35.33	29.67	**4.45**	**1.19**	**5.30**	**1.41**
		A + B Combined:	3.05	0.81	3.61	0.96

2.1 Lake County WDO Detention Volume Safety Factor

Per Lake County WDO Section 508.01, additional detention volume has been provided to accommodate the detention volume safety factor. In this stormwater management, the ratio of existing impervious to proposed on-site tributary drainage area is utilized to calculate the required safety factor of 1.028. The detention volume safety factor has been applied to the *Proposed Conditions – Theoretical Model* and is represented in the aforementioned Table 5. The proposed basins. See below Table 7 for the breakdown.

Table 7: Detention Volume Safety Factor Calculations

	Onsite	Offsite	Ratio of off-site / on-site	0.05 of Ratio	Safety Factor
A	3.30	0.44	0.155	0.008	1.008
B	20.79	3.29	0.188	0.009	1.009
C	11.24	5.66	0.207	0.010	1.010
			0.551	0.028	**1.028**

2.2. Proposed Compensatory Storage

As previously mentioned, an existing detention facility or depressional storage area will be impacted and filled as part of the proposed development. Based on our analysis, it was determined that there are approximately 1.88 ac-ft of existing storage displaced as part of the development. Since this is a depression, compensatory storage will be compensated at a 1:1 ratio.

Basin 1 proposes to provide an additional 1.88 ac-ft of storage that will compensate for the lost existing storage. To access the compensatory storage, the 100-year restrictor in Basin 1 will be reduced from 5.7-inch diameter to 5.2-inch diameter. This will allow the basin to fill to a High-Water Level (HWL) of 700.66 ft and access both the required stormwater detention volume and existing compensatory storage.

Conclusion

Stormwater management for the proposed improvements has been preliminarily designed in accordance with the stormwater regulations of Lake County and the Village of Libertyville. There are no anticipated adverse impacts to the existing downstream drainage system as a result of the proposed improvements.

During final engineering, the proposed storm sewer network will be sized appropriately to convey the 10-year storm event in accordance with the Village of Libertyville Code of Ordinances. Emergency overflow routes will be sized for the 100-year event and detailed in Final Engineering.

Exhibit 1 – Maps

DKES WETLANDS MAP

FEMA FLOODPLAIN MAP

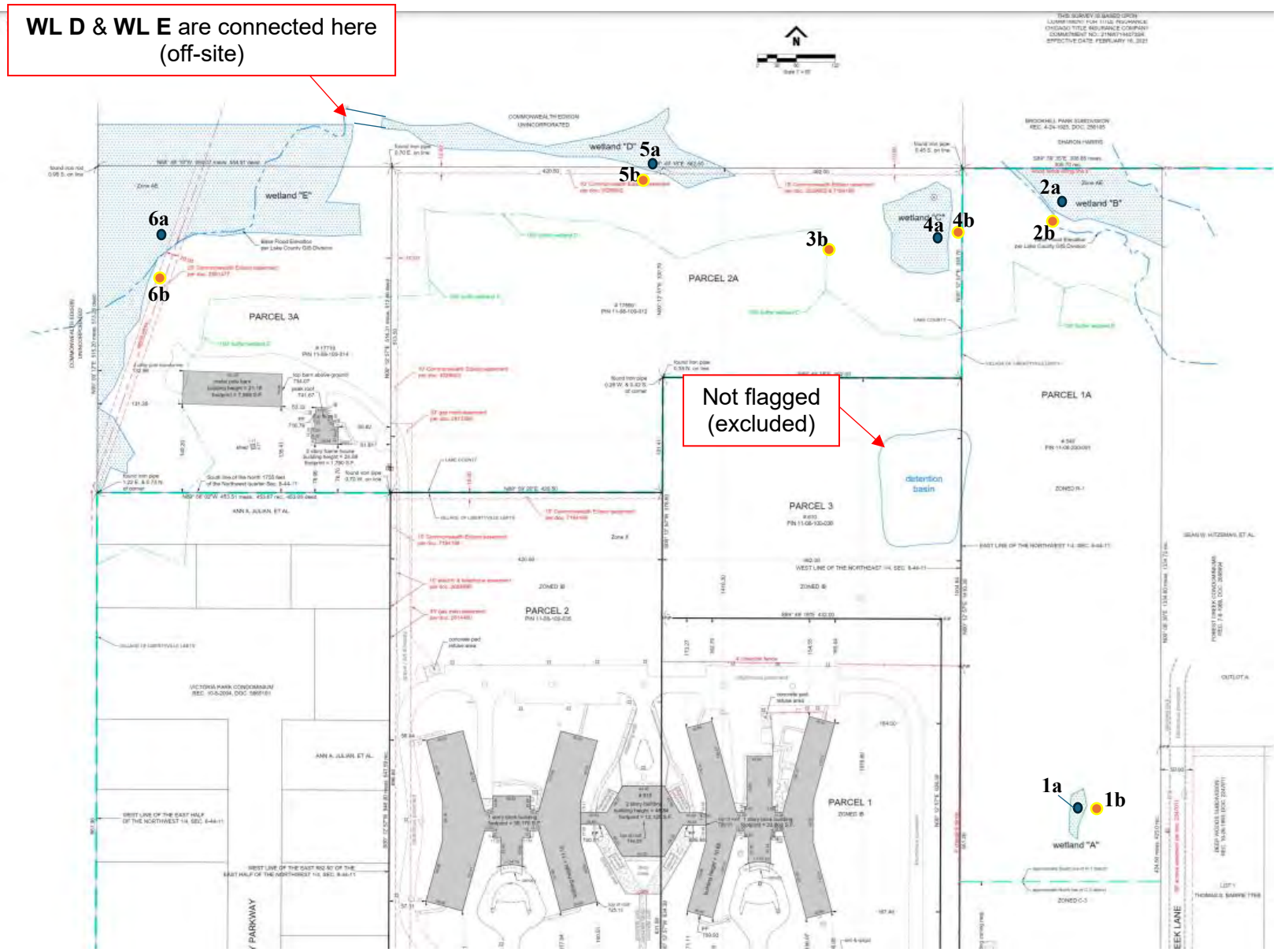
FEMA FIS PROFILE

NRCS SOILS MAP

BEI

DKES INC

Wetland Boundaries & Data Point Locations – Field Reconnaissance 10.8.2024 (UPD)



SUMMARY/NOTES:

- Wetland **A** through **E** re-flagged on 10.8.2024 (5 wetland areas total)
- Wetlands **A** and **C** are isolated wetlands wholly on-site under Lake County SMC jurisdiction
- Detention Basin not flagged (excluded from wetland regulation)
- USACE jurisdictional Wetlands **B**, **D,** and **E** extend off-site to the north and are part of the Bull Creek ADID wetland complex #94 (Liberty Prairie)

National Flood Hazard Layer FIRMette

87°59'3"W 42°18'51"N



87°58'25"W 42°18'25"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

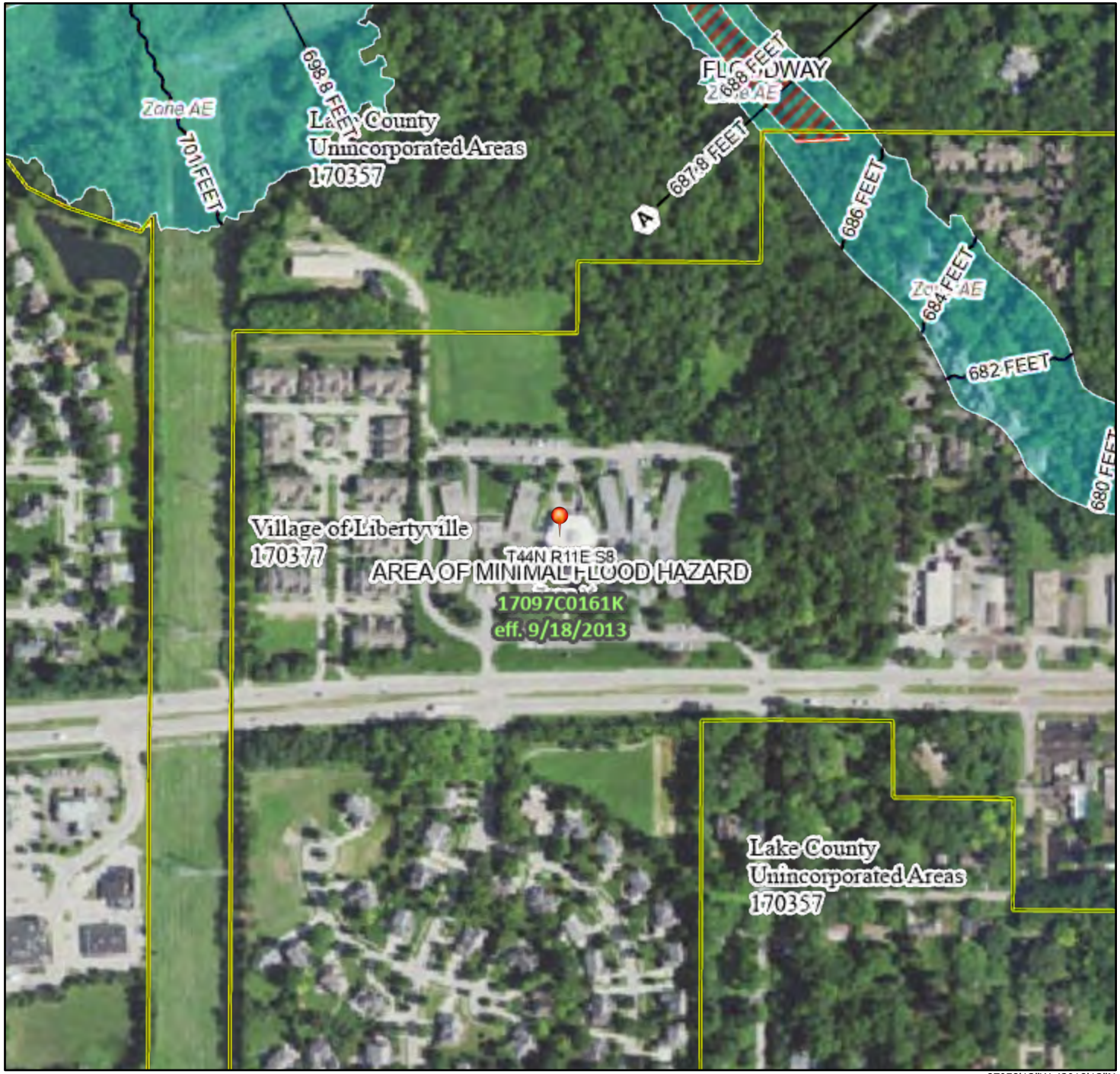
The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 11/25/2024 at 7:27 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

National Flood Hazard Layer FIRMette

FEMA

87°58'51"W 42°18'39"N



87°58'13"W 42°18'12"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
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- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

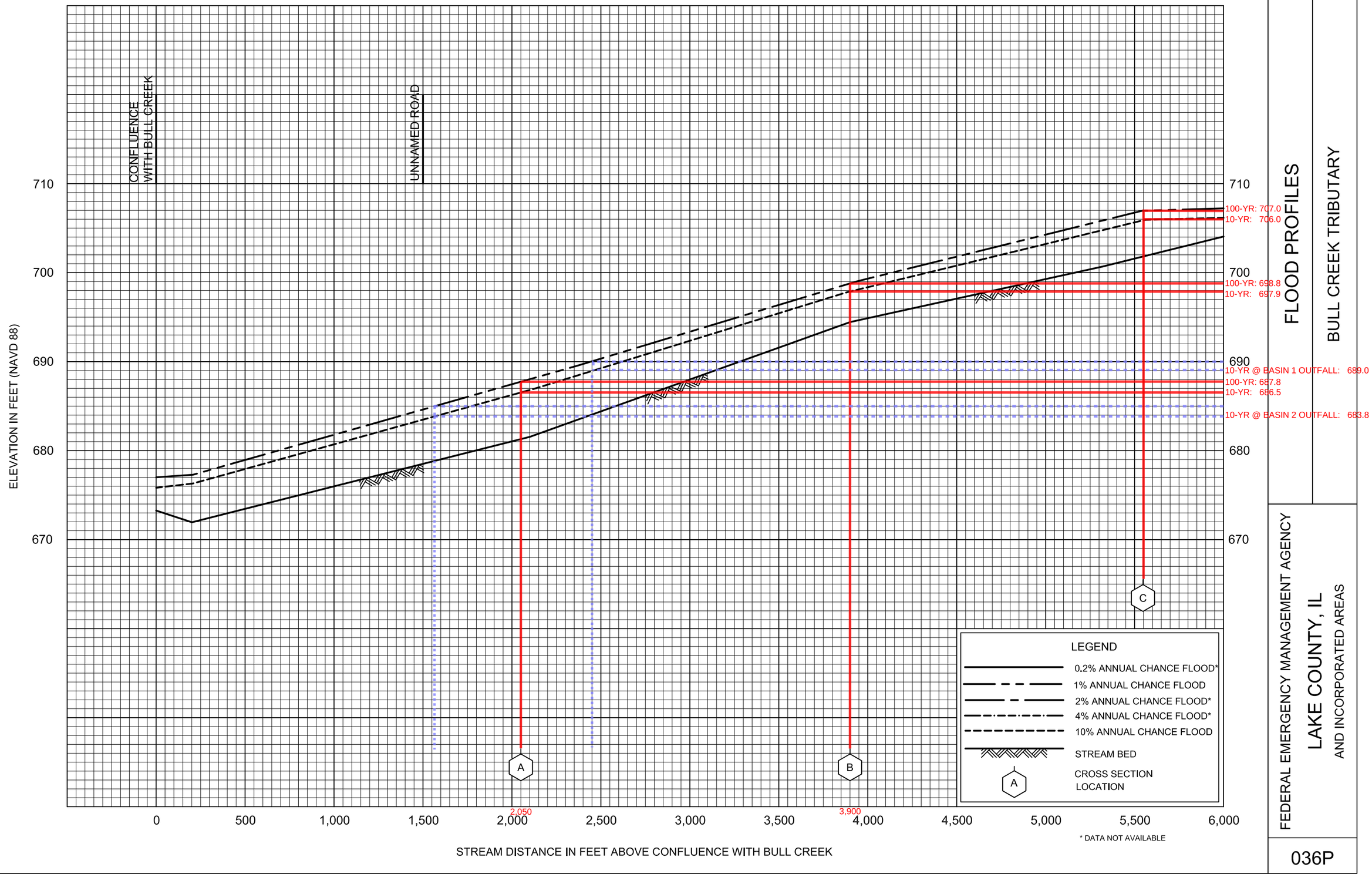
N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

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The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 9/17/2024 at 9:59 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

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FLOOD PROFILES

BULL CREEK TRIBUTARY

FEDERAL EMERGENCY MANAGEMENT AGENCY

LAKE COUNTY, IL

AND INCORPORATED AREAS

036P



Map Scale: 1:3,800 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 150 300 600 900

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil Rating Polygons

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Lake County, Illinois
Survey Area Data: Version 19, Aug 21, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 19, 2022—Sep 30, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
146A	Elliott silt loam, 0 to 2 percent slopes	C/D	3.3	6.9%
153A	Pella silty clay loam, 0 to 2 percent slopes	B/D	11.7	24.8%
223B	Varna silt loam, 2 to 4 percent slopes	C	12.9	27.1%
223C2	Varna silt loam, 4 to 6 percent slopes, eroded	C	12.8	27.0%
442A	Mundelein silt loam, 0 to 2 percent slopes	B/D	0.2	0.5%
443B	Barrington silt loam, 2 to 4 percent slopes	C	2.6	5.5%
626A	Kish loam, 0 to 2 percent slopes	B/D	0.4	0.8%
1107A	Sawmill silty clay loam, undrained, cool, 0 to 2 percent slopes, frequently flooded	B/D	3.5	7.4%
Totals for Area of Interest			**47.4**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

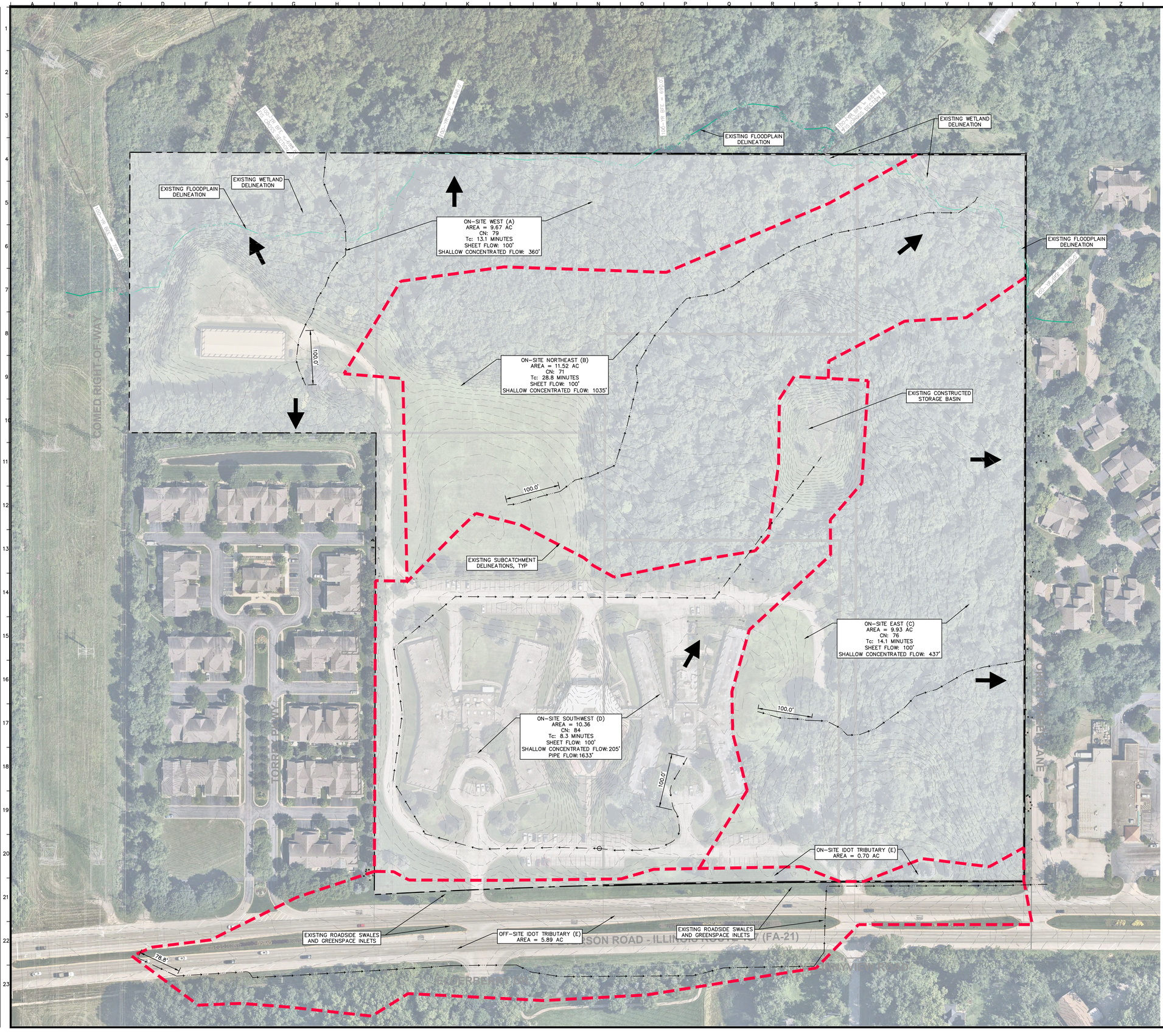
Tie-break Rule: Higher

Exhibit 2 – Existing Conditions Exhibits & Models

EXISTING CONDITIONS EXHIBIT

EXISTING CONDITIONS HYDROCAD MODEL

EXISTING (PRE 1992) IMPERVIOUS AREA CONDITIONS MODEL



NORTH

GRAPHIC SCALE IN FEET
0 40 80 160

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No.	REVISIONS	DATE	BY

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DEERFIELD, IL 60015
PHONE: 847-520-9074
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SCALE: AS NOTED
DESIGNED BY: INS
DRAWN BY: KTRM
CHECKED BY: RNM

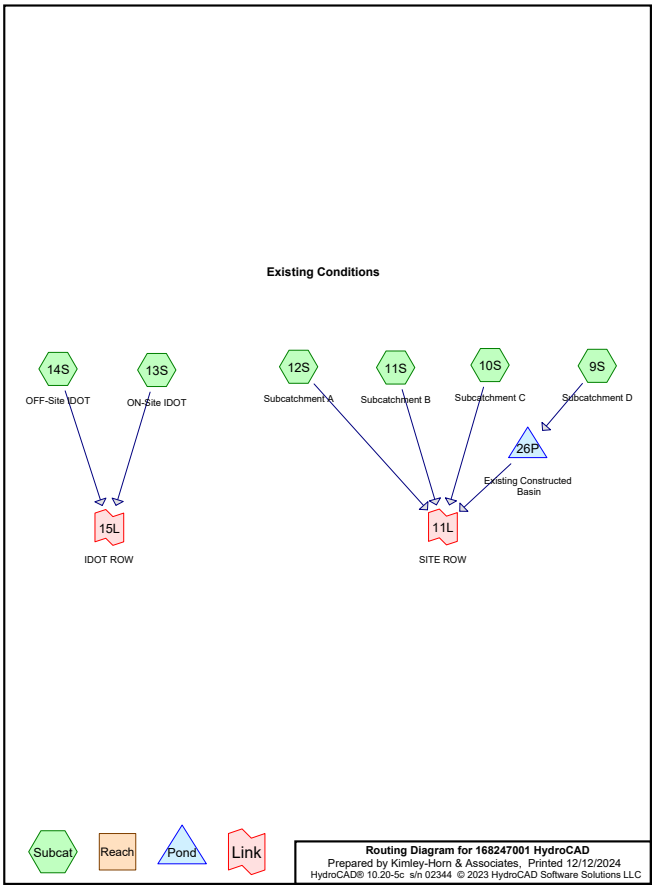
PULTE GROUP

EXISTING DRAINAGE CONDITIONS EXHIBIT

GREENWAY CHASE
610 PETERSON ROAD
LIBERTYVILLE, IL 60048

ORIGINAL ISSUE: 12/11/2024
KHA PROJECT NO. 168247001
SHEET NUMBER
EXH.

Drawing name: K:\CHS_LDEV\168247001_Pulte_Libertyville_IL\2 Design\CAD\Exhibits\168247001-Existing Drainage Conditions.dwg EXH. Dec 12, 2024 10:35am by: Ian.Spence
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	002YR-024.00HR	Huff 0-10sm	3Q	Scale	24.00	1	3.34	2
2	100YR-024.00HR	Huff 0-10sm	3Q	Scale	24.00	1	8.57	2

Summary for Subcatchment 9S: Subcatchment D

[47] Hint: Peak is 103% of capacity of segment #3

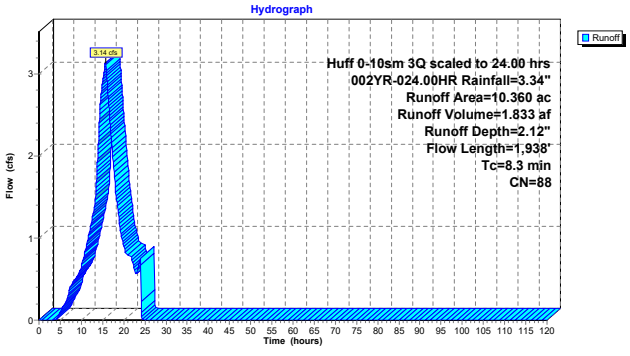
Runoff = 3.14 cfs @ 15.70 hrs, Volume= 1.833 af, Depth= 2.12"
Routed to Pond 26P : Existing Constructed Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
Huff 0-10sm 3Q scaled to 24.00 hrs 002YR-024.00HR Rainfall=3.34"

Area (ac)	CN	Description
4.340	98	
6.020	80	>75% Grass cover, Good, HSG D
10.360	88	Weighted Average
6.020		58.11% Pervious Area
4.340		41.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	100	0.0180	1.18		**Sheet Flow,** n= 0.013 P2= 3.34"
1.3	205	0.0170	2.65		**Shallow Concentrated Flow, Shallow Conc** Paved Kv= 20.3 fps
3.0	685	0.0052	3.87	3.04	**Pipe Channel, RCP_Round 12"** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.011 Concrete pipe, straight & clean
2.6	948	0.0097	6.13	7.52	**Pipe Channel, RCP_Round 15"** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.011 Concrete pipe, straight & clean
8.3	1,938	Total			

Subcatchment 9S: Subcatchment D



Summary for Subcatchment 10S: Subcatchment C

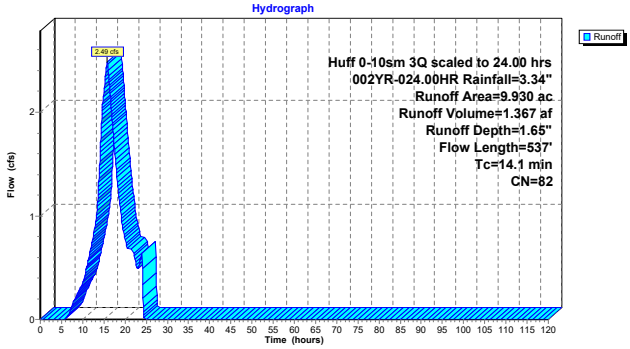
Runoff = 2.49 cfs @ 15.79 hrs, Volume= 1.367 af, Depth= 1.65"
Routed to Link 11L : SITE ROW

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
Huff 0-10sm 3Q scaled to 24.00 hrs 002YR-024.00HR Rainfall=3.34"

Area (ac)	CN	Description
9.930	82	Woods/grass comb., Fair, HSG D
9.930		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.9	100	0.0670	0.28		**Sheet Flow, Sheet Flow** Grass: Short n= 0.150 P2= 3.34"
8.2	437	0.0313	0.88		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
14.1	537	Total			

Subcatchment 10S: Subcatchment C



Summary for Subcatchment 11S: Subcatchment B

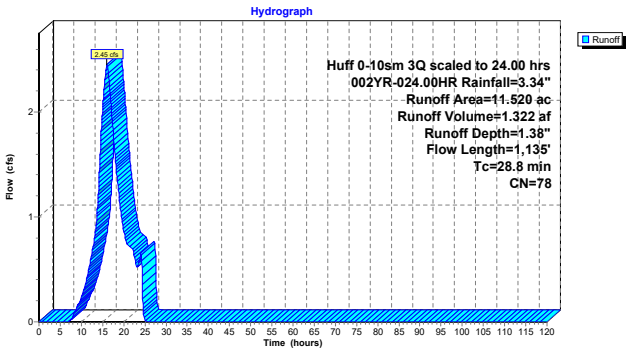
Runoff = 2.45 cfs @ 16.03 hrs, Volume= 1.322 af, Depth= 1.38"
Routed to Link 11L : SITE ROW

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
Huff 0-10sm 3Q scaled to 24.00 hrs 002YR-024.00HR Rainfall=3.34"

Area (ac)	CN	Description
2.450	80	>75% Grass cover, Good, HSG D
9.070	77	Woods, Good, HSG D
11.520	78	Weighted Average
11.520		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.5	100	0.0273	0.20		**Sheet Flow, Sheet Flow** Grass: Short n= 0.150 P2= 3.34"
20.3	1,035	0.0290	0.85		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
28.8	1,135	Total			

Subcatchment 11S: Subcatchment B



Summary for Subcatchment 12S: Subcatchment A

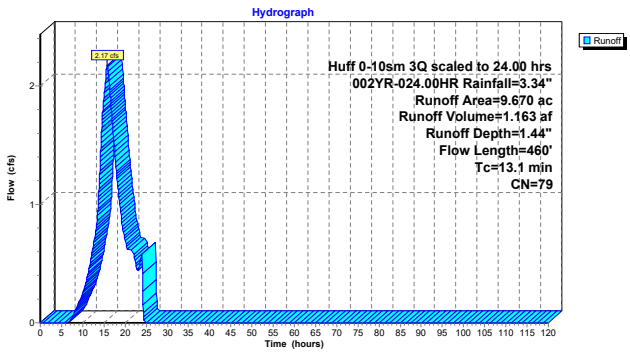
Runoff = 2.17 cfs @ 15.79 hrs, Volume= 1.163 af, Depth= 1.44"
Routed to Link 11L : SITE ROW

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
Huff 0-10sm 3Q scaled to 24.00 hrs 002YR-024.00HR Rainfall=3.34"

Area (ac)	CN	Description
0.340	96	Gravel surface, HSG D
0.330	98	Roofs, HSG D
0.820	80	>75% Grass cover, Good, HSG D
8.180	77	Woods, Good, HSG D
9.670	79	Weighted Average
9.340		96.59% Pervious Area
0.330		3.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.6	100	0.0356	0.22		**Sheet Flow, Sheet Flow** Grass: Short n= 0.150 P2= 3.34"
5.5	360	0.0480	1.10		**Shallow Concentrated Flow, Shallow Concentrated Flow** Woodland Kv= 5.0 fps
13.1	460	Total			

Subcatchment 12S: Subcatchment A



Summary for Subcatchment 13S: ON-Site IDOT

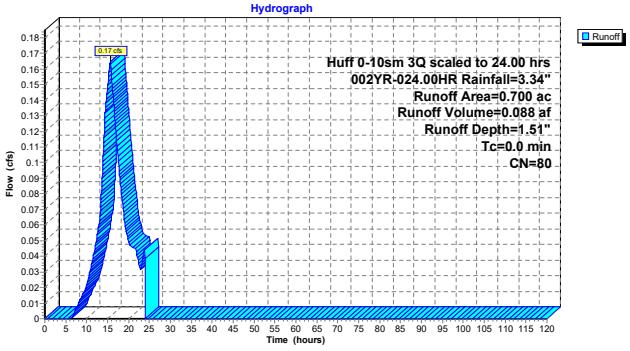
[46] Hint: Tc=0 (Instant runoff peak depends on dt)

Runoff = 0.17 cfs @ 15.60 hrs, Volume= 0.088 af, Depth= 1.51"
Routed to Link 15L : IDOT ROW

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
Huff 0-10sm 3Q scaled to 24.00 hrs 002YR-024.00HR Rainfall=3.34"

Area (ac)	CN	Description
0.700	80	>75% Grass cover, Good, HSG D
0.700		100.00% Pervious Area

Subcatchment 13S: ON-Site IDOT



Summary for Subcatchment 14S: OFF-Site IDOT

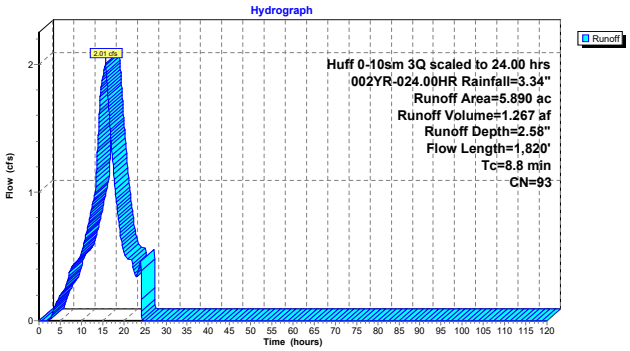
Runoff = 2.01 cfs @ 15.69 hrs, Volume= 1.267 af, Depth= 2.58"
Routed to Link 15L : IDOT ROW

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
Huff 0-10sm 3Q scaled to 24.00 hrs 002YR-024.00HR Rainfall=3.34"

Area (ac)	CN	Description
5.890	93	Paved roads w/open ditches, 50% imp, HSG D
2.945		50.00% Pervious Area
2.945		50.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.0	79	0.0218	1.29		**Sheet Flow,** n= 0.012 P2= 3.34"
1.2	136	0.0090	1.93		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.3	370	0.0830	4.64		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.4	124	0.0060	5.44	9.62	**Pipe Channel, RCP_Round 18"** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.011 Concrete pipe, straight & clean
4.2	584	0.0211	2.34		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.7	527	0.0224	12.74	40.01	**Pipe Channel, RCP_Round 24"** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011 Concrete pipe, straight & clean
8.8	1,820	Total			

Subcatchment 14S: OFF-Site IDOT



Summary for Pond 26P: Existing Constructed Basin

[44] Hint: Outlet device #1 is below defined storage

Inflow Area = 10.360 ac, 41.89% Impervious, Inflow Depth = 2.12" for 002YR-024.00HR event
Inflow = 3.14 cfs @ 15.70 hrs, Volume= 1.833 af
Outflow = 3.08 cfs @ 15.85 hrs, Volume= 1.833 af, Atten= 2%, Lag= 9.1 min
Primary = 3.08 cfs @ 15.85 hrs, Volume= 1.833 af
Routed to Link 11L : SITE ROW

Routing by Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
Peak Elev= 688.56' @ 15.85 hrs Surf.Area= 0.115 ac Storage= 0.070 af

Plug-Flow detention time= 17.9 min calculated for 1.833 af (100% of inflow)
Center-of-Mass det. time= 17.8 min (953.8 - 936.0)

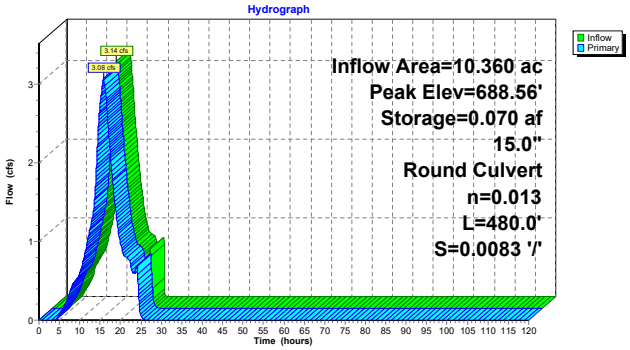
Volume	Invert	Avail.Storage	Storage Description
#1	687.70'	2.233 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
687.70	0.008	0.000	0.000
688.00	0.085	0.014	0.014
689.00	0.139	0.112	0.126
690.00	0.175	0.157	0.283
691.00	0.214	0.194	0.477
692.00	0.267	0.240	0.718
693.00	0.325	0.296	1.014
694.00	0.377	0.351	1.365
695.00	0.433	0.405	1.770
696.00	0.494	0.463	2.233

Device	Routing	Invert	Outlet Devices
#1	Primary	687.66'	**15.0" Round RCP_Round 15"** L= 480.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 687.66' / 683.66' S= 0.0083 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf

Primary OutFlow Max=3.08 cfs @ 15.85 hrs HW=688.56' (Free Discharge)
↑—**1=RCP_Round 15"** (Inlet Controls 3.08 cfs @ 3.24 fps)

Pond 26P: Existing Constructed Basin

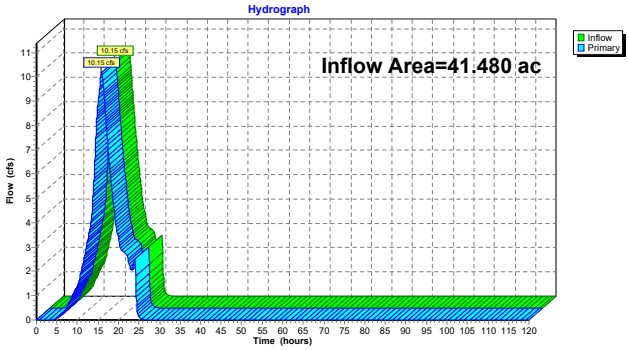


Summary for Link 11L: SITE ROW

Inflow Area = 41.480 ac, 11.26% Impervious, Inflow Depth = 1.64" for 002YR-024.00HR event
Inflow = 10.15 cfs @ 15.85 hrs, Volume= 5.684 af
Primary = 10.15 cfs @ 15.85 hrs, Volume= 5.684 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs

Link 11L: SITE ROW

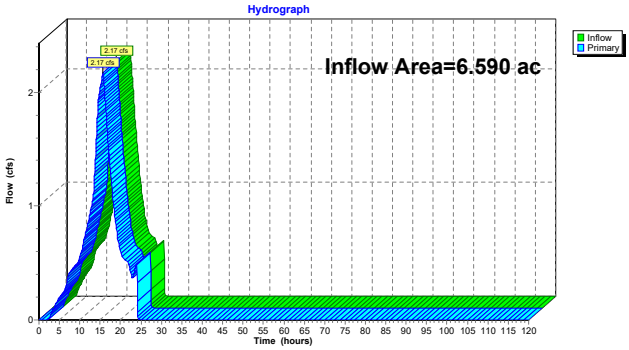


Summary for Link 15L: IDOT ROW

Inflow Area = 6.590 ac, 44.69% Impervious, Inflow Depth = 2.47" for 002YR-024.00HR event
Inflow = 2.17 cfs @ 15.68 hrs, Volume= 1.355 af
Primary = 2.17 cfs @ 15.68 hrs, Volume= 1.355 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs

Link 15L: IDOT ROW



Summary for Subcatchment 9S: Subcatchment D

[47] Hint: Peak is 309% of capacity of segment #3
[47] Hint: Peak is 125% of capacity of segment #4

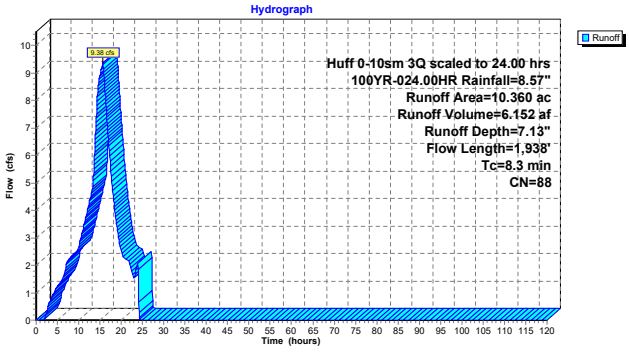
Runoff = 9.38 cfs @ 15.68 hrs, Volume= 6.152 af, Depth= 7.13"
Routed to Pond 26P : Existing Constructed Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
Huff 0-10sm 3Q scaled to 24.00 hrs 100YR-024.00HR Rainfall=8.57"

Area (ac)	CN	Description
4.340	98	
6.020	80	>75% Grass cover, Good, HSG D
10.360	88	Weighted Average
6.020		58.11% Pervious Area
4.340		41.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	100	0.0180	1.18		**Sheet Flow,** n= 0.013 P2= 3.34"
1.3	205	0.0170	2.65		**Shallow Concentrated Flow, Shallow Conc** Paved Kv= 20.3 fps
3.0	685	0.0052	3.87	3.04	**Pipe Channel, RCP_Round 12"** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.011 Concrete pipe, straight & clean
2.6	948	0.0097	6.13	7.52	**Pipe Channel, RCP_Round 15"** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.011 Concrete pipe, straight & clean
8.3	1,938	Total			

Subcatchment 9S: Subcatchment D



Summary for Subcatchment 10S: Subcatchment C

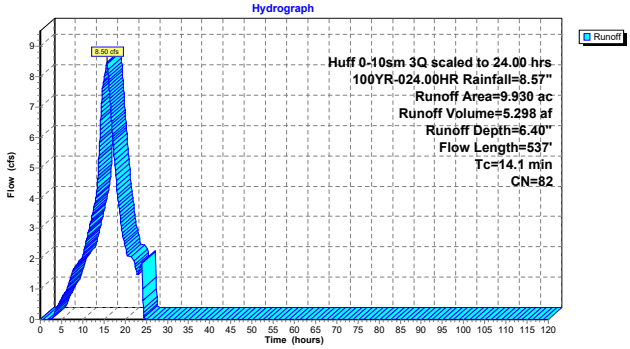
Runoff = 8.50 cfs @ 15.75 hrs, Volume= 5.298 af, Depth= 6.40"
Routed to Link 11L : SITE ROW

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
Huff 0-10sm 3Q scaled to 24.00 hrs 100YR-024.00HR Rainfall=8.57"

Area (ac)	CN	Description
9.930	82	Woods/grass comb., Fair, HSG D
9.930		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.9	100	0.0670	0.28		**Sheet Flow, Sheet Flow** Grass: Short n= 0.150 P2= 3.34"
8.2	437	0.0313	0.88		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
14.1	537	Total			

Subcatchment 10S: Subcatchment C



Summary for Subcatchment 11S: Subcatchment B

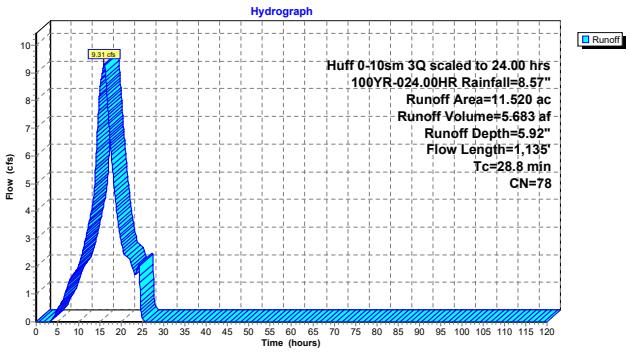
Runoff = 9.31 cfs @ 15.92 hrs, Volume= 5.683 af, Depth= 5.92"
Routed to Link 11L : SITE ROW

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
Huff 0-10sm 3Q scaled to 24.00 hrs 100YR-024.00HR Rainfall=8.57"

Area (ac)	CN	Description
2.450	80	>75% Grass cover, Good, HSG D
9.070	77	Woods, Good, HSG D
11.520	78	Weighted Average
11.520		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.5	100	0.0273	0.20		**Sheet Flow, Sheet Flow** Grass: Short n= 0.150 P2= 3.34"
20.3	1,035	0.0290	0.85		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
28.8	1,135	Total			

Subcatchment 11S: Subcatchment B



Summary for Subcatchment 12S: Subcatchment A

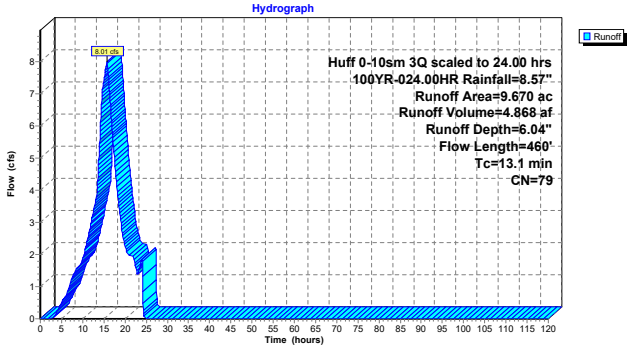
Runoff = 8.01 cfs @ 15.75 hrs, Volume= 4.868 af, Depth= 6.04"
Routed to Link 11L : SITE ROW

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
Huff 0-10sm 3Q scaled to 24.00 hrs 100YR-024.00HR Rainfall=8.57"

Area (ac)	CN	Description
0.340	96	Gravel surface, HSG D
0.330	98	Roofs, HSG D
0.820	80	>75% Grass cover, Good, HSG D
8.180	77	Woods, Good, HSG D
9.670	79	Weighted Average
9.340		96.59% Pervious Area
0.330		3.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.6	100	0.0356	0.22		**Sheet Flow, Sheet Flow** Grass: Short n= 0.150 P2= 3.34"
5.5	360	0.0480	1.10		**Shallow Concentrated Flow, Shallow Concentrated Flow** Woodland Kv= 5.0 fps
13.1	460	Total			

Subcatchment 12S: Subcatchment A



Summary for Subcatchment 13S: ON-Site IDOT

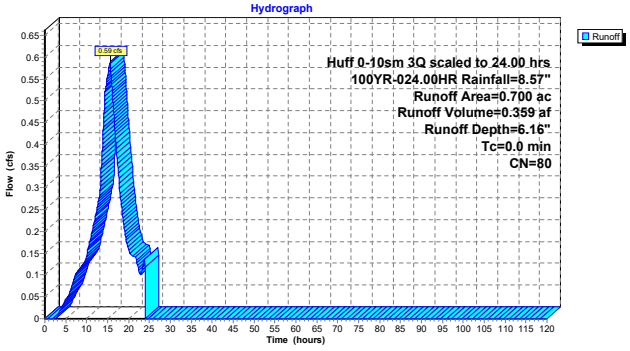
[46] Hint: Tc=0 (Instant runoff peak depends on dt)

Runoff = 0.59 cfs @ 15.59 hrs, Volume= 0.359 af, Depth= 6.16"
Routed to Link 15L : IDOT ROW

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
Huff 0-10sm 3Q scaled to 24.00 hrs 100YR-024.00HR Rainfall=8.57"

Area (ac)	CN	Description
0.700	80	>75% Grass cover, Good, HSG D
0.700		100.00% Pervious Area

Subcatchment 13S: ON-Site IDOT



Summary for Subcatchment 14S: OFF-Site IDOT

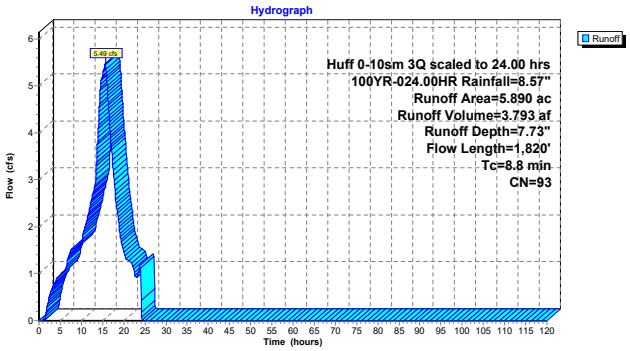
Runoff = 5.49 cfs @ 15.68 hrs, Volume= 3.793 af, Depth= 7.73"
Routed to Link 15L : IDOT ROW

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
Huff 0-10sm 3Q scaled to 24.00 hrs 100YR-024.00HR Rainfall=8.57"

Area (ac)	CN	Description
5.890	93	Paved roads w/open ditches, 50% imp, HSG D
2.945		50.00% Pervious Area
2.945		50.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.0	79	0.0218	1.29		**Sheet Flow,** n= 0.012 P2= 3.34"
1.2	136	0.0090	1.93		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.3	370	0.0830	4.64		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.4	124	0.0060	5.44	9.62	**Pipe Channel, RCP_Round 18"** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.011 Concrete pipe, straight & clean
4.2	584	0.0211	2.34		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.7	527	0.0224	12.74	40.01	**Pipe Channel, RCP_Round 24"** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011 Concrete pipe, straight & clean
8.8	1,820	Total			

Subcatchment 14S: OFF-Site IDOT



Summary for Pond 26P: Existing Constructed Basin

[44] Hint: Outlet device #1 is below defined storage

Inflow Area = 10.360 ac, 41.89% Impervious, Inflow Depth = 7.13" for 100YR-024.00HR event
Inflow = 9.38 cfs @ 15.68 hrs, Volume= 6.152 af
Outflow = 7.09 cfs @ 16.72 hrs, Volume= 6.152 af, Atten= 24%, Lag= 62.6 min
Primary = 7.09 cfs @ 16.72 hrs, Volume= 6.152 af
Routed to Link 11L : SITE ROW

Routing by Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
Peak Elev= 691.48' @ 16.72 hrs Surf.Area= 0.240 ac Storage= 0.587 af

Plug-Flow detention time= 30.8 min calculated for 6.152 af (100% of inflow)
Center-of-Mass det. time= 30.7 min (905.6 - 874.9)

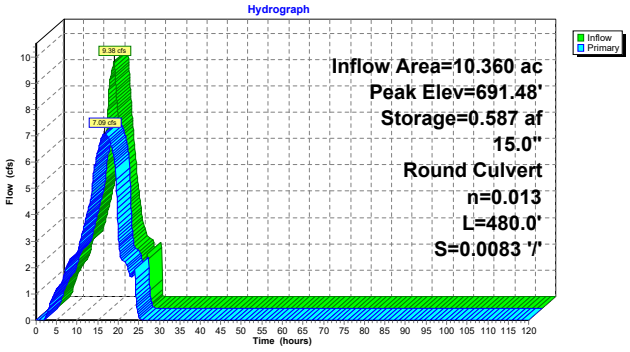
Volume	Invert	Avail.Storage	Storage Description
#1	687.70'	2.233 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
687.70	0.008	0.000	0.000
688.00	0.085	0.014	0.014
689.00	0.139	0.112	0.126
690.00	0.175	0.157	0.283
691.00	0.214	0.194	0.477
692.00	0.267	0.240	0.718
693.00	0.325	0.296	1.014
694.00	0.377	0.351	1.365
695.00	0.433	0.405	1.770
696.00	0.494	0.463	2.233

Device	Routing	Invert	Outlet Devices
#1	Primary	687.66'	**15.0" Round RCP_Round 15"** L= 480.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 687.66' / 683.66' S= 0.0083 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf

Primary OutFlow Max=7.09 cfs @ 16.72 hrs HW=691.48' (Free Discharge)
↑—**1=RCP_Round 15"** (Barrel Controls 7.09 cfs @ 5.77 fps)

Pond 26P: Existing Constructed Basin

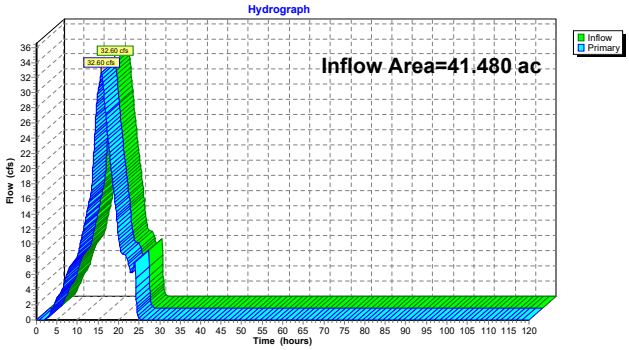


Summary for Link 11L: SITE ROW

Inflow Area = 41.480 ac, 11.26% Impervious, Inflow Depth = 6.36" for 100YR-024.00HR event
Inflow = 32.60 cfs @ 15.80 hrs, Volume= 22.001 af
Primary = 32.60 cfs @ 15.80 hrs, Volume= 22.001 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs

Link 11L: SITE ROW

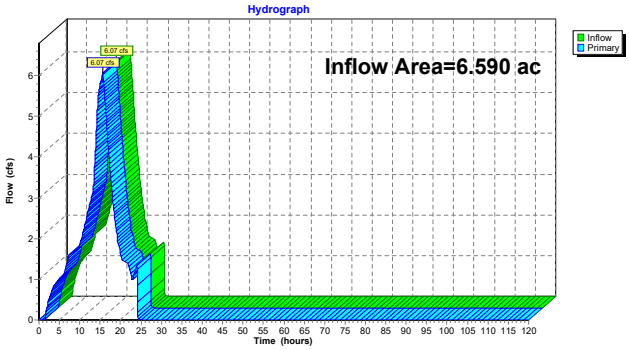


Summary for Link 15L: IDOT ROW

Inflow Area = 6.590 ac, 44.69% Impervious, Inflow Depth = 7.56" for 100YR-024.00HR event
Inflow = 6.07 cfs @ 15.67 hrs, Volume= 4.153 af
Primary = 6.07 cfs @ 15.67 hrs, Volume= 4.153 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs

Link 15L: IDOT ROW



Events for Pond 26P: Existing Constructed Basin

Event	Inflow (cfs)	Primary (cfs)	Elevation (feet)	Storage (acre-feet)
002YR-024.00HR	3.14	3.08	688.56	0.070
100YR-001.00HR	**59.57**	8.73	694.88	1.717
100YR-002.00HR	47.77	**8.88**	**695.24**	**1.875**
100YR-003.00HR	40.14	8.85	695.17	1.844
100YR-006.00HR	27.17	8.61	694.62	1.608
100YR-012.00HR	14.17	8.08	693.46	1.169
100YR-018.00HR	11.68	7.59	692.45	0.845
100YR-024.00HR	9.38	7.09	691.48	0.587
100YR-048.00HR	5.27	5.15	689.05	0.132
100YR-072.00HR	3.74	3.71	688.69	0.085
100YR-120.00HR	2.44	2.43	688.44	0.057

PRE 1992 IMPERVIOUS AREA CONDITIONS

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	100YR-024.00HR	Huff 0-10sm	3Q	Scale	24.00	1	8.57	2

Summary for Subcatchment 15S: EX. Impervious - Subcatchment A

Runoff = 0.41 cfs @ 15.74 hrs, Volume= 0.305 af, Depth= 8.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
Huff 0-10sm 3Q scaled to 24.00 hrs 100YR-024.00HR Rainfall=8.57"

	Area (ac)	CN	Description
*	0.440	98	Existing Impervious Area
	0.440		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0					**Direct Entry,**

Summary for Subcatchment 16S: EX. Impervious - Subcatchment B

Runoff = 3.10 cfs @ 15.74 hrs, Volume= 2.284 af, Depth= 8.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
Huff 0-10sm 3Q scaled to 24.00 hrs 100YR-024.00HR Rainfall=8.57"

	Area (ac)	CN	Description
*	3.290	98	Existing Impervious Area
	3.290		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0					**Direct Entry,**

Summary for Subcatchment 17S: EX. Impervious - Subcatchment C

Runoff = 1.82 cfs @ 15.74 hrs, Volume= 1.340 af, Depth= 8.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
Huff 0-10sm 3Q scaled to 24.00 hrs 100YR-024.00HR Rainfall=8.57"

	Area (ac)	CN	Description
*	1.930	98	Existing Impervious Area
	1.930		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0					**Direct Entry,**

PRE 1992 IMPERVIOUS AREA CONDITIONS

Events for Subcatchment 15S: EX. Impervious - Subcatchment A

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
002YR-024.00HR	3.34	0.16	0.114	3.11
100YR-001.00HR	4.03	**3.26**	0.139	3.80
100YR-002.00HR	4.97	2.67	0.174	4.73
100YR-003.00HR	5.49	2.25	0.193	5.25
100YR-006.00HR	6.43	1.52	0.227	6.19
100YR-012.00HR	7.46	0.65	0.265	7.22
100YR-018.00HR	8.06	0.52	0.287	7.82
100YR-024.00HR	8.57	0.41	0.305	8.33
100YR-048.00HR	9.28	0.23	0.331	9.04
100YR-072.00HR	9.85	0.16	0.352	9.61
100YR-120.00HR	**10.66**	0.11	**0.381**	**10.39**

Events for Subcatchment 16S: EX. Impervious - Subcatchment B

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
002YR-024.00HR	3.34	1.20	0.852	3.11
100YR-001.00HR	4.03	**24.37**	1.040	3.80
100YR-002.00HR	4.97	19.96	1.298	4.73
100YR-003.00HR	5.49	16.86	1.440	5.25
100YR-006.00HR	6.43	11.36	1.697	6.19
100YR-012.00HR	7.46	4.90	1.980	7.22
100YR-018.00HR	8.06	3.87	2.144	7.82
100YR-024.00HR	8.57	3.10	2.284	8.33
100YR-048.00HR	9.28	1.72	2.478	9.04
100YR-072.00HR	9.85	1.22	2.635	9.61
100YR-120.00HR	**10.66**	0.80	**2.848**	**10.39**

Events for Subcatchment 17S: EX. Impervious - Subcatchment C

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
002YR-024.00HR	3.34	0.70	0.500	3.11
100YR-001.00HR	4.03	**14.30**	0.610	3.80
100YR-002.00HR	4.97	11.71	0.761	4.73
100YR-003.00HR	5.49	9.89	0.845	5.25
100YR-006.00HR	6.43	6.66	0.996	6.19
100YR-012.00HR	7.46	2.87	1.161	7.22
100YR-018.00HR	8.06	2.27	1.258	7.82
100YR-024.00HR	8.57	1.82	1.340	8.33
100YR-048.00HR	9.28	1.01	1.454	9.04
100YR-072.00HR	9.85	0.72	1.545	9.61
100YR-120.00HR	**10.66**	0.47	**1.671**	**10.39**

Exhibit 3 – Proposed Conditions Exhibits & Models

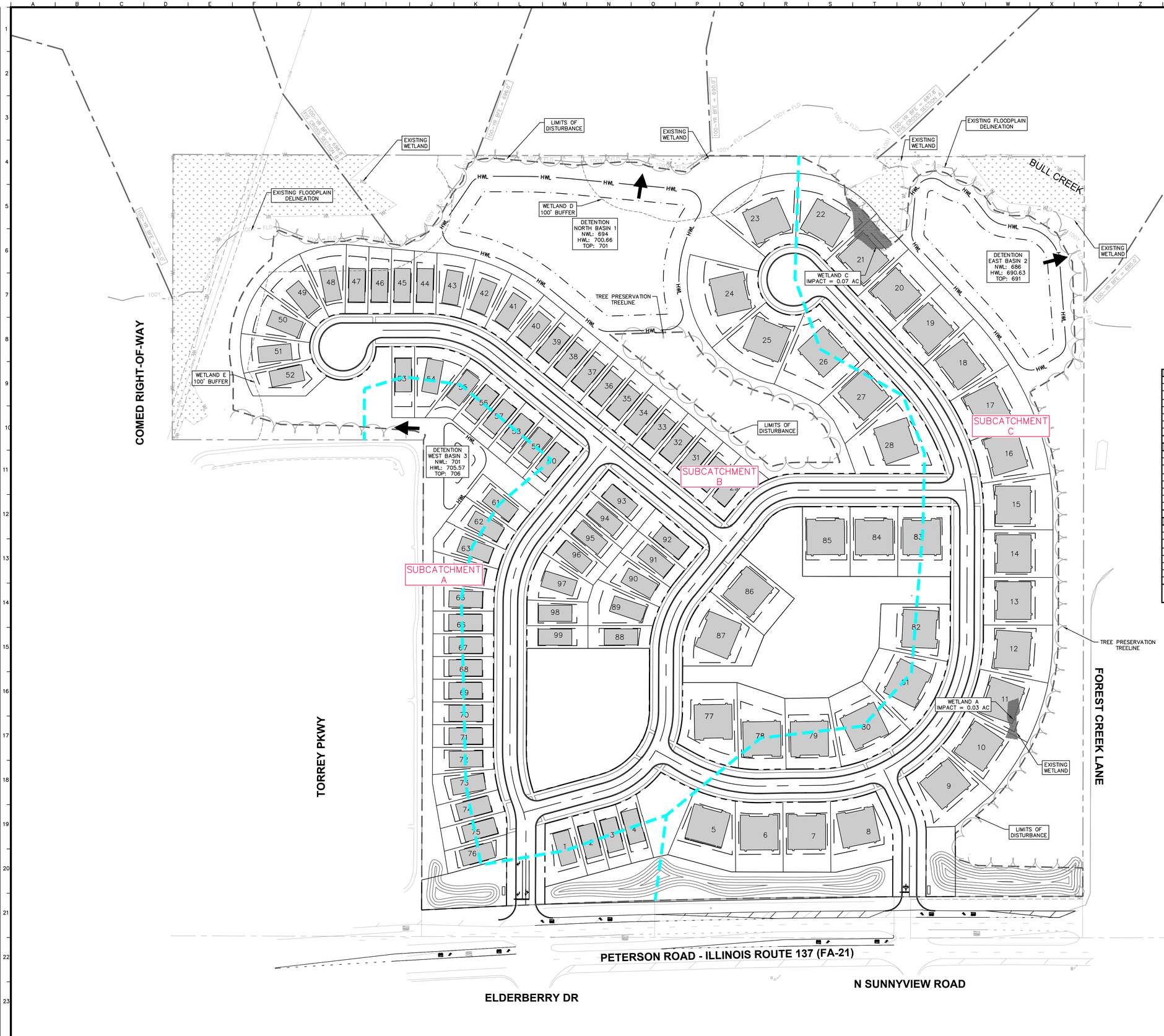
PROPOSED CONDITIONS EXHIBIT

PROPOSED LOT COVERAGE EXHIBIT

PROPOSED CONDITIONS – THEORETICAL HYDROCAD MODEL

PROPOSED CONDITIONS – ACTUAL HYDROCAD MODEL

BASIN OVERFLOW WEIR SIZING – HYDROCAD MODEL OUTPUT (PEAK EVENT)



North Basin: 4:1					
	Area		Average	Incremental	Cummulative
Elevation			Area	Storage	Storage
(ft)	(ft^2)	(acre)	(acre)	(acre-ft)	(acre-ft)
694.00	55,882	1.313			0.00
			1.673	11.71	
701.00	88,518	2.032			11.71

East Basin: 4:1					
	Area		Average	Incremental	Cummulative
Elevation			Area	Storage	Storage
(ft)	(ft^2)	(acre)	(acre)	(acre-ft)	(acre-ft)
685.50	32,786	0.770			0.00
			0.990	5.45	
691.00	52,716	1.210			5.45

West Basin: 4:1					
	Area		Average	Incremental	Cummulative
Elevation			Area	Storage	Storage
(ft)	(ft^2)	(acre)	(acre)	(acre-ft)	(acre-ft)
701.00	1,639	0.039			0.00
			0.108	0.54	
706.00	7,705	0.177			0.54
			Total Volume		17.69

BY | DATE | REVISIONS | No.

Kimley»Horn

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570 LAKE COOK ROAD, SUITE 200
DEERFIELD, IL 60015
PHONE: 847-405-2404
WWW.KIMLEY-HORN.COM

SCALE: AS NOTED
DESIGNED BY: INS
DRAWN BY: KTRM
CHECKED BY: RNM

PULTE GROUP

PROPOSED DRAINAGE CONDITIONS EXHIBIT

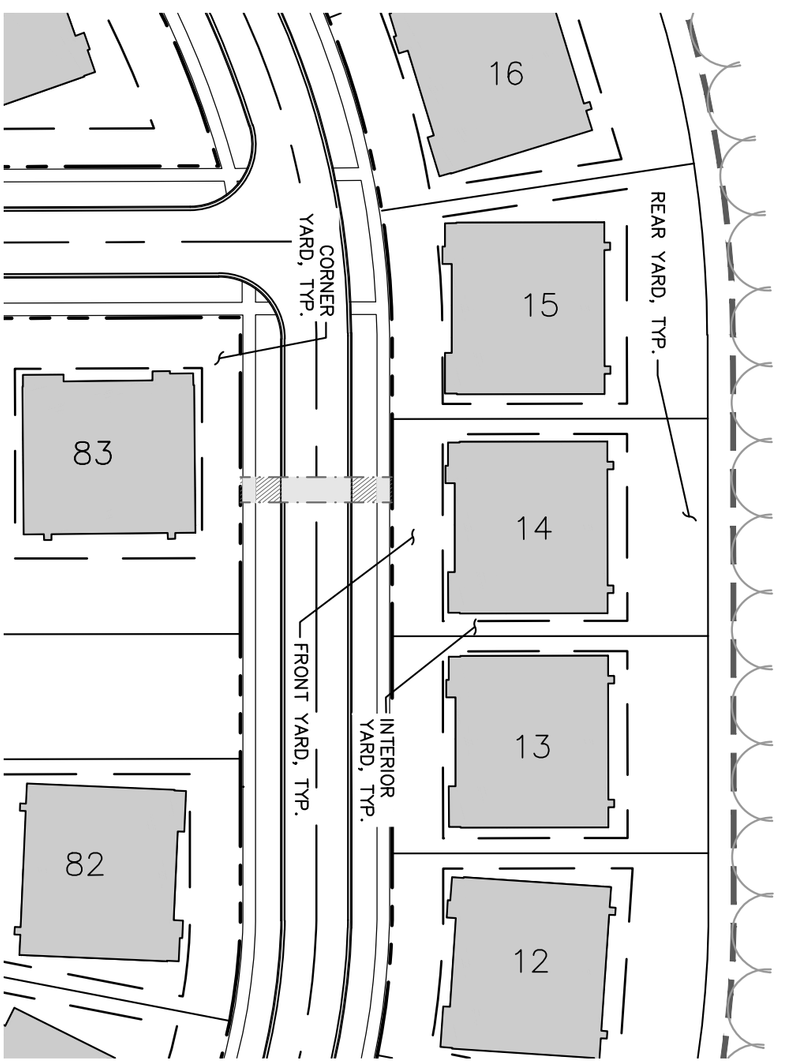
GREENWAY CHASE
610 PETERSON ROAD
LIBERTYVILLE, IL 60048

ORIGINAL ISSUE: 12/16/2024
KHA PROJECT NO. 168247001
SHEET NUMBER
EXH.

Drawing name: K:\CHS_LDEV\168247001_Pulte_Libertyville_IL\2 Design\CAD\Exhibits\168247001-Proposed Drainage Conditions.dwg EXH. Dec 17, 2024 4:30pm by: Ian.Spence
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Plotted By:----- December 12, 2024 10:51:20 AM K:\CHS_LDEV\168247001_Pulte_Libertyville_IL\2 Design\CAD\Exhibits\168247001-Lot Coverage Exhibit.dwg
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SHEET NUMBER
EX.

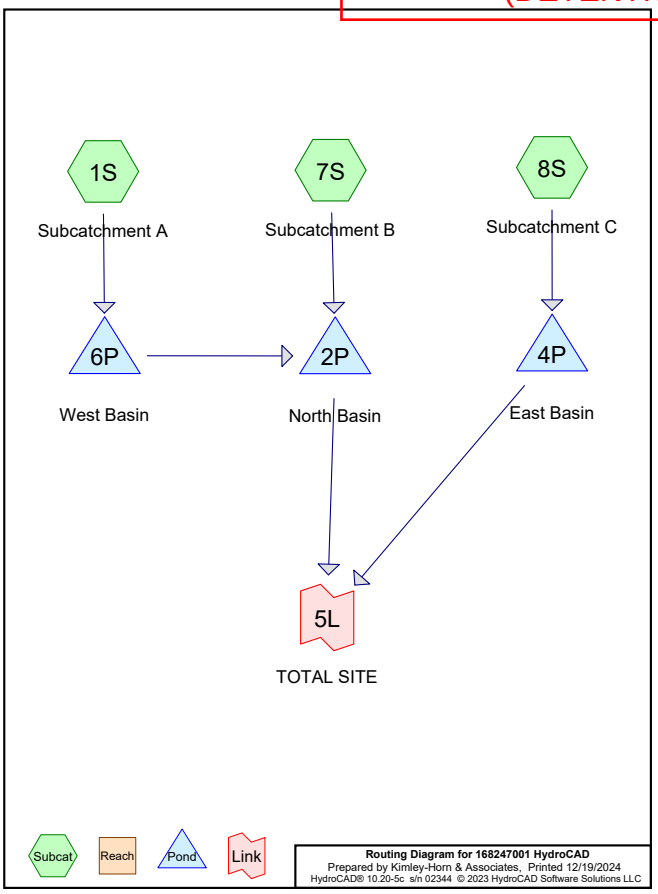
LOT COVERAGE EXHIBIT
SINGLE-FAMILY & DUPLEX PRODUCTS

PULTE -LIBERTYVILLE

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570 LAKE COOK ROAD, SUITE 200, DEERFIELD, IL 60015
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PROPOSED CONDITIONS - THEORETICAL MODEL (DETENTION VOLUME SIZING)



Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	002YR-024.00HR	Huff 0-10sm	3Q	Scale	24.00	1	3.34	2
2	100YR-024.00HR	Huff 0-10sm	3Q	Scale	24.00	1	8.57	2

Summary for Subcatchment 1S: Subcatchment A

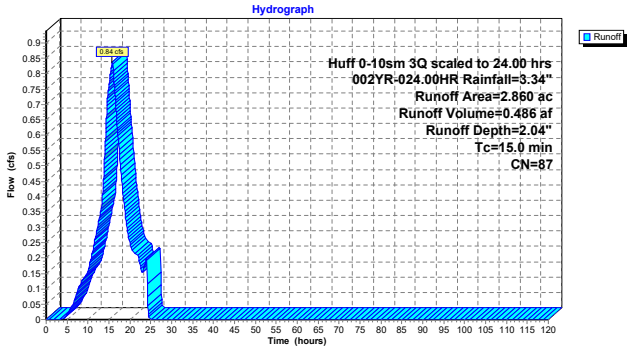
Runoff = 0.84 cfs @ 15.78 hrs, Volume= 0.486 af, Depth= 2.04"
Routed to Pond 6P : West Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
Huff 0-10sm 3Q scaled to 24.00 hrs 002YR-024.00HR Rainfall=3.34"

	Area (ac)	CN	Description
*	2.860	87	
	2.860		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0					**Direct Entry,**

Subcatchment 1S: Subcatchment A



Summary for Subcatchment 7S: Subcatchment B

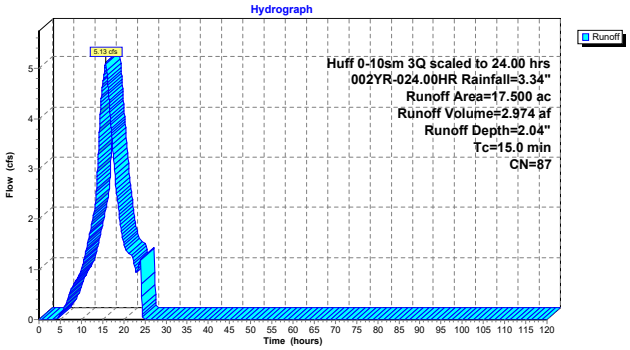
Runoff = 5.13 cfs @ 15.78 hrs, Volume= 2.974 af, Depth= 2.04"
Routed to Pond 2P : North Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
Huff 0-10sm 3Q scaled to 24.00 hrs 002YR-024.00HR Rainfall=3.34"

	Area (ac)	CN	Description
*	17.500	87	
	17.500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0					**Direct Entry,**

Subcatchment 7S: Subcatchment B



Summary for Subcatchment 8S: Subcatchment C

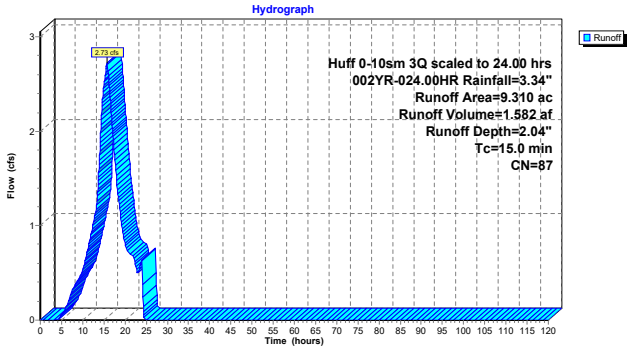
Runoff = 2.73 cfs @ 15.78 hrs, Volume= 1.582 af, Depth= 2.04"
Routed to Pond 4P : East Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
Huff 0-10sm 3Q scaled to 24.00 hrs 002YR-024.00HR Rainfall=3.34"

	Area (ac)	CN	Description
*	9.310	87	
	9.310		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0					**Direct Entry,**

Subcatchment 8S: Subcatchment C



Summary for Pond 2P: North Basin

Inflow Area = 20.360 ac, 0.00% Impervious, Inflow Depth = 2.04" for 002YR-024.00HR event
Inflow = 5.75 cfs @ 15.80 hrs, Volume= 3.460 af
Outflow = 0.81 cfs @ 24.22 hrs, Volume= 3.324 af, Atten= 86%, Lag= 505.2 min
Primary = 0.81 cfs @ 24.22 hrs, Volume= 3.324 af
Routed to Link 5L : TOTAL SITE

Routing by Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
Peak Elev= 695.95' @ 24.22 hrs Surf.Area= 1.511 ac Storage= 2.755 af

Plug-Flow detention time= 1,733.6 min calculated for 3.322 af (96% of inflow)
Center-of-Mass det. time= 1,715.8 min (2,673.3 - 957.5)

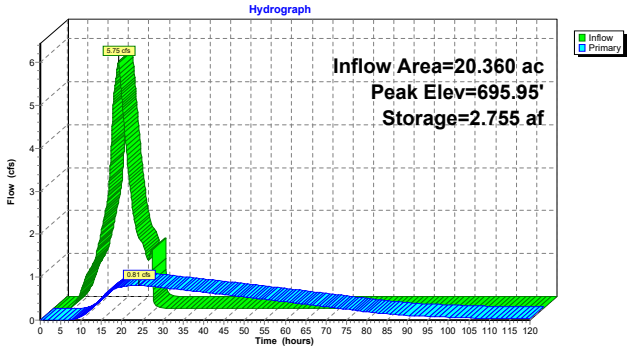
Volume	Invert	Avail.Storage	Storage Description
#1	694.00'	11.690 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
694.00	1.310	0.000	0.000
701.00	2.030	11.690	11.690

Device	Routing	Invert	Outlet Devices
#1	Primary	694.00'	**4.8" Vert. Orifice/Grate** C= 0.610 Limited to weir flow at low heads
#2	Primary	695.95'	**5.7" Vert. Orifice/Grate** C= 0.610 Limited to weir flow at low heads

Primary OutFlow Max=0.81 cfs @ 24.22 hrs HW=695.95' (Free Discharge)
↑**1=Orifice/Grate** (Orifice Controls 0.81 cfs @ 6.48 fps)
└**2=Orifice/Grate** (Orifice Controls 0.00 cfs @ 0.19 fps)

Pond 2P: North Basin



Summary for Pond 4P: East Basin

Inflow Area = 9.310 ac, 0.00% Impervious, Inflow Depth = 2.04" for 002YR-024.00HR event
Inflow = 2.73 cfs @ 15.78 hrs, Volume= 1.582 af
Outflow = 0.36 cfs @ 24.21 hrs, Volume= 1.523 af, Atten= 87%, Lag= 505.3 min
Primary = 0.36 cfs @ 24.21 hrs, Volume= 1.523 af
Routed to Link 5L : TOTAL SITE

Routing by Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
Peak Elev= 687.03' @ 24.21 hrs Surf.Area= 0.892 ac Storage= 1.268 af

Plug-Flow detention time= 1,774.0 min calculated for 1.522 af (96% of inflow)
Center-of-Mass det. time= 1,757.4 min (2,706.7 - 949.3)

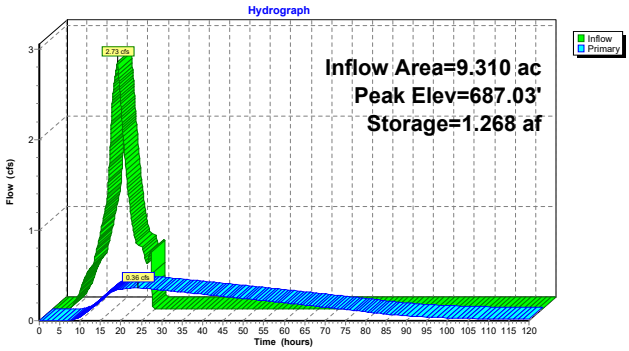
Volume	Invert	Avail.Storage	Storage Description
#1	685.50'	5.445 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
685.50	0.770	0.000	0.000
691.00	1.210	5.445	5.445

Device	Routing	Invert	Outlet Devices
#1	Primary	685.50'	**3.4" Vert. Orifice/Grate** C= 0.610 Limited to weir flow at low heads
#2	Primary	687.03'	**4.1" Vert. Orifice/Grate** C= 0.610 Limited to weir flow at low heads

Primary OutFlow Max=0.36 cfs @ 24.21 hrs HW=687.03' (Free Discharge)
↑**1=Orifice/Grate** (Orifice Controls 0.36 cfs @ 5.76 fps)
└**2=Orifice/Grate** (Controls 0.00 cfs)

Pond 4P: East Basin



Summary for Pond 6P: West Basin

Inflow Area = 2.860 ac, 0.00% Impervious, Inflow Depth = 2.04" for 002YR-024.00HR event
Inflow = 0.84 cfs @ 15.78 hrs, Volume= 0.486 af
Outflow = 0.66 cfs @ 16.79 hrs, Volume= 0.486 af, Atten= 21%, Lag= 60.6 min
Primary = 0.66 cfs @ 16.79 hrs, Volume= 0.486 af
Routed to Pond 2P : North Basin

Routing by Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
Peak Elev= 702.20' @ 16.79 hrs Surf.Area= 0.072 ac Storage= 0.067 af

Plug-Flow detention time= 58.4 min calculated for 0.486 af (100% of inflow)
Center-of-Mass det. time= 58.7 min (1,008.0 - 949.3)

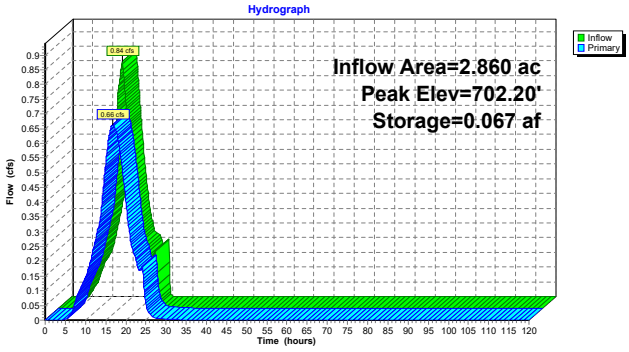
Volume	Invert	Avail.Storage	Storage Description
#1	701.00'	0.540 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
701.00	0.039	0.000	0.000
706.00	0.177	0.540	0.540

Device	Routing	Invert	Outlet Devices
#1	Primary	701.00'	**5.0" Vert. Orifice/Grate** C= 0.610 Limited to weir flow at low heads

Primary OutFlow Max=0.66 cfs @ 16.79 hrs HW=702.20' (Free Discharge)
↑**1=Orifice/Grate** (Orifice Controls 0.66 cfs @ 4.87 fps)

Pond 6P: West Basin

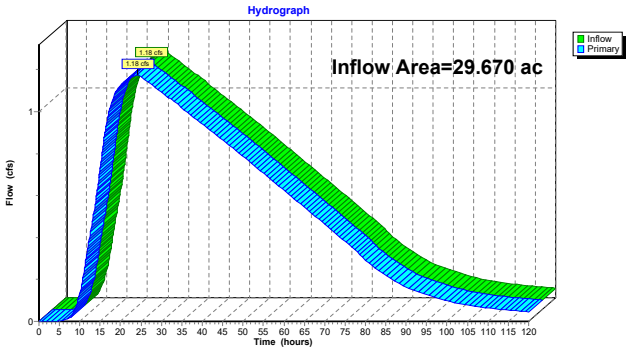


Summary for Link 5L: TOTAL SITE

Inflow Area = 29.670 ac, 0.00% Impervious, Inflow Depth > 1.96" for 002YR-024.00HR event
Inflow = 1.18 cfs @ 24.21 hrs, Volume= 4.847 af
Primary = 1.18 cfs @ 24.21 hrs, Volume= 4.847 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs

Link 5L: TOTAL SITE



Summary for Subcatchment 1S: Subcatchment A

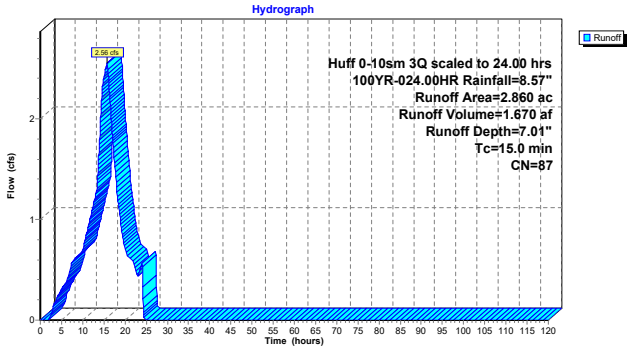
Runoff = 2.56 cfs @ 15.75 hrs, Volume= 1.670 af, Depth= 7.01"
Routed to Pond 6P : West Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
Huff 0-10sm 3Q scaled to 24.00 hrs 100YR-024.00HR Rainfall=8.57"

	Area (ac)	CN	Description
*	2.860	87	
	2.860		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0					**Direct Entry,**

Subcatchment 1S: Subcatchment A



Summary for Subcatchment 7S: Subcatchment B

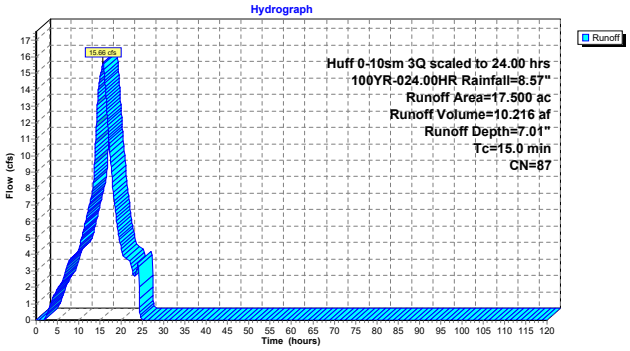
Runoff = 15.66 cfs @ 15.75 hrs, Volume= 10.216 af, Depth= 7.01"
Routed to Pond 2P : North Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
Huff 0-10sm 3Q scaled to 24.00 hrs 100YR-024.00HR Rainfall=8.57"

	Area (ac)	CN	Description
*	17.500	87	
	17.500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0					**Direct Entry,**

Subcatchment 7S: Subcatchment B



Summary for Subcatchment 8S: Subcatchment C

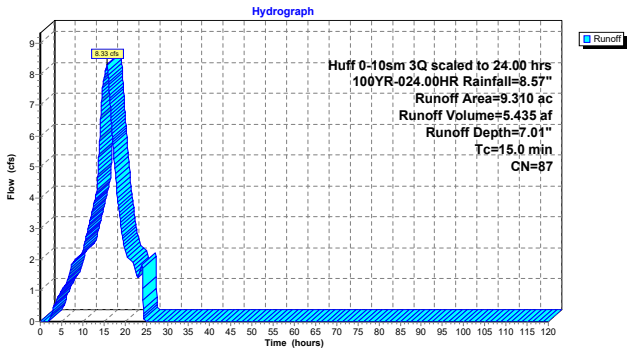
Runoff = 8.33 cfs @ 15.75 hrs, Volume= 5.435 af, Depth= 7.01"
Routed to Pond 4P : East Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
Huff 0-10sm 3Q scaled to 24.00 hrs 100YR-024.00HR Rainfall=8.57"

	Area (ac)	CN	Description
*	9.310	87	
	9.310		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0					**Direct Entry,**

Subcatchment 8S: Subcatchment C



Summary for Pond 2P: North Basin

Inflow Area = 20.360 ac, 0.00% Impervious, Inflow Depth = 7.01" for 100YR-024.00HR event
Inflow = 16.91 cfs @ 15.76 hrs, Volume= 11.886 af
Outflow = 3.04 cfs @ 24.20 hrs, Volume= 11.502 af, Atten= 82%, Lag= 506.3 min
Primary = 3.04 cfs @ 24.20 hrs, Volume= 11.502 af
Routed to Link 5L : TOTAL SITE

Routing by Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
Peak Elev= 699.61' @ 24.20 hrs Surf.Area= 1.887 ac Storage= 8.973 af

Plug-Flow detention time= 1,760.2 min calculated for 11.497 af (97% of inflow)
Center-of-Mass det. time= 1,742.6 min (2,649.7 - 907.2)

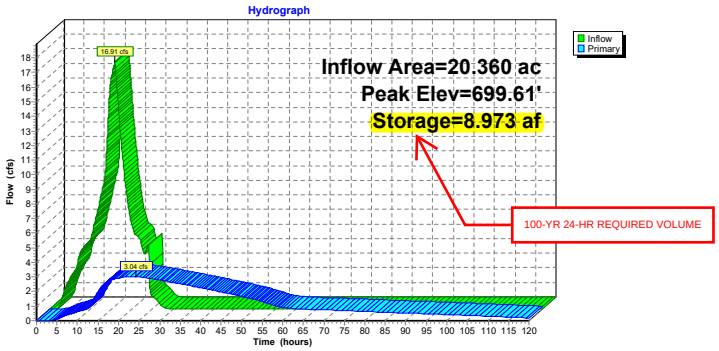
Volume	Invert	Avail.Storage	Storage Description
#1	694.00'	11.690 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
694.00	1.310	0.000	0.000
701.00	2.030	11.690	11.690

Device	Routing	Invert	Outlet Devices
#1	Primary	694.00'	**4.8" Vert. Orifice/Grate** C= 0.610 Limited to weir flow at low heads
#2	Primary	695.95'	**5.7" Vert. Orifice/Grate** C= 0.610 Limited to weir flow at low heads

Primary OutFlow Max=3.04 cfs @ 24.20 hrs HW=699.61' (Free Discharge)
↑**1=Orifice/Grate** (Orifice Controls 1.43 cfs @ 11.39 fps)
└**2=Orifice/Grate** (Orifice Controls 1.61 cfs @ 9.06 fps)

Pond 2P: North Basin



Summary for Pond 4P: East Basin

Inflow Area = 9.310 ac, 0.00% Impervious, Inflow Depth = 7.01" for 100YR-024.00HR event
Inflow = 8.33 cfs @ 15.75 hrs, Volume= 5.435 af
Outflow = 1.38 cfs @ 24.16 hrs, Volume= 5.249 af, Atten= 83%, Lag= 504.6 min
Primary = 1.38 cfs @ 24.16 hrs, Volume= 5.249 af
Routed to Link 5L : TOTAL SITE

Routing by Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
Peak Elev= 689.91' @ 24.16 hrs Surf.Area= 1.123 ac Storage= 4.171 af

Plug-Flow detention time= 1,793.8 min calculated for 5.249 af (97% of inflow)
Center-of-Mass det. time= 1,775.0 min (2,661.0 - 886.1)

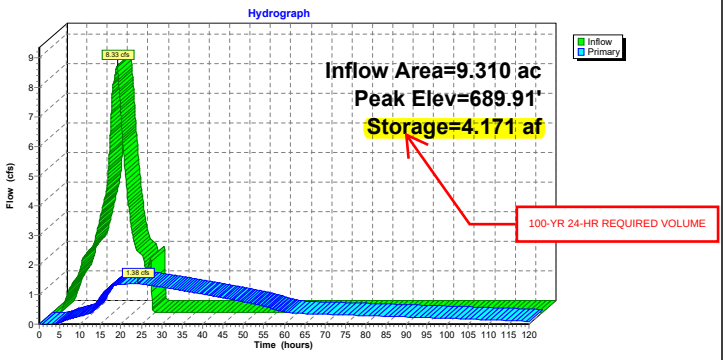
Volume	Invert	Avail.Storage	Storage Description
#1	685.50'	5.445 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
685.50	0.770	0.000	0.000
691.00	1.210	5.445	5.445

Device	Routing	Invert	Outlet Devices
#1	Primary	685.50'	**3.4" Vert. Orifice/Grate** C= 0.610 Limited to weir flow at low heads
#2	Primary	687.03'	**4.1" Vert. Orifice/Grate** C= 0.610 Limited to weir flow at low heads

Primary OutFlow Max=1.38 cfs @ 24.16 hrs HW=689.91' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.64 cfs @ 10.11 fps)
└**2=Orifice/Grate** (Orifice Controls 0.74 cfs @ 8.05 fps)

Pond 4P: East Basin



Summary for Pond 6P: West Basin

Inflow Area = 2.860 ac, 0.00% Impervious, Inflow Depth = 7.01" for 100YR-024.00HR event
Inflow = 2.56 cfs @ 15.75 hrs, Volume= 1.670 af
Outflow = 1.37 cfs @ 17.91 hrs, Volume= 1.670 af, Atten= 46%, Lag= 129.6 min
Primary = 1.37 cfs @ 17.91 hrs, Volume= 1.670 af
Routed to Pond 2P : North Basin

Routing by Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
Peak Elev= 705.45' @ 17.91 hrs Surf.Area= 0.162 ac Storage= 0.447 af

Plug-Flow detention time= 151.1 min calculated for 1.670 af (100% of inflow)
Center-of-Mass det. time= 150.1 min (1,036.2 - 886.1)

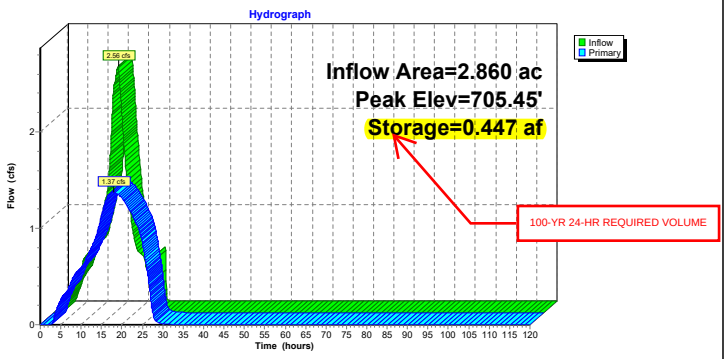
Volume	Invert	Avail.Storage	Storage Description
#1	701.00'	0.540 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
701.00	0.039	0.000	0.000
706.00	0.177	0.540	0.540

Device	Routing	Invert	Outlet Devices
#1	Primary	701.00'	**5.0" Vert. Orifice/Grate** C= 0.610 Limited to weir flow at low heads

Primary OutFlow Max=1.37 cfs @ 17.91 hrs HW=705.45' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 1.37 cfs @ 10.08 fps)

Pond 6P: West Basin

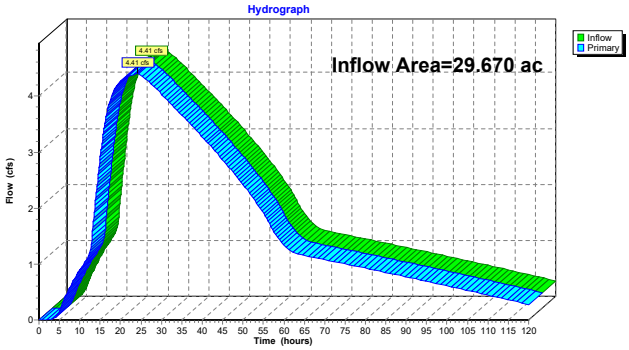


Summary for Link 5L: TOTAL SITE

Inflow Area = 29.670 ac, 0.00% Impervious, Inflow Depth > 6.77" for 100YR-024.00HR event
Inflow = 4.41 cfs @ 24.19 hrs, Volume= 16.750 af
Primary = 4.41 cfs @ 24.19 hrs, Volume= 16.750 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs

Link 5L: TOTAL SITE



PROPOSED CONDITIONS - THEORETICAL MODEL
(DETENTION VOLUME SIZING)

Rainfall Events Listing

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	002YR-024.00HR	Huff 0-10sm	3Q	Scale	24.00	1	3.34	2
2	100YR-001.00HR	Huff 0-10sm	1Q	Scale	1.00	1	4.03	2
3	100YR-002.00HR	Huff 0-10sm	1Q	Scale	2.00	1	4.97	2
4	100YR-003.00HR	Huff 0-10sm	1Q	Scale	3.00	1	5.49	2
5	100YR-006.00HR	Huff 0-10sm	1Q	Scale	6.00	1	6.43	2
6	100YR-012.00HR	Huff 0-10sm	2Q	Scale	12.00	1	7.46	2
7	100YR-018.00HR	Huff 0-10sm	3Q	Scale	18.00	1	8.06	2
8	100YR-024.00HR	Huff 0-10sm	3Q	Scale	24.00	1	8.57	2
9	100YR-048.00HR	Huff 0-10sm	4Q	Scale	48.00	1	9.28	2
10	100YR-072.00HR	Huff 0-10sm	4Q	Scale	72.00	1	9.85	2
11	100YR-120.00HR	Huff 0-10sm	4Q	Scale	120.00	1	10.66	2

Events for Subcatchment 1S: Subcatchment A

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
002YR-024.00HR	3.34	0.84	0.486	2.04
100YR-001.00HR	4.03	**13.59**	0.635	2.66
100YR-002.00HR	4.97	10.97	0.843	3.54
100YR-003.00HR	5.49	9.35	0.961	4.03
100YR-006.00HR	6.43	6.82	1.175	4.93
100YR-012.00HR	7.46	3.83	1.412	5.92
100YR-018.00HR	8.06	3.18	1.551	6.51
100YR-024.00HR	8.57	2.56	1.670	7.01
100YR-048.00HR	9.28	1.44	1.835	7.70
100YR-072.00HR	9.85	1.03	1.968	8.26
100YR-120.00HR	**10.66**	0.67	**2.151**	**9.03**

Events for Subcatchment 7S: Subcatchment B

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
002YR-024.00HR	3.34	5.13	2.974	2.04
100YR-001.00HR	4.03	**83.14**	3.885	2.66
100YR-002.00HR	4.97	67.14	5.161	3.54
100YR-003.00HR	5.49	57.23	5.878	4.03
100YR-006.00HR	6.43	41.73	7.189	4.93
100YR-012.00HR	7.46	23.45	8.640	5.92
100YR-018.00HR	8.06	19.46	9.491	6.51
100YR-024.00HR	8.57	15.66	10.216	7.01
100YR-048.00HR	9.28	8.82	11.229	7.70
100YR-072.00HR	9.85	6.28	12.044	8.26
100YR-120.00HR	**10.66**	4.10	**13.162**	**9.03**

Events for Subcatchment 8S: Subcatchment C

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
002YR-024.00HR	3.34	2.73	1.582	2.04
100YR-001.00HR	4.03	**44.23**	2.067	2.66
100YR-002.00HR	4.97	35.72	2.746	3.54
100YR-003.00HR	5.49	30.45	3.127	4.03
100YR-006.00HR	6.43	22.20	3.825	4.93
100YR-012.00HR	7.46	12.48	4.597	5.92
100YR-018.00HR	8.06	10.36	5.049	6.51
100YR-024.00HR	8.57	8.33	5.435	7.01
100YR-048.00HR	9.28	4.69	5.974	7.70
100YR-072.00HR	9.85	3.34	6.408	8.26
100YR-120.00HR	**10.66**	2.18	**7.002**	**9.03**

Events for Pond 2P: North Basin

Event	Inflow (cfs)	Primary (cfs)	Elevation (feet)	Storage (acre-feet)
002YR-024.00HR	5.75	0.81	695.95	2.755
100YR-001.00HR	**84.12**	1.59	696.70	3.906
100YR-002.00HR	68.11	2.11	697.50	5.223
100YR-003.00HR	58.13	2.32	697.91	5.906
100YR-006.00HR	42.65	2.61	698.53	6.986
100YR-012.00HR	24.68	2.86	699.15	8.105
100YR-018.00HR	20.76	2.99	699.49	8.738
100YR-024.00HR	16.91	3.04	699.61	8.973
100YR-048.00HR	9.77	**3.04**	**699.63**	**9.000**
100YR-072.00HR	7.07	2.91	699.28	8.352
100YR-120.00HR	4.70	2.60	698.50	6.942

Events for Pond 4P: East Basin

Event	Inflow (cfs)	Primary (cfs)	Elevation (feet)	Storage (acre-feet)
002YR-024.00HR	2.73	0.36	687.03	1.268
100YR-001.00HR	**44.23**	0.81	687.83	2.009
100YR-002.00HR	35.72	1.02	688.45	2.618
100YR-003.00HR	30.45	1.10	688.75	2.925
100YR-006.00HR	22.20	1.21	689.18	3.379
100YR-012.00HR	12.48	1.31	689.61	3.839
100YR-018.00HR	10.36	1.37	689.87	4.127
100YR-024.00HR	8.33	1.38	689.91	4.171
100YR-048.00HR	4.69	**1.38**	**689.94**	**4.210**
100YR-072.00HR	3.34	1.32	689.64	3.871
100YR-120.00HR	2.18	1.18	689.03	3.217

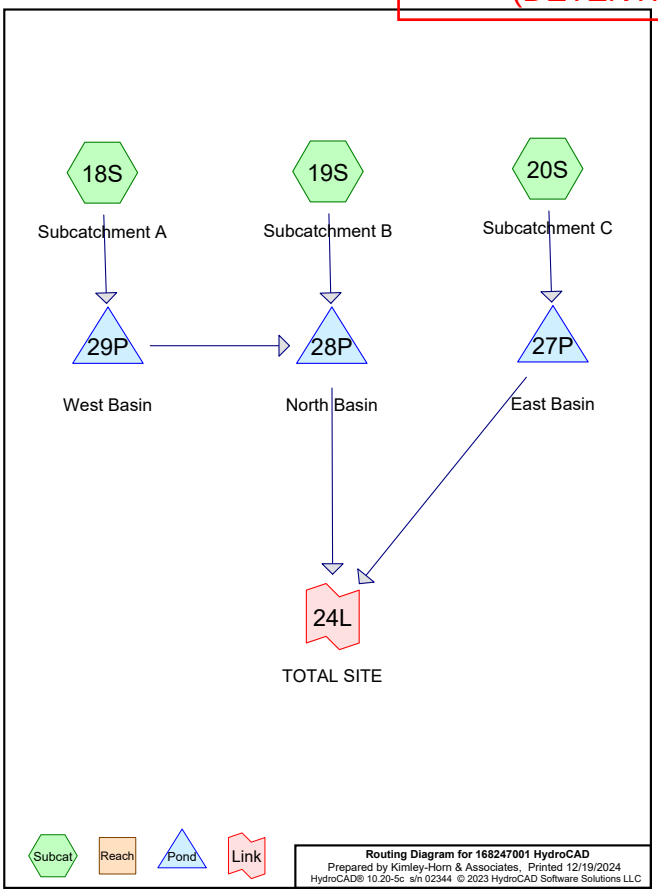
Events for Pond 6P: West Basin

Event	Inflow (cfs)	Primary (cfs)	Elevation (feet)	Storage (acre-feet)
002YR-024.00HR	0.84	0.66	702.20	0.067
100YR-001.00HR	**13.59**	1.45	705.90	0.522
100YR-002.00HR	10.97	3.85	733.13	**0.540**
100YR-003.00HR	9.35	**5.83**	**777.29**	0.540
100YR-006.00HR	6.82	4.53	747.19	0.540
100YR-012.00HR	3.83	3.03	721.75	0.540
100YR-018.00HR	3.18	1.45	705.91	0.524
100YR-024.00HR	2.56	1.37	705.45	0.447
100YR-048.00HR	1.44	1.11	703.97	0.237
100YR-072.00HR	1.03	0.91	703.05	0.138
100YR-120.00HR	0.67	0.64	702.13	0.062

Events for Link 5L: TOTAL SITE

Event	Inflow (cfs)	Primary (cfs)	Elevation (feet)
002YR-024.00HR	1.18	1.18	**0.00**
100YR-001.00HR	2.40	2.40	0.00
100YR-002.00HR	3.13	3.13	0.00
100YR-003.00HR	3.42	3.42	0.00
100YR-006.00HR	3.82	3.82	0.00
100YR-012.00HR	4.17	4.17	0.00
100YR-018.00HR	4.36	4.36	0.00
100YR-024.00HR	4.41	4.41	0.00
100YR-048.00HR	**4.43**	**4.43**	0.00
100YR-072.00HR	4.23	4.23	0.00
100YR-120.00HR	3.77	3.77	0.00

PROPOSED CONDITIONS - ACTUAL MODEL (DETENTION VOLUME SIZING)



Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	002YR-024.00HR	Huff 0-10sm	3Q	Scale	24.00	1	3.34	2
2	100YR-024.00HR	Huff 0-10sm	3Q	Scale	24.00	1	8.57	2

Summary for Subcatchment 18S: Subcatchment A

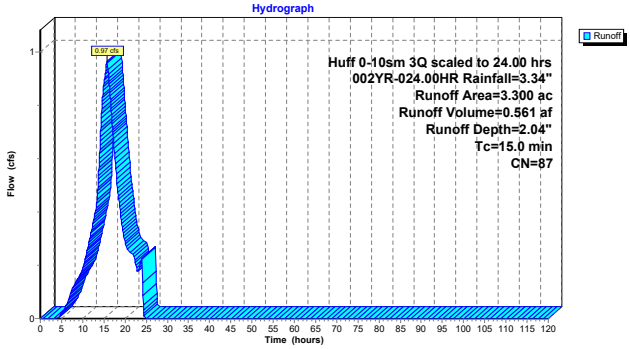
Runoff = 0.97 cfs @ 15.78 hrs, Volume= 0.561 af, Depth= 2.04"
Routed to Pond 29P : West Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
Huff 0-10sm 3Q scaled to 24.00 hrs 002YR-024.00HR Rainfall=3.34"

	Area (ac)	CN	Description
*	3.300	87	
	3.300		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0					Direct Entry,

Subcatchment 18S: Subcatchment A



Summary for Subcatchment 19S: Subcatchment B

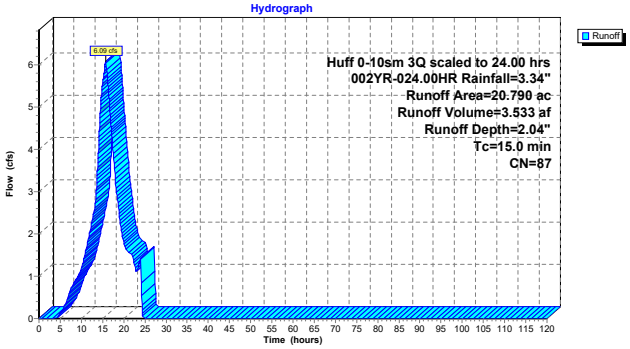
Runoff = 6.09 cfs @ 15.78 hrs, Volume= 3.533 af, Depth= 2.04"
Routed to Pond 28P : North Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
Huff 0-10sm 3Q scaled to 24.00 hrs 002YR-024.00HR Rainfall=3.34"

	Area (ac)	CN	Description
*	20.790	87	
	20.790		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0					Direct Entry,

Subcatchment 19S: Subcatchment B



Summary for Subcatchment 20S: Subcatchment C

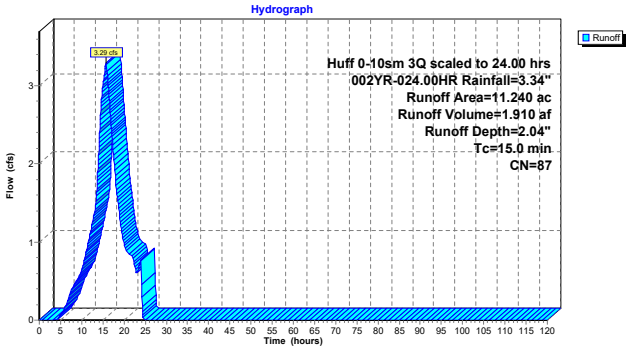
Runoff = 3.29 cfs @ 15.78 hrs, Volume= 1.910 af, Depth= 2.04"
Routed to Pond 27P : East Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
Huff 0-10sm 3Q scaled to 24.00 hrs 002YR-024.00HR Rainfall=3.34"

	Area (ac)	CN	Description
*	11.240	87	
	11.240		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0					**Direct Entry,**

Subcatchment 20S: Subcatchment C



Summary for Pond 27P: East Basin

Inflow Area = 11.240 ac, 0.00% Impervious, Inflow Depth = 2.04" for 002YR-024.00HR event
Inflow = 3.29 cfs @ 15.78 hrs, Volume= 1.910 af
Outflow = 0.45 cfs @ 24.20 hrs, Volume= 1.851 af, Atten= 86%, Lag= 505.2 min
Primary = 0.45 cfs @ 24.20 hrs, Volume= 1.851 af
Routed to Link 24L : TOTAL SITE

Routing by Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
Peak Elev= 687.30' @ 24.20 hrs Surf.Area= 0.914 ac Storage= 1.520 af

Plug-Flow detention time= 1,738.9 min calculated for 1.851 af (97% of inflow)
Center-of-Mass det. time= 1,723.7 min (2,672.9 - 949.3)

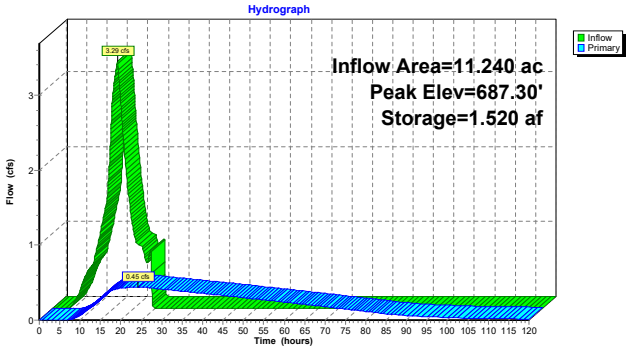
Volume	Invert	Avail.Storage	Storage Description
#1	685.50'	5.445 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
685.50	0.770	0.000	0.000
691.00	1.210	5.445	5.445

Device	Routing	Invert	Outlet Devices
#1	Primary	685.50'	**3.6" Vert. Orifice/Grate** C= 0.610 Limited to weir flow at low heads
#2	Primary	687.30'	**4.4" Vert. Orifice/Grate** C= 0.610 Limited to weir flow at low heads

Primary OutFlow Max=0.45 cfs @ 24.20 hrs HW=687.30' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.45 cfs @ 6.30 fps)
└**2=Orifice/Grate** (Orifice Controls 0.00 cfs @ 0.24 fps)

Pond 27P: East Basin



Summary for Pond 28P: North Basin

Inflow Area = 24.090 ac, 0.00% Impervious, Inflow Depth = 2.04" for 002YR-024.00HR event
Inflow = 6.84 cfs @ 15.80 hrs, Volume= 4.094 af
Outflow = 0.96 cfs @ 24.22 hrs, Volume= 3.953 af, Atten= 86%, Lag= 505.2 min
Primary = 0.96 cfs @ 24.22 hrs, Volume= 3.953 af
Routed to Link 24L : TOTAL SITE

Routing by Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
Peak Elev= 696.28' @ 24.22 hrs Surf.Area= 1.544 ac Storage= 3.253 af

Plug-Flow detention time= 1,729.2 min calculated for 3.952 af (97% of inflow)
Center-of-Mass det. time= 1,713.9 min (2,670.0 - 956.1)

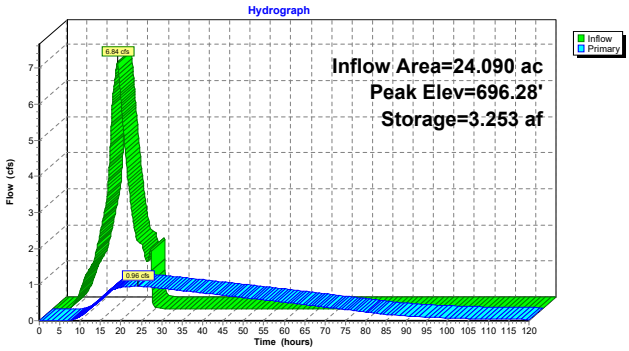
Volume	Invert	Avail.Storage	Storage Description
#1	694.00'	11.690 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
694.00	1.310	0.000	0.000
701.00	2.030	11.690	11.690

Device	Routing	Invert	Outlet Devices
#1	Primary	694.00'	**5.0" Vert. Orifice/Grate** C= 0.610 Limited to weir flow at low heads
#2	Primary	696.28'	**5.2" Vert. Orifice/Grate** C= 0.610 Limited to weir flow at low heads

Primary OutFlow Max=0.96 cfs @ 24.22 hrs HW=696.28' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.96 cfs @ 7.04 fps)
└**2=Orifice/Grate** (Controls 0.00 cfs)

Pond 28P: North Basin



Summary for Pond 29P: West Basin

Inflow Area = 3.300 ac, 0.00% Impervious, Inflow Depth = 2.04" for 002YR-024.00HR event
Inflow = 0.97 cfs @ 15.78 hrs, Volume= 0.561 af
Outflow = 0.80 cfs @ 16.67 hrs, Volume= 0.561 af, Atten= 18%, Lag= 52.9 min
Primary = 0.80 cfs @ 16.67 hrs, Volume= 0.561 af
Routed to Pond 28P : North Basin

Routing by Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
Peak Elev= 702.20' @ 16.67 hrs Surf.Area= 0.072 ac Storage= 0.067 af

Plug-Flow detention time= 51.1 min calculated for 0.561 af (100% of inflow)
Center-of-Mass det. time= 50.2 min (999.5 - 949.3)

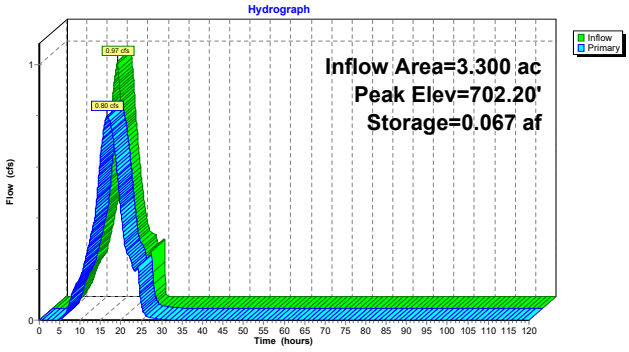
Volume	Invert	Avail.Storage	Storage Description
#1	701.00'	0.540 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
701.00	0.039	0.000	0.000
706.00	0.177	0.540	0.540

Device	Routing	Invert	Outlet Devices
#1	Primary	701.00'	**5.5" Vert. Orifice/Grate** C= 0.610 Limited to weir flow at low heads

Primary OutFlow Max=0.80 cfs @ 16.67 hrs HW=702.20' (Free Discharge)
↑**1=Orifice/Grate** (Orifice Controls 0.80 cfs @ 4.83 fps)

Pond 29P: West Basin

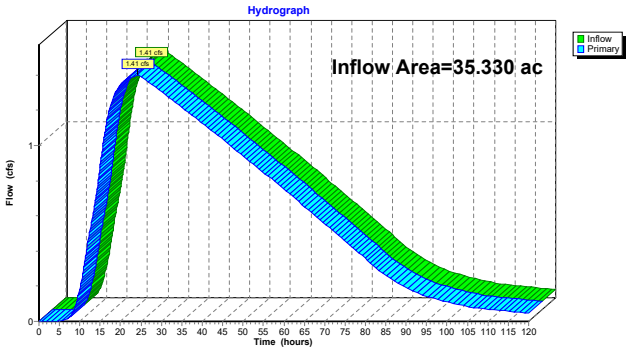


Summary for Link 24L: TOTAL SITE

Inflow Area = 35.330 ac, 0.00% Impervious, Inflow Depth > 1.97" for 002YR-024.00HR event
Inflow = 1.41 cfs @ 24.21 hrs, Volume= 5.804 af
Primary = 1.41 cfs @ 24.21 hrs, Volume= 5.804 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs

Link 24L: TOTAL SITE



Summary for Subcatchment 18S: Subcatchment A

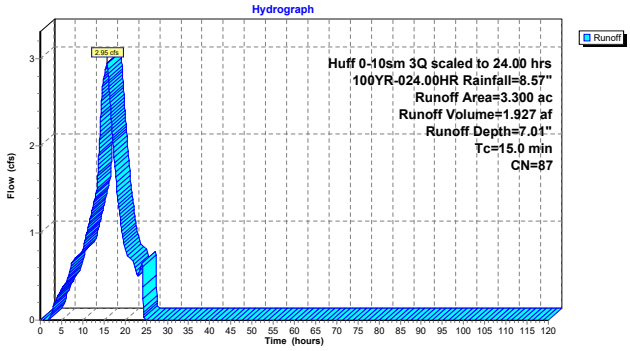
Runoff = 2.95 cfs @ 15.75 hrs, Volume= 1.927 af, Depth= 7.01"
Routed to Pond 29P : West Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
Huff 0-10sm 3Q scaled to 24.00 hrs 100YR-024.00HR Rainfall=8.57"

	Area (ac)	CN	Description
*	3.300	87	
	3.300		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0					**Direct Entry,**

Subcatchment 18S: Subcatchment A



Summary for Subcatchment 19S: Subcatchment B

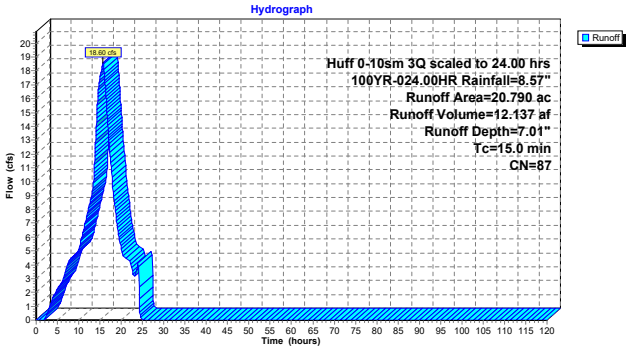
Runoff = 18.60 cfs @ 15.75 hrs, Volume= 12.137 af, Depth= 7.01"
Routed to Pond 28P : North Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
Huff 0-10sm 3Q scaled to 24.00 hrs 100YR-024.00HR Rainfall=8.57"

	Area (ac)	CN	Description
*	20.790	87	
	20.790		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0					**Direct Entry,**

Subcatchment 19S: Subcatchment B



Summary for Subcatchment 20S: Subcatchment C

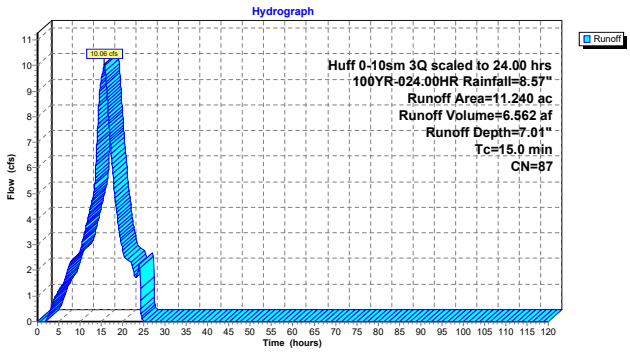
Runoff = 10.06 cfs @ 15.75 hrs, Volume= 6.562 af, Depth= 7.01"
Routed to Pond 27P : East Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
Huff 0-10sm 3Q scaled to 24.00 hrs 100YR-024.00HR Rainfall=8.57"

	Area (ac)	CN	Description
*	11.240	87	
	11.240		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0					**Direct Entry,**

Subcatchment 20S: Subcatchment C



Summary for Pond 27P: East Basin

Inflow Area = 11.240 ac, 0.00% Impervious, Inflow Depth = 7.01" for 100YR-024.00HR event
Inflow = 10.06 cfs @ 15.75 hrs, Volume= 6.562 af
Outflow = 1.69 cfs @ 24.16 hrs, Volume= 6.372 af, Atten= 83%, Lag= 504.4 min
Primary = 1.69 cfs @ 24.16 hrs, Volume= 6.372 af
Routed to Link 24L : TOTAL SITE

Routing by Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
Peak Elev= 690.63' @ 24.16 hrs Surf.Area= 1.180 ac Storage= 5.002 af

Plug-Flow detention time= 1,763.1 min calculated for 6.369 af (97% of inflow)
Center-of-Mass det. time= 1,748.8 min (2,634.9 - 886.1)

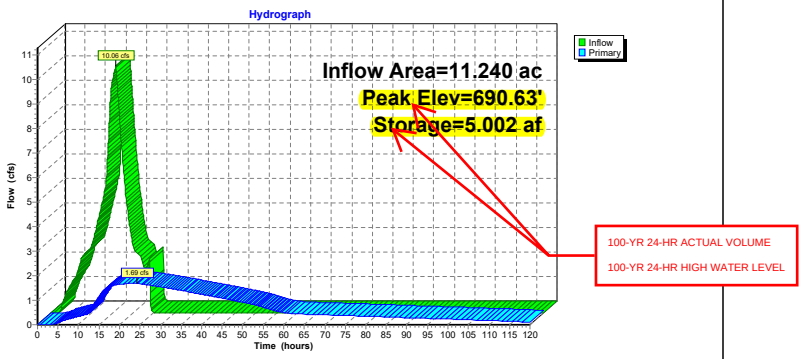
Volume	Invert	Avail.Storage	Storage Description
#1	685.50'	5.445 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
685.50	0.770	0.000	0.000
691.00	1.210	5.445	5.445

Device	Routing	Invert	Outlet Devices
#1	Primary	685.50'	**3.6" Vert. Orifice/Grate** C= 0.610 Limited to weir flow at low heads
#2	Primary	687.30'	**4.4" Vert. Orifice/Grate** C= 0.610 Limited to weir flow at low heads

Primary OutFlow Max=1.69 cfs @ 24.16 hrs HW=690.63' (Free Discharge)
↑**1=Orifice/Grate** (Orifice Controls 0.77 cfs @ 10.92 fps)
└**2=Orifice/Grate** (Orifice Controls 0.92 cfs @ 8.68 fps)

Pond 27P: East Basin



Summary for Pond 28P: North Basin

Inflow Area = 24.090 ac, 0.00% Impervious, Inflow Depth = 7.01" for 100YR-024.00HR event
Inflow = 20.14 cfs @ 15.76 hrs, Volume= 14.064 af
Outflow = 3.17 cfs @ 24.22 hrs, Volume= 13.521 af, Atten= 84%, Lag= 507.4 min
Primary = 3.17 cfs @ 24.22 hrs, Volume= 13.521 af
Routed to Link 24L : TOTAL SITE

Routing by Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
Peak Elev= 700.66' @ 24.22 hrs Surf.Area= 1.995 ac Storage= 11.001 af

Plug-Flow detention time= 1,918.1 min calculated for 13.515 af (96% of inflow)
Center-of-Mass det. time= 1,897.8 min (2,801.2 - 903.4)

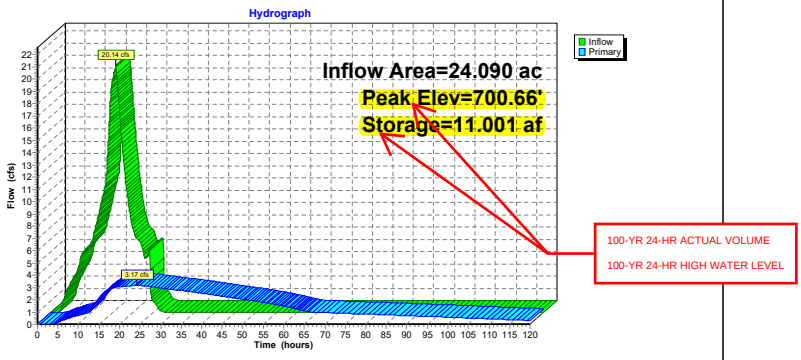
Volume	Invert	Avail.Storage	Storage Description
#1	694.00'	11.690 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
694.00	1.310	0.000	0.000
701.00	2.030	11.690	11.690

Device	Routing	Invert	Outlet Devices
#1	Primary	694.00'	**5.0" Vert. Orifice/Grate** C= 0.610 Limited to weir flow at low heads
#2	Primary	696.28'	**5.2" Vert. Orifice/Grate** C= 0.610 Limited to weir flow at low heads

Primary OutFlow Max=3.17 cfs @ 24.22 hrs HW=700.66' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 1.70 cfs @ 12.43 fps)
└**2=Orifice/Grate** (Orifice Controls 1.47 cfs @ 9.99 fps)

Pond 28P: North Basin



Summary for Pond 29P: West Basin

Inflow Area = 3.300 ac, 0.00% Impervious, Inflow Depth = 7.01" for 100YR-024.00HR event
Inflow = 2.95 cfs @ 15.75 hrs, Volume= 1.927 af
Outflow = 1.68 cfs @ 17.74 hrs, Volume= 1.927 af, Atten= 43%, Lag= 119.5 min
Primary = 1.68 cfs @ 17.74 hrs, Volume= 1.927 af
Routed to Pond 28P : North Basin

Routing by Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
Peak Elev= 705.57' @ 17.74 hrs Surf.Area= 0.165 ac Storage= 0.466 af

Plug-Flow detention time= 127.3 min calculated for 1.927 af (100% of inflow)
Center-of-Mass det. time= 126.3 min (1,012.4 - 886.1)

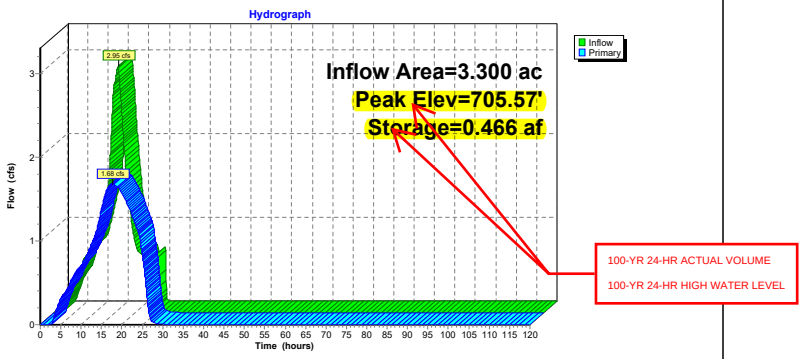
Volume	Invert	Avail.Storage	Storage Description
#1	701.00'	0.540 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
701.00	0.039	0.000	0.000
706.00	0.177	0.540	0.540

Device	Routing	Invert	Outlet Devices
#1	Primary	701.00'	**5.5" Vert. Orifice/Grate** C= 0.610 Limited to weir flow at low heads

Primary OutFlow Max=1.68 cfs @ 17.74 hrs HW=705.57' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 1.68 cfs @ 10.20 fps)

Pond 29P: West Basin



100-YR 24-HR ACTUAL VOLUME

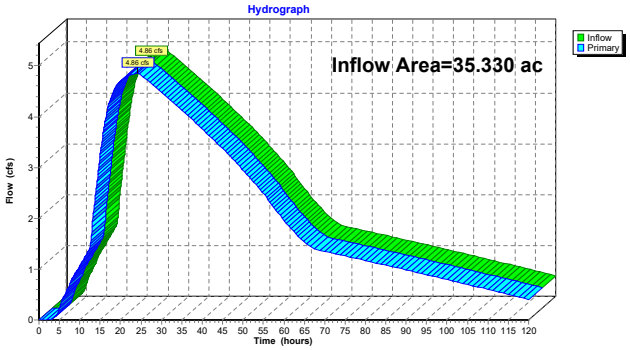
100-YR 24-HR HIGH WATER LEVEL

Summary for Link 24L: TOTAL SITE

Inflow Area = 35.330 ac, 0.00% Impervious, Inflow Depth > 6.76" for 100YR-024.00HR event
Inflow = 4.86 cfs @ 24.19 hrs, Volume= 19.892 af
Primary = 4.86 cfs @ 24.19 hrs, Volume= 19.892 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs

Link 24L: TOTAL SITE



PROPOSED CONDITIONS - ACTUAL MODEL
(DETENTION VOLUME SIZING)

Rainfall Events Listing

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	002YR-024.00HR	Huff 0-10sm	3Q	Scale	24.00	1	3.34	2
2	100YR-001.00HR	Huff 0-10sm	1Q	Scale	1.00	1	4.03	2
3	100YR-002.00HR	Huff 0-10sm	1Q	Scale	2.00	1	4.97	2
4	100YR-003.00HR	Huff 0-10sm	1Q	Scale	3.00	1	5.49	2
5	100YR-006.00HR	Huff 0-10sm	1Q	Scale	6.00	1	6.43	2
6	100YR-012.00HR	Huff 0-10sm	2Q	Scale	12.00	1	7.46	2
7	100YR-018.00HR	Huff 0-10sm	3Q	Scale	18.00	1	8.06	2
8	100YR-024.00HR	Huff 0-10sm	3Q	Scale	24.00	1	8.57	2
9	100YR-048.00HR	Huff 0-10sm	4Q	Scale	48.00	1	9.28	2
10	100YR-072.00HR	Huff 0-10sm	4Q	Scale	72.00	1	9.85	2
11	100YR-120.00HR	Huff 0-10sm	4Q	Scale	120.00	1	10.66	2

Events for Subcatchment 18S: Subcatchment A

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
002YR-024.00HR	3.34	0.97	0.561	2.04
100YR-001.00HR	4.03	**15.68**	0.733	2.66
100YR-002.00HR	4.97	12.66	0.973	3.54
100YR-003.00HR	5.49	10.79	1.108	4.03
100YR-006.00HR	6.43	7.87	1.356	4.93
100YR-012.00HR	7.46	4.42	1.629	5.92
100YR-018.00HR	8.06	3.67	1.790	6.51
100YR-024.00HR	8.57	2.95	1.927	7.01
100YR-048.00HR	9.28	1.66	2.118	7.70
100YR-072.00HR	9.85	1.18	2.271	8.26
100YR-120.00HR	**10.66**	0.77	**2.482**	**9.03**

Events for Subcatchment 19S: Subcatchment B

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
002YR-024.00HR	3.34	6.09	3.533	2.04
100YR-001.00HR	4.03	**98.77**	4.616	2.66
100YR-002.00HR	4.97	79.76	6.131	3.54
100YR-003.00HR	5.49	67.99	6.983	4.03
100YR-006.00HR	6.43	49.57	8.541	4.93
100YR-012.00HR	7.46	27.86	10.265	5.92
100YR-018.00HR	8.06	23.12	11.275	6.51
100YR-024.00HR	8.57	18.60	12.137	7.01
100YR-048.00HR	9.28	10.48	13.340	7.70
100YR-072.00HR	9.85	7.46	14.309	8.26
100YR-120.00HR	**10.66**	4.88	**15.636**	**9.03**

Events for Subcatchment 20S: Subcatchment C

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
002YR-024.00HR	3.34	3.29	1.910	2.04
100YR-001.00HR	4.03	**53.40**	2.495	2.66
100YR-002.00HR	4.97	43.12	3.315	3.54
100YR-003.00HR	5.49	36.76	3.776	4.03
100YR-006.00HR	6.43	26.80	4.617	4.93
100YR-012.00HR	7.46	15.06	5.550	5.92
100YR-018.00HR	8.06	12.50	6.096	6.51
100YR-024.00HR	8.57	10.06	6.562	7.01
100YR-048.00HR	9.28	5.67	7.212	7.70
100YR-072.00HR	9.85	4.03	7.736	8.26
100YR-120.00HR	**10.66**	2.64	**8.454**	**9.03**

PROPOSED CONDITIONS - ACTUAL MODEL
(DETENTION VOLUME SIZING)

Events for Pond 27P: East Basin

Event	Inflow (cfs)	Primary (cfs)	Elevation (feet)	Storage (acre-feet)
002YR-024.00HR	3.29	0.45	687.30	1.520
100YR-001.00HR	**53.40**	1.01	688.25	2.423
100YR-002.00HR	43.12	1.26	688.97	3.156
100YR-003.00HR	36.76	1.36	689.32	3.525
100YR-006.00HR	26.80	1.50	689.81	4.066
100YR-012.00HR	15.06	1.61	690.30	4.613
100YR-018.00HR	12.50	1.68	690.59	4.957
100YR-024.00HR	10.06	1.69	690.63	5.002
100YR-048.00HR	5.67	**1.70**	**690.66**	**5.035**
100YR-072.00HR	4.03	1.61	690.30	4.613
100YR-120.00HR	2.64	1.44	689.58	3.810

Events for Pond 28P: North Basin

Event	Inflow (cfs)	Primary (cfs)	Elevation (feet)	Storage (acre-feet)
002YR-024.00HR	6.84	0.96	696.28	3.253
100YR-001.00HR	**100.01**	1.76	697.19	4.709
100YR-002.00HR	80.96	2.25	698.14	6.303
100YR-003.00HR	69.13	2.45	698.61	7.131
100YR-006.00HR	50.74	2.73	699.35	8.484
100YR-012.00HR	29.40	2.99	700.09	9.893
100YR-018.00HR	24.73	3.11	700.49	10.659
100YR-024.00HR	20.14	3.17	700.66	11.001
100YR-048.00HR	11.63	**3.17**	**700.67**	**11.034**
100YR-072.00HR	8.41	3.06	700.33	10.349
100YR-120.00HR	5.58	2.79	699.50	8.765

Events for Pond 29P: West Basin

Event	Inflow (cfs)	Primary (cfs)	Elevation (feet)	Storage (acre-feet)
002YR-024.00HR	0.97	0.80	702.20	0.067
100YR-001.00HR	**15.68**	6.26	760.43	**0.540**
100YR-002.00HR	12.66	**11.50**	**904.06**	0.540
100YR-003.00HR	10.79	8.23	804.62	0.540
100YR-006.00HR	7.87	5.74	751.72	0.540
100YR-012.00HR	4.42	4.30	729.36	0.540
100YR-018.00HR	3.67	2.37	709.82	0.540
100YR-024.00HR	2.95	1.68	705.57	0.466
100YR-048.00HR	1.66	1.33	703.96	0.236
100YR-072.00HR	1.18	1.07	703.00	0.133
100YR-120.00HR	0.77	0.75	702.09	0.059

Events for Link 24L: TOTAL SITE

Event	Inflow (cfs)	Primary (cfs)	Elevation (feet)
002YR-024.00HR	1.41	1.41	**0.00**
100YR-001.00HR	2.76	2.76	0.00
100YR-002.00HR	3.51	3.51	0.00
100YR-003.00HR	3.81	3.81	0.00
100YR-006.00HR	4.23	4.23	0.00
100YR-012.00HR	4.60	4.60	0.00
100YR-018.00HR	4.79	4.79	0.00
100YR-024.00HR	4.86	4.86	0.00
100YR-048.00HR	**4.87**	**4.87**	0.00
100YR-072.00HR	4.68	4.68	0.00
100YR-120.00HR	4.22	4.22	0.00

BASIN 1: WEIR OVERFLOW - PEAK DISCHARGE EVENT

Worksheet for Overflow Weir_Basin 1

Project Description	
Solve For	Headwater Elevation

Input Data	
Discharge	100.01 cfs
Crest Elevation	0.00 ft
Tailwater Elevation	0.00 ft
Crest Surface Type	Gravel
Crest Breadth	5.00 ft
Crest Length	200.0 ft

Results	
Headwater Elevation	0.33 ft
Headwater Height Above Crest	0.33 ft
Tailwater Height Above Crest	0.00 ft
Weir Coefficient	2.64 ft^(1/2)/s
Submergence Factor	1.000
Adjusted Weir Coefficient	2.64 ft^(1/2)/s
Flow Area	66.0 ft²
Velocity	1.51 ft/s
Wetted Perimeter	200.7 ft
Top Width	200.00 ft

BASIN 2: WEIR OVERFLOW - PEAK DISCHARGE EVENT

Worksheet for Overflow Weir_Basin 2

Project Description	
Solve For	Headwater Elevation

Input Data	
Discharge	53.40 cfs
Crest Elevation	0.00 ft
Tailwater Elevation	0.00 ft
Crest Surface Type	Gravel
Crest Breadth	5.00 ft
Crest Length	125.0 ft

Results	
Headwater Elevation	0.30 ft
Headwater Height Above Crest	0.30 ft
Tailwater Height Above Crest	0.00 ft
Weir Coefficient	2.62 ft^(1/2)/s
Submergence Factor	1.000
Adjusted Weir Coefficient	2.62 ft^(1/2)/s
Flow Area	37.3 ft²
Velocity	1.43 ft/s
Wetted Perimeter	125.6 ft
Top Width	125.00 ft

BASIN 3: WEIR OVERFLOW - PEAK DISCHARGE EVENT

Worksheet for Overflow Weir_Basin 3

Project Description	
Solve For	Headwater Elevation

Input Data	
Discharge	15.68 cfs
Crest Elevation	0.00 ft
Tailwater Elevation	0.00 ft
Crest Surface Type	Gravel
Crest Breadth	5.00 ft
Crest Length	25.0 ft

Results	
Headwater Elevation	0.38 ft
Headwater Height Above Crest	0.38 ft
Tailwater Height Above Crest	0.00 ft
Weir Coefficient	2.65 ft^(1/2)/s
Submergence Factor	1.000
Adjusted Weir Coefficient	2.65 ft^(1/2)/s
Flow Area	9.6 ft²
Velocity	1.64 ft/s
Wetted Perimeter	25.8 ft
Top Width	25.00 ft



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610 PETERSON ROAD - LIBERTYVILLE, IL

CONCEPT GEOMETRICS EXHIBIT

03/26/2025

0 20 40 80 120

NORTH

dimension radii

Is CC&G proposed along the right turn lane?

Please add a 10-foot multi-use path across entire site, show crosswalks

add stop sign

add stop sign

Minimum 150 ft on SRA, use shorter taper to accommodate

Is CC&G proposed along the right turn lane?

PETERSON ROAD (IL RTE 137)

ELDERBERRY DR

N SUNNYVIEW ROAD

Please revise the left turn lane design to provide a neutral or positive offset (preferred) per BDE Chapter 36.

in addition to graphic scale, write out scale, e.g. 1"=100'

2024-1211 - IN PROGRESS (FOR CLIENT REVIEW ONLY)

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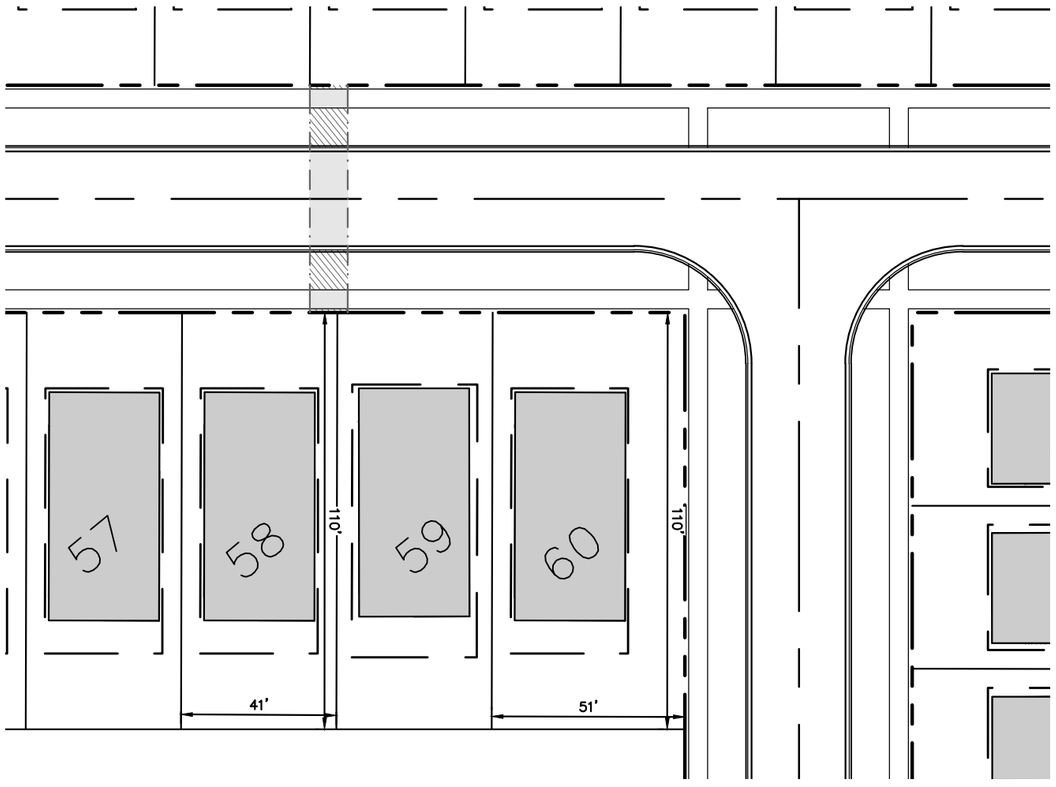
12/11/2024

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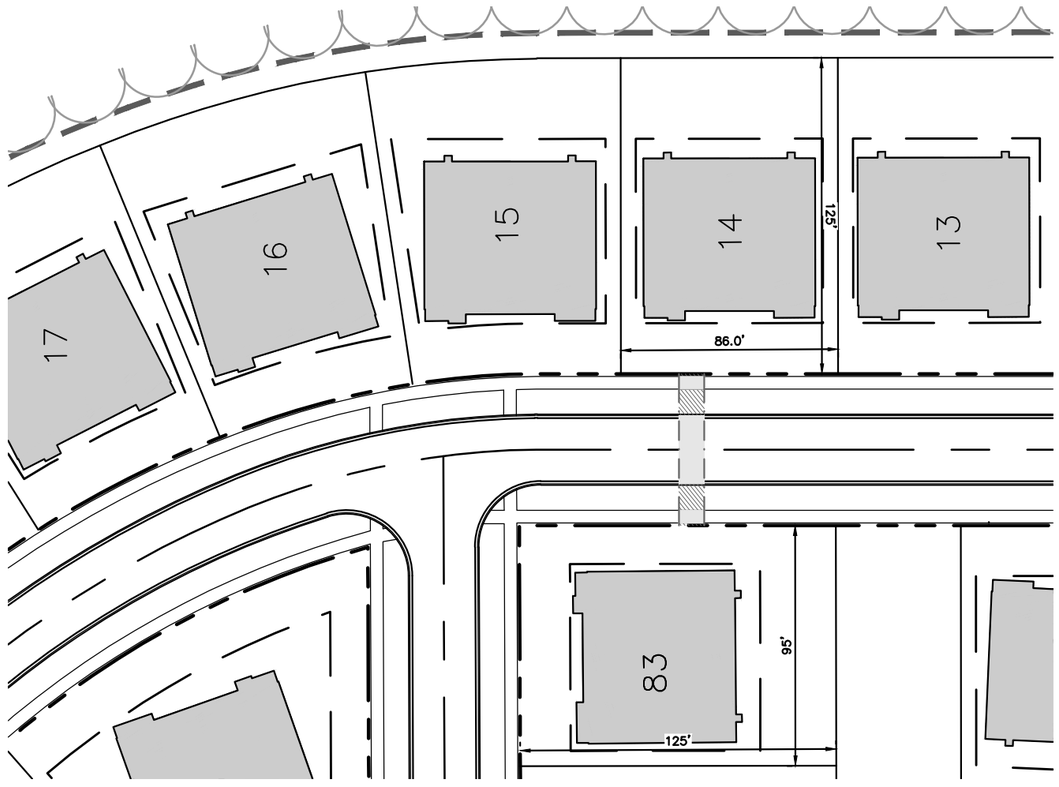
NORTH

SINGLE FAMILY LOTS		
	CODE MAX	REQUIRED MAX
INTERIOR	45	50
CORNER	40	45

DUPLEX LOTS		
	CODE MAX	REQUIRED MAX
INTERIOR	50	55
CORNER	45	50



GRAPHIC SCALE IN FEET
0 20 40 80



GRAPHIC SCALE IN FEET
0 30 60 120

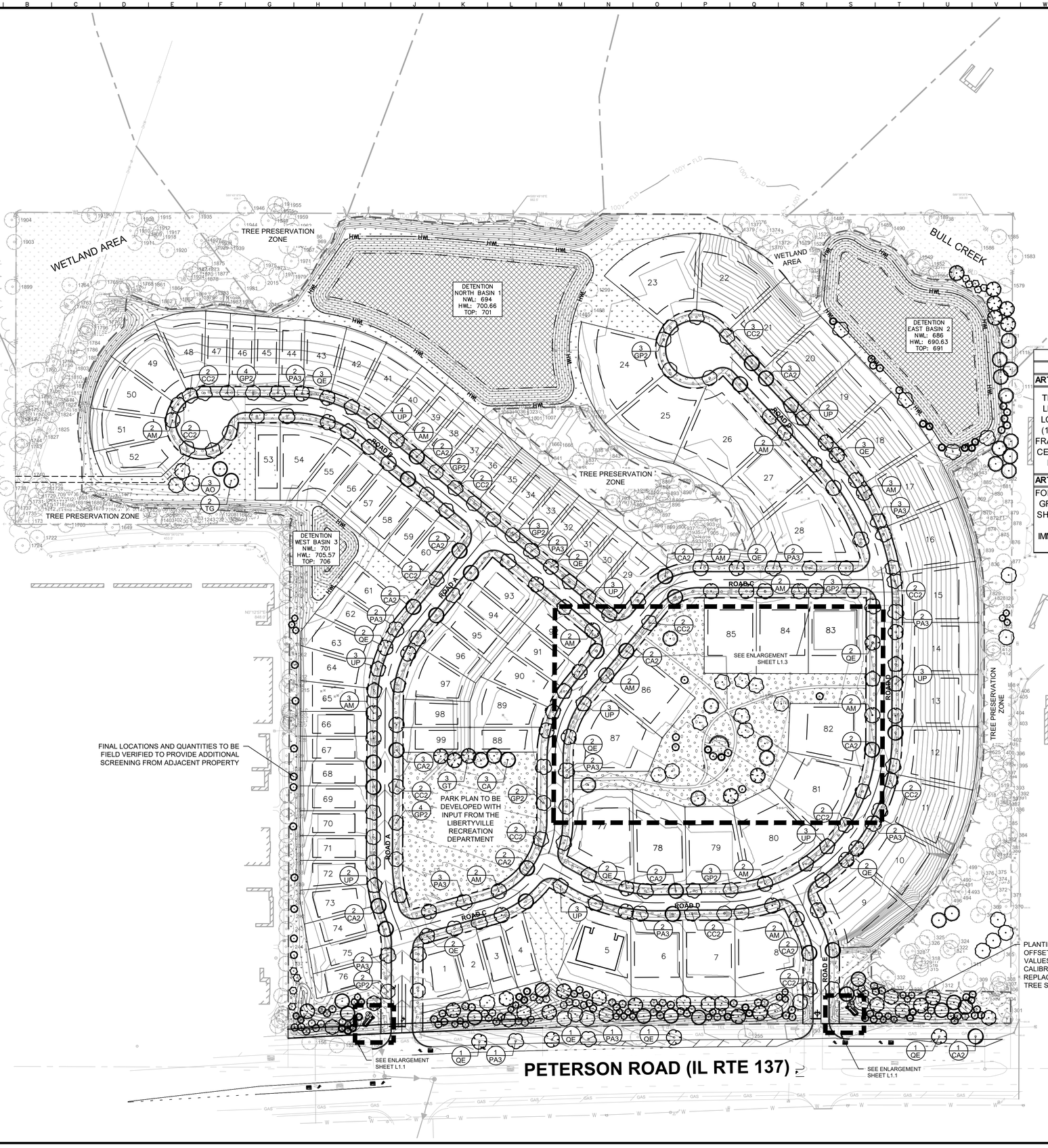
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LOT COVERAGE EXHIBIT
SINGLE-FAMILY & DUPLEX PRODUCTS
PULTE - LIBERTYVILLE

SHEET NUMBER
EX.

Drawing name: K:\DHS_LDE\V16824\7001_pulte_libertyville_jv3 Design\CAD\plansheets\L1.0 LANDSCAPE PLAN.dwg L1.0 LANDSCAPE PLAN Mar 07, 2025 10:50am by christina.merrell
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NORTH

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GROUND COVERS

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- PIZZO LOW PROFILE PRAIRIE SEED MIX
- PIZZO WET-MESIC PRAIRIE SEED MIX
- TURF SEED

Libertyville, IL - LANDSCAPE CODE		
ORDINANCE	**REQUIRED**	**PROVIDED**
ARTICLE 6: SEC 22-113 LANDSCAPING IN SUBDIVISIONS		
TREES SHALL BE PLANTED WITH AT LEAST ONE (1) TREE PLANTED PER LOT OR PARCEL AND AT LEAST ONE (1) TREE EVERY SIXTY (60) FEET OR FRACTION THEREOF. TREES SHALL BE CENTERED IN THE PARKWAY, MIDWAY BETWEEN CURB AND SIDEWALK.	ONE (1) TREE PER LOT AND MAXIMUM ONE (1) TREE EVERY SIXTY (60) FEET REQUIRED.	ONE (1) TREE PER LOT AND MAXIMUM ONE (1) TREE EVERY SIXTY (60) FEET PROVIDED
ARTICLE 11: SEC 3-11 SIGNS		
FOR EVERY ONE (1) SQUARE FOOT OF GROSS SIGN SURFACE AREA, THERE SHALL BE PROVIDED ONE (1) SQUARE FOOT OF LANDSCAPE AREA IMMEDIATELY ADJACENT TO THE SIGN BASE	APPROXIMATELY 100 SQUARE FEET OF GROSS SIGN SURFACE AREA PER SIGN = 100 SQUARE FEET OF LANDSCAPE AREA IMMEDIATELY ADJACENT TO THE SIGN BASE REQUIRED FOR EACH SIGN.	288 SQUARE FEET OF LANDSCAPE AREA IMMEDIATELY ADJACENT TO THE SIGN BASE PROVIDED FOR EACH SIGN.

No.	REVISIONS	DATE	BY
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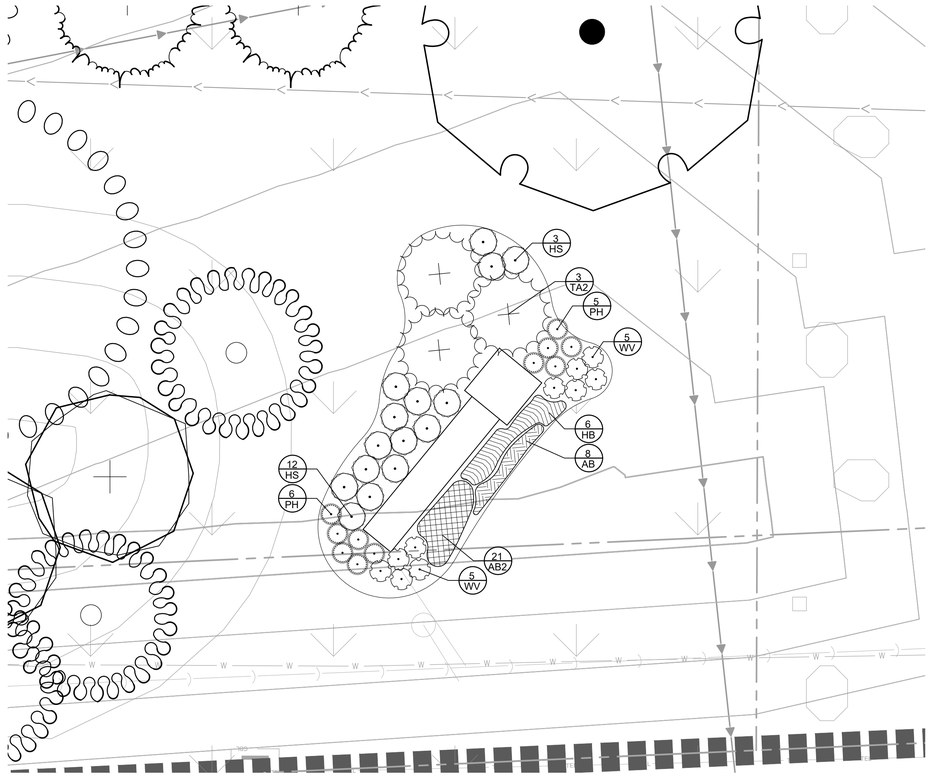
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CHECKED BY: RNM

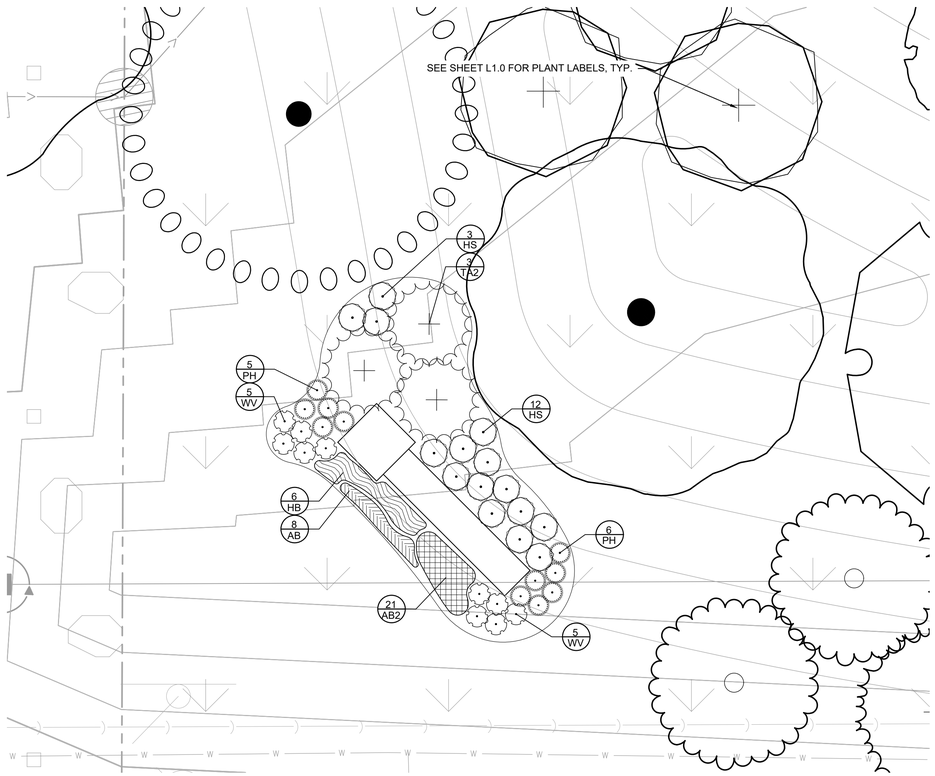
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LANDSCAPE PLAN

GREENWAY CHASE
610 PETERSON ROAD
LIBERTYVILLE, IL 60048

ORIGINAL ISSUE: 01/03/2025
KHA PROJECT NO. 168247001
SHEET NUMBER
L1.0





NORTH

GRAPHIC SCALE IN FEET
0 2.5 5 10

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PLANT SCHEDULE WEST SIGN

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	CONT	CAL	SIZE
ORNAMENTAL TREES						
	CE	1	CERCIS CANADENSIS / EASTERN REDBUD	B & B	-	6` HT. MIN.
SYMBOL	**CODE**	**QTY**	**BOTANICAL / COMMON NAME**	**CONT**	**SPACING**	**SIZE**
SHRUBS						
	HS	15	DIERVILLA X SPLENDENS 'EL MADRIGAL' / FIREFLY NIGHTGLOW BUSH HONEYSUCKLE	-	SEE PLAN	10" HT. MIN.
	WV	10	WEIGELA FLORIDA 'VERWEIG' / MY MONET® WEIGELA	-	SEE PLAN	6" HT. MIN.
EVERGREEN SHRUBS						
	TA2	3	THUJA OCCIDENTALIS `HOLMSTRUP` / HOLMSTRUP EASTERN ARBORVITAE	-	SEE PLAN	24" HT. MIN.
ORNAMENTAL GRASSES						
	PH	11	PANICUM VIRGATUM `HEAVY METAL` / HEAVY METAL SWITCH GRASS	-	SEE PLAN	24" HT. MIN.
SHRUB AREAS						
	AB2	21	ACHILLEA MILLEFOLIUM `BALVINOLET` / NEW VINTAGE™ VIOLET COMMON YARROW	1 GAL.	SEE PLAN	6" HT. MIN.
	AB	8	AMSONIA X 'BLUE ICE' / BLUE ICE BLUESTAR	1 GAL.	SEE PLAN	6" HT. MIN.
	HB	6	HEUCHERA X 'BLACK BEAUTY' / BLACK BEAUTY CORAL BELLS	1 GAL.	SEE PLAN	6" HT. MIN.

PLANT SCHEDULE EAST SIGN

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	CONT	CAL	SIZE
CANOPY TREES						
	AO	1	AESCULUS GLABRA / OHIO BUCKEYE	B & B	2.5" CAL. MIN.	
SYMBOL	**CODE**	**QTY**	**BOTANICAL / COMMON NAME**	**CONT**	**SPACING**	**SIZE**
SHRUBS						
	HS	15	DIERVILLA X SPLENDENS 'EL MADRIGAL' / FIREFLY NIGHTGLOW BUSH HONEYSUCKLE	-	SEE PLAN	10" HT. MIN.
	WV	10	WEIGELA FLORIDA 'VERWEIG' / MY MONET® WEIGELA	-	SEE PLAN	6" HT. MIN.
EVERGREEN SHRUBS						
	TA2	3	THUJA OCCIDENTALIS `HOLMSTRUP` / HOLMSTRUP EASTERN ARBORVITAE	-	SEE PLAN	24" HT. MIN.
ORNAMENTAL GRASSES						
	PH	11	PANICUM VIRGATUM `HEAVY METAL` / HEAVY METAL SWITCH GRASS	-	SEE PLAN	24" HT. MIN.
SHRUB AREAS						
	AB2	21	ACHILLEA MILLEFOLIUM `BALVINOLET` / NEW VINTAGE™ VIOLET COMMON YARROW	1 GAL.	SEE PLAN	6" HT. MIN.
	AB	8	AMSONIA X 'BLUE ICE' / BLUE ICE BLUESTAR	1 GAL.	SEE PLAN	6" HT. MIN.
	HB	6	HEUCHERA X 'BLACK BEAUTY' / BLACK BEAUTY CORAL BELLS	1 GAL.	SEE PLAN	6" HT. MIN.

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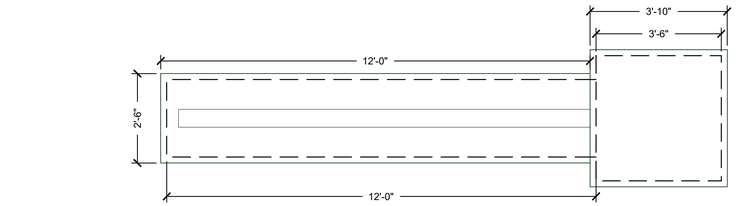
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SIGNAGE LANDSCAPE

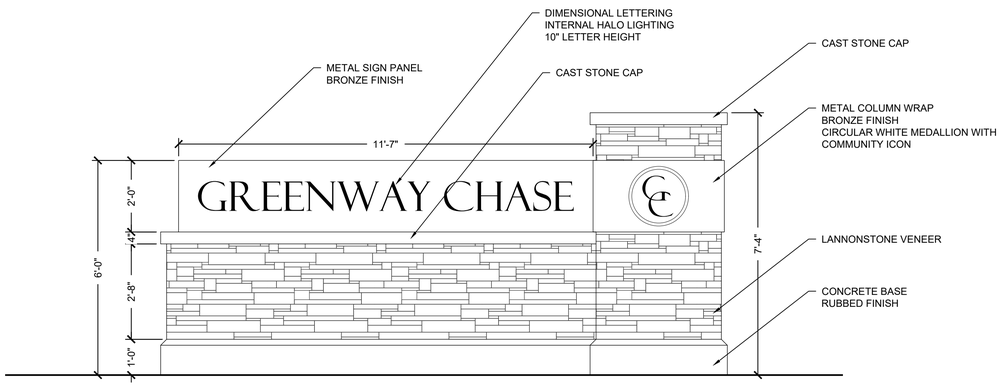
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610 PETERSON ROAD
LIBERTYVILLE, IL 60048

ORIGINAL ISSUE: 01/03/2025
KHA PROJECT NO. 168247001
SHEET NUMBER
L1.1

Drawing name: K:\CHS_LDEV\168247001_pulte_libertyville_JV\3 Design\CAD\plansheets\L1.0 LANDSCAPE PLAN.dwg L1.1 SIGNAGE LANDSCAPE Mar 07, 2025 10:50am by christina.morrell
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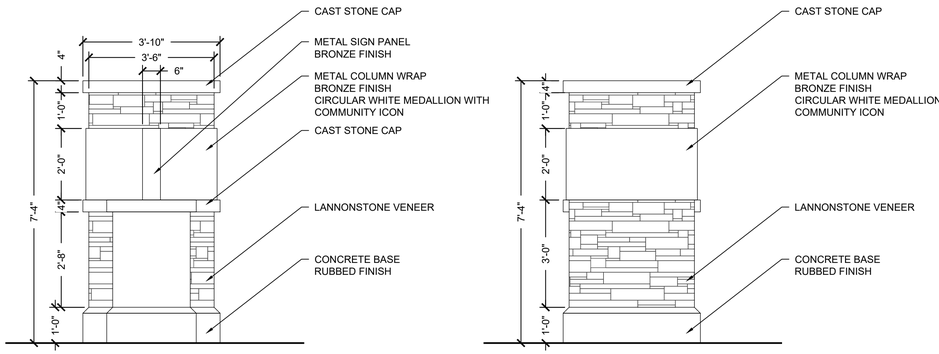
PLAN



ELEVATION

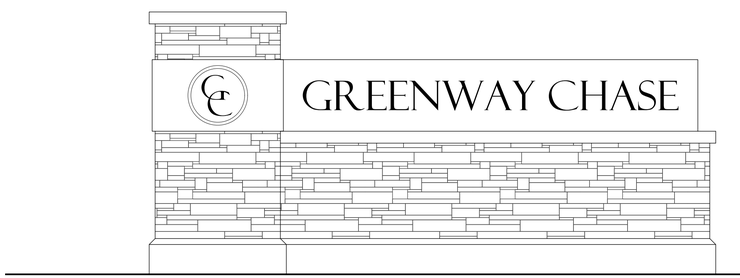
01 WEST MONUMENT SIGN - FRONT ELEVATION AND PLAN

1/2" = 1'-0"



02 WEST MONUMENT SIGN - SIDE ELEVATIONS

1/2" = 1'-0"



03 EAST MONUMENT SIGN - FRONT ELEVATION

1/2" = 1'-0"

NORTH

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0 1 2 4

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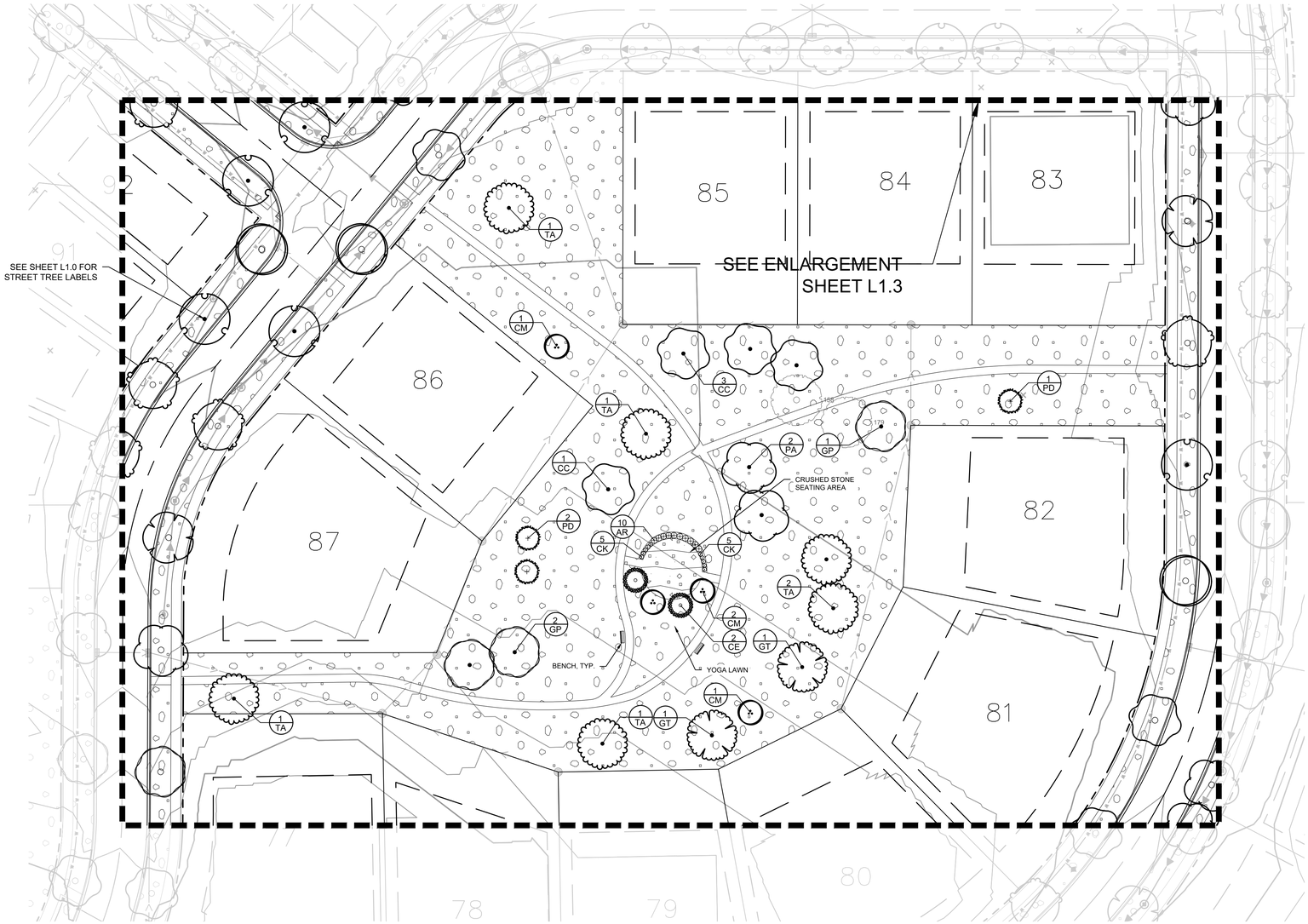
SIGNAGE PLAN AND DETAILS

GREENWAY CHASE
610 PETERSON ROAD
LIBERTYVILLE, IL 60048

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SHEET NUMBER
L1.2

Drawing name: K:\CHS_LDEV\168247001_pulte_libertyville_JV\2 Design\CAD\plansheet\L1.0 LANDSCAPE PLAN.dwg L1.2 SIGNAGE PLAN AND DETAILS Mar 07, 2025 10:50am by christina.merrill
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GROUND COVERS

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- PIZZO DRY BOTTOM DETENTION SEED MIX
- PIZZO LOW PROFILE PRAIRIE SEED MIX
- PIZZO WET-MESIC PRAIRIE SEED MIX
- TURF SEED

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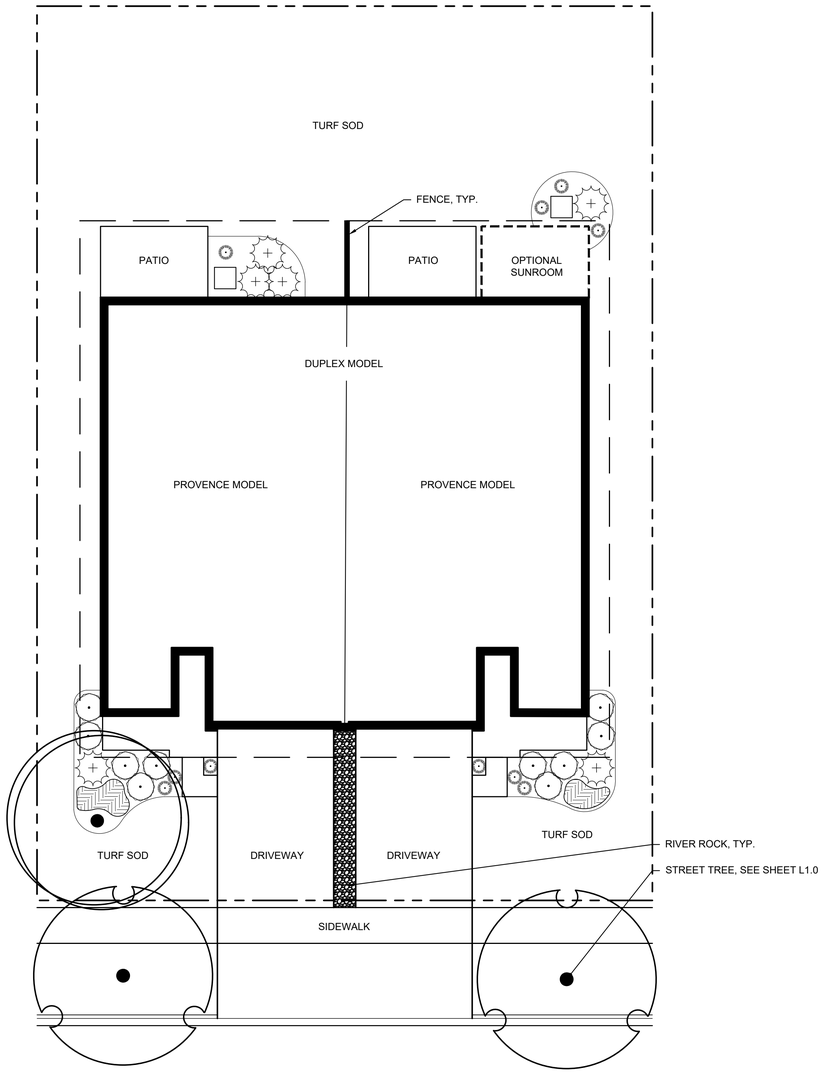
PARK ENLARGEMENT

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610 PETERSON ROAD
LIBERTYVILLE, IL 60048

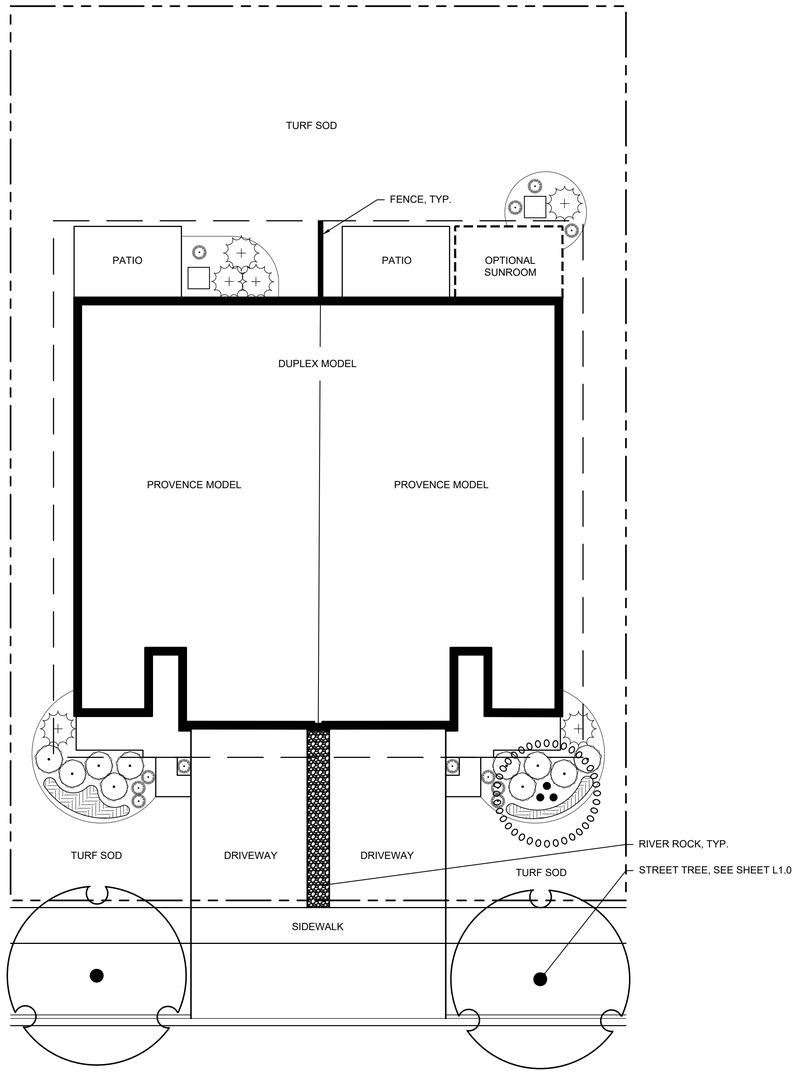
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01/03/2025

KHA PROJECT NO.
168247001

SHEET NUMBER
L1.3



DUPLEX FAMILY HOME FOUNDATION PLANTING PROTOTYPE - EVEN



DUPLEX FAMILY HOME FOUNDATION PLANTING PROTOTYPE - ODD

CONCEPT PLANT SCHEDULE DUPLEX - EVEN

	CANOPY TREE	1
	MEDIUM SHRUB	10
	EVERGREEN SHRUB	6
	ORNAMENTAL GRASS	10
	PERENNIALS	44 SF

CONCEPT PLANT SCHEDULE DUPLEX - ODD

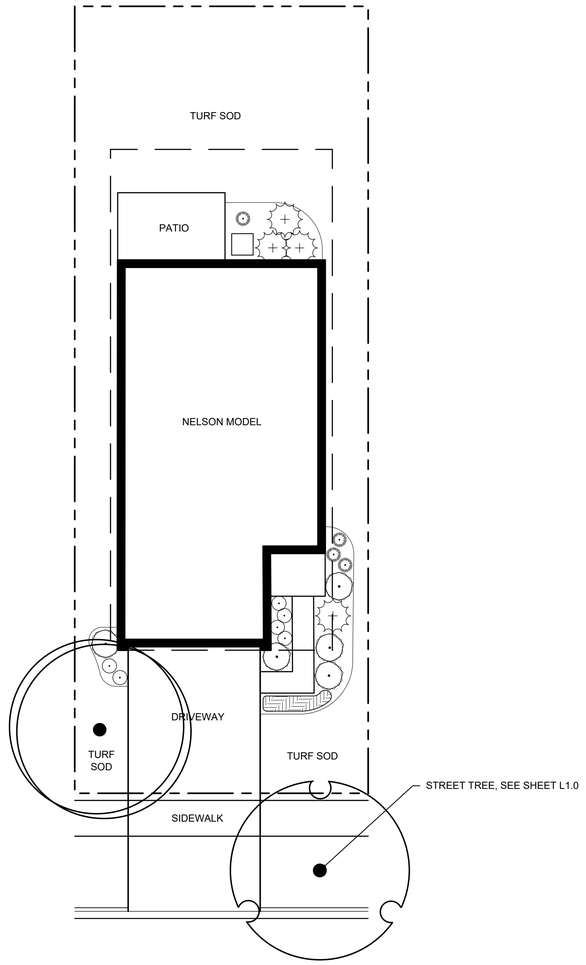
	ORNAMENTAL TREE	1
	MEDIUM SHRUB	10
	EVERGREEN SHRUB	6
	ORNAMENTAL GRASS	12
	PERENNIALS	47 SF

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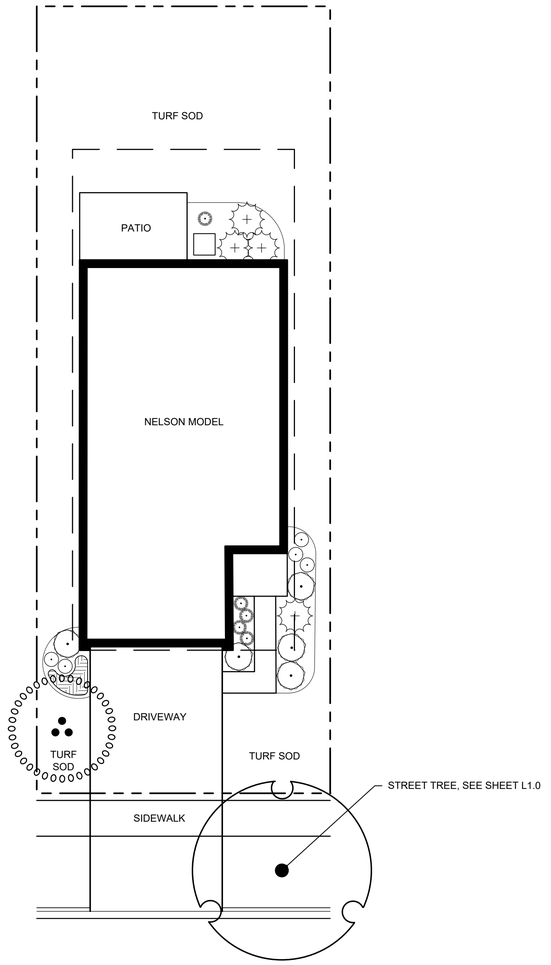
GRAPHIC SCALE IN FEET
0 5 10 20

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Drawing name: K:\CHS_LDEV\168247001_pulte_libertyville_JV2 Design\CAD\plansheet\L1.0 LANDSCAPE PLAN.dwg L1.5 SINGLE FAMILY FOUNDATION PROTOTYPES Mar 07, 2025 10:51am by christina.marelli
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SINGLE FAMILY HOME FOUNDATION PLANTING PROTOTYPE - EVEN



SINGLE FAMILY HOME FOUNDATION PLANTING PROTOTYPE - ODD

CONCEPT PLANT SCHEDULE SINGLE FAMILY EVEN

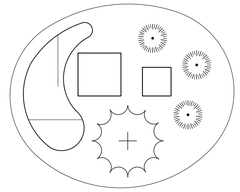
CANOPY TREE	1
MEDIUM SHRUB	5
EVERGREEN SHRUB	4
ORNAMENTAL GRASS	4
SMALL SHRUB	6
PERENNIALS	19 SF

CONCEPT PLANT SCHEDULE SINGLE FAMILY ODD

ORNAMENTAL TREE	1
MEDIUM SHRUB	5
EVERGREEN SHRUB	4
ORNAMENTAL GRASS	5
SMALL SHRUB	5
PERENNIALS	17 SF

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GRAPHIC SCALE IN FEET
0 5 10 20



GRAPHIC SCALE IN FEET
0 2.5 5 10

PEDESTAL SCREENING FOR FRONT YARD LOCATION - TYPICAL

CONCEPT PLANT SCHEDULE PEDESTAL SCREENING

EVERGREEN SHRUB	1
ORNAMENTAL GRASS	3
PERENNIALS	24 SF

No.	REVISIONS	DATE	BY
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DESIGNED BY: MS
DRAWN BY: KTRM
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PULTE HOME COMPANY, LLC

SINGLE FAMILY FOUNDATION PROTOTYPES

GREENWAY CHASE
610 PETERSON ROAD
LIBERTYVILLE, IL 60048

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L1.5

PLANT SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	CONT	CAL	SIZE
CANOPY TREES						
	AM	28	ACER MIYABEI 'MORTON' / STATE STREET™ MIYABE MAPLE	B & B	2.5" CAL. MIN.	
	AO	16	AESCULUS GLABRA / OHIO BUCKEYE	B & B	2.5" CAL. MIN.	
	CA	3	CARPINUS CAROLINIANA / AMERICAN HORNBEAM	B & B	2.5" CAL. MIN.	
	CC	4	CELTIS OCCIDENTALIS 'CHICAGOLAND' / CHICAGOLAND HACKBERRY	B & B	2.5" CAL. MIN.	
	GP	3	GINKGO BILOBA 'PRINCETON SENTRY' / PRINCETON SENTRY MAIDENHAIR TREE	B & B	2.5" CAL. MIN.	
	GT	20	GLEDITSIA TRIACANTHOS F. INERMIS / THORNLESS HONEY LOCUST	B & B	2.5" CAL. MIN.	
	GD	14	GYMNOCLADUS DIOICUS 'ESPRESSO' / KENTUCKY COFFEETREE	B & B	2.5" CAL. MIN.	
	PA	6	PLATANUS X ACERIFOLIA / LONDON PLANE TREE	B & B	2.5" CAL. MIN.	
	TA	18	TILIA AMERICANA / AMERICAN LINDEN	B & B	2.5" CAL. MIN.	
	TG	14	TILIA CORDATA 'GREENSPIRE' / GREENSPIRE LITTLELEAF LINDEN	B & B	2.5" CAL. MIN.	
EVERGREEN TREES						
	JE	22	JUNIPERUS VIRGINIANA / EASTERN REDCEDAR	B & B	-	6` HT. MIN.
	PA2	16	PICEA ABIES / NORWAY SPRUCE	B & B	-	6` HT. MIN.
	PD	28	PICEA GLAUCA 'DENSATA' / BLACK HILLS WHITE SPRUCE	B & B	-	6` HT. MIN.
	PF	21	PINUS FLEXILIS 'VANDERWOLF'S PYRAMID' / VANDERWOLF'S PYRAMID LIMBER PINE	B & B	-	6` HT. MIN.
	TT	11	THUJA OCCIDENTALIS 'TECHNY' / TECHNY ARBORVITAE	B & B	-	6` HT. MIN.
	TI	17	THUJA X 'GREEN GIANT' / GREEN GIANT ARBORVITAE	B & B	-	6` HT. MIN.
ORNAMENTAL TREES						
	CE	21	CERCIS CANADENSIS / EASTERN REDBUD	B & B	-	6` HT. MIN.
	CM	17	CORNUS MAS / CORNELIAN CHERRY MULTI-STEM	B & B	-	6` HT. MIN.
	MP	15	MALUS X 'PRAIRIFIRE' / PRAIRIFIRE CRABAPPLE	B & B	-	6` HT. MIN.
STREET TREES						
	CA2	27	CARPINUS CAROLINIANA / AMERICAN HORNBEAM	B & B	2.5" CAL. MIN.	
	CC2	27	CELTIS OCCIDENTALIS 'CHICAGOLAND' / CHICAGOLAND HACKBERRY	B & B	2.5" CAL. MIN.	
	GP2	26	GINKGO BILOBA 'PRINCETON SENTRY' / PRINCETON SENTRY MAIDENHAIR TREE	B & B	2.5" CAL. MIN.	
	PA3	26	PLATANUS X ACERIFOLIA / LONDON PLANE TREE	B & B	2.5" CAL. MIN.	
	QE	26	QUERCUS X 'CRIMSCHMIDT' / CRIMSON SPIRE™ OAK	B & B	2.5" CAL. MIN.	
	UP	26	ULMUS AMERICANA 'PRINCETON' / PRINCETON AMERICAN ELM	B & B	2.5" CAL. MIN.	

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	CONT	SPACING	SIZE
SHRUBS						
	HS	30	DIERVILLA X SPLENDENS 'EL MADRIGAL' / FIREFLY NIGHTGLOW BUSH HONEYSUCKLE	-	SEE PLAN	10" HT. MIN.
	WV	20	WEIGELA FLORIDA 'VERWEIG' / MY MONET® WEIGELA	-	SEE PLAN	6" HT. MIN.
EVERGREEN SHRUBS						
	TA2	6	THUJA OCCIDENTALIS `HOLMSTRUP` / HOLMSTRUP EASTERN ARBORVITAE	-	SEE PLAN	24" HT. MIN.
ORNAMENTAL GRASSES						
	AR	10	ANDROPOGON GERARDII 'RED OCTOBER' / RED OCTOBER BIG BLUESTEM	-	SEE PLAN	12" HT MIN
	CK	10	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER' / KARL FOERSTER FEATHER REED GRASS	-	SEE PLAN	12" HT MIN
	PH	22	PANICUM VIRGATUM `HEAVY METAL` / HEAVY METAL SWITCH GRASS	-	SEE PLAN	24" HT. MIN.
SHRUB AREAS						
	AB2	42	ACHILLEA MILLEFOLIUM `BALVINOLET` / NEW VINTAGE™ VIOLET COMMON YARROW	1 GAL.	SEE PLAN	6" HT. MIN.
	AB	16	AMSONIA X 'BLUE ICE' / BLUE ICE BLUESTAR	1 GAL.	SEE PLAN	6" HT. MIN.
	HB	12	HEUCHERA X 'BLACK BEAUTY' / BLACK BEAUTY CORAL BELLS	1 GAL.	SEE PLAN	6" HT. MIN.

SYMBOL	BOTANICAL / COMMON NAME
GROUND COVERS	
	CRUSHED STONE
	PIZZO DRY BOTTOM DETENTION SEED MIX
	PIZZO LOW PROFILE PRAIRIE SEED MIX
	PIZZO WET-MESIC PRAIRIE SEED MIX
	TURF SEED

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No.	REVISIONS	DATE	BY
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SCALE: AS NOTED
DESIGNED BY: NS
DRAWN BY: KTRM
CHECKED BY: RNM

PULTE HOME COMPANY, LLC

LANDSCAPE SCHEDULE

GREENWAY CHASE
610 PETERSON ROAD
LIBERTYVILLE, IL 60048

ORIGINAL ISSUE: 01/03/2025
KHA PROJECT NO. 168247001
SHEET NUMBER
L2.0

Drawing name: K:\CHS_LIB\168247001 Jaithe Libertyville Jt\2 Design\CAD\Landarch\L1.0 LANDSCAPE PLAN.dwg L2.0 LANDSCAPE SCHEDULE Mar 07, 2025 10:51am by christina.morrell
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Pizzo NATIVE PLANT NURSERY

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Low Profile Prairie Seed Mix (Dry-Mesic Soils)

MIX STATISTICS

Base Mix Without Supplemental Plugs	
Average Mix Height (ft)	2.6
Median Mix Height (ft)	3.0
Species Heights (# of Occurrences in Mix)	1.5' (1), **2' (15)**, 3' (11), 4' (10), 5' (2)
Number of Native Species in Mix	39
Native FQI	35.3
Native Mean C Value	5.0
Native Mean W Value	2.5
National Wetland Category	FACU
Lbs/Acre of Native Seed	24.4
Seeds per Square Foot	127.6
Percent of Mix (by Seed Count) Requiring Stratification	56.1%

Designed for sunny areas that are mesic to dry for most of the growing season. Composed of a diverse collection of shorter-profile prairie grass and wildflower species, this mix is ideal for areas where taller vegetation is not appropriate. Averaging 2.6' in height by seed count, with over 56% wildflowers, this mix provides an array of blooms from April through October. When installed and managed correctly, this mix typically begins flowering in the second growing season, starting with the yellow blooms of annual Partridge Pea and biennial Black-Eyed Susan. An additional colorful matrix of perennial species appears in the succeeding 3 to 5 years.

Grasses, Sedges, & Rushes

CODE	SCIENTIFIC NAME	COMMON NAME	C-VALUE	W-VALUE	WETNESS	HEIGHT Min-Max	HEIGHT Typical	BLOOM COLOR	BLOOM TIME A	M	J	J	A	S	O	SEEDS/OZ	OZ/ACRE	LB/ACRE	% OF MIX by Weight	% OF MIX by Seed Count	GERMINATION	TOP SOW
BOUCUR	*Bouteloua curtipendula*	Side-oats Grama	8	5	UPL	1.5-2.5'	2	N/A								6,000	128.00	8.00	32.75%	13.82%	N/A	
CXBICK	*Carex bicknellii*	Copper-shouldered Oval Sedge	10	3	FACU	1.5-2.5'	2	N/A								17,000	6.00	0.38	1.54%	1.84%	CM-60	
CXBREV	*Carex brevior*	Plains Oval Sedge	4	0	FAC	1-3'	2	N/A								29,000	4.00	0.25	1.02%	2.09%	CM-60	
CXMOLE	*Carex molesta*	Field Oval Sedge	2	0	FAC	1-2.5'	2	N/A								25,000	2.00	0.13	0.51%	0.90%	CM-60	
ELYCAN	*Elymus canadensis*	Canada Wild Rye	4	3	FACU	3-5'	5	N/A								5,200	32.00	2.00	8.19%	2.99%	N/A	
JUNDUD	*Juncus dudleyi*	Dudley's Rush	4	-3	FACW	1-2.5'	2	N/A								3,200,000	0.125	0.01	0.03%	7.20%	CM-60	
PANVIR	*Panicum virgatum*	Switch Grass	5	0	FAC	3-6'	4	N/A								14,000	8.00	0.50	2.05%	2.02%	N/A	
SCHSCO	*Schizachyrium scoparium*	Little Bluestem	5	3	FACU	2-3'	3	N/A								15,000	48.00	3.00	12.28%	12.96%	N/A	
																			Grass/Sedge Subtotals	**14.254**	**58.36%**	**43.81%**	

Wildflowers

CODE	SCIENTIFIC NAME	COMMON NAME	C-VALUE	W-VALUE	WETNESS	HEIGHT Min-Max	HEIGHT Typical	BLOOM COLOR	BLOOM TIME A	M	J	J	A	S	O	SEEDS/OZ	OZ/ACRE	LB/ACRE	% OF MIX by Weight	% OF MIX by Seed Count	GERMINATION	TOP SOW
ALLCER	*Allium cernuum*	Nodding Onion	7	3	FACU	1-2'	1.5	Purple								7,600	3.00	0.19	0.77%	0.41%	CM-60	
AMOCAN	*Amorpha canescens*	Lead Plant	9	5	UPL	1-1.5	1	Purple								16,000	2.00	0.13	0.51%	0.58%	CM-10, H, I, J	
ASCTUB	*Asclepias tuberosa*	Butterfly Weed	7	5	UPL	1-2.5'	2	Orange								4,300	16.00	1.00	4.09%	1.24%	CM-30	
BAPALB	*Baptisia alba*	White Wild Indigo	8	3	FACU	3-6'	4	White								1,700	2.50	0.16	0.64%	0.08%	CM-10, H, I	
CHAFAS	*Chamaecrista fasciculata*	Partridge Pea	1	3	FACU	6"-2'	2	Yellow								2,700	16.00	1.00	4.09%	0.78%	CM-10, H, I	
CORLAN	*Coreopsis lanceolata*	Sand Coreopsis	5	3	FACU	1.5-3'	2	Yellow								20,000	6.00	0.38	1.54%	2.16%	CM-30	
CORPAL	*Coreopsis palmata*	Prairie Coreopsis	6	5	UPL	1-2.5'	2	Yellow								10,000	4.00	0.25	1.02%	0.73%	CM-60, MI	
DALPUR	*Dalea purpurea*	Purple Prairie-Clover	9	5	UPL	1-3'	2	Purple								18,000	8.00	0.50	2.05%	2.59%	I, J	
ECHPAL	*Echinacea pallida*	Pale Purple Coneflower	8	5	UPL	2-3'	3	Purple								5,200	16.00	1.00	4.09%	1.50%	CM-90 or MI	
ECHPUR	*Echinacea purpurea*	Purple Coneflower	3	5	UPL	2-5'	4	Purple								6,600	6.00	0.38	1.54%	0.71%	N/A	
ERYYUC	*Eryngium yuccifolium*	Rattlesnake Master	9	0	FAC	2-5'	4	White								7,500	4.00	0.25	1.02%	0.54%	CM-60	
EUPCOR	*Euphorbia corollata*	Flowering Spurge	2	5	UPL	1-3'	3	White								8,000	4.00	0.25	1.02%	0.58%	CM-30	
HELHEL	*Helianthus helianthoides*	Early Sunflower	5	3	FACU	3-5'	5	Yellow								6,300	6.00	0.38	1.54%	0.58%	CM-30	
LESCAP	*Lespedeza capitata*	Round-headed Bush Clover	4	3	FACU	2-5'	4	Green								8,000	4.00	0.25	1.02%	0.58%	CM-10, H, I, J	
LIASPI	*Liatris aspera*	Button Blazing Star	6	5	UPL	2-5'	3	Purple								16,000	3.00	0.19	0.77%	0.86%	CM-60	
LIAPYC	*Liatris pycnostachya*	Prairie Blazing Star	8	0	FAC	2-4'	4	Purple								11,000	4.00	0.25	1.02%	0.79%	CM-60	
MONFIS	*Monarda fistulosa*	Wild Bergamot	4	3	FACU	2.5-4'	4	Purple								70,000	4.00	0.25	1.02%	2.53%	N/A	
PARINT	*Parthenium integrifolium*	Wild Quinine	8	5	UPL	2-3.5	3	White								7,000	8.00	0.50	2.05%	1.01%	CM-60	
PENDIG	*Penstemon digitalis*	Foxglove Beardtongue	4	0	FAC	2-3'	3	White								130,000	2.00	0.13	0.51%	1.94%	CM-30, G	
PYCTEN	*Pycnanthemum tenuifolium*	Slender Mountain Mint	7	0	FAC	1-3'	2	White								378,000	0.25	0.02	0.06%	1.70%	N/A	
RATPIN	*Ratibida pinnata*	Yellow Coneflower	4	5	UPL	2-4'	4	Yellow								30,000	4.00	0.25	1.02%	2.16%	CM-30	
RUDFUL	*Rudbeckia fulgida*	Orange Coneflower	8	-5	OBL	2-4'	3	Orange								31,000	4.00	0.25	1.02%	2.23%	CM-60	
RUDHIR	*Rudbeckia hirta*	Black-eyed Susan	1	3	FACU	2-3'	2	Yellow								92,000	8.00	0.50	2.05%	13.25%	CM-30	
SOLJUN	*Solidago juncea*	Early Goldenrod	5	5	UPL	1-3'	3	Yellow								290,000	0.50	0.03	0.13%	2.61%	CM-60	
SOLRIG	*Solidago rigida*	Stiff Goldenrod	4	3	FACU	2-5'	4	Yellow								41,000	1.00	0.06	0.26%	0.74%	CM-60	
SYMERI	*Symphyotrichum ericoides*	Heath Aster	5	3	FACU	1-3'	2	White								200,000	1.00	0.06	0.26%	3.60%	N/A	
SYMLAE	*Symphyotrichum laeve*	Smooth Blue Aster	9	3	FACU	1.5-3'	3	Blue								55,000	1.00	0.06	0.26%	0.99%	N/A	
SYMNOV	*Symphyotrichum novae-angliae*	New England Aster	4	-3	FACW	3-5'	4	Purple								66,000	0.50	0.03	0.13%	0.59%	CM-60	
TRADHI	*Tradescantia ohiensis*	Ohio Spiderwort	2	3	FACU	2-4'	3	Blue								8,000	8.00	0.50	2.05%	1.15%	CM-120 or M, G	
VERSTR	*Verbena stricta*	Hoary Vervain	4	5	UPL	1-3'	2	Blue								28,000	2.00	0.13	0.51%	1.01%	CM-60	
ZIZAUR	*Zizia aurea*	Golden Alexanders	7	0	FAC	1-2.5'	2	Yellow								11,000	16.00	1.00	4.09%	3.17%	CM-60 or M, G	
																			Wildflower Subtotals	**10.172**	**41.64%**	**56.19%**	
																			Mix TOTALS	**24.430**	**100.00%**	**100.00%**	

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Dry-Bottom Detention Basin Seed Mix (Mesic-Wet Soils at the Bottom of Basins or Swales)

MIX STATISTICS

Base Mix Without Supplemental Plugs	
Average Mix Height (ft)	3.4
Median Mix Height (ft)	4.0
Species Heights (# of Occurrences in Mix)	1.5' (1), 2' (10), 3' (8), **4' (13)**, 5' (8), 6' (3), 7' (2), 8' (1)
Number of Native Species in Mix	46
Native FQI	32.6
Native Mean C Value	4.8
Native Mean W Value	-1.0
National Wetland Category	FAC+
Lbs/Acre of Native Seed	30.0
Seeds per Square Foot	330.8
Percent of Mix (by Seed Count) Requiring Stratification	68.1%

Designed for sunny areas that flood periodically for short periods of time, ranging from 24-48 hours, but remain mesic to dry for most of the growing season. It is composed of species that tolerate fluctuating water levels and poor water quality, and is ideal for planting in the bottom of dry-bottom detention basins, within the "Bounce Zone" on detention basin slopes, dry-bottom bioswales, large rain gardens, and within open floodplains. This is a medium height prairie with an average height of 3.4' by seed count, and about 23% of seeds typically averaging 5.0' high or more. While this mix does provide flowering species from April-October, it is designed to be a bit graminoid heavy (particularly long-term) with nearly 66% of seeds being grass and sedge species. The mix is designed in this fashion to ensure excellent erosion control when used in stormwater applications.

Grasses, Sedges, & Rushes

CODE	SCIENTIFIC NAME	COMMON NAME	C-VALUE	W-VALUE	WETNESS	HEIGHT Min-Max	HEIGHT Typical	BLOOM COLOR	BLOOM TIME A	M	J	J	A	S	O	SEEDS/OZ	OZ/ACRE	LB/ACRE	% OF MIX by Weight	% OF MIX by Seed Count	GERMINATION	TOP SOW
ANDGER	*Andropogon gerardii*	Big Bluestem	5	0	FAC	6-8'	7	N/A								10,000	64.00	4.00	13.33%	4.44%	N/A	
CXBEBB	*Carex bebbii*	Bebb's Oval Sedge	6	-5	OBL	1-3'	2	N/A								34,000	2.00	0.13	0.42%	0.47%	CM-60	
CXBREV	*Carex brevior*	Plains Oval Sedge	4	0	FAC	1-3'	2	N/A								29,030	4.00	0.25	0.83%	0.81%	CM-60	
CXCRIS	*Carex cristatella*	Crested Oval Sedge	4	-3	FACW	3-4'	3	N/A								58,000	1.00	0.06	0.21%	0.40%	CM-60	
CXHYST	*Carex hystericina*	Porcupine Sedge	5	-5	OBL	1-2.5'	2	N/A								30,000	2.00	0.13	0.42%	0.41%	CM-60	
CXMOLE	*Carex molesta*	Field Oval Sedge	2	0	FAC	1-2.5'	2	N/A								25,000	3.00	0.19	0.63%	0.52%	CM-60	
CXSCOP	*Carex scoparia*	Lance-fruited Oval Sedge	7	-3	FACW	1-3'	2	N/A								84,000	1.00	0.06	0.21%	0.58%	CM-60	
CXVULP	*Carex vulpinoidea*	Brown Fox Sedge	2	-3	FACW	1.5-3.5'	3	N/A								100,000	8.00	0.50	1.67%	5.91%	CM-60	
ELEPAL	*Eleocharis palustris*	Great Spike Rush	2	-5	OBL	1-3.5'	2	N/A								51,000	6.00	0.38	1.25%	2.12%	CM-60	
ELYCAN	*Elymus canadensis*	Canada Wild Rye	4	3	FACU	3-5'	5	N/A								5,200	32.00	2.00	6.67%	1.15%	N/A	
ELYVIR	*Elymus virginicus*	Virginia Wild Rye	4	-3	FACW	2.5-4'	4	N/A								4,200	48.00	3.00	10.00%	1.40%	N/A	
JUNDUD	*Juncus dudleyi*	Dudley's Rush	4	-3	FACW	1-2.5'	2	N/A								3,200,000	1.00	0.06	0.21%	22.21%	CM-60	
PANVIR	*Panicum virgatum*	Switch Grass	5	0	FAC	3-6'	4	N/A								14,000	80.00	5.00	16.67%	7.77%	N/A	
SCHSCO	*Schizachyrium scoparium*	Little Bluestem	5	3	FACU	2-3'	3	N/A								15,000	64.00	4.00	13.33%	6.66%	N/A	
SCIATR	*Scirpus atrovirens*	Dark-green Bulrush	4	-5	OBL	2-6'	5	N/A								460,000	1.00	0.06	0.21%	3.19%	CM-60 or M	
SCICYP	*Scirpus cyperinus*	Wool Grass	6	-5	OBL	3-5'	5	N/A								1,700,000	0.50	0.03	0.10%	5.90%	CM-60 or M	
SORNUT	*Sorghastrum nutans*	Indian Grass	5	3	FACU	3-7'	6	N/A								12,000	16.00	1.00	3.33%	3.33%	N/A	
																			Grass/Sedge Subtotals	**20.844**	**69.48%**	**64.94%**	

Wildflowers

CODE	SCIENTIFIC NAME	COMMON NAME	C-VALUE	W-VALUE	WETNESS	HEIGHT Min-Max	HEIGHT Typical	BLOOM COLOR	BLOOM TIME A	M	J	J	A	S	O	SEEDS/OZ	OZ/ACRE	LB/ACRE	% OF MIX by Weight	% OF MIX by Seed Count	GERMINATION	TOP SOW
ALLCER	*Allium cernuum*	Nodding Onion	7	3	FACU	1-2'	1.5	Purple								7,600	4.00	0.25	0.83%	0.21%	CM-60	
ASCINC	*Asclepias incarnata*	Swamp Milkweed	4	-5	OBL	3-6'	4	Pink								4,830	24.00	1.50	5.00%	0.80%	CM-30	
CHAFAS	*Chamaecrista fasciculata*	Partridge Pea	5	3	FACU	6"-2'	2	Yellow								2,700	16.00	1.00	3.33%	0.30%	CM-10, H, I	
CORTRI	*Coreopsis tripteris*	Tall Coreopsis	5	0	FAC	3-8'	7	Yellow								14,000	6.00	0.38	1.25%	0.58%	CM-60	
DESCAA	*Desmodium canadense*	Showy Tick Trefoil	4	3	FACU	3-6'	4	Purple								5,500	4.00	0.25	0.83%	0.15%	I, J	
ECHPUR	*Echinacea purpurea*	Purple Coneflower	3	5	UPL	2-5'	4	Purple								6,600	8.00	0.50	1.67%	0.37%	N/A	
ERYYUC	*Eryngium yuccifolium*	Rattlesnake Master	9	0	FAC	2-5'	4	White								7,500	12.00	0.75	2.50%	0.62%	CM-60	
EUPPER	*Eupatorium perfoliatum*	Boneset	4	-5	OBL	3-4'	4	White								160,000	0.50	0.03	0.10%	0.56%	CM-30	
EUTGRA	*Euthamia graminifolia*	Grass-leaved Goldenrod	4	-3	FACW	2-4'	3	Yellow								350,000	1.00	0.06	0.21%	2.43%	CM-60	
EUTMAC	*Eutrochium maculatum*	Spotted Joe Pye Weed	4	-5	OBL	3-6'	5	Pink								95,000	0.50	0.03	0.10%	0.32%	CM-30	
HELAUT	*Helenium autumnale*	Sneezeweed	5	-3	FACW	2-5'	4	Yellow								130,000	1.00	0.06	0.40%	1.42%	N/A	
LIAPYC	*Liatris pycnostachya*	Prairie Blazing Star	8	0	FAC	2-4'	4	Purple								11,000	6.00	0.38	1.25%	0.79%	CM-60	
LIASPI	*Liatris spicata*	Marsh Blazing Star	6	0	FAC	2-5'	5	Purple								11,000	2.00	0.13	0.42%	0.15%	CM-60	
MONFIS	*Monarda fistulosa*	Wild Bergamot	4	3	FACU	2.5-4'	4	Purple								70,000	4.00	0.25	0.83%	1.94%	N/A	
PENDIG	*Penstemon digitalis*	Foxglove Beardtongue	4	0	FAC	2-3'	3	White								130,000	4.00	0.25	0.83%	3.61%	CM-30, G	
PHYVIR	*Physostegia virginiana*	Obedient Plant	6	-3	FACW	1-4'	4	Pink								11,000	2.00	0.13	0.42%	0.15%	CM-60	
PYCVIR	*Pycnanthemum virginianum*	Virginia Mountain Mint	5	-3	FACW	1-4'	3	White								220,000	2.00	0.13	0.42%	3.05%	N/A	
RUDHIR	*Rudbeckia hirta*	Black-eyed Susan	1	3	FACU	2-3'	2	Yellow								92,000	8.00	0.50	1.67%	5.11%	CM-30	
RUDSUB	*Rudbeckia subtomentosa*	Sweet Black-eyed Susan	9	3	FACU	3-6'	5	Yellow								41,000	2.00	0.13	0.42%	0.30%	CM-30	
RUDTRI	*Rudbeckia triloba*	Brown-eyed Susan	3	3	FACU	2-6'	5	Yellow								34,000	3.00	0.19	0.63%	0.71%	CM-30	
SILLAC	*Silphium laciniatum*	Compass Plant	5	5	UPL	6-12'	8	Yellow								660	6.00	0.38	1.25%	0.04%	CM-60	
SILTER	*Silphium terebinthinaceum*	Prairie Dock	5	0	FAC	4-10'	9	Yellow								1,000	3.00	0.19	1.19%	0.03%	CM-60	
SOLRID	*Solidago riddellii*	Riddell's Goldenrod	7	-5	OBL	2-4'	3	Yellow								93,000	0.50	0.03	0.20%	0.51%	CM-60	
SOLRIG	*Solidago rigida*	Stiff Goldenrod	4	3	FACU	2-5'	4	Yellow								41,000	4.00	0.25	1.58%	1.79%	CM-60	
SYMNOV	*Symphyotrichum novae-angliae*	New England Aster	4	-3	FACW	3-5'	4	Purple								66,000	3.00	0.19	1.19%	2.16%	CM-60	
THADAS	*Thalictrum dasycarpum*	Purple Meadow Rue	5	-3	FACW	3-7'	6	Cream								11,000	2.00	0.13	0.79%	0.24%	CM-60, G	
TRADHI	*Tradescantia ohiensis*	Ohio Spiderwort	2	3	FACU	2-4'	3	Blue								8,000	12.00	0.75	4.74%	1.05%	CM-120 or M, G	
VERHAS	*Verbena hastata*	Blue Vervain	4	-3	FACW	2-6'	5	Blue								93,000	4.00	0.25	1.58%	2.03%	CM-30	
VERFAS	*Vernonia fasciculata*	Common Ironweed	5	-3	FACW	3-6'	6	Purple								24,000	4.00	0.25	1.58%	2.58%	CM-30	
ZIZAUR	*Zizia aurea*	Golden Alexanders	7	0	FAC	1-2.5'	2	Yellow								11,000	12.00	0.75	4.74%	0.96%	CM-60 or M, G	
																			Wildflower Subtotals	**9.156**	**30.52%**	**35.06%**	
																			Mix TOTALS	**30.000**	**100.00%**	**100.00%**	

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Wet-Mesic Prairie Seed Mix (Wet-Mesic Soils)

MIX STATISTICS

Base Mix Without Supplemental Plugs	
Average Mix Height (ft)	3.0
Median Mix Height (ft)	4.0
Species Heights (# of Occurrences in Mix)	1.5' (1), 2' (8), 3' (10), **4' (14)**, 5' (7), 6' (2), 7' (2), 8' (1), 9' (1)
Number of Native Species in Mix	46
Native FQI	32.0
Native Mean C Value	4.7
Native Mean W Value	-1.3
National Wetland Category	FACW-
Lbs/Acre of Native Seed	25.8
Seeds per Square Foot	210.5
Percent of Mix (by Seed Count) Requiring Stratification	79.1%

Designed for sunny areas that are moist to wet; however, they may dry out completely in the height of summer, or more extensively in particularly dry years. Most of the species in this mix can take consistently saturated soils, while about 1/3 of the species are adapted to facultative upland conditions. Over 43% of this mix is a diverse composition of wildflowers that bloom from April through October resulting in a medium to tall prairie with an average height of 3.0' by seed count, and less than 10% of species typically averaging 5.0' high or more at maturity.

Grasses, Sedges, & Rushes

CODE	SCIENTIFIC NAME	COMMON NAME	C-VALUE	W-VALUE	WETNESS	HEIGHT Min-Max	HEIGHT Typical	BLOOM COLOR	BLOOM TIME A	M	J	J	A	S	O	SEEDS/OZ	OZ/ACRE	LB/ACRE	% OF MIX by Weight	% OF MIX by Seed Count	GERMINATION	TOP SOW
CALCAN	*Calamagrostis canadensis*	Blue Joint Grass	3	-5	OBL	2-5'	4	N/A								280,000	0.75	0.05	0.30%	2.29%	N/A	
CXBREV	*Carex brevior*	Plains Oval Sedge	4	0	FAC	1-3'	2	N/A								29,000	2.00	0.13	0.79%	0.63%	CM-60	
CXCRIS	*Carex cristatella*	Crested Oval Sedge	4	-3	FACW	2-4'	3	N/A								58,000	1.50	0.09	0.59%	0.95%	CM-60	
CXMOLE	*Carex molesta*	Field Oval Sedge	2	0	FAC	1-2.5'	2	N/A								25,000	4.00	0.25	1.58%	1.09%	CM-60	
CXSCOP	*Carex scoparia*	Lance-fruited Oval Sedge	7	-3	FACW	1-3'	2	N/A								84,000	2.00	0.13	0.79%	1.83%	CM-60	
CXSTIP	*Carex stipata*	Common Fox Sedge	3	-5	OBL	1.5-3'	3	N/A								34,000	2.00	0.13	0.79%	0.74%	CM-60	
CXVULP	*Carex vulpinoidea*	Brown Fox Sedge	2	-3	FACW	1.5-3.5'	3	N/A								100,000	4.00	0.25	1.58%	4.36%	CM-60	
ELEPAL	*Eleocharis palustris*	Great Spike Rush	2	-5	OBL	1-3.5'	2	N/A								51,000	1.00	0.06	0.40%	0.56%	CM-60	
ELYVIR	*Elymus virginicus*	Virginia Wild Rye	4	-3	FACW	2.5-4'	4	N/A								4,200	48.00	3.00	18.96%	2.20%	N/A	
GLYSTR	*Glyceria striata*	Fowl Manna Grass	4	-5	OBL	2-3.5'	3	N/A								90,000	2.00	0.13	0.79%	1.96%	N/A	
JUNDUD	*Juncus dudleyi*	Dudley's Rush	4	-3	FACW	1-2.5'	2	N/A								3,200,000	1.00	0.06	0.40%	34.91%	CM-60	
PANVIR	*Panicum virgatum*	Switch Grass	5	0	FAC	3-6'	4	N/A								14,000	16.00	1.00	6.32%	2.44%	N/A	
SCIATR	*Scirpus atrovirens*	Dark-green Bulrush	4	-5	OBL	2-6'	5	N/A								460,000	0.13	0.01	0.05%	1.63%	CM-60 or M	
SPAPEC	*Spartina pectinata*	Cord Grass	4	-3	FACW	3-9'	7	N/A								6,600	32.00	2.00	12.64%	2.30%	N/A	
																			Grass/Sedge Subtotals	**7.273**	**45.98%**	**56.90%**	

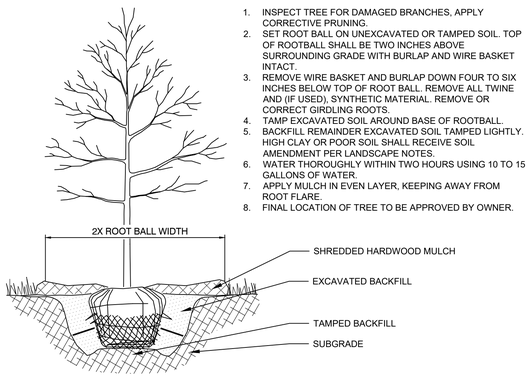
Wildflowers

CODE	SCIENTIFIC NAME	COMMON NAME	C-VALUE	W-VALUE	WETNESS	HEIGHT Min-Max	HEIGHT Typical	BLOOM COLOR	BLOOM TIME A	M	J	J	A	S	O	SEEDS/OZ	OZ/ACRE	LB/ACRE	% OF MIX by Weight	% OF MIX by Seed Count	GERMINATION	TOP SOW
ALLCER	*Allium cernuum*	Nodding Onion	7	3	FACU	1-2'	1.5	Purple								7,600	12.00	0.75	4.74%	0.99%	CM-60	
ASCINC	*Asclepias incarnata*	Swamp Milkweed	4	-5	OBL	3-6'	4	Pink								4,800	6.00	0.38	2.37%	0.31%	CM-30	
BIDCER	*Bidens cernua*	Nodding Bur Marigold	5	-5	OBL	1-3'	3	Yellow								21,000	1.50	0.09	0.59%	0.34%	CM-60	
BOLAST	*Boltonia asteroides*	False Aster	9	-5	OBL	3-5'	4	White								160,000	0.50	0.03	0.20%	0.87%	CM-60	
CHAFAS	*Chamaecrista fasciculata*	Partridge Pea	5	3	FACU	6"-2'	2	Yellow								2,700	16.00	1.00	6.32%	0.47%	CM-10, H, I	
CORTRI	*Coreopsis tripteris*	Tall Coreopsis	5	0	FAC	3-8'	7	Yellow								14,000	4.00	0.25	1.58%	0.61%	CM-60	
DESCAN	*Desmodium canadense*	Showy Tick Trefoil	4	3	FACU	3-6'	4	Purple								5,500	3.00	0.19	1.19%	0.18%	I, J	
DOELUMB	*Doellingeria umbellata*	Flat-topped Aster	9	-3	FACW	2-5'	5	Cream								67,000	1.50	0.09	0.59%	1.10%	CM-60	
ECHPUR	*Echinacea purpurea*	Purple Coneflower	3	5	UPL	2-5'	4	Purple								6,600	4.00	0.25	1.58%	0.29%	N/A	
ERYYUC	*Eryngium yuccifolium*	Rattlesnake Master	9	0	FAC	2-5'	4	White								7,500	16.00	1.00	6.32%	1.31%	CM-60	
EUPPER	*Eupatorium perfoliatum*	Boneset	4	-5	OBL	3-4'	4	White								160,000	0.25	0.02	0.10%	0.44%	CM-30	
EUTGRA	*Euthamia graminifolia*	Grass-leaved Goldenrod	4	-3	FACW	2-4'	3	Yellow								350,000	1.00	0.06	0.40%	1.82%	CM-60	
EUTMAC	*Eutrochium maculatum*	Spotted Joe Pye Weed	4	-5	OBL	3-6'	5	Pink								95,000	0.50	0.03	0.20%	0.52%	CM-30	
HELAUT	*Helenium autumnale*	Sneezeweed	5	-3	FACW	2-5'	4	Yellow								130,000	1.00	0.06	0.40%	1.42%	N/A	
LIAPYC	*Liatris pycnostachya*	Prairie Blazing Star	8	0	FAC	2-4'	4	Purple								11,000	6.00	0.38	2.37%	0.72%	CM-60	
LIASPI	*Liatris spicata*	Marsh Blazing Star	6	0	FAC	2-5'	5	Purple								11,000	2.00	0.13	0.79%	0.24%	CM-60	
MONFIS	*Monarda fistulosa*	Wild Bergamot	4	3	FACU	2.5-4'	4	Purple								70,000	4.00	0.25	1.58%	3.05%	N/A	
PENDIG	*Penstemon digitalis*	Foxglove Beardtongue	4	0	FAC	2-3'	3	White								130,000	4.00	0.25	1.58%	1.94%	CM-30, G	
PHYVIR	*Physostegia virginiana*	Obedient Plant	6	-3	FACW	1-4'	4	Pink								11,000	2.00	0.13	0.79%	0.17%	CM-60	
PYCVIR	*Pycnanthemum virginianum*	Virginia Mountain Mint	5	-3	FACW	1-4'	3	White								220,000	2.00	0.13	0.79%	4.80%	N/A	
RUDHIR	*Rudbeckia hirta*	Black-eyed Susan	1	3	FACU	2-3'	2	Yellow								92,000	8.00	0.50	3.16%	8.03%	CM-30	
RUDSUB	*Rudbeckia subtomentosa*	Sweet Black-eyed Susan	9	3	FACU	3-6'	5	Yellow						

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NOTES:

1. INSPECT TREE FOR DAMAGED BRANCHES, APPLY CORRECTIVE PRUNING.
2. SET ROOT BALL ON UNEXCAVATED OR TAMPED SOIL. TOP OF ROOTBALL SHALL BE TWO INCHES ABOVE SURROUNDING GRADE WITH BURLAP AND WIRE BASKET INTACT.
3. REMOVE WIRE BASKET AND BURLAP DOWN FOUR TO SIX INCHES BELOW TOP OF ROOT BALL. REMOVE ALL TWINE AND (IF USED), SYNTHETIC MATERIAL. REMOVE OR CORRECT GIRDLING ROOTS.
4. TAMP EXCAVATED SOIL AROUND BASE OF ROOTBALL.
5. BACKFILL REMAINDER EXCAVATED SOIL TAMPED LIGHTLY. HIGH CLAY OR POOR SOIL SHALL RECEIVE SOIL AMENDMENT PER LANDSCAPE NOTES.
6. WATER THOROUGHLY WITHIN TWO HOURS USING 10 TO 15 GALLONS OF WATER.
7. APPLY MULCH IN EVEN LAYER, KEEPING AWAY FROM ROOT FLARE.
8. FINAL LOCATION OF TREE TO BE APPROVED BY OWNER.

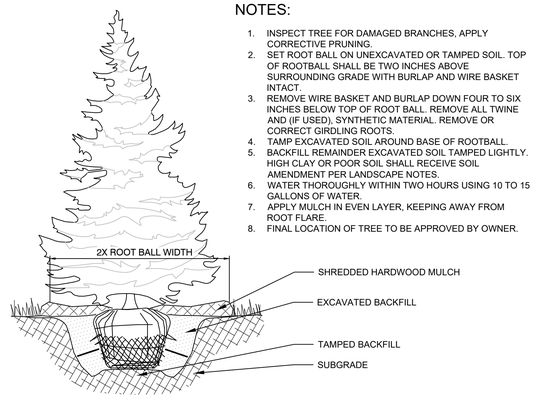


1 TREE PLANTING

NTS

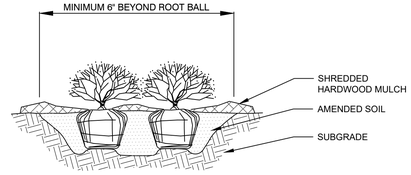
NOTES:

1. INSPECT TREE FOR DAMAGED BRANCHES, APPLY CORRECTIVE PRUNING.
2. SET ROOT BALL ON UNEXCAVATED OR TAMPED SOIL. TOP OF ROOTBALL SHALL BE TWO INCHES ABOVE SURROUNDING GRADE WITH BURLAP AND WIRE BASKET INTACT.
3. REMOVE WIRE BASKET AND BURLAP DOWN FOUR TO SIX INCHES BELOW TOP OF ROOT BALL. REMOVE ALL TWINE AND (IF USED), SYNTHETIC MATERIAL. REMOVE OR CORRECT GIRDLING ROOTS.
4. TAMP EXCAVATED SOIL AROUND BASE OF ROOTBALL.
5. BACKFILL REMAINDER EXCAVATED SOIL TAMPED LIGHTLY. HIGH CLAY OR POOR SOIL SHALL RECEIVE SOIL AMENDMENT PER LANDSCAPE NOTES.
6. WATER THOROUGHLY WITHIN TWO HOURS USING 10 TO 15 GALLONS OF WATER.
7. APPLY MULCH IN EVEN LAYER, KEEPING AWAY FROM ROOT FLARE.
8. FINAL LOCATION OF TREE TO BE APPROVED BY OWNER.



2 EVERGREEN TREE PLANTING

NTS



NOTES:

1. APPLY CORRECTIVE PRUNING.
2. SET ROOT BALL OR CONTAINER ON UNEXCAVATED OR TAMPED SOIL. TOP OF ROOTBALL (CONTAINER) SHALL BE ONE INCH ABOVE SURROUNDING GRADE. FOR LARGER SHRUBS WITHIN PLANTING BED DIG A DEEPER PIT ONLY FOR THOSE SHRUBS.
3. REMOVE BURLAP FROM TOP HALF THE LENGTH OF ROOTBALL. TWINE AND (IF USED) SYNTHETIC MATERIAL SHALL BE REMOVED FROM PLANTING BED. FOR CONTAINER GROWN SHRUBS, REMOVE CONTAINER AND LOOSEN ROOTS PRIOR TO INSTALLATION.
4. REMOVE OR CORRECT GIRDLING ROOTS.
5. PLUMB AND BACKFILL WITH AMENDED SOIL PER LANDSCAPE NOTES. WATER THOROUGHLY WITHIN TWO HOURS.
6. APPLY MULCH IN EVEN LAYER, KEEPING AWAY FROM ROOT FLARE. MULCH LIMITS FOR SHRUBS EXTEND TO ALL LIMITS OF PLANTING BED, SEE PLANS FOR BED LAYOUTS.

3 SHRUB PLANTING

NTS

NOTES:

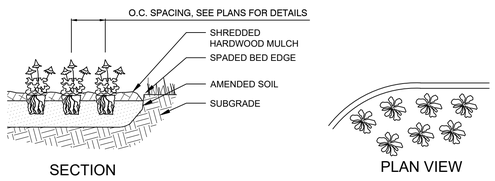
1. APPLY CORRECTIVE PRUNING.
2. SET ROOT BALL OR CONTAINER ON UNEXCAVATED OR TAMPED SOIL. TOP OF CONTAINER SHALL BE ONE INCH ABOVE SURROUNDING GRADE.
3. SYNTHETIC MATERIAL SHALL BE REMOVED FROM PLANTING BED. FOR CONTAINER GROWN GRASSES, REMOVE CONTAINER AND LOOSEN ROOTS PRIOR TO INSTALLATION.
4. REMOVE OR CORRECT GIRDLING ROOTS.
5. PLUMB AND BACKFILL WITH AMENDED SOIL PER LANDSCAPE NOTES. WATER THOROUGHLY WITHIN TWO HOURS.
6. APPLY MULCH IN EVEN LAYER, KEEPING AWAY FROM ROOT FLARE. MULCH LIMITS FOR GRASS EXTEND TO ALL LIMITS OF PLANTING BED, SEE PLANS FOR BED LAYOUTS.

4 ORNAMENTAL GRASS PLANTING

NTS

NOTES:

1. EXCAVATE PLANTING BED.
2. BED HEIGHT IS TO BE 2" ABOVE FINISH GRADE AND WELL DRAINED.
3. REMOVE CONTAINER, SCORE SOIL MASS TO REDIRECT AND PREVENT CIRCLING ROOTS. CORRECT GIRDLING ROOTS.
2. PLANT MATERIAL SHALL BE LAID OUT BY FOLLOWING THE BED EDGE, WORKING TOWARDS THE CENTER OF THE BED USING TRIANGULAR (STAGGERED) SPACING AS PLAUSIBLE.
3. PLUMB AND BACKFILL WITH PLANTING MIX AS SPECIFIED IN LANDSCAPE NOTES.
4. APPLY MULCH IN EVEN LAYER, KEEPING AWAY FROM ROOT FLARE. MULCH LIMITS FOR PERENNIALS/GROUNDCOVER EXTEND TO ALL LIMITS OF PLANTING BED, SEE PLANS FOR BED LAYOUTS.
5. SPACING TO BE AS SPECIFIED IN THE PLANT LIST. PERENNIALS SHALL BE PLACED WITH THEIR CENTER 24" FROM EDGE OF BED.



SECTION

PLAN VIEW

5 PERENNIAL PLANTING

NTS

LANDSCAPE NOTES

1. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING MATERIALS AND PLANTS SHOWN ON THE LANDSCAPE PLAN. THE CONTRACTOR IS RESPONSIBLE FOR THE COST TO REPAIR UTILITIES, ADJACENT LANDSCAPE, PUBLIC AND PRIVATE PROPERTY THAT IS DAMAGED BY THE CONTRACTOR OR THEIR SUBCONTRACTOR'S OPERATIONS DURING INSTALLATION OR DURING THE SPECIFIED MAINTENANCE PERIOD. CALL FOR UTILITY LOCATIONS PRIOR TO ANY EXCAVATION.
2. THE CONTRACTOR SHALL REPORT ANY DISCREPANCY IN PLAN VS. FIELD CONDITIONS IMMEDIATELY TO THE LANDSCAPE ARCHITECT, PRIOR TO CONTINUING WITH THAT PORTION OF WORK.
3. NO PLANTING WILL BE INSTALLED UNTIL ALL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF ANY OF THEIR TRENCHES OR EXCAVATIONS THAT SETTLE.
5. ALL PLANTS TO BE SPECIMEN GRADE, WELL BRANCHED, HEALTHY, FULL, PRE-INOCULATED AND FERTILIZED. PLANTS SHALL BE FREE FROM DISEASE, PESTS, WOUNDS, AND SCARS. PLANTS SHALL BE FREE FROM NOTICEABLE GAPS, HOLES, OR DEFORMITIES. PLANTS SHALL BE FREE FROM BROKEN OR DEAD BRANCHES. TRUNKS WILL BE WRAPPED IF NECESSARY TO PREVENT SUN SCALD AND INSECT DAMAGE. THE LANDSCAPE CONTRACTOR SHALL REMOVE THE WRAP AT THE PROPER TIME AS PART OF THIS CONTRACT.
6. THE OWNER'S REPRESENTATIVE MAY REJECT ANY PLANT MATERIALS THAT ARE DISEASED, DEFORMED, OR OTHERWISE NOT EXHIBITING SUPERIOR QUALITY.
7. ALL NURSERY STOCK SHALL BE GUARANTEED, BY THE CONTRACTOR, FOR ONE YEAR FROM DATE OF FINAL INSPECTION. THE GUARANTEE BEGINS ON THE DATE OF THE LANDSCAPE ARCHITECT'S OR OWNERS WRITTEN ACCEPTANCE OF THE INITIAL PLANTING. REPLACEMENT PLANT MATERIAL SHALL HAVE A ONE YEAR GUARANTEE COMMENCING UPON PLANTING.
8. PLANTS TO MEET AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.1-2014 OR MOST CURRENT VERSION) REQUIREMENTS FOR SIZE AND TYPE SPECIFIED.
9. PRUNE PLANTS AS NECESSARY- PER STANDARD NURSERY PRACTICE AND TO CORRECT POOR BRANCHING OF EXISTING AND PROPOSED TREES.
10. TOPSOIL SHALL BE PROVIDED AND GRADED BY THE GENERAL CONTRACTOR UP TO 6 INCHES BELOW FINISHED GRADE IN TURF AREAS AND 18 INCHES IN PLANTING AREAS.
11. PLANTING AREA TOPSOIL SHALL BE AMENDED WITH 25% SPHAGNUM PEATMOSS, 5% HUMUS AND 70% PULVERIZED SOIL FOR ALL NON TURF SEED MIX AREAS, SHRUB, ORNAMENTAL GRASS, PERENNIAL AND ANNUAL BEDS.
12. SEED/SOD LIMIT LINES ARE APPROXIMATE. CONTRACTOR SHALL SEED/SOD ALL AREAS WHICH ARE DISTURBED BY GRADING WITH THE SPECIFIED SEED/SOD MIXES.
13. EDGING TO BE A SPADED EDGE UNLESS INDICATED OTHERWISE ON THE PLANS. SPADED EDGE TO PROVIDE V-SHAPED DEPTH AND WIDTH TO CREATE SEPARATION BETWEEN MULCH AND GRASS. A SPADED BED EDGE SHALL SEPARATE MULCH BEDS FROM TURF OR SEEDED AREAS. A SPADED EDGE IS NOT REQUIRED ALONG CURBED EDGES.
14. CONTRACTOR SHALL INSTALL SHREDDED HARDWOOD MULCH AT A 3" DEPTH TO ALL TREES, SHRUB, PERENNIAL, AND GROUNDCOVER AREAS. TREES PLACED IN AREA COVERED BY TURF SHALL RECEIVE A 4 FT WIDE MAXIMUM TREE RING WITH 3" DEPTH SHREDDED HARDWOOD MULCH.
15. INSTALLATION OF TREES WITHIN PARKWAYS SHALL BE COORDINATED IN THE FIELD WITH LOCATIONS OF UNDERGROUND UTILITIES. TREES SHALL NOT BE LOCATED CLOSER THAN 5' FROM UNDERGROUND UTILITY LINES AND NO CLOSER THAN 10' FROM UTILITY STRUCTURES.
16. DO NOT DISTURB THE EXISTING PAVING, LIGHTING, OR LANDSCAPING THAT EXISTS ADJACENT TO THE SITE UNLESS OTHERWISE NOTED ON PLAN.
17. ALL DISTURBED AREAS TO BE SODDED OR SEEDED, UNLESS OTHERWISE NOTED. SOD/SEED SHALL BE LOCAL HARDY TURF GRASS MIX UNLESS, OTHERWISE NOTED.
18. PLANT QUANTITIES SHOWN ARE FOR THE CONVENIENCE OF THE OWNER AND JURISDICTIONAL REVIEW AGENCIES. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL PLANT QUANTITIES AS DRAWN.

No.	REVISIONS	DATE	BY
1	ARC RE-SUBMITTAL	03/07/25	DG

Kimley»Horn
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DEERFIELD, IL 60015
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WWW.KIMLEY-HORN.COM

SCALE: AS NOTED
DESIGNED BY: NS
DRAWN BY: KTRM
CHECKED BY: RNM

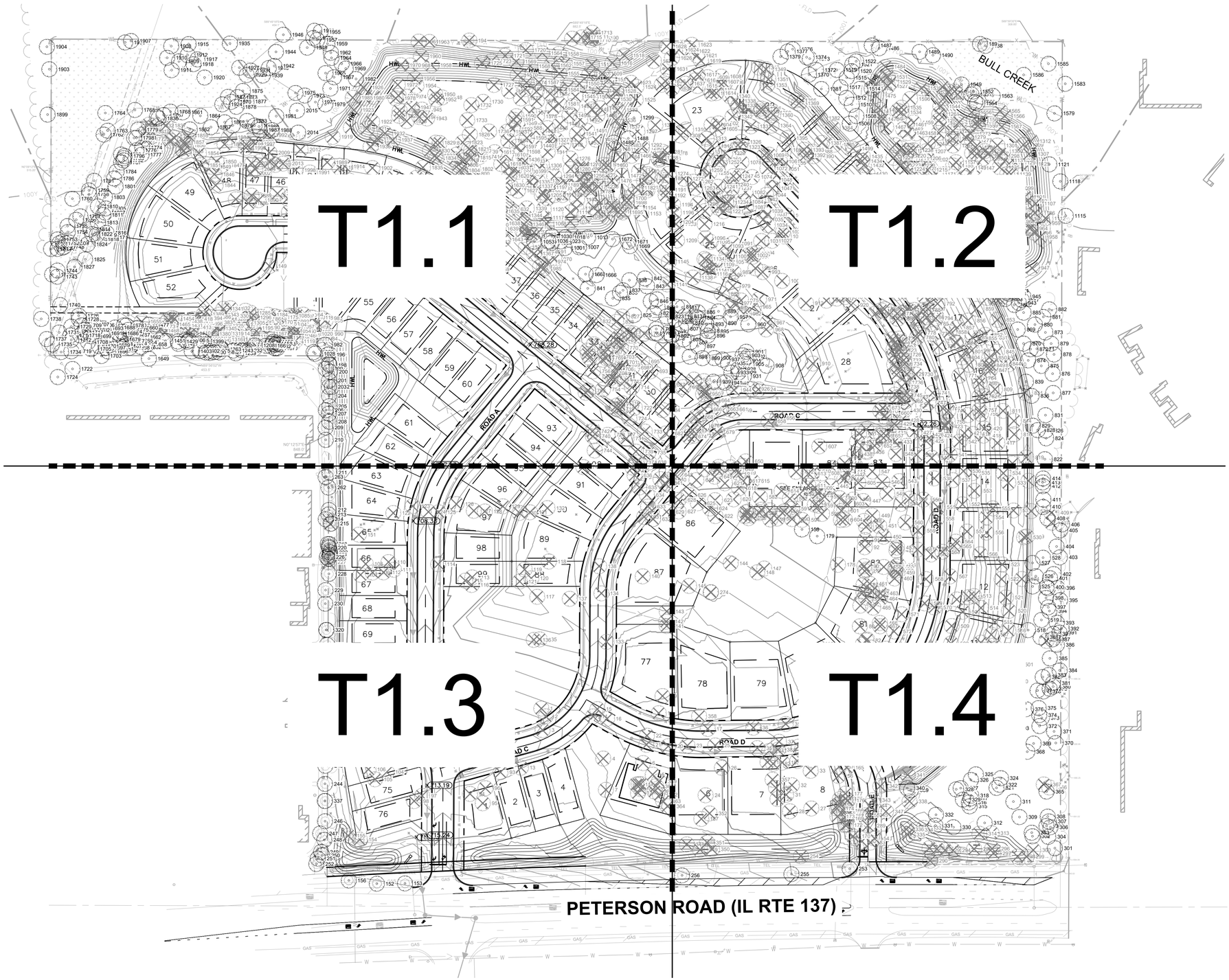
PULTE HOME COMPANY, LLC

LANDSCAPE NOTES AND DETAILS

GREENWAY CHASE
610 PETERSON ROAD
LIBERTYVILLE, IL 60048

ORIGINAL ISSUE: 01/03/2025
KHA PROJECT NO. 168247001
SHEET NUMBER
L2.2

Drawing name: K:\CHI_LDEV\168247001_pulte_libertyville_JV\2 Design\CAD\plansheet\L1.0 LANDSCAPE PLAN.dwg L2.2 LANDSCAPE NOTES AND DETAILS Mar 07, 2025, 10:51am by christina.cranell
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GRAPHIC SCALE IN FEET
0 40 80 160

No.	REVISIONS	DATE	BY
1	ARC RE-SUBMITTAL	03/07/25	DG

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SCALE: AS NOTED
DESIGNED BY: MS
DRAWN BY: KTRM
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PULTE HOME COMPANY, LLC

TREE PRESERVATION PLAN

GREENWAY CHASE
610 PETERSON ROAD
LIBERTYVILLE, IL 60048

ORIGINAL ISSUE: 01/03/2025
KHA PROJECT NO. 168247001
SHEET NUMBER
T1.0

Drawing name: K:\CHC_LDEV\168247001_Pulte-Libertyville_IL\2 Design\CAD\PrintSheet\V2.0 TREE PRESERVATION PLAN.dwg, TREE PRESERVATION PLAN, Mar 07, 2025, 10:51am, by Daniel.Crow
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TREE PRESERVATION NOTES

1. ALL TREES ARE TO BE PRESERVED UNLESS OTHERWISE NOTED.
2. FINAL LAYOUT OF TREE PRESERVATION FENCING IS TO BE DETERMINED IN THE FIELD.
3. REFER TO SHEET T1.5 FOR TREE TABULATION DATA.
4. REFER TO SHEET T1.5 FOR VILLAGE OF LIBERTYVILLE STANDARD TREE PROTECTION DETAIL AND REQUIREMENTS.

TREE PRESERVATION LEGEND

EXISTING TREE TO BE PRESERVED
SEE TREE PROTECTION DETAIL ON SHEET T1.5
ASSOCIATED TREE ID #

EXISTING TREE TO BE REMOVED
SEE TREE TABULATION DATA ON SHEET T1.5
ASSOCIATED TREE ID #

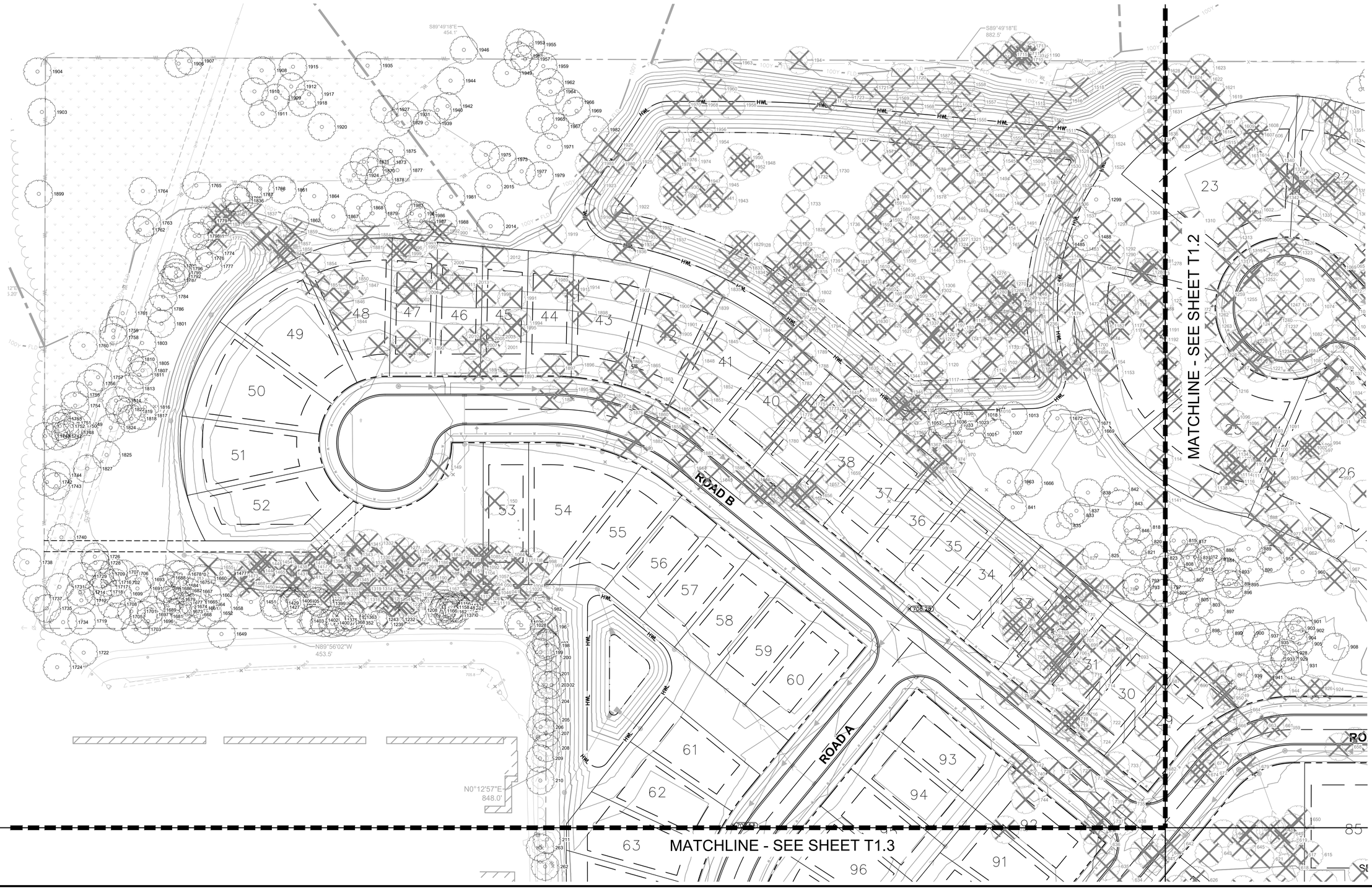
TREE PROTECTION FENCE
SEE TREE PROTECTION DETAIL ON SHEET T1.5

TREE PRESERVATION NOTES

1. CONTRACTOR TO FURNISH AND INSTALL TEMPRORARY TREE PROTECTION FENCE, TYP. SEE DETAIL ON SHEET T1.5
2. EXISTING TREE TO BE PRESERVED
3. EXISTING WOODLAND TO BE PRESERVED
4. EXISTING TREE TO BE REMOVED

NORTH

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ORIGINAL ISSUE: 01/03/2025
KHA PROJECT NO. 168247001
SHEET NUMBER T1.1

Drawing name: K:\DIS_LDEV\168247001_Pulte-Libertyville_IL\2 Design\CAD\PlanSheet\1.0 TREE PRESERVATION PLAN.dwg T1.1 Mar 07, 2025 10:52am by Daniel.Drew
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ASSOCIATED TREE ID #

EXISTING TREE TO BE REMOVED
SEE TREE TABULATION DATA ON SHEET T1.5

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ASSOCIATED TREE ID #

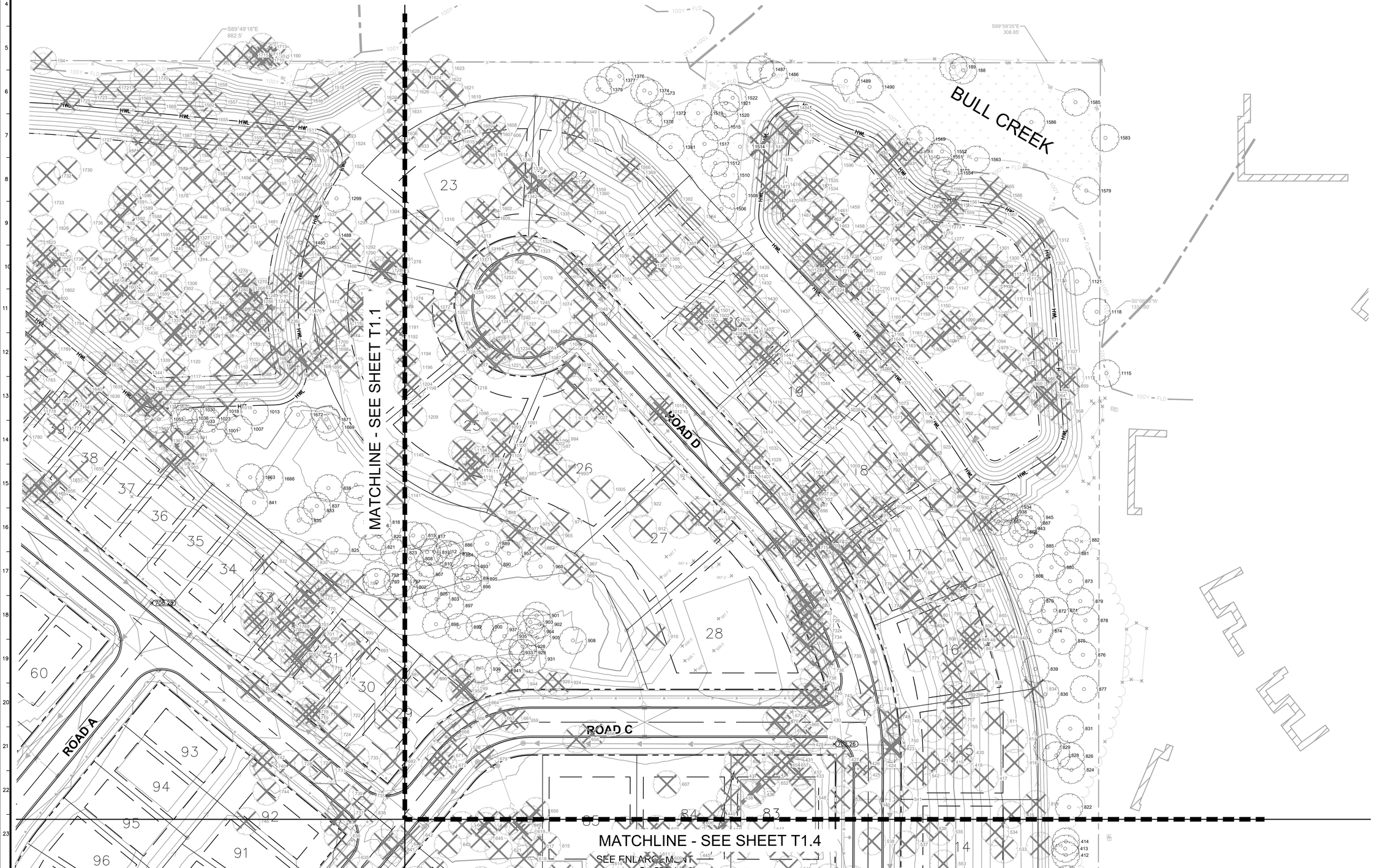
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T1.2

Drawing name: K:\CHS_LDEV\168247001_Pulte-Libertyville_LV\2 Design\C40\PlotSheet\LG.0 TREE PRESERVATION PLAN.dwg T1.2 Mar 07, 2025 10:53am by DanielDrew
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NORTH

GRAPHIC SCALE IN FEET
0 20 40 80

MATCHLINE - SEE SHEET T1.1

SEE ENLARGEMENT SHEET T1.3

MATCHLINE - SEE SHEET T1.4

ROAD A

ROAD C

ROAD D

PETERSON ROAD (IL RTE 137)

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ORIGINAL ISSUE: 01/03/2025
KHA PROJECT NO. 168247001
SHEET NUMBER
T1.3

Drawing name: K:\CHS_LIB\KJ\168247001_Pulte-Libertyville-JL\2 Design\CAD\PlanSheets\L00 TREE PRESERVATION PLAN.dwg T1.3 Mar 07, 2025 10:52am by Daniel.Grove
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EXISTING TREE TO BE REMOVED
SEE TREE TABULATION DATA ON SHEET T1.5
ASSOCIATED TREE ID #

TREE PROTECTION FENCE
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TREE PRESERVATION NOTES

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NORTH

GRAPHIC SCALE IN FEET
0 20 40 80

MATCHLINE - SEE SHEET T1.2

SEE ENLARGEMENT SHEET T1.3

MATCHLINE - SEE SHEET T1.3

ROAD D

ROAD E

PETERSON ROAD (IL RTE 137)

No.	REVISIONS	DATE	BY
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ORIGINAL ISSUE: 01/03/2025
KHA PROJECT NO. 168247001
SHEET NUMBER
T1.4

Drawing name: K:\CHS_LIB\V\168247001-Pulte-Libertyville-JL\3 Design\CAD\PlanSheets\LD.0 TREE PRESERVATION PLAN.dwg T1.4 Mar 07, 2025 10:53am br.DanielGrove
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TREE PRESERVATION NOTES

FLORA AND ROOT PROTECTION:

1. EXISTING TREES NOT IN DIRECT CONFLICT WITH CONSTRUCTION SHALL BE SAVED AND PROTECTED, UNLESS SPECIFIED TO BE REMOVED. REMOVE TREES ONLY AFTER APPROVAL BY OWNER IN ACCORDANCE WITH LATEST EDITION OF ANSI A300 – TREE CARE OPERATIONS – TREE, SHRUB AND OTHER WOODY PLANT MAINTENANCE – STANDARD PRACTICES. PRUNE TREES ONLY AFTER APPROVAL BY OWNER IN ACCORDANCE WITH LATEST EDITION OF ANSI A300 – TREE CARE OPERATIONS – TREE, SHRUB AND OTHER WOODY PLANT MAINTENANCE – STANDARD PRACTICES WITH ADDITION OF VILLAGE OF LIBERTYVILLE ORDINANCE.

PROTECTION DURING CONSTRUCTION ACTIVITIES:

1. TREE PROTECTION FENCE SHALL BE ERECTED AROUND, MINIMALLY, THE DISTANCE OF DRIPLINE OF THE TREE TO BE PROTECTED. TREE PROTECTION FENCE SHALL BE A MINIMUM OF FOUR FEET WOOD SLAT OR CHAINLINK FENCE ATTACHED TO 6' MINIMUM "T" – STEEL POSTS, DRIVEN AT LEAST 2' INTO GROUND AT 6' INTERVALS OR APPROVED EQUIVALENT.
2. TREE PROTECTION SIGNAGE SHALL BE LAMINATED OR OTHERWISE WEATHERPROOF AND PRINTED IN BOLD TEXT SO AS TO BE EASILY READ FROM A DISTANCE OF 20 FEET. WORDING ON SIGNAGE SHALL BE PROVIDED IN BOTH ENGLISH AND SPANISH. SIGNS SHALL BE PLACED EVERY 30' ALONG PROTECTION FENCE.
3. NO OTHER CONSTRUCTION ACTIVITY MAY OCCUR ON SITE UNTIL TREE PRESERVATION FENCING HAS BEEN INSTALLED AND APPROVED.
4. ALL CONSTRUCTION ACTIVITY WITHIN THE AREAS FENCED OFF AROUND THE TREES SHALL BE PROHIBITED. THIS SHALL INCLUDE , BUT NOT LIMITED TO, THE FOLLOWING ACTIVITIES:
   - 4.1. PARKING OR DRIVING EQUIPMENT, MACHINERY OR VEHICLES OF ANY TYPE.
   - 4.2. STORAGE OF ANY CONSTRUCTION MATERIALS, EQUIPMENT, STOCKPILING, EXCAVATION OR FILL, SOIL, GRAVEL, ETC.
   - 4.3. DUMPING OF ANY CHEMICALS, WASH-OUT MATERIALS FROM CLEANING EQUIPMENT, CONCRETE OR MORTAR REMAINDER, TRASH, GARBAGE, OR DEBRIS OF ANY KIND.
   - 4.4. TRENCHING, GRADING OR CONSTRUCTION IN THE ROOT AREA.
5. FENCING SHALL REMAIN IN PLACE AND BE CONTINUOUSLY MAINTAINED FOR DURATION OF CONSTRUCTION.
6. ROOT PRUNING SHALL BE PERFORMED WHENEVER GRADES OUTSIDE THE TREE PROTECTION AREA BUT WITHIN THE AN AREA TWICE THE HEIGHT OF THE TREE WILL BE LOWERED.

PROTECTION DURING REMOVAL OF EXISTING MATERIALS WITHIN THE DRIPLINE:

1. EXTRA CARE IS TO BE TAKEN DURING THE REMOVAL OF EXISTING MATERIALS WITHIN THE DRIPLINE TO PREVENT BREAKAGE OF ANY ROOTS WITHIN THE DRIPLINE (ROOT ZONE) OF ANY FLORA. VIOLATIONS OF THESE BASIC POLICIES AND PROCEDURES MAY RESULT IN FINES BEING LEVIED AGAINST THE OFFENDING PARTY. ADDITIONALLY, NEGLIGENT ACTS MAY RESULT IN THE POTENTIAL CATASTROPHIC FAILURE OF THE AFFECTED FLORA LEADING TO INJURY, PROPERTY DAMAGE OR LOSS OF LIFE FOR WHICH THE OFFENDING PARTY SHALL BE HELD RESPONSIBLE.
2. DRIPLINE (ROOT ZONE) DIMENSIONS ARE DEFINED BY SIZE CLASSIFICATION OF FLORA.
3. NO ROOTS ARE TO BE BROKEN WITH EQUIPMENT DURING REMOVAL OF EXISTING WALKS, CURBS OR ANY OTHER FACILITIES, UNLESS ROOTS ARE FIRST "PRE–CUT" ON THE TREE SIDE OF THE EXCAVATION. ROOTS ARE TO BE CUT WITH SHARP TOOLS, SUCH AS, CHAIN SAWS, HANDSAWS, LOPPERS, OR OTHER. EQUIPMENT BREAKAGE OF ROOTS DAMAGES MORE OF THE ROOT THAN NECESSARY AND CREATES UNSEEN FRACTURES BEYOND THE SOIL WALL. SEE FIGURES–2A–2B.
4. PRE–CUTTING OF ROOTS WILL ONLY BE PERMISSIBLE IN SITUATIONS WHERE IT IS IMPOSSIBLE TO EITHER ELEVATE FINAL PAVED GRADE TO LAY ATOP ROOTS, REDUCE PAVED WIDTH TO ACCEPTABLE SPECIFICATIONS WHILE AVOIDING ROOT INTERFERENCE OR ADHERE TO DIRECTIONAL BORING SPECIFICATIONS.
5. ABOVE GROUND PORTIONS OF FLORA ARE TO BE PROTECTED FROM CONTACT WITH ANY EQUIPMENT OR MATERIALS. CONSTRUCTION FENCING SHOULD BE PLACED AT THE PERIMETER OF THE AREA TO BE PROTECTED TO HELP PREVENT UNNECESSARY DAMAGE.
6. NO CONCRETE OR OTHER FOREIGN MATERIALS SHALL BE PLACED DIRECTLY AGAINST CUT PORTIONS OF ROOTS OR WITHIN 6"OF CUT PORTIONS.
7. THERE SHALL BE FOUR(4) CLASSIFICATIONS OF ROOT SIZES ACCORDING TO THE SIZE OF THE MAIN STEM OF ANY PARTICULAR FLORA.

   CLASS 1: ROOT DIAMETER = 20–25% OF MAIN STEM DIAMETER
   CLASS 2: ROOT DIAMETER = 15–20% OF MAIN STEM DIAMETER
   CLASS 3: ROOT DIAMETER = 10–15% OF MAIN STEM DIAMETER
   CLASS 4: ROOT DIAMETER = 1–10% OF MAIN STEM DIAMETER
   NO MORE THAN ONE (1) CLASS 1 ROOT MAY BE CUT FROM ANY GIVEN FLORA
   NO MORE THAN TWO (2) CLASS 2 ROOTS MAY BE CUT FROM ANY GIVEN FLORA
   NO MORE THAN FOUR (4) CLASS 3 ROOTS MAY BE CUT FROM ANY GIVEN FLORA
   NO LIMIT FOR CLASS 4 ROOTS

8. ROOT REMOVAL IN EXCESS OF THE ABOVE SPECIFICATIONS MAY RESULT IN THE REQUIRED REMOVAL AND REPLACEMENT OF THE AFFECTED FLORA BY THE OFFENDING PARTY.
9. NOT MORE THAN ONE SIDE OF ANY FLORA MAY SUFFER CUT ROOTS.
10. EXCAVATED SOIL SHALL BE PLACED ON THE SIDE OF THE CUT OPPOSITE THE TREE.
11. NO ROOTS GREATER THAN 25% OF THE TRUNK DIAMETER OF FLORA MAY BE CUT OR GROUND OFF AT THE TRUNK OF ANY FLORA.
12. NO ROOTS SHALL BE CUT WITHIN 24" OF THE TRUNK OF ANY FLORA OR WITHIN THE STRUCTURAL CRITICAL ROOTING DISTANCE, WHICHEVER IS LARGER.

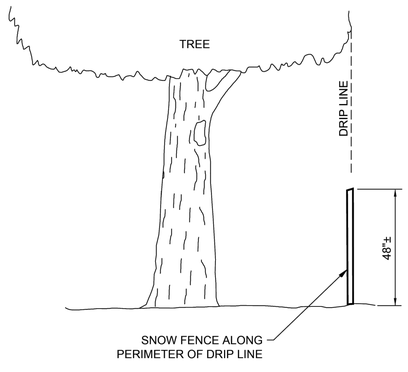
CLEAN CUTTING AND BACKFILLING ROOTS:

1. ALL PRE–CUT AND/OR DAMAGED ROOTS SHALL BE CLEAN CUT WITH THE APPROPRIATE SHARP TOOL PRIOR TO BACK–FILLING OF SOIL.
2. ALL CUT ROOTS MUST BE CLEAN CUT PERPENDICULAR TO THE NATURAL DIRECTION OF ROOT GROWTH AT THE POINT WHERE THE CUT IS TO OCCUR.
3. ALL CLEAN CUTS SHALL OCCUR ON THE TREE SIDE OF THE ROOT BEYOND A POINT WHERE ALL ROOT TISSUES HAVE BEEN DAMAGED. SEE FIGURES 3A–3B.
4. ALL DAMAGED ROOTS SHALL BE BACK–FILLED WITH TOPSOIL WITHIN 60 MINUTES OF BEING CLEAN CUT.
5. ALL DAMAGED ROOTS MUST HAVE AT LEAST 6"CLEARANCE FROM ALL PERMANENT CONSTRUCTION MATERIALS EXCEPT TOPSOIL.
6. ALL ROOT DAMAGED FLORA MUST BE HEAVILY WATERED WITHIN 24 HOURS OF BACK–FILLING.

GRADE CHANGE SPECIFICATIONS:

1. ELEVATING THE FINAL GRADE SHOULD BE CONSIDERED IN ALL SITUATIONS WHERE THE DIAMETER OF THE TRUNK OF VALUABLE FLORA EXCEEDS 10"AND THE LOCATION OF THE WORK TO BE PERFORMED IS WITHIN THE DRIPLINE, AND/OR, THE TRUNK DIAMETER DOES NOT EXCEED THE WIDTH OF THE EXISTING TREE LAWN, AND/OR WHEN DIRECTIONAL BORING IS IMPRACTICAL OR IMPOSSIBLE.
2. WHEN FINAL GRADES ARE TO BE ELEVATED ABOVE EXISTING GRADES, EXTRA CARE IS TO BE TAKEN DURING REMOVAL OF EXISTING MATERIALS, I.E., BACKHOES SHOULD "SCRAPE"OR "LIFT"CONCRETE AWAY FROM ROOTS RATHER THAN "SCOOP UP"CONCRETE, OR CONCRETE SHOULD BE BROKEN WITH A JACKHAMMER AND REMOVED MANUALLY, ETC.
3. GRADE ELEVATIONS IN EXCESS OF 12"DEPTH SHALL REQUIRE ADHERENCE TO THE ATTACHED TREE WELL SPECIFICATIONS.
4. WHEN ELEVATING GRADE LESS THAN 12", NOT MORE THAN 20% OF THE SURFACE AREA WITHIN THE DRIPLINE OF ANY FLORA MAY BE PAVED OR COMPACTED WITH ANY MACHINERY.
5. UNDAMAGED ROOTS SHOULD BE COVERED WITH AT LEAST 2"OF SAND OR SOIL BASE PRIOR TO INSTALLATION OF A GRAVEL BASE OR THE POURING OF CONCRETE.
6. FORM STAKES SHOULD BE AT LEAST 10"FROM THE TRUNK OF FLORA.
7. ELEVATION SHOULD BE HIGH ENOUGH TO PREVENT ROOT CUTTING FOR INSTALLATION OF FORMS.

TREE_NUM	SPECIES	LATIN	DBH	CONDITION	LIBERTYVILLE TREE GROUP	STATUS
1	HONEYLOCUST	Gleditsia triacanthos	9	3	B	TO REMOVE
2	HONEYLOCUST	Gleditsia triacanthos	7	3	B	TO REMOVE
3	APPLE-CRAB SPP	Malus spp	10	4	A	TO REMOVE
4	OAK-PIN	Quercus palustris	30	4	B	TO REMOVE
5	MAPLE-SILVER	Acer saccharinum	24	3	B	TO REMOVE
6	SPRUCE-BLUE	Picea pungens	17	3	B	TO REMOVE
7	MAPLE-SILVER	Acer saccharinum	26	4	B	TO REMOVE
8	CHERRY-BLACK	Prunus serotina	11	4	C	TO REMOVE
9	MAPLE-SILVER	Acer saccharinum	12	4	B	TO REMOVE
10	EASTERN REDCEDAR	Juniperus virginiana	6	3	D	TO REMOVE
11	MAPLE-SILVER	Acer saccharinum	38	3	B	TO REMOVE
12	MAPLE-SILVER	Acer saccharinum	36	3	B	TO REMOVE
13	SPRUCE-WHITE	Picea glauca	6	3	B	TO REMOVE
14	HONEYLOCUST	Gleditsia triacanthos	10	3	B	TO REMOVE
15	HONEYLOCUST	Gleditsia triacanthos	10	3	B	TO REMOVE
16	EASTERN REDCEDAR	Juniperus virginiana	4	3	D	TO REMOVE
17	HONEYLOCUST	Gleditsia triacanthos	34	3	B	TO REMOVE
18	APPLE-CRAB SPP	Malus spp	9	4	A	TO REMOVE
19	HONEYLOCUST	Gleditsia triacanthos	20	3	B	TO REMOVE
20	HONEYLOCUST	Gleditsia triacanthos	19	3	B	TO REMOVE
21	HONEYLOCUST	Gleditsia triacanthos	14	3	B	TO REMOVE
22	APPLE-CRAB SPP	Malus spp	11	4	A	TO REMOVE
23	APPLE-CRAB SPP	Malus spp	11	4	A	TO REMOVE
24	SPRUCE-BLUE	Picea pungens	23	2	B	TO REMOVE
25	APPLE-CRAB SPP	Malus spp	12	3	A	TO REMOVE
26	HAWTHORN-SPP	Crataegus spp	8	3	A	TO REMOVE
27	MAPLE-SILVER	Acer saccharinum	23	3	B	TO REMOVE
28	SPRUCE-BLUE	Picea pungens	17	3	B	TO REMOVE
29	SPRUCE-BLUE	Picea pungens	15	3	B	TO REMOVE
30	SPRUCE-BLUE	Picea pungens	14	3	B	TO REMOVE
31	SPRUCE-BLUE	Picea pungens	12	4	B	TO REMOVE
32	MULBERRY-SPP	Morus spp	24	4	D	TO REMOVE
33	CHERRY-BLACK	Prunus serotina	17	4	C	TO REMOVE
34	CHERRY-BLACK	Prunus serotina	11	4	C	TO REMOVE
35	SPRUCE-BLUE	Picea pungens	12	3	B	TO REMOVE
36	COTTONWOOD	Populus deltoides	42	4	C	TO REMOVE
37	CHERRY-BLACK	Prunus serotina	12	4	C	TO REMOVE
38	BOXELDER	Acer negundo	11	4	C	TO REMOVE
39	HACKBERRY	Celtis occidentalis	21	3	A	TO REMOVE
40	CHERRY-BLACK	Prunus serotina	9	4	C	TO REMOVE
41	CHERRY-BLACK	Prunus serotina	9	4	C	TO REMOVE
42	MAPLE-SILVER	Acer saccharinum	22	3	B	TO REMOVE
43	MAPLE-SILVER	Acer saccharinum	23	3	B	TO REMOVE
44	CHERRY-BLACK	Prunus serotina	23	3	C	TO REMOVE
45	WALNUT-BLACK	Juglans nigra	30	4	B	TO REMOVE
46	MAPLE-SILVER	Acer saccharinum	20	4	B	TO REMOVE
49	MAPLE-SILVER	Acer saccharinum	13	3	B	TO REMOVE
50	MAPLE-SILVER	Acer saccharinum	17	4	B	TO REMOVE
51	MAPLE-SILVER	Acer saccharinum	21	3	B	TO REMOVE
52	SPRUCE-BLUE	Picea pungens	13	3	B	TO REMOVE
53	SPRUCE-BLUE	Picea pungens	19	3	B	TO REMOVE
54	SPRUCE-BLUE	Picea pungens	11	3	B	TO REMOVE
55	BOXELDER	Acer negundo	12	4	C	TO REMOVE
56	MAPLE-SILVER	Acer saccharinum	14	5	B	TO REMOVE
57	MAPLE-SILVER	Acer saccharinum	11	4	B	TO REMOVE
58	MAPLE-SILVER	Acer saccharinum	30	5	B	TO REMOVE
59	MAPLE-SILVER	Acer saccharinum	10	5	B	TO REMOVE
60	BOXELDER	Acer negundo	15	4	C	TO REMOVE
61	MAPLE-SILVER	Acer saccharinum	13	3	B	TO REMOVE
62	MAPLE-SILVER	Acer saccharinum	16	3	B	TO REMOVE
63	MAPLE-SILVER	Acer saccharinum	11	3	B	TO REMOVE
64	MAPLE-SILVER	Acer saccharinum	7	4	B	TO REMOVE
65	MAPLE-SILVER	Acer saccharinum	16	3	B	TO REMOVE
66	MAPLE-SILVER	Acer saccharinum	21	3	B	TO REMOVE
67	MAPLE-SILVER	Acer saccharinum	13	3	B	TO REMOVE
68	MAPLE-SILVER	Acer saccharinum	16	3	B	TO REMOVE
69	MAPLE-SILVER	Acer saccharinum	16	3	B	TO REMOVE
70	MAPLE-SILVER	Acer saccharinum	12	3	B	TO REMOVE
71	MAPLE-SILVER	Acer saccharinum	12	3	B	TO REMOVE
72	MAPLE-SILVER	Acer saccharinum	8	3	B	TO REMOVE
73	MAPLE-SILVER	Acer saccharinum	10	4	B	TO REMOVE
74	MAPLE-SILVER	Acer saccharinum	21	3	B	TO REMOVE
75	MAPLE-SILVER	Acer saccharinum	20	3	B	TO REMOVE
76	MAPLE-SILVER	Acer saccharinum	6	4	B	TO REMOVE
77	MAPLE-SILVER	Acer saccharinum	13	4	B	TO REMOVE
78	BOXELDER	Acer negundo	13	4	C	TO REMOVE
79	BOXELDER	Acer negundo	27	4	C	TO REMOVE
80	MULBERRY-SPP	Morus spp	24	4	D	TO REMOVE
81	BOXELDER	Acer negundo	14	4	C	TO REMOVE
82	CHERRY-BLACK	Prunus serotina	25	4	C	TO REMOVE
83	BOXELDER	Acer negundo	12	4	C	TO REMOVE
84	BOXELDER	Acer negundo	13	4	C	TO REMOVE
85	MULBERRY-SPP	Morus spp	20	4	D	TO REMOVE
86	WALNUT-BLACK	Juglans nigra	17	3	B	TO REMOVE
87	CHERRY-BLACK	Prunus serotina	11	4	C	TO REMOVE
88	BOXELDER	Acer negundo	13	4	C	TO REMOVE
89	BOXELDER	Acer negundo	9	4	C	TO REMOVE
90	BOXELDER	Acer negundo	7	4	C	TO REMOVE
91	BOXELDER	Acer negundo	21	4	C	TO REMOVE
92	BOXELDER	Acer negundo	19	4	C	TO REMOVE
93	SPRUCE-BLUE	Picea pungens	2	3	B	TO REMOVE
94	SPRUCE-BLUE	Picea pungens	19	5	B	TO REMOVE
95	SPRUCE-BLUE	Picea pungens	16	5	B	TO REMOVE
96	SPRUCE-BLUE	Picea pungens	11	3	B	TO REMOVE
97	SPRUCE-BLUE	Picea pungens	15	4	B	TO REMOVE
98	SPRUCE-BLUE	Picea pungens	16	4	B	TO REMOVE
99	MAPLE-RED	Acer rubrum	6	3	B	TO REMOVE
100	APPLE-CRAB SPP	Malus spp	5	4	A	TO REMOVE
101	EASTERN REDCEDAR	Juniperus virginiana	12	2	D	TO REMOVE
102	HONEYLOCUST	Gleditsia triacanthos	18	3	B	TO REMOVE
103	MAPLE-JAPANESE	Acer japonicum	2	3	A	TO REMOVE
104	SPRUCE-BLUE	Picea pungens	17	4	B	TO REMOVE
105	SPRUCE-BLUE	Picea pungens	24	4	B	TO REMOVE
106	SPRUCE-BLUE	Picea pungens	16	4	B	TO REMOVE
107	SPRUCE-BLUE	Picea pungens	16	4	B	TO REMOVE
108	SPRUCE-BLUE	Picea pungens	12	4	B	TO REMOVE
109	SPRUCE-BLUE	Picea pungens	16	4	B	TO REMOVE
110	SPRUCE-BLUE	Picea pungens	11	4	B	TO REMOVE
111	SPRUCE-BLUE	Picea pungens	17	4	B	TO REMOVE
112	SPRUCE-BLUE	Picea pungens	19	4	B	TO REMOVE
113	SPRUCE-BLUE	Picea pungens	16	4	B	TO REMOVE
114	SPRUCE-BLUE	Picea pungens	18	3	B	TO REMOVE
115	SPRUCE-BLUE	Picea pungens	17	4	B	TO REMOVE
116	SPRUCE-BLUE	Picea pungens	18	4	B	TO REMOVE
117	SPRUCE-BLUE	Picea pungens	11	4	B	TO REMOVE
118	SPRUCE-BLUE	Picea pungens	16	3	B	TO REMOVE
119	SPRUCE-BLUE	Picea pungens	10	4	B	TO REMOVE
120	SPRUCE-BLUE	Picea pungens	10	4	B	TO REMOVE
121	SPRUCE-BLUE	Picea pungens	10	5	B	TO REMOVE
122	SPRUCE-BLUE	Picea pungens	16	3	B	TO REMOVE
123	SPRUCE-BLUE	Picea pungens	17	3	B	TO REMOVE
124	SPRUCE-BLUE	Picea pungens	15	4	B	TO REMOVE
125	SPRUCE-BLUE	Picea pungens	16	5	B	TO REMOVE
126	SPRUCE-BLUE	Picea pungens	17	3	B	TO REMOVE
127	SPRUCE-BLUE	Picea pungens	18	5	B	TO REMOVE
128	SPRUCE-BLUE	Picea pungens	18	4	B	TO REMOVE
129	SPRUCE-BLUE	Picea pungens	16	3	B	TO REMOVE
130	SPRUCE-BLUE	Picea pungens	17	3	B	TO REMOVE
131	SPRUCE-BLUE	Picea pungens	17	4	B	TO REMOVE
132	SPRUCE-BLUE	Picea pungens	16	3	B	TO REMOVE
133	SPRUCE-WHITE	Picea glauca	2	3	B	TO REMOVE
134	SPRUCE-NORWAY	Picea abies	16	2	B	TO REMOVE
135	SPRUCE-BLUE	Picea pungens	3	3	B	TO REMOVE
136	SPRUCE-NORWAY	Picea abies	2	3	B	TO REMOVE
137	HONEYLOCUST	Gleditsia triacanthos	14	3	B	TO REMOVE
138	SPRUCE-BLUE	Picea pungens	16	3	B	TO REMOVE
140	SPRUCE-BLUE	Picea pungens	8	3	B	TO REMOVE
141	SPRUCE-WHITE	Picea glauca	2	4	B	TO REMOVE
142	SPRUCE-WHITE	Picea glauca	2	4	B	TO REMOVE



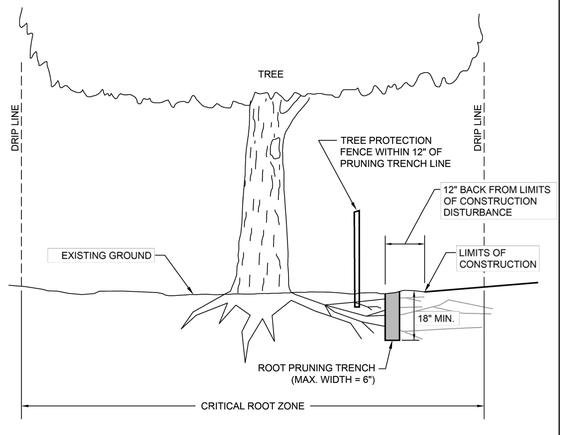
NOTES:

1. EXISTING TREES TO BE PROTECTED SHALL HAVE SNOW FENCE INSTALLED AT THE DRIP LINE OF THE TREE TO PREVENT THE STOCKPILING OF EXCAVATED OR CONSTRUCTION MATERIALS UNDER THE TREE, AND PROHIBIT VEHICULAR TRAFFIC OR EXCESSIVE FOOT TRAFFIC WITHIN THE DRIP LINE.
2. SNOW FENCE SHALL BE WEBBED HDPE CONSTRUCTION FENCING, COLORED ORANGE AND SUPPORTED WITH STEEL "TEE" POSTS SET AT MAX. 15' INTERVALS, OR AS REQUIRED TO MAINTAIN THE FENCE IN AN UPRIGHT POSITION THROUGHOUT THE TERM OF CONSTRUCTION.
3. TREES THAT MAY BE DAMAGED BY CONSTRUCTION OPERATIONS SHALL BE REPAIRED OR REPLACED IN A MANNER ACCEPTABLE TO THE VILLAGE.

TREE PROTECTION FENCING

Libertyville

LAST REVISED:	STANDARD DETAIL #
02/15/2023	EROS - 04



NOTES:

1. EXACT LOCATION OF ROOT PRUNING TO BE AS SPECIFIED BY ENGINEER OR APPOINTED REPRESENTATIVE OF THE VILLAGE OF LIBERTYVILLE PARKS DIVISION.
2. ROOT PRUNING TRENCH SHALL BE BACKFILLED IMMEDIATELY FOLLOWING COMPLETION OF PRUNING ACTIVITIES. TRENCH SHALL BE COVERED WITH A MINIMUM OF 3" MULCH.
3. ROOT PRUNING ACTIVITIES AND THE PLACEMENT OF PROTECTIVE FENCING SHALL BE COORDINATED SO THAT BOTH SHALL BE COMPLETED AT EACH LOCATION WITHIN A 48-HOUR PERIOD.
4. UNDER NO CIRCUMSTANCES SHALL CONSTRUCTION PROCEED PRIOR TO THE COMPLETION OF ROOT PRUNING AND THE PLACEMENT OF PROTECTIVE FENCING, NOR SHALL FENCING BE REMOVED WITHOUT PRIOR AUTHORIZATION FROM THE ENGINEER OR PARKS DIVISION REPRESENTATIVE.

TREE ROOT PRUNING

Libertyville

LAST REVISED:	STANDARD DETAIL #
02/15/2023	EROS - 05

No.	REVISIONS	DATE	BY
1	ARC RE–SUBMITTAL	03/07/25	DG

Kimley»Horn

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SCALE: AS NOTED
DESIGNED BY: MS
DRAWN BY: KTRM
CHECKED BY: RNM

PULTE HOME COMPANY, LLC

TREE PRESERVATION PLAN

GREENWAY CHASE
610 PETERSON ROAD
LIBERTYVILLE, IL 60048

ORIGINAL ISSUE: 01/03/2025
KHA PROJECT NO. 168247001
SHEET NUMBER
T1.5

Drawing name: K:\CHS_LDE\168247001_Pulte-Libertyville_d\1.0 Design\1.2 CAD\PlanSheets\1.0.0 TREE PRESERVATION PLAN.dwg T1.5 Mar 07, 2025 10:52am byr DanielDrive
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

TREE_NUM	SPECIES	LATIN	DBH	CONDITION	LIBERTYVILLE TREE GROUP	STATUS
143	SPRUCE-WHITE	Picea glauca	2	4	B	TO REMOVE
144	BOXELDER	Acer negundo	27	4	C	TO REMOVE
145	SPRUCE-NORWAY	Picea abies	3	3	B	TO REMOVE
146	HONEYLOCUST	Gleditsia triacanthos	6	3	B	TO REMOVE
147	SPRUCE-BLUE	Picea pungens	15	5	B	TO REMOVE
148	SPRUCE-BLUE	Picea pungens	15	5	B	TO REMOVE
149	EASTERN REDCEDAR	Juniperus virginiana	14	2	D	TO REMOVE
150	SPRUCE-BLUE	Picea pungens	4	3	B	TO REMOVE
151	SPRUCE-BLUE	Picea pungens	14	3	B	TO REMOVE
152	MAPLE-MIYABEI	Acer miyabei 'Morton'	10	3	A	TO SAVE
153	MAPLE-MIYABEI	Acer miyabei 'Morton'	4	3	A	TO SAVE
154	SPRUCE-BLUE	Picea pungens	15	4	B	TO REMOVE
155	SPRUCE-BLUE	Picea pungens	16	3	B	TO REMOVE
156	MAPLE-MIYABEI	Acer miyabei 'Morton'	7	3	A	TO SAVE
158	SPRUCE-NORWAY	Picea abies	25	2	B	TO SAVE
159	CHERRY-BLACK	Prunus serotina	17	4	C	TO REMOVE
160	MULBERRY-SPP	Morus spp	13	4	D	TO REMOVE
161	BOXELDER	Acer negundo	16	4	C	TO REMOVE
162	MAPLE-SILVER	Acer saccharinum	17	3	B	TO REMOVE
163	BOXELDER	Acer negundo	9	4	C	TO REMOVE
164	MAPLE-SILVER	Acer saccharinum	21	3	B	TO REMOVE
165	WALNUT-BLACK	Juglans nigra	20	3	B	TO REMOVE
166	MAPLE-SILVER	Acer saccharinum	18	3	B	TO REMOVE
167	MAPLE-SILVER	Acer saccharinum	8	3	B	TO REMOVE
168	MAPLE-SILVER	Acer saccharinum	9	3	B	TO REMOVE
169	MAPLE-SILVER	Acer saccharinum	9	3	B	TO REMOVE
170	SPRUCE-BLUE	Picea pungens	14	3	B	TO REMOVE
171	MAPLE-SILVER	Acer saccharinum	20	3	B	TO REMOVE
172	MAPLE-SILVER	Acer saccharinum	12	3	B	TO REMOVE
173	MAPLE-SILVER	Acer saccharinum	18	4	B	TO REMOVE
174	MAPLE-SILVER	Acer saccharinum	11	3	B	TO REMOVE
175	MAPLE-SILVER	Acer saccharinum	14	3	B	TO REMOVE
176	MAPLE-SILVER	Acer saccharinum	8	4	B	TO REMOVE
177	MAPLE-SILVER	Acer saccharinum	14	3	B	TO REMOVE
178	APPLE-CRAB SPP	Malus spp	21	4	A	TO REMOVE
179	SPRUCE-NORWAY	Picea abies	22	2	B	TO SAVE
180	CHERRY-BLACK	Prunus serotina	12	4	C	TO REMOVE
181	BOXELDER	Acer negundo	11	4	C	TO REMOVE
182	BOXELDER	Acer negundo	21	4	C	TO REMOVE
183	MAPLE-SILVER	Acer saccharinum	24	2	B	TO REMOVE
184	CHERRY-BLACK	Prunus serotina	13	4	C	TO REMOVE
185	BOXELDER	Acer negundo	14	4	C	TO REMOVE
186	MAPLE-SILVER	Acer saccharinum	39	2	B	TO REMOVE
187	HONEYLOCUST	Gleditsia triacanthos	3	4	B	TO REMOVE
188	OAK-PIN	Quercus palustris	35	3	B	TO SAVE
189	CHERRY-BLACK	Prunus serotina	21	4	C	TO SAVE
190	COTTONWOOD	Populus deltoides	35	3	C	TO REMOVE
191	COTTONWOOD	Populus deltoides	28	3	C	TO REMOVE
192	COTTONWOOD	Populus deltoides	13	3	C	TO REMOVE
193	COTTONWOOD	Populus deltoides	22	3	C	TO REMOVE
194	CHERRY-BLACK	Prunus serotina	24	4	C	TO REMOVE
195	CHERRY-BLACK	Prunus serotina	9	5	C	TO REMOVE
196	BUCKTHORN	Rhamnus cathartica	10	4	D	TO SAVE
197	BUCKTHORN	Rhamnus cathartica	13	4	D	TO SAVE
198	CHERRY-BLACK	Prunus serotina	10	3	C	TO SAVE
199	PINE-AUSTRIAN	Pinus nigra	8	3	C	TO SAVE
200	CHERRY-BLACK	Prunus serotina	15	4	C	TO SAVE
201	MULBERRY-SPP	Morus spp	8	3	D	TO SAVE
202	BOXELDER	Acer negundo	15	3	C	TO SAVE
203	CHERRY-BLACK	Prunus serotina	22	4	C	TO SAVE
204	APPLE-CRAB SPP	Malus spp	16	4	A	TO SAVE
205	CHERRY-BLACK	Prunus serotina	11	4	C	TO SAVE
206	PINE-AUSTRIAN	Pinus nigra	11	3	C	TO SAVE
207	BUCKTHORN	Rhamnus cathartica	18	4	D	TO SAVE
208	CHERRY-BLACK	Prunus serotina	28	4	C	TO SAVE
209	PINE-AUSTRIAN	Pinus nigra	11	3	C	TO SAVE
210	PINE-AUSTRIAN	Pinus nigra	16	2	C	TO SAVE
211	CHERRY-BLACK	Prunus serotina	32	4	C	TO SAVE
212	CHERRY-BLACK	Prunus serotina	20	4	C	TO SAVE
213	BOXELDER	Acer negundo	19	3	C	TO SAVE
214	ASH-GREEN	Fraxinus pennsylvanica	12	3	D	TO SAVE
215	BOXELDER	Acer negundo	21	3	C	TO SAVE
216	CHERRY-BLACK	Prunus serotina	18	5	C	TO REMOVE
217	BOXELDER	Acer negundo	18	3	C	TO SAVE
218	CHERRY-BLACK	Prunus serotina	23	4	C	TO SAVE
219	CHERRY-BLACK	Prunus serotina	19	4	C	TO SAVE
220	CHERRY-BLACK	Prunus serotina	7	4	C	TO SAVE
221	CHERRY-BLACK	Prunus serotina	12	5	C	TO REMOVE
222	CHERRY-BLACK	Prunus serotina	17	4	C	TO SAVE
223	BUCKTHORN	Rhamnus cathartica	5	3	D	TO SAVE
224	BUCKTHORN	Rhamnus cathartica	7	3	D	TO SAVE
225	BUCKTHORN	Rhamnus cathartica	6	3	D	TO SAVE
226	MULBERRY-SPP	Morus spp	9	3	D	TO SAVE
227	BUCKTHORN	Rhamnus cathartica	16	5	D	TO REMOVE
228	CHERRY-BLACK	Prunus serotina	35	4	C	TO SAVE
229	PINE-SCOTCH	Pinus sylvestris	14	3	C	TO SAVE
230	PINE-SCOTCH	Pinus sylvestris	14	3	C	TO SAVE
231	PINE-AUSTRIAN	Pinus nigra	11	2	C	TO SAVE
232	PINE-AUSTRIAN	Pinus nigra	12	2	C	TO SAVE
233	PINE-AUSTRIAN	Pinus nigra	11	3	C	TO SAVE
234	PINE-AUSTRIAN	Pinus nigra	12	3	C	TO SAVE
235	PINE-AUSTRIAN	Pinus nigra	11	2	C	TO SAVE
236	PINE-AUSTRIAN	Pinus nigra	14	2	C	TO SAVE
237	SPRUCE-BLUE	Picea pungens	2	3	B	TO SAVE
238	SPRUCE-BLUE	Picea pungens	12	2	B	TO SAVE
239	SPRUCE-BLUE	Picea pungens	10	2	B	TO SAVE
240	SPRUCE-BLUE	Picea pungens	10	2	B	TO SAVE
241	PINE-AUSTRIAN	Pinus nigra	16	2	C	TO SAVE
242	SPRUCE-BLUE	Picea pungens	9	2	B	TO SAVE
243	SPRUCE-BLUE	Picea pungens	6	3	B	TO SAVE
244	PINE-AUSTRIAN	Pinus nigra	15	2	C	TO SAVE
245	PINE-SCOTCH	Pinus sylvestris	13	2	C	TO SAVE
246	SPRUCE-NORWAY	Picea abies	15	2	B	TO SAVE
247	SPRUCE-NORWAY	Picea abies	18	3	B	TO SAVE
248	SPRUCE-NORWAY	Picea abies	12	3	B	TO SAVE
249	ARBORVITAE	Thuja occidentalis	2	3	C	TO SAVE
250	ARBORVITAE	Thuja occidentalis	2	3	C	TO SAVE
251	PINE-AUSTRIAN	Pinus nigra	10	3	C	TO SAVE
252	SPRUCE-BLUE	Picea pungens	12	3	B	TO SAVE
253	EASTERN REDCEDAR	Juniperus virginiana	11	3	D	TO SAVE
254	APPLE-CRAB SPP	Malus spp	13	3	A	TO REMOVE
255	MAPLE-MIYABEI	Acer miyabei 'Morton'	4	4	A	TO SAVE
256	MAPLE-MIYABEI	Acer miyabei 'Morton'	5	4	A	TO SAVE
262	AMERICAN REDBUD	Cercis canadensis	2	3	A	TO SAVE
263	SPRUCE-NORWAY	Picea abies	1	3	B	TO SAVE
264	HONEYLOCUST	Gleditsia triacanthos	4	3	B	TO REMOVE
266	ARBORVITAE	Thuja occidentalis	6	3	C	TO REMOVE
267	ARBORVITAE	Thuja occidentalis	6	3	C	TO REMOVE
268	ARBORVITAE	Thuja occidentalis	6	3	C	TO REMOVE
269	ARBORVITAE	Thuja occidentalis	2	3	C	TO REMOVE
270	ARBORVITAE	Thuja occidentalis	2	3	C	TO REMOVE
271	AMERICAN REDBUD	Cercis canadensis	2	4	A	TO REMOVE

TREE_NUM	SPECIES	LATIN	DBH	CONDITION	LIBERTYVILLE TREE GROUP	STATUS
272	BOXELDER	Acer negundo	14	4	C	TO REMOVE
273	HACKBERRY	Celtis occidentalis	19	2	A	TO REMOVE
274	BOXELDER	Acer negundo	14	4	C	TO REMOVE
275	PINE-WHITE	Pinus strobus	13	3	B	TO REMOVE
276	PINE-WHITE	Pinus strobus	16	3	B	TO REMOVE
277	PINE-WHITE	Pinus strobus	19	3	B	TO REMOVE
278	ARBORVITAE	Thuja occidentalis	12	4	C	TO REMOVE
279	ARBORVITAE	Thuja occidentalis	10	3	C	TO REMOVE
280	MAPLE-SILVER	Acer saccharinum	40	3	B	TO REMOVE
281	CHERRY-BLACK	Prunus serotina	17	4	C	TO REMOVE
282	BOXELDER	Acer negundo	23	4	C	TO REMOVE
283	BOXELDER	Acer negundo	17	4	C	TO REMOVE
284	ELM-AMERICAN	Ulmus americana	9	4	C	TO REMOVE
285	CHERRY-BLACK	Prunus serotina	15	4	C	TO REMOVE
286	BOXELDER	Acer negundo	10	4	C	TO REMOVE
287	MAPLE-SILVER	Acer saccharinum	12	3	B	TO REMOVE
288	BOXELDER	Acer negundo	16	4	C	TO REMOVE
289	BOXELDER	Acer negundo	25	4	C	TO REMOVE
290	MULBERRY-SPP	Morus spp	43	4	D	TO REMOVE
291	SPRUCE-BLUE	Picea pungens	15	3	B	TO REMOVE
292	SPRUCE-BLUE	Picea pungens	12	4	B	TO REMOVE
293	SPRUCE-BLUE	Picea pungens	11	3	B	TO REMOVE
294	SPRUCE-BLUE	Picea pungens	13	3	B	TO REMOVE
295	SPRUCE-BLUE	Picea pungens	14	3	B	TO REMOVE
296	EASTERN REDCEDAR	Juniperus virginiana	7	3	D	TO REMOVE
297	MULBERRY-SPP	Morus spp	11	3	D	TO REMOVE
298	MULBERRY-SPP	Morus spp	15	4	D	TO REMOVE
299	MULBERRY-SPP	Morus spp	25	4	D	TO REMOVE
300	MULBERRY-SPP	Morus spp	14	4	D	TO REMOVE
301	CHERRY-BLACK	Prunus serotina	13	3	C	TO SAVE
302	MAPLE-SILVER	Acer saccharinum	29	2	B	TO SAVE
303	MAPLE-SILVER	Acer saccharinum	25	2	B	TO SAVE
304	MAPLE-SILVER	Acer saccharinum	20	2	B	TO SAVE
305	ELM-AMERICAN	Ulmus americana	22	2	C	TO SAVE
306	MAPLE-SILVER	Acer saccharinum	11	3	B	TO SAVE
307	CHERRY-BLACK	Prunus serotina	16	4	C	TO SAVE
308	CHERRY-BLACK	Prunus serotina	8	4	C	TO SAVE
309	CHERRY-BLACK	Prunus serotina	17	4	C	TO SAVE
311	CHERRY-BLACK	Prunus serotina	26	4	C	TO SAVE
312	MULBERRY-SPP	Morus spp	11	4	D	TO SAVE
313	WALNUT-BLACK	Juglans nigra	14	3	B	TO REMOVE
314	HACKBERRY	Celtis occidentalis	3	3	A	TO REMOVE
315	MULBERRY-SPP	Morus spp	15	4	D	TO SAVE
316	EASTERN REDCEDAR	Juniperus virginiana	13	3	D	TO SAVE
317	EASTERN REDCEDAR	Juniperus virginiana	11	3	D	TO SAVE
318	EASTERN REDCEDAR	Juniperus virginiana	8	3	D	TO SAVE
319	EASTERN REDCEDAR	Juniperus virginiana	1	3	D	TO SAVE
320	EASTERN REDCEDAR	Juniperus virginiana	1	3	D	TO SAVE
321	MAPLE-SILVER	Acer saccharinum	18	3	B	TO SAVE
322	CHERRY-BLACK	Prunus serotina	10	4	C	TO SAVE
323	SPRUCE-NORWAY	Picea abies	1	3	B	TO SAVE
324	BOXELDER	Acer negundo	16	4	C	TO SAVE
325	WALNUT-BLACK	Juglans nigra	7	3	B	TO SAVE
326	WALNUT-BLACK	Juglans nigra	11	3	B	TO SAVE
327	MULBERRY-SPP	Morus spp	10	4	D	TO SAVE
328	MULBERRY-SPP	Morus spp	9	4	D	TO SAVE
329	WALNUT-BLACK	Juglans nigra	8	3	B	TO SAVE
330	CHERRY-BLACK	Prunus serotina	25	4	C	TO SAVE
331	MULBERRY-SPP	Morus spp	12	3	D	TO SAVE
332	CHERRY-BLACK	Prunus serotina	37	4	C	TO SAVE
333	CHERRY-BLACK	Prunus serotina	18	4	C	TO REMOVE
334	CHERRY-BLACK	Prunus serotina	15	4	C	TO REMOVE
335	CHERRY-BLACK	Prunus serotina	23	4	C	TO REMOVE
336	CHERRY-BLACK	Prunus serotina	17	4	C	TO REMOVE
337	EASTERN REDCEDAR	Juniperus virginiana	1	3	D	TO SAVE
338	CHERRY-BLACK	Prunus serotina	22	4	C	TO REMOVE
339	MAPLE-SILVER	Acer saccharinum	34	2	B	TO REMOVE
340	MAPLE-SILVER	Acer saccharinum	39	2	B	TO SAVE
341	MAPLE-SILVER	Acer saccharinum	33	2	B	TO REMOVE
342	BOXELDER	Acer negundo	25	4	C	TO REMOVE
343	MAPLE-SILVER	Acer saccharinum	46	1	B	TO REMOVE
344	BOXELDER	Acer negundo	16	4	C	TO REMOVE
345	CHERRY-BLACK	Prunus serotina	23	4	C	TO REMOVE
347	HACKBERRY	Celtis occidentalis	9	3	A	TO REMOVE
348	ARBORVITAE	Thuja occidentalis	21	3	C	TO REMOVE
349	ARBORVITAE	Thuja occidentalis	14	3	C	TO REMOVE
350	ARBORVITAE	Thuja occidentalis	11	3	C	TO REMOVE
351	ARBORVITAE	Thuja occidentalis	12	3	C	TO REMOVE
352	BIRCH-WHITE	Betula papyrifera	15	3	C	TO REMOVE
354	CHERRY-BLACK	Prunus serotina	21	4	C	TO REMOVE
355	CHERRY-BLACK	Prunus serotina	14	4	C	TO REMOVE
356	LILAC TREE	Syringa spp	13	3	A	TO REMOVE
357	SPRUCE-BLUE	Picea pungens	14	3	B	TO REMOVE
358	APPLE-CRAB SPP	Malus spp	7	4	A	TO REMOVE
359	ARBORVITAE	Thuja occidentalis	11	3	C	TO REMOVE
360	ARBORVITAE	Thuja occidentalis	9	3	C	TO REMOVE
361	ARBORVITAE	Thuja occidentalis	11	3	C	TO REMOVE
362	ARBORVITAE	Thuja occidentalis	14	3	C	TO REMOVE
363	ARBORVITAE	Thuja occidentalis	14	3	C	TO REMOVE
364	ARBORVITAE	Thuja occidentalis	11	3	C	TO REMOVE
365	CHERRY-BLACK	Prunus serotina	10	4	C	TO SAVE
366	ASH-WHITE	Fraxinus americana	16	5	D	TO REMOVE
367	ELM-AMERICAN	Ulmus americana	16	5	C	TO REMOVE
368	MAPLE-SILVER	Acer saccharinum	22	3	B	TO SAVE
369	CHERRY-BLACK	Prunus serotina	18	3	C	TO SAVE
370	WALNUT-BLACK	Juglans nigra	19	3	B	TO SAVE
371	BOXELDER	Acer negundo	14	3	C	TO SAVE
372	MAPLE-SILVER	Acer saccharinum	35	3	B	TO SAVE
373	BOXELDER	Acer negundo	15	3	C	TO SAVE
374	MAPLE-SILVER	Acer saccharinum	17	3	B	TO SAVE
375	MAPLE-SILVER	Acer saccharinum	21	3	B	TO SAVE
376	CHERRY-BLACK	Prunus serotina	7	3	C	TO SAVE
377	MAPLE-SILVER	Acer saccharinum	10	3	B	TO SAVE
378	CHERRY-BLACK	Prunus serotina	6	3	C	TO SAVE
379	CHERRY-BLACK	Prunus serotina	9	3	C	TO SAVE
380	WALNUT-BLACK	Juglans nigra	6	3	B	TO SAVE
381	CHERRY-BLACK	Prunus serotina	10	3	C	TO SAVE
382	CHERRY-BLACK	Prunus serotina	13	3	C	TO SAVE
383	MULBERRY-SPP	Morus spp	9	3	D	TO SAVE
384	CHERRY-BLACK	Prunus serotina	6	3	C	TO SAVE
385	BOXELDER	Acer negundo	12	3	C	TO SAVE
386	CHERRY-BLACK	Prunus serotina	16	3	C	TO SAVE
387	ELM-AMERICAN	Ulmus americana	16	3	C	TO SAVE
388	CHERRY-BLACK	Prunus serotina	16	3	C	TO SAVE
389	CHERRY-BLACK	Prunus serotina	7	5	C	TO REMOVE
390	CHERRY-BLACK	Prunus serotina	18	3	C	TO SAVE
391	CHERRY-BLACK	Prunus serotina	6	3	C	TO SAVE
392	CHERRY-BLACK	Prunus serotina	10	3	C	TO SAVE
393	BUCKTHORN	Rhamnus cathartica	9	4	D	TO SAVE
394	BOXELDER	Acer negundo	12	3	C	TO SAVE
395	WALNUT-BLACK	Juglans nigra	16	2	B	TO SAVE
396	BOXELDER	Acer negundo	13	3	C	TO SAVE

TREE_NUM	SPECIES	LATIN	DBH	CONDITION	LIBERTYVILLE TREE GROUP	STATUS
397	CHERRY-BLACK	Prunus serotina	11	3	C	TO SAVE
398	CHERRY-BLACK	Prunus serotina	13	4	C	TO SAVE
399	CHERRY-BLACK	Prunus serotina	11	4	C	TO SAVE
400	BOXELDER	Acer negundo	15	3	C	TO SAVE
401	CHERRY-BLACK	Prunus serotina	14	3	C	TO SAVE
402	CHERRY-BLACK	Prunus serotina	8	4	C	TO SAVE
403	BOXELDER	Acer negundo	16	4	C	TO SAVE
404	WALNUT-BLACK	Juglans nigra	16	2	B	TO SAVE
405	BOXELDER	Acer negundo	16	3	C	TO SAVE
406	MAPLE-SILVER	Acer saccharinum	21	2	B	TO SAVE
407	BOXELDER	Acer negundo	6	5	C	TO REMOVE
408	BOXELDER	Acer negundo	12	4	C	TO SAVE
409	BOXELDER	Acer negundo	12	5	C	TO REMOVE
410	CHERRY-BLACK	Prunus serotina	9	3	C	TO SAVE
411	MAPLE-SILVER	Acer saccharinum	24	2	B	TO SAVE
412	CHERRY-BLACK	Prunus serotina	13	3	C	TO SAVE
413	CHERRY-BLACK	Prunus serotina	10	3	C	TO SAVE
414	CHERRY-BLACK	Prunus serotina	11	3	C	TO SAVE
415	CHERRY-BLACK	Prunus serotina	18	3	C	TO REMOVE
416	MAPLE-SILVER	Acer saccharinum	23	3	B	TO REMOVE
417	CHERRY-BLACK	Prunus serotina	12	3	C	TO REMOVE
418	BOXELDER	Acer negundo	6	3	C	TO REMOVE
419	CHERRY-BLACK	Prunus serotina	11	3	C	TO REMOVE
420	CHERRY-BLACK	Prunus serotina	16	3	C	TO REMOVE
421	BOXELDER	Acer negundo	7	3	C	TO REMOVE
422	CHERRY-BLACK	Prunus serotina	10	5	C	TO REMOVE
423	CHERRY-BLACK	Prunus serotina	6	3	C	TO REMOVE
424	CHERRY-BLACK	Prunus serotina	19	3	C	TO REMOVE
425	BOXELDER	Acer negundo	6	3	C	TO REMOVE
426	MAPLE-SILVER	Acer saccharinum	16	2	B	TO REMOVE
427	BOXELDER	Acer negundo	10	4	C	TO REMOVE
428	MAPLE-SILVER	Acer saccharinum	16	5	B	TO REMOVE
429	BOXELDER	Acer negundo	12	4	C	TO REMOVE
430	WALNUT-BLACK	Juglans nigra	16	2	B	TO REMOVE
431	BOXELDER	Acer negundo	9	3	C	TO REMOVE
432	CHERRY-BLACK	Prunus serotina	12	3	C	TO REMOVE
433	BOXELDER	Acer negundo	10	5	C	TO REMOVE
434	CHERRY-BLACK	Prunus serotina	18	5	C	TO REMOVE
435	CHERRY-BLACK	Prunus serotina	33	3	C	TO REMOVE
436	CHERRY-BLACK	Prunus serotina	16	3	C	TO REMOVE
437	ELM-AMERICAN	Ulmus americana	21	3	C	TO REMOVE
438	BOXELDER	Acer negundo	9	3	C	TO REMOVE
439	BOXELDER	Acer negundo	10	3	C	TO REMOVE
440	MAPLE-SILVER	Acer saccharinum	6	4	B	TO REMOVE
441	ELM-AMERICAN	Ulmus americana	15	2	C	TO REMOVE
442	MAPLE-SUGAR	Acer saccharum	18	2	B	TO REMOVE
443	CHERRY-BLACK	Prunus serotina	10	3	C	TO REMOVE
444	CHERRY-BLACK	Prunus serotina	11	3	C	TO REMOVE
445	CHERRY-BLACK	Prunus serotina	11	3	C	TO REMOVE
446	MAPLE-SILVER	Acer saccharinum	16	2	B	TO REMOVE
447	CHERRY-BLACK	Prunus serotina	32	4	C	TO REMOVE
448	BOXELDER	Acer negundo	16	4	C	TO REMOVE
449	BOXELDER	Acer negundo	10	3	C	TO REMOVE
450	MULBERRY-SPP	Morus spp	6	5	D	TO REMOVE
451	MULBERRY-SPP	Morus spp	12	4	D	TO REMOVE
452	CHERRY-BLACK	Prunus serotina	36	4	C	TO REMOVE
453	CHERRY-BLACK	Prunus serotina	23	4	C	TO REMOVE
454	BOXELDER	Acer negundo	6	4	C	TO REMOVE
455	CHERRY-BLACK	Prunus serotina	26	3	C	TO REMOVE
456	BOXELDER	Acer negundo	7	3	C	TO REMOVE
457	CHERRY-BLACK	Prunus serotina	16	3	C	TO REMOVE
458	CHERRY-BLACK	Prunus serotina	16	3	C	TO REMOVE
459	CHERRY-BLACK	Prunus serotina	18	3	C	TO REMOVE
460	CHERRY-BLACK	Prunus serotina	16	3	C	TO REMOVE
461	CHERRY-BLACK	Prunus serotina	20	5	C	TO REMOVE
462	BOXELDER	Acer negundo	20	4	C	TO REMOVE
463	CHERRY-BLACK	Prunus serotina	15	3	C	TO REMOVE
464	CHERRY-BLACK	Prunus serotina	20	3	C	TO REMOVE
465	MAPLE-SUGAR	Acer saccharum	17	2	B	TO REMOVE
466	CHERRY-BLACK	Prunus serotina	18	4	C	TO REMOVE
467	CHERRY-BLACK	Prunus serotina	14	4	C	TO REMOVE
468	CHERRY-BLACK	Prunus serotina	23	4	C	TO REMOVE
469	MULBERRY-SPP	Morus spp	11	4	D	TO REMOVE
470	MULBERRY-SPP	Morus spp	9	3	D	TO REMOVE
471	MULBERRY-SPP	Morus spp	11	3	D	TO REMOVE
472	BOXELDER	Acer negundo	19	4	C	TO REMOVE
473	BOXELDER	Acer negundo	10	3	C	TO REMOVE
474	WALNUT-BLACK	Juglans nigra	19	2	B	TO REMOVE
475	BOXELDER	Acer negundo	19	3	C	TO REMOVE
476	CHERRY-BLACK	Prunus serotina	15	2	C	TO REMOVE
477	BOXELDER	Acer negundo	11	5	C	TO REMOVE
478	WALNUT-BLACK	Juglans nigra	11	3	B	TO REMOVE
479	CHERRY-BLACK	Prunus serotina	11	3	C	TO REMOVE
480	CHERRY-BLACK	Prunus serotina	19	3	C	TO REMOVE
481	BOXELDER	Acer negundo	7	3	C	TO REMOVE
482	CHERRY-BLACK	Prunus serotina	18	4	C	TO REMOVE
483	CHERRY-BLACK	Prunus serotina	22	3	C	TO REMOVE
484	ELM-AMERICAN	Ulmus americana	11	2	C	TO REMOVE
485	COTTONWOOD	Populus deltoides	28	2	C	TO REMOVE
486	MAPLE-SILVER	Acer saccharinum	22	3	B	TO REMOVE
487	ELM-AMERICAN	Ulmus americana	18	3	C	TO REMOVE
488	MAPLE-SILVER	Acer saccharinum	36	3	B	TO REMOVE
489	BOXELDER	Acer negundo	10	3	C	TO REMOVE
490	CHERRY-BLACK	Prunus serotina	18	3	C	TO SAVE
491	MAPLE-SILVER	Acer saccharinum	16	3	B	TO SAVE
492	MAPLE-SILVER	Acer saccharinum	16	3	B	TO SAVE
493	MAPLE-SILVER	Acer saccharinum	16	3	B	TO SAVE
494	BOXELDER	Acer negundo	14	3	C	TO SAVE
495	CHERRY-BLACK	Prunus serotina	19	5	C	TO REMOVE
496	CHERRY-BLACK	Prunus serotina	20	3	C	TO SAVE
497	CHERRY-BLACK	Prunus serotina	11	5	C	TO REMOVE
498	AILANTHUS	Ailanthus altissima	11	2	D	TO REMOVE
499	MAPLE-SILVER	Acer saccharinum	22	2	B	TO SAVE
500	CHERRY-BLACK	Prunus serotina	12	3	C	TO REMOVE
501	BOXELDER	Acer negundo	12	3	C	TO REMOVE
502	MAPLE-SILVER	Acer saccharinum	23	3	B	TO REMOVE
503	COTTONWOOD	Populus deltoides	23	2	C	TO REMOVE
504	COTTONWOOD	Populus deltoides	24	3	C	TO REMOVE
505	COTTONWOOD	Populus deltoides	22	3	C	TO REMOVE
506	COTTONWOOD	Populus deltoides	23	2	C	TO REMOVE
507	COTTONWOOD	Populus deltoides	34	1	C	TO REMOVE
508	WALNUT-BLACK	Juglans nigra	18	1	B	TO REMOVE
509	WALNUT-BLACK	Juglans nigra	9	2	B	TO REMOVE
510	MAPLE-SILVER	Acer saccharinum	32	3	B	TO REMOVE
511	CHERRY-BLACK	Prunus serotina	23	4	C	TO REMOVE
512	CHERRY-BLACK	Prunus serotina	24	3	C	TO REMOVE
513	CHERRY-BLACK	Prunus serotina	24	5	C	TO REMOVE
514	MAPLE-SILVER	Acer saccharinum	15	3	B	TO REMOVE
515	MAPLE-SILVER	Acer saccharinum	18	3	B	TO REMOVE
516	MAPLE-SILVER	Acer saccharinum	25	3	B	TO REMOVE
517	BOXELDER	Acer negundo	14	3	C	TO REMOVE
518	MAPLE-SILVER	Acer saccharinum	21	2	B	TO SAVE

TREE_NUM	SPECIES	LATIN	DBH	CONDITION	LIBERTYVILLE TREE GROUP	STATUS
519	BOXELDER	Acer negundo	18	3	C	TO SAVE
520	CHERRY-BLACK	Prunus serotina	31	3	C	TO REMOVE
521	BOXELDER	Acer negundo	12	3	C	TO REMOVE
522	MAPLE-SILVER	Acer saccharinum	16	3	B	TO REMOVE
523	CHERRY-BLACK	Prunus serotina	23	4	C	TO REMOVE
524	BOXELDER	Acer negundo	13	4	C	TO REMOVE
525	CHERRY-BLACK	Prunus serotina	11	3	C	TO SAVE
526	CH

TREE_NUM	SPECIES	LATIN	DBH	CONDITION	LIBERTYVILLE TREE GROUP	STATUS
639	WALNUT-BLACK	Juglans nigra	17	2	B	TO REMOVE
640	CHERRY-BLACK	Prunus serotina	9	4	C	TO REMOVE
641	CHERRY-BLACK	Prunus serotina	10	4	C	TO REMOVE
642	CHERRY-BLACK	Prunus serotina	10	5	C	TO REMOVE
643	BOXELDER	Acer negundo	6	3	C	TO REMOVE
644	CHERRY-BLACK	Prunus serotina	6	3	C	TO REMOVE
645	CHERRY-BLACK	Prunus serotina	8	4	C	TO REMOVE
646	CHERRY-BLACK	Prunus serotina	10	2	C	TO REMOVE
647	BOXELDER	Acer negundo	7	3	C	TO REMOVE
648	BOXELDER	Acer negundo	20	3	C	TO REMOVE
649	BOXELDER	Acer negundo	8	3	C	TO REMOVE
650	BOXELDER	Acer negundo	15	4	C	TO REMOVE
651	ELM-AMERICAN	Ulmus americana	7	3	C	TO REMOVE
652	CHERRY-BLACK	Prunus serotina	18	5	C	TO REMOVE
653	ELM-AMERICAN	Ulmus americana	6	3	C	TO REMOVE
654	WALNUT-BLACK	Juglans nigra	15	2	B	TO REMOVE
655	WALNUT-BLACK	Juglans nigra	16	2	B	TO REMOVE
656	ELM-SPP	Ulmus spp	8	3	B	TO REMOVE
657	CHERRY-BLACK	Prunus serotina	15	5	C	TO REMOVE
658	ASH-GREEN	Fraxinus pennsylvanica	16	3	D	TO REMOVE
659	CHERRY-BLACK	Prunus serotina	11	3	C	TO REMOVE
660	MAPLE-SUGAR	Acer saccharum	22	2	B	TO REMOVE
661	MAPLE-SILVER	Acer saccharinum	44	2	B	TO REMOVE
662	BOXELDER	Acer negundo	9	3	C	TO REMOVE
663	CHERRY-BLACK	Prunus serotina	9	3	C	TO REMOVE
664	CHERRY-BLACK	Prunus serotina	10	3	C	TO REMOVE
665	CHERRY-BLACK	Prunus serotina	11	4	C	TO REMOVE
666	CHERRY-BLACK	Prunus serotina	10	3	C	TO REMOVE
667	CHERRY-BLACK	Prunus serotina	15	2	C	TO REMOVE
668	CHERRY-BLACK	Prunus serotina	14	3	C	TO REMOVE
669	CHERRY-BLACK	Prunus serotina	12	3	C	TO REMOVE
670	CHERRY-BLACK	Prunus serotina	12	4	C	TO REMOVE
671	CHERRY-BLACK	Prunus serotina	10	3	C	TO REMOVE
672	BOXELDER	Acer negundo	11	4	C	TO REMOVE
673	WALNUT-BLACK	Juglans nigra	13	4	B	TO REMOVE
674	MAPLE-SUGAR	Acer saccharum	24	2	B	TO REMOVE
675	CHERRY-BLACK	Prunus serotina	17	3	C	TO REMOVE
676	ELM-SIBERIAN	Ulmus pumila	16	4	D	TO REMOVE
677	CHERRY-BLACK	Prunus serotina	14	3	C	TO REMOVE
678	CHERRY-BLACK	Prunus serotina	14	4	C	TO REMOVE
679	MAPLE-SUGAR	Acer saccharum	21	1	B	TO REMOVE
680	BOXELDER	Acer negundo	21	3	C	TO REMOVE
681	MULBERRY-SPP	Morus spp	16	3	D	TO REMOVE
682	BOXELDER	Acer negundo	11	4	C	TO REMOVE
683	BOXELDER	Acer negundo	15	4	C	TO REMOVE
684	WALNUT-BLACK	Juglans nigra	26	3	B	TO REMOVE
685	MULBERRY-SPP	Morus spp	9	3	D	TO REMOVE
686	COTTONWOOD	Populus deltoides	16	2	C	TO REMOVE
687	WALNUT-BLACK	Juglans nigra	24	3	B	TO REMOVE
688	MULBERRY-SPP	Morus spp	7	4	D	TO REMOVE
689	COTTONWOOD	Populus deltoides	12	3	C	TO REMOVE
690	BOXELDER	Acer negundo	22	4	C	TO REMOVE
691	COTTONWOOD	Populus deltoides	30	3	C	TO REMOVE
692	COTTONWOOD	Populus deltoides	12	2	C	TO REMOVE
693	ELM-SIBERIAN	Ulmus pumila	26	4	D	TO REMOVE
694	COTTONWOOD	Populus deltoides	15	3	C	TO REMOVE
695	BOXELDER	Acer negundo	16	4	C	TO REMOVE
696	BOXELDER	Acer negundo	10	3	C	TO REMOVE
697	MULBERRY-SPP	Morus spp	9	3	D	TO REMOVE
698	BOXELDER	Acer negundo	15	4	C	TO REMOVE
699	BOXELDER	Acer negundo	11	4	C	TO REMOVE
700	MULBERRY-SPP	Morus spp	6	3	D	TO REMOVE
701	MAPLE-SILVER	Acer saccharinum	11	3	B	TO REMOVE
702	MULBERRY-SPP	Morus spp	6	3	D	TO REMOVE
703	BOXELDER	Acer negundo	14	4	C	TO REMOVE
704	CHERRY-BLACK	Prunus serotina	18	4	C	TO REMOVE
705	CHERRY-BLACK	Prunus serotina	14	4	C	TO REMOVE
706	MAPLE-SUGAR	Acer saccharum	8	3	B	TO REMOVE
707	CHERRY-BLACK	Prunus serotina	16	4	C	TO REMOVE
708	BOXELDER	Acer negundo	11	4	C	TO REMOVE
709	BOXELDER	Acer negundo	18	4	C	TO REMOVE
710	CHERRY-BLACK	Prunus serotina	12	4	C	TO REMOVE
711	BOXELDER	Acer negundo	13	4	C	TO REMOVE
712	CHERRY-BLACK	Prunus serotina	13	3	C	TO REMOVE
713	CHERRY-BLACK	Prunus serotina	10	3	C	TO REMOVE
714	WALNUT-BLACK	Juglans nigra	10	3	B	TO REMOVE
715	BOXELDER	Acer negundo	6	4	C	TO REMOVE
716	MAPLE-SUGAR	Acer saccharum	14	2	B	TO REMOVE
717	CHERRY-BLACK	Prunus serotina	15	3	C	TO REMOVE
718	CHERRY-BLACK	Prunus serotina	9	4	C	TO REMOVE
719	CHERRY-BLACK	Prunus serotina	10	4	C	TO REMOVE
720	MULBERRY-SPP	Morus spp	17	4	D	TO REMOVE
721	CHERRY-BLACK	Prunus serotina	15	3	C	TO REMOVE
722	CHERRY-BLACK	Prunus serotina	12	4	C	TO REMOVE
723	CHERRY-BLACK	Prunus serotina	11	3	C	TO REMOVE
724	BOXELDER	Acer negundo	12	4	C	TO REMOVE
725	CHERRY-BLACK	Prunus serotina	16	5	C	TO REMOVE
726	MULBERRY-SPP	Morus spp	16	3	D	TO REMOVE
727	CATALPA	Catalpa speciosa	21	3	B	TO REMOVE
728	WALNUT-BLACK	Juglans nigra	13	3	B	TO REMOVE
729	MAPLE-SILVER	Acer saccharinum	18	3	B	TO REMOVE
730	BOXELDER	Acer negundo	13	3	C	TO REMOVE
731	WALNUT-BLACK	Juglans nigra	13	3	B	TO REMOVE
732	CHERRY-BLACK	Prunus serotina	17	3	C	TO REMOVE
733	WALNUT-BLACK	Juglans nigra	16	3	B	TO REMOVE
734	CHERRY-BLACK	Prunus serotina	16	3	C	TO REMOVE
735	WALNUT-BLACK	Juglans nigra	21	2	B	TO REMOVE
736	CHERRY-BLACK	Prunus serotina	31	4	C	TO REMOVE
737	WALNUT-BLACK	Juglans nigra	18	3	B	TO REMOVE
738	CHERRY-BLACK	Prunus serotina	6	3	C	TO REMOVE
739	WALNUT-BLACK	Juglans nigra	13	3	B	TO REMOVE
740	CHERRY-BLACK	Prunus serotina	15	4	C	TO REMOVE
741	OAK-WHITE	Quercus alba	16	4	A	TO REMOVE
742	CHERRY-BLACK	Prunus serotina	22	4	C	TO REMOVE
743	BOXELDER	Acer negundo	6	4	C	TO REMOVE
744	CHERRY-BLACK	Prunus serotina	26	4	C	TO REMOVE
745	BOXELDER	Acer negundo	8	4	C	TO REMOVE
746	MAPLE-SILVER	Acer saccharinum	36	3	B	TO REMOVE
747	WALNUT-BLACK	Juglans nigra	19	2	B	TO REMOVE
748	CHERRY-BLACK	Prunus serotina	13	4	C	TO REMOVE
749	CHERRY-BLACK	Prunus serotina	13	4	C	TO REMOVE
750	CHERRY-BLACK	Prunus serotina	13	4	C	TO REMOVE
751	BOXELDER	Acer negundo	12	4	C	TO REMOVE
752	CHERRY-BLACK	Prunus serotina	17	4	C	TO REMOVE
753	MULBERRY-SPP	Morus spp	6	3	D	TO REMOVE
754	BOXELDER	Acer negundo	13	4	C	TO REMOVE
755	CHERRY-BLACK	Prunus serotina	25	3	C	TO REMOVE
756	MAPLE-SILVER	Acer saccharinum	33	2	B	TO REMOVE
757	CHERRY-BLACK	Prunus serotina	6	3	C	TO REMOVE
758	BOXELDER	Acer negundo	17	4	C	TO REMOVE
759	BOXELDER	Acer negundo	18	4	C	TO REMOVE
760	COTTONWOOD	Populus deltoides	25	3	C	TO REMOVE

TREE_NUM	SPECIES	LATIN	DBH	CONDITION	LIBERTYVILLE TREE GROUP	STATUS
761	BOXELDER	Acer negundo	22	4	C	TO REMOVE
762	CHERRY-BLACK	Prunus serotina	12	4	C	TO REMOVE
763	BOXELDER	Acer negundo	25	4	C	TO REMOVE
764	CHERRY-BLACK	Prunus serotina	21	3	C	TO REMOVE
765	BOXELDER	Acer negundo	16	4	C	TO REMOVE
766	CHERRY-BLACK	Prunus serotina	6	3	C	TO REMOVE
767	CHERRY-BLACK	Prunus serotina	15	3	C	TO REMOVE
768	BOXELDER	Acer negundo	14	4	C	TO REMOVE
769	BOXELDER	Acer negundo	10	4	C	TO REMOVE
770	BOXELDER	Acer negundo	11	4	C	TO REMOVE
771	MULBERRY-SPP	Morus spp	16	4	D	TO REMOVE
772	BOXELDER	Acer negundo	15	4	C	TO REMOVE
773	BOXELDER	Acer negundo	15	4	C	TO REMOVE
774	MAPLE-SILVER	Acer saccharinum	23	1	B	TO REMOVE
775	BOXELDER	Acer negundo	17	4	C	TO REMOVE
776	CHERRY-BLACK	Prunus serotina	16	2	C	TO REMOVE
777	BOXELDER	Acer negundo	13	4	C	TO REMOVE
778	BOXELDER	Acer negundo	12	3	C	TO REMOVE
779	BOXELDER	Acer negundo	14	4	C	TO REMOVE
780	CHERRY-BLACK	Prunus serotina	10	3	C	TO REMOVE
781	BOXELDER	Acer negundo	23	4	C	TO REMOVE
782	CHERRY-BLACK	Prunus serotina	15	4	C	TO REMOVE
783	CHERRY-BLACK	Prunus serotina	16	3	C	TO REMOVE
784	CHERRY-BLACK	Prunus serotina	20	2	C	TO REMOVE
785	CHERRY-BLACK	Prunus serotina	9	3	C	TO REMOVE
786	CHERRY-BLACK	Prunus serotina	14	4	C	TO REMOVE
787	CHERRY-BLACK	Prunus serotina	20	4	C	TO REMOVE
788	CHERRY-BLACK	Prunus serotina	10	4	C	TO REMOVE
789	BOXELDER	Acer negundo	13	4	C	TO SAVE
790	CHERRY-BLACK	Prunus serotina	16	3	C	TO REMOVE
791	BOXELDER	Acer negundo	11	4	C	TO SAVE
792	CHERRY-BLACK	Prunus serotina	17	4	C	TO REMOVE
793	BOXELDER	Acer negundo	10	4	C	TO SAVE
794	CHERRY-BLACK	Prunus serotina	24	4	C	TO REMOVE
795	BOXELDER	Acer negundo	22	4	C	TO REMOVE
796	CHERRY-BLACK	Prunus serotina	8	4	C	TO REMOVE
797	BOXELDER	Acer negundo	10	4	C	TO SAVE
798	CHERRY-BLACK	Prunus serotina	20	4	C	TO REMOVE
799	BOXELDER	Acer negundo	9	4	C	TO REMOVE
800	ELM-SIBERIAN	Ulmus pumila	18	3	D	TO SAVE
801	CHERRY-BLACK	Prunus serotina	11	4	C	TO REMOVE
802	BOXELDER	Acer negundo	8	4	C	TO SAVE
803	BOXELDER	Acer negundo	11	4	C	TO SAVE
804	BOXELDER	Acer negundo	14	4	C	TO REMOVE
805	BOXELDER	Acer negundo	12	4	C	TO SAVE
806	CHERRY-BLACK	Prunus serotina	8	4	C	TO REMOVE
807	CHERRY-BLACK	Prunus serotina	8	4	C	TO SAVE
808	BOXELDER	Acer negundo	16	4	C	TO SAVE
809	APPLE-CRAB-SPP	Malus spp	7	4	A	TO REMOVE
810	BOXELDER	Acer negundo	11	4	C	TO SAVE
811	CHERRY-BLACK	Prunus serotina	6	3	C	TO SAVE
812	BOXELDER	Acer negundo	18	4	C	TO SAVE
813	BOXELDER	Acer negundo	13	4	C	TO SAVE
814	MAPLE-SILVER	Acer saccharinum	40	3	B	TO REMOVE
815	BOXELDER	Acer negundo	16	3	C	TO SAVE
816	CHERRY-BLACK	Prunus serotina	10	3	C	TO REMOVE
817	BOXELDER	Acer negundo	18	4	C	TO SAVE
818	BOXELDER	Acer negundo	27	4	C	TO SAVE
819	CHERRY-BLACK	Prunus serotina	23	4	C	TO REMOVE
820	CHERRY-BLACK	Prunus serotina	11	4	C	TO SAVE
821	BOXELDER	Acer negundo	11	4	C	TO SAVE
822	BOXELDER	Acer negundo	15	3	C	TO SAVE
823	BOXELDER	Acer negundo	11	4	C	TO SAVE
824	CHERRY-BLACK	Prunus serotina	12	3	C	TO SAVE
825	CHERRY-BLACK	Prunus serotina	16	4	C	TO SAVE
826	CHERRY-BLACK	Prunus serotina	16	3	C	TO SAVE
827	BOXELDER	Acer negundo	23	4	C	TO REMOVE
828	CHERRY-BLACK	Prunus serotina	6	3	C	TO SAVE
829	APPLE-CRAB-SPP	Malus spp	7	3	A	TO SAVE
830	CHERRY-BLACK	Prunus serotina	12	4	C	TO REMOVE
831	CHERRY-BLACK	Prunus serotina	19	3	C	TO SAVE
832	MULBERRY-SPP	Morus spp	12	3	D	TO REMOVE
833	CHERRY-BLACK	Prunus serotina	7	3	C	TO SAVE
834	HACKBERRY	Celtis occidentalis	6	5	A	TO REMOVE
835	CHERRY-BLACK	Prunus serotina	8	3	C	TO SAVE
836	BOXELDER	Acer negundo	8	3	C	TO SAVE
837	CHERRY-BLACK	Prunus serotina	7	3	C	TO SAVE
838	MULBERRY-SPP	Morus spp	11	3	D	TO SAVE
839	MAPLE-SILVER	Acer saccharinum	11	2	B	TO SAVE
840	CHERRY-BLACK	Prunus serotina	16	4	C	TO REMOVE
841	BOXELDER	Acer negundo	42	3	C	TO SAVE
842	CHERRY-BLACK	Prunus serotina	24	4	C	TO SAVE
843	CHERRY-BLACK	Prunus serotina	23	4	C	TO SAVE
844	CHERRY-BLACK	Prunus serotina	10	2	C	TO REMOVE
845	BOXELDER	Acer negundo	8	3	C	TO REMOVE
846	CHERRY-BLACK	Prunus serotina	10	4	C	TO SAVE
847	CHERRY-BLACK	Prunus serotina	9	3	C	TO REMOVE
848	CHERRY-BLACK	Prunus serotina	6	4	C	TO REMOVE
849	BOXELDER	Acer negundo	11	4	C	TO REMOVE
850	CHERRY-BLACK	Prunus serotina	9	4	C	TO REMOVE
851	CHERRY-BLACK	Prunus serotina	10	4	C	TO REMOVE
852	CHERRY-BLACK	Prunus serotina	10	4	C	TO REMOVE
853	BOXELDER	Acer negundo	10	3	C	TO REMOVE
854	CHERRY-BLACK	Prunus serotina	10	3	C	TO REMOVE
855	CHERRY-BLACK	Prunus serotina	10	3	C	TO REMOVE
856	CHERRY-BLACK	Prunus serotina	13	4	C	TO REMOVE
857	CHERRY-BLACK	Prunus serotina	19	4	C	TO REMOVE
858	CHERRY-BLACK	Prunus serotina	13	4	C	TO REMOVE
859	CHERRY-BLACK	Prunus serotina	12	3	C	TO REMOVE
860	BOXELDER	Acer negundo	13	4	C	TO REMOVE
861	COTTONWOOD	Populus deltoides	16	4	C	TO REMOVE
862	COTTONWOOD	Populus deltoides	24	2	C	TO REMOVE
863	COTTONWOOD	Populus deltoides	26	2	C	TO REMOVE
864	COTTONWOOD	Populus deltoides	23	2	C	TO REMOVE
865	COTTONWOOD	Populus deltoides	25	2	C	TO REMOVE
866	COTTONWOOD	Populus deltoides	23	2	C	TO REMOVE
867	COTTONWOOD	Populus deltoides	47	3	C	TO SAVE
868	COTTONWOOD	Populus deltoides	21	3	C	TO SAVE
869	BOXELDER	Acer negundo	8	3	C	TO SAVE
870	CHERRY-BLACK	Prunus serotina	10	4	C	TO SAVE
871	MAPLE-SILVER	Acer saccharinum	18	3	B	TO SAVE
872	MAPLE-SILVER	Acer saccharinum	14	3	B	TO SAVE
873	COTTONWOOD	Populus deltoides	33	2	C	TO SAVE
874	CHERRY-BLACK	Prunus serotina	10	3	C	TO SAVE
875	CHERRY-BLACK	Prunus serotina	10	3	C	TO SAVE
876	CHERRY-BLACK	Prunus serotina	17	3	C	TO SAVE
877	CHERRY-BLACK	Prunus serotina	13	3	C	TO SAVE
878	BOXELDER	Acer negundo	11	4	C	TO SAVE
879	CHERRY-BLACK	Prunus serotina	11	4	C	TO SAVE
880	BOXELDER	Acer negundo	10	3	C	TO SAVE
881	COTTONWOOD	Populus deltoides	23	2	C	TO SAVE
882	COTTONWOOD	Populus deltoides	15	3	C	TO SAVE

TREE_NUM	SPECIES	LATIN	DBH	CONDITION	LIBERTYVILLE TREE GROUP	STATUS
883	BOXELDER	Acer negundo	13	4	C	TO SAVE
884	MULBERRY-SPP	Morus spp	9	4	D	TO SAVE
885	MAPLE-SUGAR	Acer saccharum	23	2	B	TO SAVE
886	MULBERRY-SPP	Morus spp	7	4	D	TO SAVE
887	COTTONWOOD	Populus deltoides	13	2	C	TO SAVE
888	BOXELDER	Acer negundo	20	4	C	TO REMOVE
889	MULBERRY-SPP	Morus spp	9	4	D	TO SAVE
890	BOXELDER	Acer negundo	14	4	C	TO SAVE
891	BOXELDER	Acer negundo	25	4	C	TO REMOVE
892	BOXELDER	Acer negundo	18	3	C	TO SAVE
893	BOXELDER	Acer negundo	13	4	C	TO SAVE
894	BOXELDER	Acer negundo	11	4	C	TO SAVE
895	BOXELDER	Acer negundo	10	4	C	TO SAVE
896	CHERRY-BLACK	Prunus serotina	14	3	C	TO SAVE
897	BOXELDER	Acer negundo	15	4	C	TO SAVE
898	BOXELDER	Acer negundo	14	4	C	TO SAVE
899	ELM-SIBERIAN	Ulmus pumila	22	4	D	TO SAVE
900	WALNUT-BLACK	Juglans nigra	17	3	B	TO SAVE
901	BOXELDER	Acer negundo	20	4	C	TO SAVE
902	BOXELDER	Acer negundo	17	4	C	TO SAVE
903	BOXELDER	Acer negundo	13	4	C	TO SAVE
904	BOXELDER	Acer negundo	8	4	C	TO SAVE
905	BOXELDER	Acer negundo	17	4	C	TO SAVE
906	MULBERRY-SPP	Morus spp	24	3	D	TO REMOVE
907	MULBERRY-SPP	Morus spp	6	3	D	TO REMOVE
908	WALNUT-BLACK	Juglans nigra	15	3	B	TO SAVE
909	MULBERRY-SPP	Morus spp	7	3	D	TO REMOVE
910	WILLOW-SPP	Salix spp	8	3	C	TO REMOVE
911	MULBERRY-SPP	Morus spp	8	4	D	TO REMOVE
912	COTTONWOOD	Populus deltoides	20	3	C	TO REMOVE
913	MULBERRY-SPP	Morus spp	10	4	D	TO REMOVE
914	COTTONWOOD	Populus deltoides	16	4	C	TO REMOVE
915	MULBERRY-SPP	Morus spp	6	3	D	TO REMOVE
916	COTTONWOOD	Populus deltoides	14	3	C	TO REMOVE
917	COTTONWOOD	Populus deltoides	10	3	C	TO REMOVE
918	COTTONWOOD	Populus deltoides	15	3	C	TO REMOVE
919	BOXELDER	Acer negundo	12	4	C	TO REMOVE
920	COTTONWOOD	Populus deltoides	23	3	C	TO REMOVE
921	ELM-SIBERIAN	Ulmus pumila	9	4	D	TO REMOVE
922	ELM-SIBERIAN	Ulmus pumila	14	4	D	TO REMOVE
923	ELM-AMERICAN	Ulmus americana	10	3	C	TO REMOVE
924	CHERRY-BLACK	Prunus serotina	12	3	C	TO REMOVE
925	MULBERRY-SPP	Morus spp	12	3	D	TO REMOVE
926	CHERRY-BLACK	Prunus serotina	6	3	C	TO REMOVE
927	COTTONWOOD	Populus deltoides	12	2	C	TO REMOVE
928	BOXELDER	Acer negundo	10	4	C	TO SAVE
929	BOXELDER	Acer negundo	12	4	C	TO SAVE
930	MAPLE-SILVER	Acer saccharinum	13	3	B	TO REMOVE
931	CHERRY-BLACK	Prunus serotina	13	4	C	TO SAVE
932	COTTONWOOD	Populus deltoides	12	3	C	TO REMOVE
933	BOXELDER	Acer negundo	11	4	C	TO SAVE
934	ELM-AMERICAN	Ulmus americana	10	2	C	TO SAVE
935	CHERRY-BLACK	Prunus serotina	21	3	C	TO SAVE
936	ELM-AMERICAN	Ulmus americana	7	3	C	TO REMOVE
937	CHERRY-BLACK	Prunus serotina	12	4	C	TO SAVE
938	COTTONWOOD	Populus deltoides	48	3	C	TO SAVE
939	CHERRY-BLACK	Prunus serotina	14	4	C	TO SAVE
940	COTTONWOOD	Populus deltoides	22	3	C	TO REMOVE
941	CHERRY-BLACK	Prunus serotina	15	4	C	TO SAVE
942	CHERRY-BLACK	Prunus serotina	12	4	C	TO REMOVE
943	COTTONWOOD	Populus deltoides	15	3	C	TO SAVE
944	BOXELDER	Acer negundo	11	4	C	TO REMOVE
945	MAPLE-SILVER	Acer saccharinum	6	3	B	TO SAVE
946	CHERRY-BLACK	Prunus serotina	11	4	C	TO REMOVE
947	EASTERN REDCEDAR	Juniperus virginiana	13	3	D	TO REMOVE
948	BOXELDER	Acer negundo	11	4	C	TO REMOVE
949	BOXELDER	Acer negundo	6	4	C	TO REMOVE
950	BOXELDER	Acer negundo	11	4	C	TO REMOVE
951	CHERRY-BLACK	Prunus serotina	8	4	C	TO REMOVE
952	MAPLE-SILVER	Acer saccharinum	20	3	B	TO REMOVE
953	BLACK LOCUST	Robinia pseudoacacia	10	3	C	TO REMOVE
954	CHERRY-BLACK	Prunus serotina	9	3	C	TO REMOVE
955	CHERRY-BLACK	Prunus serotina	10	3	C	TO REMOVE
956	CHERRY-BLACK	Prunus serotina	10	3	C	TO REMOVE
957	BOXELDER	Acer negundo	13	4	C	TO SAVE
958	CHERRY-BLACK	Prunus serotina	12	3	C	TO REMOVE
959	ELM-AMERICAN	Ulmus americana	10	3	C	TO REMOVE
960	WILLOW-SPP	Salix spp	23	4	C	TO SAVE
961	CHERRY-BLACK	Prunus serotina	11	3	C	TO REMOVE
962	BOXELDER	Acer negundo	7	4	C	TO REMOVE
963	CHERRY-BLACK	Prunus serotina	8	3	C	TO REMOVE
964	CHERRY-BLACK	Prunus serotina	6	3	C	TO REMOVE
965	BOXELDER	Acer negundo	17	4	C	TO REMOVE
966	WALNUT-BLACK	Juglans nigra	6	3	B	TO REMOVE
967	WILLOW-SPP	Salix spp	26	4	C	TO REMOVE
968	BOXELDER	Acer negundo	11	4	C	TO REMOVE
969	CHERRY-BLACK	Prunus serotina	10	4	C	TO REMOVE
970	BOXELDER	Acer negundo	14	4	C	TO REMOVE
971	BOXELDER	Acer negundo	6	4	C	TO REMOVE
972	CHERRY-BLACK	Prunus serotina	9	4	C	TO REMOVE
973	CHERRY-BLACK	Prunus serotina	7	3	C	TO REMOVE
974	CHERRY-BLACK	Prunus serotina	7	3	C	TO REMOVE
975	BOXELDER	Acer negundo	17	4	C	TO REMOVE
976	BOXELDER	Acer negundo	8	4	C	TO REMOVE
977	BOXELDER	Acer negundo	8	4	C	TO REMOVE
978	CHERRY-BLACK	Prunus serotina	9	3	C	TO REMOVE
979	BOXELDER	Acer negundo	16	4	C	TO REMOVE
980	CHERRY-BLACK	Prunus serotina	19	3	C	TO REMOVE
981	MULBERRY-SPP	Morus spp	7	4	D	TO REMOVE
982	ASH-GREEN	Fraxinus pennsylvanica	8	4	D	TO SAVE
983	BOXELDER	Acer negundo	12	4	C	TO REMOVE
984	CHERRY-BLACK	Prunus serotina	6	4	C	TO REMOVE
985	BOXELDER	Acer negundo	25	4	C	TO REMOVE
986	BOXELDER	Acer negundo	15	4	C	TO REMOVE
987	ELM-AMERICAN	Ulmus americana	12	2	C	TO REMOVE
988	ELM-AMERICAN	Ulmus americana	11	2	C	TO REMOVE
989	BOXELDER	Acer negundo	13	4	C	TO REMOVE
990	CHERRY-BLACK	Prunus serotina	11	3	C	TO REMOVE
991	BOXELDER	Acer negundo	10	2	C	TO REMOVE
992	MULBERRY-SPP	Morus spp	6	3	D	TO REMOVE
993	MULBERRY-SPP	Morus spp	11	4	D	TO REMOVE
994	CHERRY-BLACK	Prunus serotina	11	4	C	TO REMOVE
995	MULBERRY-SPP	Morus spp	5	3	D	TO REMOVE
996	CHERRY-BLACK	Prunus serotina	7	4	C	TO REMOVE
997	CHERRY-BLACK	Prunus serotina	8	4	C	TO REMOVE
998	MULBERRY-SPP	Morus spp	13	4	D	TO REMOVE
999	COTTONWOOD	Populus deltoides	16	3	C	TO REMOVE
1000	COTTONWOOD	Populus deltoides	15	3	C	TO REMOVE
1001	BOXELDER	Acer negundo	13	4	C	TO SAVE
1002	BOXELDER	Acer negundo	21	4	C	TO REMOVE
1003	COTTONWOOD	Populus deltoides	23	2	C	TO REMOVE
1004	BOXELDER	Acer negundo	18	4	C	TO REMOVE

TREE_NUM	SPECIES	LATIN	DBH	CONDITION	LIBERTYVILLE TREE GROUP	STATUS
1005	WILLOW-SPP	Salix spp	27	4	C	TO REMOVE
1006	CHERRY-BLACK	Prunus serotina	6	3	C	TO REMOVE
1007	BOXELDER	Acer negundo	12	3	C	TO SAVE
1008	BOXELDER	Acer negundo	13	4	C	TO REMOVE
1009	COTTONWOOD	Populus deltoides	26	2	C	TO REMOVE
1010	COTTONWOOD	Populus deltoides	17	3	C	TO REMOVE
1011	BOXELDER	Acer negundo	14	4	C	TO REMOVE
1012	COTTONWOOD	Populus deltoides	13	3	C	TO REMOVE
1013	BOXELDER	Acer negundo	29	4	C	TO SAVE
1014	MULBERRY-SPP	Morus spp	6	3	D	TO REMOVE
1015	COTTONWOOD	Populus deltoides	18	3	C	TO REMOVE
1016	BOXELDER	Acer negundo	17	4	C	TO REMOVE
1017	CHERRY-BLACK	Prunus serotina	20	4	C	TO REMOVE
1018	BOXELDER	Acer negundo	13	4	C	TO SAVE
1019	COTTONWOOD	Populus deltoides	23	3	C	TO REMOVE
1020	CHERRY-BLACK	Prunus serotina	13	4	C	TO REMOVE
1021	APPLE-CRAB-SPP	Malus spp	9	3	A	TO REMOVE
1022	COTTONWOOD

TREE_NUM	SPECIES	LATIN	DBH	CONDITION	LIBERTYVILLE TREE GROUP	STATUS
1126	CHERRY-BLACK	Prunus serotina	8	3	C	TO SAVE
1127	BOXELDER	Acer negundo	10	4	C	TO REMOVE
1128	BOXELDER	Acer negundo	13	4	C	TO REMOVE
1129	CHERRY-BLACK	Prunus serotina	9	4	C	TO REMOVE
1130	MULBERRY-SPP	Morus spp	6	3	D	TO SAVE
1131	CHERRY-BLACK	Prunus serotina	8	4	C	TO REMOVE
1132	BOXELDER	Acer negundo	19	4	C	TO REMOVE
1133	CHERRY-BLACK	Prunus serotina	7	4	C	TO REMOVE
1134	CHERRY-BLACK	Prunus serotina	12	4	C	TO REMOVE
1135	COTTONWOOD	Populus deltoides	11	4	C	TO REMOVE
1136	ELM-AMERICAN	Ulmus americana	14	2	C	TO REMOVE
1137	MAPLE-SILVER	Acer saccharinum	13	3	B	TO SAVE
1138	BOXELDER	Acer negundo	21	4	C	TO REMOVE
1139	CHERRY-BLACK	Prunus serotina	11	2	C	TO REMOVE
1140	CHERRY-BLACK	Prunus serotina	8	4	C	TO REMOVE
1141	CHERRY-BLACK	Prunus serotina	16	3	C	TO REMOVE
1142	CHERRY-BLACK	Prunus serotina	10	4	C	TO REMOVE
1143	CHERRY-BLACK	Prunus serotina	6	4	C	TO SAVE
1144	CHERRY-BLACK	Prunus serotina	6	4	C	TO SAVE
1145	WALNUT-BLACK	Juglans nigra	15	3	B	TO REMOVE
1146	CHERRY-BLACK	Prunus serotina	10	3	C	TO REMOVE
1147	ELM-AMERICAN	Ulmus americana	6	3	C	TO REMOVE
1148	CHERRY-BLACK	Prunus serotina	11	3	C	TO SAVE
1149	COTTONWOOD	Populus deltoides	10	3	C	TO REMOVE
1150	COTTONWOOD	Populus deltoides	16	2	C	TO REMOVE
1151	CHERRY-BLACK	Prunus serotina	6	4	C	TO REMOVE
1152	BOXELDER	Acer negundo	10	3	C	TO REMOVE
1153	BOXELDER	Acer negundo	16	4	C	TO REMOVE
1154	CHERRY-BLACK	Prunus serotina	14	3	C	TO REMOVE
1155	COTTONWOOD	Populus deltoides	21	2	C	TO REMOVE
1156	BOXELDER	Acer negundo	17	3	C	TO SAVE
1157	EASTERN REDCEDAR	Juniperus virginiana	6	3	D	TO REMOVE
1158	CHERRY-BLACK	Prunus serotina	11	3	C	TO SAVE
1159	APPLE-CRAB-SPP	Malus spp	11	5	A	TO REMOVE
1160	MAPLE-SILVER	Acer saccharinum	20	1	B	TO REMOVE
1161	COTTONWOOD	Populus deltoides	6	3	C	TO REMOVE
1162	CHERRY-BLACK	Prunus serotina	7	4	C	TO SAVE
1163	ELM-AMERICAN	Ulmus americana	9	3	C	TO REMOVE
1164	COTTONWOOD	Populus deltoides	8	4	C	TO REMOVE
1165	COTTONWOOD	Populus deltoides	8	3	C	TO REMOVE
1166	MAPLE-SILVER	Acer saccharinum	17	3	B	TO SAVE
1167	CHERRY-BLACK	Prunus serotina	9	3	C	TO REMOVE
1168	CHERRY-BLACK	Prunus serotina	9	3	C	TO REMOVE
1169	COTTONWOOD	Populus deltoides	7	3	C	TO REMOVE
1170	MULBERRY-SPP	Morus spp	17	4	D	TO REMOVE
1171	COTTONWOOD	Populus deltoides	13	3	C	TO REMOVE
1172	BOXELDER	Acer negundo	8	4	C	TO REMOVE
1173	CHERRY-BLACK	Prunus serotina	9	3	C	TO REMOVE
1174	MAPLE-SILVER	Acer saccharinum	14	3	B	TO REMOVE
1175	CHERRY-BLACK	Prunus serotina	11	3	C	TO REMOVE
1176	CHERRY-BLACK	Prunus serotina	11	3	C	TO REMOVE
1177	CHERRY-BLACK	Prunus serotina	10	4	C	TO REMOVE
1178	CHERRY-BLACK	Prunus serotina	22	4	C	TO REMOVE
1179	CHERRY-BLACK	Prunus serotina	16	4	C	TO REMOVE
1180	MAPLE-SILVER	Acer saccharinum	30	2	B	TO REMOVE
1181	CHERRY-BLACK	Prunus serotina	15	4	C	TO REMOVE
1182	MAPLE-SILVER	Acer saccharinum	16	3	B	TO REMOVE
1183	CHERRY-BLACK	Prunus serotina	7	5	C	TO REMOVE
1184	MAPLE-SILVER	Acer saccharinum	17	3	B	TO REMOVE
1185	MAPLE-SILVER	Acer saccharinum	16	2	B	TO REMOVE
1186	CHERRY-BLACK	Prunus serotina	8	3	C	TO REMOVE
1187	CHERRY-BLACK	Prunus serotina	15	3	C	TO REMOVE
1188	MAPLE-SILVER	Acer saccharinum	24	3	B	TO REMOVE
1189	CHERRY-BLACK	Prunus serotina	12	4	C	TO REMOVE
1190	MAPLE-SILVER	Acer saccharinum	28	3	B	TO REMOVE
1191	BOXELDER	Acer negundo	10	4	C	TO REMOVE
1192	BOXELDER	Acer negundo	12	4	C	TO REMOVE
1193	BOXELDER	Acer negundo	21	4	C	TO REMOVE
1194	CHERRY-BLACK	Prunus serotina	13	3	C	TO REMOVE
1195	CHERRY-BLACK	Prunus serotina	6	3	C	TO REMOVE
1196	BOXELDER	Acer negundo	14	4	C	TO REMOVE
1197	BOXELDER	Acer negundo	6	3	C	TO REMOVE
1198	WALNUT-BLACK	Juglans nigra	13	3	B	TO REMOVE
1199	MAPLE-SILVER	Acer saccharinum	21	3	B	TO REMOVE
1200	COTTONWOOD	Populus deltoides	11	3	C	TO REMOVE
1201	CHERRY-BLACK	Prunus serotina	15	2	C	TO REMOVE
1202	COTTONWOOD	Populus deltoides	10	4	C	TO REMOVE
1203	CHERRY-BLACK	Prunus serotina	11	5	C	TO REMOVE
1204	BOXELDER	Acer negundo	10	4	C	TO REMOVE
1205	MAPLE-SILVER	Acer saccharinum	18	3	B	TO REMOVE
1206	COTTONWOOD	Populus deltoides	9	4	C	TO REMOVE
1207	COTTONWOOD	Populus deltoides	4	4	C	TO REMOVE
1208	CHERRY-BLACK	Prunus serotina	15	3	C	TO SAVE
1209	BOXELDER	Acer negundo	23	4	C	TO REMOVE
1210	COTTONWOOD	Populus deltoides	10	4	C	TO REMOVE
1211	COTTONWOOD	Populus deltoides	12	4	C	TO REMOVE
1212	BOXELDER	Acer negundo	17	5	C	TO REMOVE
1213	CHERRY-BLACK	Prunus serotina	12	3	C	TO REMOVE
1214	COTTONWOOD	Populus deltoides	11	4	C	TO REMOVE
1215	COTTONWOOD	Populus deltoides	6	4	C	TO REMOVE
1216	BOXELDER	Acer negundo	22	3	C	TO REMOVE
1217	BOXELDER	Acer negundo	10	4	C	TO REMOVE
1218	BOXELDER	Acer negundo	9	5	C	TO REMOVE
1219	BOXELDER	Acer negundo	18	3	C	TO REMOVE
1220	COTTONWOOD	Populus deltoides	5	4	C	TO REMOVE
1221	BOXELDER	Acer negundo	11	4	C	TO REMOVE
1222	MAPLE-SILVER	Acer saccharinum	6	5	B	TO REMOVE
1223	ELM-AMERICAN	Ulmus americana	12	4	C	TO REMOVE
1224	COTTONWOOD	Populus deltoides	12	3	C	TO REMOVE
1225	CHERRY-BLACK	Prunus serotina	10	5	C	TO REMOVE
1226	MAPLE-SILVER	Acer saccharinum	25	2	B	TO REMOVE
1227	BOXELDER	Acer negundo	18	3	C	TO REMOVE
1228	BOXELDER	Acer negundo	11	4	C	TO REMOVE
1229	BOXELDER	Acer negundo	11	4	C	TO REMOVE
1230	COTTONWOOD	Populus deltoides	16	3	C	TO REMOVE
1231	BOXELDER	Acer negundo	12	4	C	TO REMOVE
1232	HAWTHORN-COCKSPUR	Crataegus crusgalli	4	3	A	TO SAVE
1233	COTTONWOOD	Populus deltoides	14	4	C	TO REMOVE
1234	BOXELDER	Acer negundo	17	4	C	TO REMOVE
1235	ELM-AMERICAN	Ulmus americana	10	2	C	TO REMOVE
1236	CHERRY-BLACK	Prunus serotina	16	3	C	TO REMOVE
1237	BOXELDER	Acer negundo	13	4	C	TO REMOVE
1238	COTTONWOOD	Populus deltoides	9	3	C	TO REMOVE
1239	MULBERRY-SPP	Morus spp	7	3	D	TO SAVE
1240	BOXELDER	Acer negundo	14	4	C	TO REMOVE
1241	BOXELDER	Acer negundo	15	4	C	TO REMOVE
1242	MAPLE-SILVER	Acer saccharinum	13	2	B	TO REMOVE
1243	CHERRY-BLACK	Prunus serotina	11	4	C	TO SAVE
1244	COTTONWOOD	Populus deltoides	6	3	C	TO REMOVE
1245	BOXELDER	Acer negundo	17	4	C	TO REMOVE
1246	MAPLE-SILVER	Acer saccharinum	16	3	B	TO REMOVE
1247	BOXELDER	Acer negundo	12	4	C	TO REMOVE

TREE_NUM	SPECIES	LATIN	DBH	CONDITION	LIBERTYVILLE TREE GROUP	STATUS
1248	MAPLE-SILVER	Acer saccharinum	20	1	B	TO REMOVE
1249	CHERRY-BLACK	Prunus serotina	18	4	C	TO REMOVE
1250	BOXELDER	Acer negundo	16	3	C	TO REMOVE
1251	MAPLE-SILVER	Acer saccharinum	19	3	B	TO REMOVE
1252	BOXELDER	Acer negundo	11	4	C	TO REMOVE
1253	COTTONWOOD	Populus deltoides	10	4	C	TO REMOVE
1254	CHERRY-BLACK	Prunus serotina	6	5	C	TO REMOVE
1255	CHERRY-BLACK	Prunus serotina	12	4	C	TO REMOVE
1256	MAPLE-SILVER	Acer saccharinum	21	2	B	TO REMOVE
1257	COTTONWOOD	Populus deltoides	10	3	C	TO REMOVE
1258	COTTONWOOD	Populus deltoides	11	3	C	TO REMOVE
1259	BOXELDER	Acer negundo	13	4	C	TO REMOVE
1260	MAPLE-SILVER	Acer saccharinum	22	2	B	TO REMOVE
1261	COTTONWOOD	Populus deltoides	6	4	C	TO REMOVE
1262	MAPLE-SILVER	Acer saccharinum	19	4	B	TO REMOVE
1263	BOXELDER	Acer negundo	9	4	C	TO REMOVE
1264	COTTONWOOD	Populus deltoides	10	3	C	TO REMOVE
1265	MAPLE-SILVER	Acer saccharinum	22	3	B	TO REMOVE
1266	COTTONWOOD	Populus deltoides	9	3	C	TO REMOVE
1267	COTTONWOOD	Populus deltoides	6	4	C	TO REMOVE
1268	CHERRY-BLACK	Prunus serotina	20	3	C	TO REMOVE
1269	COTTONWOOD	Populus deltoides	11	3	C	TO REMOVE
1270	BOXELDER	Acer negundo	8	4	C	TO REMOVE
1271	CHERRY-BLACK	Prunus serotina	13	3	C	TO REMOVE
1272	CHERRY-BLACK	Prunus serotina	12	4	C	TO REMOVE
1273	CHERRY-BLACK	Prunus serotina	6	4	C	TO REMOVE
1274	MAPLE-SILVER	Acer saccharinum	24	2	B	TO REMOVE
1275	CHERRY-BLACK	Prunus serotina	16	3	C	TO REMOVE
1276	MAPLE-SILVER	Acer saccharinum	21	4	B	TO REMOVE
1277	CHERRY-BLACK	Prunus serotina	10	4	C	TO REMOVE
1278	BOXELDER	Acer negundo	10	4	C	TO REMOVE
1279	COTTONWOOD	Populus deltoides	12	3	C	TO REMOVE
1280	CHERRY-BLACK	Prunus serotina	8	3	C	TO REMOVE
1281	CHERRY-BLACK	Prunus serotina	12	4	C	TO REMOVE
1282	COTTONWOOD	Populus deltoides	9	3	C	TO REMOVE
1283	CHERRY-BLACK	Prunus serotina	14	4	C	TO REMOVE
1284	COTTONWOOD	Populus deltoides	10	3	C	TO REMOVE
1285	BOXELDER	Acer negundo	18	4	C	TO REMOVE
1286	CHERRY-BLACK	Prunus serotina	12	4	C	TO REMOVE
1287	COTTONWOOD	Populus deltoides	8	3	C	TO REMOVE
1288	BOXELDER	Acer negundo	8	4	C	TO REMOVE
1289	COTTONWOOD	Populus deltoides	10	3	C	TO REMOVE
1290	CHERRY-BLACK	Prunus serotina	22	4	C	TO REMOVE
1291	MAPLE-SILVER	Acer saccharinum	10	5	B	TO REMOVE
1292	BOXELDER	Acer negundo	7	4	C	TO REMOVE
1293	CHERRY-BLACK	Prunus serotina	6	3	C	TO REMOVE
1294	MAPLE-SILVER	Acer saccharinum	41	3	B	TO REMOVE
1295	COTTONWOOD	Populus deltoides	15	4	C	TO REMOVE
1296	MAPLE-SILVER	Acer saccharinum	13	3	B	TO REMOVE
1297	MAPLE-SILVER	Acer saccharinum	17	3	B	TO REMOVE
1298	ELM-AMERICAN	Ulmus americana	6	3	C	TO REMOVE
1299	MAPLE-SILVER	Acer saccharinum	25	2	B	TO SAVE
1300	CHERRY-BLACK	Prunus serotina	10	3	C	TO REMOVE
1301	COTTONWOOD	Populus deltoides	9	3	C	TO REMOVE
1302	MAPLE-SILVER	Acer saccharinum	18	4	B	TO REMOVE
1303	BOXELDER	Acer negundo	11	4	C	TO REMOVE
1304	MAPLE-SILVER	Acer saccharinum	25	3	B	TO REMOVE
1305	CHERRY-BLACK	Prunus serotina	7	4	C	TO REMOVE
1306	MAPLE-SILVER	Acer saccharinum	11	4	B	TO REMOVE
1307	COTTONWOOD	Populus deltoides	11	2	C	TO REMOVE
1308	BOXELDER	Acer negundo	11	4	C	TO REMOVE
1309	COTTONWOOD	Populus deltoides	6	3	C	TO REMOVE
1310	BOXELDER	Acer negundo	17	4	C	TO REMOVE
1311	CHERRY-BLACK	Prunus serotina	14	3	C	TO REMOVE
1312	COTTONWOOD	Populus deltoides	10	2	C	TO REMOVE
1313	BOXELDER	Acer negundo	19	4	C	TO REMOVE
1314	CHERRY-BLACK	Prunus serotina	16	3	C	TO REMOVE
1315	BOXELDER	Acer negundo	17	3	C	TO REMOVE
1316	CHERRY-BLACK	Prunus serotina	8	4	C	TO REMOVE
1317	BOXELDER	Acer negundo	12	4	C	TO REMOVE
1318	MAPLE-SILVER	Acer saccharinum	32	3	B	TO REMOVE
1319	CHERRY-BLACK	Prunus serotina	15	3	C	TO REMOVE
1320	CHERRY-BLACK	Prunus serotina	20	3	C	TO REMOVE
1321	CHERRY-BLACK	Prunus serotina	9	3	C	TO REMOVE
1322	MAPLE-SILVER	Acer saccharinum	12	3	B	TO REMOVE
1323	BOXELDER	Acer negundo	14	4	C	TO REMOVE
1324	MAPLE-SILVER	Acer saccharinum	42	2	B	TO REMOVE
1325	MAPLE-SILVER	Acer saccharinum	8	3	B	TO REMOVE
1326	BOXELDER	Acer negundo	21	4	C	TO REMOVE
1327	CHERRY-BLACK	Prunus serotina	17	3	C	TO REMOVE
1328	CHERRY-BLACK	Prunus serotina	10	3	C	TO REMOVE
1329	MAPLE-SILVER	Acer saccharinum	21	2	B	TO REMOVE
1330	CHERRY-BLACK	Prunus serotina	6	4	C	TO REMOVE
1331	MAPLE-SILVER	Acer saccharinum	22	2	B	TO REMOVE
1332	MAPLE-SILVER	Acer saccharinum	25	3	B	TO REMOVE
1333	MAPLE-SILVER	Acer saccharinum	9	3	B	TO REMOVE
1334	MAPLE-SILVER	Acer saccharinum	22	2	B	TO REMOVE
1335	MAPLE-SILVER	Acer saccharinum	22	3	B	TO REMOVE
1336	MAPLE-SILVER	Acer saccharinum	32	2	B	TO REMOVE
1337	CHERRY-BLACK	Prunus serotina	17	3	C	TO REMOVE
1338	BOXELDER	Acer negundo	15	4	C	TO REMOVE
1339	BOXELDER	Acer negundo	12	4	C	TO REMOVE
1340	MAPLE-SILVER	Acer saccharinum	13	3	B	TO REMOVE
1341	MAPLE-SILVER	Acer saccharinum	18	3	B	TO REMOVE
1342	BOXELDER	Acer negundo	11	4	C	TO REMOVE
1343	CHERRY-BLACK	Prunus serotina	8	3	C	TO REMOVE
1344	MAPLE-SILVER	Acer saccharinum	28	2	B	TO REMOVE
1345	MAPLE-SILVER	Acer saccharinum	24	3	B	TO REMOVE
1346	MAPLE-SILVER	Acer saccharinum	32	3	B	TO REMOVE
1347	BOXELDER	Acer negundo	14	4	C	TO REMOVE
1348	MAPLE-SILVER	Acer saccharinum	14	3	B	TO REMOVE
1349	BOXELDER	Acer negundo	18	4	C	TO REMOVE
1350	MAPLE-SILVER	Acer saccharinum	19	3	B	TO REMOVE
1351	BOXELDER	Acer negundo	15	4	C	TO REMOVE
1352	CHERRY-BLACK	Prunus serotina	9	4	C	TO SAVE
1353	BOXELDER	Acer negundo	15	4	C	TO REMOVE
1354	CHERRY-BLACK	Prunus serotina	6	3	C	TO SAVE
1355	BOXELDER	Acer negundo	13	4	C	TO REMOVE
1356	BOXELDER	Acer negundo	21	4	C	TO REMOVE
1357	BOXELDER	Acer negundo	10	4	C	TO REMOVE
1358	BOXELDER	Acer negundo	13	4	C	TO REMOVE
1359	BOXELDER	Acer negundo	11	4	C	TO REMOVE
1360	BOXELDER	Acer negundo	12	4	C	TO REMOVE
1361	MAPLE-SILVER	Acer saccharinum	16	3	B	TO SAVE
1362	BOXELDER	Acer negundo	13	4	C	TO REMOVE
1363	BOXELDER	Acer negundo	7	3	C	TO SAVE
1364	BOXELDER	Acer negundo	19	4	C	TO REMOVE
1365	BOXELDER	Acer negundo	15	4	C	TO REMOVE
1366	BOXELDER	Acer negundo	8	4	C	TO REMOVE
1367	BOXELDER	Acer negundo	15	4	C	TO REMOVE
1368	BOXELDER	Acer negundo	11	3	C	TO SAVE
1369	BOXELDER	Acer negundo	8	4	C	TO REMOVE

TREE_NUM	SPECIES	LATIN	DBH	CONDITION	LIBERTYVILLE TREE GROUP	STATUS
1370	ELM-AMERICAN	Ulmus americana	12	3	C	TO SAVE
1371	MAPLE-SILVER	Acer saccharinum	10	4	B	TO SAVE
1372	COTTONWOOD	Populus deltoides	12	3	C	TO SAVE
1373	BOXELDER	Acer negundo	21	4	C	TO SAVE
1374	BOXELDER	Acer negundo	11	4	C	TO SAVE
1375	MAPLE-SILVER	Acer saccharinum	13	3	B	TO SAVE
1376	BOXELDER	Acer negundo	15	4	C	TO SAVE
1377	BOXELDER	Acer negundo	9	4	C	TO SAVE
1378	BOXELDER	Acer negundo	12	3	C	TO REMOVE
1379	BOXELDER	Acer negundo	17	4	C	TO SAVE
1380	CHERRY-BLACK	Prunus serotina	10	3	C	TO REMOVE
1381	BOXELDER	Acer negundo	11	4	C	TO SAVE
1382	MAPLE-SILVER	Acer saccharinum	36	1	B	TO REMOVE
1383	BOXELDER	Acer negundo	8	3	C	TO REMOVE
1384	MAPLE-SILVER	Acer saccharinum	45	1	B	TO REMOVE
1385	BOXELDER	Acer negundo	7	4	C	TO REMOVE
1386	MAPLE-SILVER	Acer saccharinum	24	4	B	TO REMOVE
1387	BOXELDER	Acer negundo	12	4	C	TO REMOVE
1388	BOXELDER	Acer negundo	12	4	C	TO REMOVE
1389	CHERRY-BLACK	Prunus serotina	13	3	C	TO REMOVE
1390	BOXELDER	Acer negundo	8	4	C	TO REMOVE
1391	CHERRY-BLACK	Prunus serotina	6	5	C	TO REMOVE
1392	WALNUT-BLACK	Juglans nigra	18	3	B	TO REMOVE
1393	BOXELDER	Acer negundo	11	4	C	TO REMOVE
1394	MAPLE-SILVER	Acer saccharinum	16	3	B	TO REMOVE
1395	BOXELDER	Acer negundo	20	3	C	TO REMOVE
1396	CHERRY-BLACK	Prunus serotina	10	3	C	TO REMOVE
1397	CHERRY-BLACK	Prunus serotina	8	5	C	TO REMOVE
1398	CHERRY-BLACK	Prunus serotina	10	3	C	TO SAVE
1399	CHERRY-BLACK	Prunus serotina	9	3	C	TO SAVE
1400	BOXELDER	Acer negundo	22	4	C	TO SAVE
1401	CHERRY-BLACK	Prunus serotina	11	3	C	TO SAVE
1402	BOXELDER	Acer negundo	11	4	C	TO SAVE
1403	BOXELDER	Acer negundo	6	4	C	TO SAVE
1404	MAPLE-SILVER	Acer saccharinum	15	4	B	TO SAVE
1405	CHERRY-BLACK	Prunus serotina	7	3	C	TO SAVE
1406	CHERRY-BLACK	Prunus serotina	11	4	C	TO SAVE
1407	COTTONWOOD	Populus deltoides	12	3	C	TO REMOVE
1408	COTTONWOOD	Populus deltoides	12	2	C	TO REMOVE
1409	CHERRY-BLACK	Prunus serotina	8	4	C	TO REMOVE
1410	CHERRY-BLACK	Prunus serotina	11	3	C	TO REMOVE
1411	MULBERRY-SPP	Morus spp	12	3	D	TO REMOVE
1412	ELM-AMERICAN	Ulmus americana	10	2	C	TO REMOVE
1413	CHERRY-BLACK	Prunus serotina	11	3	C	TO REMOVE
1414	COTTONWOOD	Populus deltoides	16	3	C	TO REMOVE
1415	CHERRY-BLACK	Prunus serotina	10	3	C	TO REMOVE
1416	COTTONWOOD	Populus deltoides	24	3	C	TO REMOVE
1417	CHERRY-BLACK	Prunus serotina	6	4	C	TO REMOVE
1418	BOXELDER	Acer negundo	25	4	C	TO REMOVE
1419	COTTONWOOD	Populus deltoides	15	2	C	TO REMOVE
1420	COTTONWOOD	Populus deltoides	13	4	C	TO REMOVE
1421	COTTONWOOD	Populus deltoides	12	4	C	TO REMOVE
1422	COTTONWOOD	Populus deltoides	15	3	C	TO REMOVE
1423	COTTONWOOD	Populus deltoides	6	3	C	TO REMOVE
1424	COTTONWOOD	Populus deltoides	18	2	C	TO REMOVE
1425	COTTONWOOD	Populus deltoides	16	3	C	TO REMOVE
1426	COTTONWOOD	Populus deltoides	24	1	C	TO REMOVE
1427	CHERRY-BLACK	Prunus serotina	12	4	C	TO SAVE
1428	COTTONWOOD	Populus deltoides	38	3	C	TO REMOVE
1429	BOXELDER	Acer negundo	23	3	C	TO SAVE
1430	BOXELDER	Acer negundo	19	4	C	TO REMOVE
1431	BOXELDER	Acer negundo	8	3	C	TO REMOVE
1432	BOXELDER	Acer negundo	10	4	C	TO REMOVE
1433	CHERRY-BLACK	Prunus serotina	11	3	C	TO REMOVE
1434	BOXELDER	Acer negundo	13	4	C	TO REMOVE
1435	BOXELDER	Acer negundo	16	4	C	TO REMOVE
1436	MAPLE-SILVER	Acer saccharinum	17	2	B	TO REMOVE
1437	MULBERRY-SPP	Morus spp	14	4	D	TO REMOVE
1438	MAPLE-SILVER	Acer saccharinum	30	3	B	TO REMOVE
1439	BOXELDER	Acer negundo	6	4	C	TO REMOVE
1440	MAPLE-SILVER	Acer saccharinum	32	2	B	TO REMOVE
1441	MAPLE-SILVER	Acer saccharinum	13	3	B	TO REMOVE
1442	APPLE-CRAB-SPP	Malus spp	7	3	A	TO REMOVE
1443	MAPLE-SILVER	Acer saccharinum	32	2	B	TO REMOVE
1444	BOXELDER	Acer negundo	6	3	C	TO REMOVE
1445	CHERRY-BLACK	Prunus serotina	17	3	C	TO REMOVE
1446	CHERRY-BLACK	Prunus serotina	10	4	C	TO REMOVE
1447	BOXELDER	Acer negundo	7	3	C	TO REMOVE
1448	MAPLE-SILVER	Acer saccharinum	8	3	B	TO REMOVE
1449	MAPLE-SILVER	Acer saccharinum	14	3	B	TO REMOVE
1450	MAPLE-SILVER	Acer saccharinum	11	4	B	TO REMOVE
1451	MAPLE-SILVER	Acer saccharinum	16	3	B	TO SAVE
1452	APPLE-CRAB-SPP	Malus spp	6	3	A	TO REMOVE
1453	BOXELDER	Acer negundo	8	4	C	TO REMOVE
1454	CHERRY-BLACK	Prunus serotina	14	3	C	TO REMOVE
1455	CHERRY-BLACK	Prunus serotina	9	4	C	TO REMOVE
1456	APPLE-CRAB-SPP	Malus spp	6	3	A	TO REMOVE
1457	CHERRY-BLACK	Prunus serotina	16	4	C	TO REMOVE
1458	COTTONWOOD	Populus deltoides	11	3	C	TO REMOVE
1459	COTTONWOOD	Populus deltoides	11	3	C	TO REMOVE
1460	MAPLE-SILVER	Acer saccharinum	27	3	B	TO REMOVE
1461	COTTONWOOD	Populus deltoides	11	3	C	TO REMOVE
1462	COTTONWOOD	Populus deltoides	11	4	C	TO REMOVE
1463	COTTONWOOD	Populus deltoides	11	4	C	TO REMOVE
1464	CHERRY-BLACK	Prunus serotina	11	2	C	TO REMOVE
1465	BOXELDER	Acer negundo	7	5	C	TO REMOVE
1466	MAPLE-SILVER	Acer saccharinum	12	3	B	TO REMOVE
1467	COTTONWOOD	Populus deltoides	11	4	C	TO REMOVE
1468	MAPLE-SILVER	Acer saccharinum	15	3	B	TO REMOVE
1469	COTTONWOOD	Populus deltoides	11	4	C	TO REMOVE
1470	COTTONWOOD	Populus deltoides	13	4	C	TO REMOVE
1471	COTTONWOOD	Populus deltoides	10	4	C	TO REMOVE
1472	CHERRY-BLACK	Prunus serotina	16	3	C	TO REMOVE
1473	BOXELDER	Acer negundo	19	3	C	TO REMOVE
1474	COTTONWOOD	Populus deltoides	12	4	C	TO REMOVE
1475	COTTONWOOD	Populus deltoides	10	4	C	TO REMOVE
1476	MAPLE-SILVER	Acer saccharinum	22	4	B	TO REMOVE
1477	MAPLE-SILVER	Acer saccharinum	26	2	B	TO SAVE
1478	COTTONWOOD	Populus deltoides	10	5	C	TO REMOVE
1479	COTTONWOOD	Populus deltoides	12	4	C	TO REMOVE
1480	COTTONWOOD	Populus deltoides	11	4	C	TO REMOVE
1481	MAPLE-SILVER	Acer saccharinum	18	3	B	TO REMOVE
1482	COTTONWOOD	Populus deltoides	11	3	C	TO REMOVE
1483	CHERRY-BLACK	Prunus serotina	14	3	C	TO REMOVE
1484	BOXELDER	Acer negundo	9	5	C	TO REMOVE
1485	MAPLE-SILVER	Acer saccharinum	26	2	B	TO SAVE
1486	OAK-RED	Quercus rubra	16	3	A	TO SAVE
1487	COTTONWOOD	Populus deltoides	12	3	C	TO SAVE
1488	MAPLE-SILVER	Acer saccharinum	24	2	B	TO SAVE
1489	WALNUT-BLACK	Juglans nigra	10	2	B	TO SAVE
1490	HACKBERRY	Celtis occidentalis	16	2	A	TO SAVE
1491	MAPLE-SILVER	Acer saccharinum	22	2	B	TO REMOVE

TREE_NUM	SPECIES	LATIN	DBH	CONDITION	LIBERTYVILLE TREE GROUP	STATUS
1492	CHERRY-BLACK	Prunus serotina	21	4	C	TO REMOVE
1493	BOXELDER	Acer negundo	11	4	C	TO REMOVE
1494	CHERRY-BLACK	Prunus serotina	16	2	C	TO REMOVE
1495	MAPLE-SILVER	Acer saccharinum	11	3	B	TO REMOVE
1496	MAPLE-SILVER	Acer saccharinum	16	3	B	TO REMOVE
1497	MAPLE-S

TREE_NUM	SPECIES	LATIN	DBH	CONDITION	LIBERTYVILLE TREE GROUP	STATUS
1614	MAPLE-SILVER	Acer saccharinum	18	3	B	TO REMOVE
1615	BOXELDER	Acer negundo	19	4	C	TO REMOVE
1616	BOXELDER	Acer negundo	23	4	C	TO REMOVE
1617	BOXELDER	Acer negundo	10	4	C	TO REMOVE
1618	CHERRY-BLACK	Prunus serotina	10	3	C	TO REMOVE
1619	BOXELDER	Acer negundo	14	4	C	TO REMOVE
1620	CHERRY-BLACK	Prunus serotina	6	4	C	TO REMOVE
1621	BOXELDER	Acer negundo	12	4	C	TO REMOVE
1622	BOXELDER	Acer negundo	21	4	C	TO REMOVE
1623	CHERRY-BLACK	Prunus serotina	12	4	C	TO REMOVE
1624	CHERRY-BLACK	Prunus serotina	14	4	C	TO REMOVE
1625	MAPLE-SILVER	Acer saccharinum	24	2	B	TO REMOVE
1626	CHERRY-BLACK	Prunus serotina	10	4	C	TO REMOVE
1627	CHERRY-BLACK	Prunus serotina	6	4	C	TO REMOVE
1628	MULBERRY-SPP	Morus spp	10	4	D	TO REMOVE
1629	BOXELDER	Acer negundo	23	3	C	TO REMOVE
1630	BOXELDER	Acer negundo	8	4	C	TO REMOVE
1631	BOXELDER	Acer negundo	13	4	C	TO REMOVE
1632	MAPLE-SILVER	Acer saccharinum	17	3	B	TO REMOVE
1633	MAPLE-SILVER	Acer saccharinum	28	2	B	TO REMOVE
1634	CHERRY-BLACK	Prunus serotina	14	4	C	TO REMOVE
1635	BOXELDER	Acer negundo	10	4	C	TO REMOVE
1636	CHERRY-BLACK	Prunus serotina	10	4	C	TO REMOVE
1637	BOXELDER	Acer negundo	14	4	C	TO REMOVE
1638	MAPLE-SILVER	Acer saccharinum	19	4	B	TO REMOVE
1639	MAPLE-SILVER	Acer saccharinum	15	3	B	TO REMOVE
1640	MAPLE-SILVER	Acer saccharinum	20	3	B	TO REMOVE
1641	MAPLE-SILVER	Acer saccharinum	31	2	B	TO REMOVE
1642	BOXELDER	Acer negundo	14	3	C	TO REMOVE
1643	MAPLE-SILVER	Acer saccharinum	7	3	B	TO REMOVE
1644	BOXELDER	Acer negundo	17	4	C	TO REMOVE
1645	BOXELDER	Acer negundo	7	4	C	TO REMOVE
1646	BOXELDER	Acer negundo	17	4	C	TO REMOVE
1647	BOXELDER	Acer negundo	19	4	C	TO REMOVE
1648	BOXELDER	Acer negundo	10	4	C	TO REMOVE
1649	WALNUT-BLACK	Juglans nigra	6	3	B	TO SAVE
1650	BOXELDER	Acer negundo	6	4	C	TO REMOVE
1651	BOXELDER	Acer negundo	16	4	C	TO REMOVE
1652	MAPLE-SILVER	Acer saccharinum	12	3	B	TO SAVE
1653	BOXELDER	Acer negundo	16	4	C	TO REMOVE
1654	BOXELDER	Acer negundo	11	4	C	TO REMOVE
1655	MAPLE-SILVER	Acer saccharinum	22	3	B	TO REMOVE
1656	BOXELDER	Acer negundo	15	4	C	TO REMOVE
1657	BOXELDER	Acer negundo	7	4	C	TO REMOVE
1658	BOXELDER	Acer negundo	9	4	C	TO SAVE
1659	MULBERRY-SPP	Morus spp	31	4	D	TO REMOVE
1660	MAPLE-SILVER	Acer saccharinum	16	3	B	TO SAVE
1661	CHERRY-BLACK	Prunus serotina	11	3	C	TO SAVE
1662	MAPLE-SILVER	Acer saccharinum	13	3	B	TO SAVE
1663	BOXELDER	Acer negundo	30	4	C	TO SAVE
1664	MAPLE-SILVER	Acer saccharinum	8	3	B	TO SAVE
1665	MAPLE-SILVER	Acer saccharinum	8	3	B	TO SAVE
1666	WALNUT-BLACK	Juglans nigra	17	3	B	TO SAVE
1667	MAPLE-SILVER	Acer saccharinum	20	3	B	TO SAVE
1668	MAPLE-SILVER	Acer saccharinum	12	3	B	TO SAVE
1669	BOXELDER	Acer negundo	8	4	C	TO SAVE
1670	MAPLE-SILVER	Acer saccharinum	10	3	B	TO SAVE
1671	BOXELDER	Acer negundo	19	4	C	TO SAVE
1672	HACKBERRY	Celtis occidentalis	15	3	A	TO SAVE
1673	MAPLE-SILVER	Acer saccharinum	23	3	B	TO SAVE
1674	MAPLE-SILVER	Acer saccharinum	13	3	B	TO SAVE
1675	MAPLE-SILVER	Acer saccharinum	10	3	B	TO SAVE
1676	BOXELDER	Acer negundo	15	4	C	TO REMOVE
1677	CHERRY-BLACK	Prunus serotina	16	3	C	TO SAVE
1678	CHERRY-BLACK	Prunus serotina	6	4	C	TO SAVE
1679	MAPLE-SILVER	Acer saccharinum	6	4	B	TO SAVE
1680	BOXELDER	Acer negundo	13	4	C	TO REMOVE
1681	MAPLE-SILVER	Acer saccharinum	13	3	B	TO SAVE
1682	MAPLE-SILVER	Acer saccharinum	10	3	B	TO SAVE
1683	MAPLE-SILVER	Acer saccharinum	9	4	B	TO REMOVE
1684	MAPLE-SILVER	Acer saccharinum	17	2	B	TO SAVE
1685	MAPLE-SILVER	Acer saccharinum	21	3	B	TO REMOVE
1686	MAPLE-SILVER	Acer saccharinum	6	4	B	TO SAVE
1687	BOXELDER	Acer negundo	13	4	C	TO REMOVE
1688	MAPLE-SILVER	Acer saccharinum	24	3	B	TO SAVE
1689	MAPLE-SILVER	Acer saccharinum	16	3	B	TO SAVE
1690	CHERRY-BLACK	Prunus serotina	16	3	C	TO REMOVE
1691	CHERRY-BLACK	Prunus serotina	12	3	C	TO SAVE
1692	CHERRY-BLACK	Prunus serotina	9	4	C	TO REMOVE
1693	MAPLE-SILVER	Acer saccharinum	12	3	B	TO SAVE
1694	CHERRY-BLACK	Prunus serotina	13	4	C	TO REMOVE
1695	CHERRY-BLACK	Prunus serotina	9	4	C	TO REMOVE
1696	BOXELDER	Acer negundo	19	4	C	TO SAVE
1697	MAPLE-SILVER	Acer saccharinum	17	2	B	TO SAVE
1698	MAPLE-SILVER	Acer saccharinum	29	3	B	TO REMOVE
1699	CHERRY-BLACK	Prunus serotina	16	4	C	TO SAVE
1700	CHERRY-BLACK	Prunus serotina	9	3	C	TO REMOVE
1701	CHERRY-BLACK	Prunus serotina	19	4	C	TO SAVE
1702	MAPLE-SILVER	Acer saccharinum	15	2	B	TO SAVE
1703	MAPLE-SILVER	Acer saccharinum	16	3	B	TO SAVE
1704	BOXELDER	Acer negundo	12	4	C	TO REMOVE
1705	BOXELDER	Acer negundo	12	3	C	TO SAVE
1706	MAPLE-SILVER	Acer saccharinum	24	3	B	TO SAVE
1707	MAPLE-SILVER	Acer saccharinum	22	3	B	TO SAVE
1708	MAPLE-SILVER	Acer saccharinum	23	3	B	TO SAVE
1709	MAPLE-SILVER	Acer saccharinum	10	3	B	TO SAVE
1710	COTTONWOOD	Populus deltoides	16	3	C	TO REMOVE
1711	COTTONWOOD	Populus deltoides	16	3	C	TO REMOVE
1712	MAPLE-SILVER	Acer saccharinum	23	3	B	TO SAVE
1713	COTTONWOOD	Populus deltoides	20	3	C	TO REMOVE
1714	MAPLE-SILVER	Acer saccharinum	21	3	B	TO SAVE
1715	COTTONWOOD	Populus deltoides	35	3	C	TO REMOVE
1716	MAPLE-SILVER	Acer saccharinum	12	3	B	TO SAVE
1717	MAPLE-SILVER	Acer saccharinum	17	3	B	TO SAVE
1718	MAPLE-SILVER	Acer saccharinum	12	3	B	TO SAVE
1719	WALNUT-BLACK	Juglans nigra	14	2	B	TO SAVE
1720	CHERRY-BLACK	Prunus serotina	18	4	C	TO REMOVE
1721	MAPLE-SILVER	Acer saccharinum	15	4	B	TO REMOVE
1722	BOXELDER	Acer negundo	9	3	C	TO SAVE
1723	CHERRY-BLACK	Prunus serotina	14	5	C	TO REMOVE
1724	MAPLE-SILVER	Acer saccharinum	10	3	B	TO SAVE
1725	CHERRY-BLACK	Prunus serotina	12	4	C	TO REMOVE
1726	MAPLE-SILVER	Acer saccharinum	16	3	B	TO SAVE
1727	MAPLE-SILVER	Acer saccharinum	36	3	B	TO REMOVE
1728	MAPLE-SILVER	Acer saccharinum	11	3	B	TO SAVE
1729	MAPLE-SILVER	Acer saccharinum	9	4	B	TO SAVE
1730	MAPLE-SILVER	Acer saccharinum	32	3	B	TO REMOVE
1731	MAPLE-SILVER	Acer saccharinum	21	2	B	TO SAVE
1732	MAPLE-SILVER	Acer saccharinum	22	3	B	TO REMOVE
1733	BOXELDER	Acer negundo	9	4	C	TO REMOVE
1734	WALNUT-BLACK	Juglans nigra	17	3	B	TO SAVE
1735	ELM-AMERICAN	Ulmus americana	13	4	C	TO SAVE

TREE_NUM	SPECIES	LATIN	DBH	CONDITION	LIBERTYVILLE TREE GROUP	STATUS
1736	MAPLE-SILVER	Acer saccharinum	23	2	B	TO REMOVE
1737	BOXELDER	Acer negundo	16	4	C	TO SAVE
1738	ELM-AMERICAN	Ulmus americana	9	3	C	TO SAVE
1739	CHERRY-BLACK	Prunus serotina	13	4	C	TO REMOVE
1740	WALNUT-BLACK	Juglans nigra	13	4	B	TO SAVE
1741	CHERRY-BLACK	Prunus serotina	9	4	C	TO REMOVE
1742	BOXELDER	Acer negundo	8	4	C	TO SAVE
1743	MAPLE-SILVER	Acer saccharinum	30	3	B	TO SAVE
1744	MAPLE-SILVER	Acer saccharinum	24	2	B	TO SAVE
1745	MAPLE-SILVER	Acer saccharinum	32	4	B	TO SAVE
1746	MAPLE-SILVER	Acer saccharinum	18	3	B	TO SAVE
1747	MAPLE-SILVER	Acer saccharinum	10	3	B	TO SAVE
1748	MAPLE-SILVER	Acer saccharinum	11	3	B	TO SAVE
1749	MAPLE-SILVER	Acer saccharinum	22	3	B	TO SAVE
1750	MAPLE-SILVER	Acer saccharinum	24	3	B	TO SAVE
1751	MAPLE-SILVER	Acer saccharinum	17	3	B	TO SAVE
1752	MAPLE-SILVER	Acer saccharinum	23	3	B	TO SAVE
1753	MAPLE-SILVER	Acer saccharinum	18	3	B	TO SAVE
1754	MAPLE-SILVER	Acer saccharinum	17	3	B	TO SAVE
1755	MAPLE-SILVER	Acer saccharinum	8	4	B	TO SAVE
1756	MAPLE-SILVER	Acer saccharinum	35	3	B	TO SAVE
1757	BOXELDER	Acer negundo	12	4	C	TO SAVE
1758	ELM-AMERICAN	Ulmus americana	19	3	C	TO SAVE
1759	BOXELDER	Acer negundo	8	3	C	TO SAVE
1760	BOXELDER	Acer negundo	10	3	C	TO SAVE
1761	ELM-AMERICAN	Ulmus americana	27	2	C	TO SAVE
1762	BOXELDER	Acer negundo	13	3	C	TO SAVE
1763	BOXELDER	Acer negundo	8	3	C	TO SAVE
1764	POPLAR-WHITE	Populus alba	10	3	D	TO SAVE
1765	BOXELDER	Acer negundo	13	4	C	TO SAVE
1766	BOXELDER	Acer negundo	14	4	C	TO SAVE
1767	BOXELDER	Acer negundo	12	3	C	TO SAVE
1768	BOXELDER	Acer negundo	7	3	C	TO SAVE
1769	COTTONWOOD	Populus deltoides	27	2	C	TO REMOVE
1770	BOXELDER	Acer negundo	6	4	C	TO REMOVE
1771	BOXELDER	Acer negundo	31	4	C	TO REMOVE
1772	COTTONWOOD	Populus deltoides	10	3	C	TO REMOVE
1773	MAPLE-SILVER	Acer saccharinum	12	4	B	TO REMOVE
1774	COTTONWOOD	Populus deltoides	19	2	C	TO SAVE
1775	MAPLE-SILVER	Acer saccharinum	12	4	B	TO REMOVE
1776	BOXELDER	Acer negundo	6	4	C	TO SAVE
1777	BOXELDER	Acer negundo	6	4	C	TO SAVE
1778	MAPLE-SILVER	Acer saccharinum	36	3	B	TO REMOVE
1779	BOXELDER	Acer negundo	12	3	C	TO SAVE
1780	BOXELDER	Acer negundo	28	4	C	TO REMOVE
1781	BOXELDER	Acer negundo	9	3	C	TO SAVE
1782	BOXELDER	Acer negundo	7	4	C	TO REMOVE
1783	MAPLE-SILVER	Acer saccharinum	11	3	B	TO REMOVE
1784	BOXELDER	Acer negundo	7	3	C	TO SAVE
1785	MAPLE-SILVER	Acer saccharinum	47	2	B	TO REMOVE
1786	BOXELDER	Acer negundo	9	3	C	TO SAVE
1787	BOXELDER	Acer negundo	17	3	C	TO SAVE
1788	CHERRY-BLACK	Prunus serotina	9	4	C	TO REMOVE
1789	CHERRY-BLACK	Prunus serotina	9	4	C	TO REMOVE
1790	BOXELDER	Acer negundo	12	3	C	TO SAVE
1791	CHERRY-BLACK	Prunus serotina	10	4	C	TO REMOVE
1792	BOXELDER	Acer negundo	6	3	C	TO SAVE
1793	CHERRY-BLACK	Prunus serotina	10	4	C	TO REMOVE
1794	APPLE-CRAB SPP	Malus spp	10	4	A	TO REMOVE
1795	ELM-AMERICAN	Ulmus americana	10	3	C	TO SAVE
1796	BOXELDER	Acer negundo	8	3	C	TO SAVE
1797	MAPLE-SILVER	Acer saccharinum	28	2	B	TO REMOVE
1798	BOXELDER	Acer negundo	11	3	C	TO SAVE
1799	MAPLE-SILVER	Acer saccharinum	11	3	B	TO REMOVE
1800	MAPLE-SILVER	Acer saccharinum	16	3	B	TO REMOVE
1801	BOXELDER	Acer negundo	9	3	C	TO SAVE
1802	MAPLE-SILVER	Acer saccharinum	13	3	B	TO REMOVE
1803	MULBERRY-SPP	Morus spp	17	3	D	TO SAVE
1804	MAPLE-SILVER	Acer saccharinum	20	3	B	TO REMOVE
1805	COTTONWOOD	Populus deltoides	17	2	C	TO SAVE
1806	MAPLE-SILVER	Acer saccharinum	26	3	B	TO REMOVE
1807	BOXELDER	Acer negundo	14	3	C	TO SAVE
1808	CHERRY-BLACK	Prunus serotina	13	4	C	TO REMOVE
1809	CHERRY-BLACK	Prunus serotina	11	4	C	TO REMOVE
1810	MULBERRY-SPP	Morus spp	12	4	D	TO SAVE
1811	MULBERRY-SPP	Morus spp	8	3	D	TO SAVE
1812	MAPLE-SILVER	Acer saccharinum	25	3	B	TO REMOVE
1813	BOXELDER	Acer negundo	6	3	C	TO SAVE
1814	MULBERRY-SPP	Morus spp	12	3	D	TO SAVE
1815	MAPLE-SILVER	Acer saccharinum	24	3	B	TO REMOVE
1816	BOXELDER	Acer negundo	11	3	C	TO SAVE
1817	BOXELDER	Acer negundo	15	3	C	TO SAVE
1818	BOXELDER	Acer negundo	9	3	C	TO SAVE
1819	BOXELDER	Acer negundo	14	3	C	TO SAVE
1820	CHERRY-BLACK	Prunus serotina	10	4	C	TO REMOVE
1821	CHERRY-BLACK	Prunus serotina	11	4	C	TO REMOVE
1822	MAPLE-SILVER	Acer saccharinum	9	3	B	TO SAVE
1823	BOXELDER	Acer negundo	9	4	C	TO REMOVE
1824	MULBERRY-SPP	Morus spp	11	3	D	TO SAVE
1825	BOXELDER	Acer negundo	13	3	C	TO SAVE
1826	CHERRY-BLACK	Prunus serotina	21	4	C	TO REMOVE
1827	BOXELDER	Acer negundo	17	3	C	TO SAVE
1828	CHERRY-BLACK	Prunus serotina	20	4	C	TO REMOVE
1829	MAPLE-SILVER	Acer saccharinum	17	3	B	TO REMOVE
1830	CHERRY-BLACK	Prunus serotina	11	4	C	TO REMOVE
1831	BOXELDER	Acer negundo	13	3	C	TO REMOVE
1832	COTTONWOOD	Populus deltoides	17	2	C	TO REMOVE
1833	CHERRY-BLACK	Prunus serotina	9	4	C	TO REMOVE
1834	CHERRY-BLACK	Prunus serotina	11	4	C	TO REMOVE
1835	MAPLE-SILVER	Acer saccharinum	34	3	B	TO REMOVE
1836	BOXELDER	Acer negundo	10	4	C	TO SAVE
1837	BOXELDER	Acer negundo	10	3	C	TO REMOVE
1838	COTTONWOOD	Populus deltoides	23	2	C	TO REMOVE
1839	CHERRY-BLACK	Prunus serotina	15	3	C	TO REMOVE
1840	BOXELDER	Acer negundo	9	3	C	TO REMOVE
1841	MAPLE-SILVER	Acer saccharinum	12	3	B	TO REMOVE
1842	COTTONWOOD	Populus deltoides	24	2	C	TO REMOVE
1843	COTTONWOOD	Populus deltoides	16	3	C	TO REMOVE
1844	COTTONWOOD	Populus deltoides	16	2	C	TO REMOVE
1845	MAPLE-SILVER	Acer saccharinum	22	3	B	TO REMOVE
1846	CHERRY-BLACK	Prunus serotina	11	3	C	TO REMOVE
1847	BOXELDER	Acer negundo	12	3	C	TO REMOVE
1848	BOXELDER	Acer negundo	15	4	C	TO REMOVE
1849	BOXELDER	Acer negundo	16	3	C	TO REMOVE
1850	BOXELDER	Acer negundo	16	2	C	TO REMOVE
1851	MULBERRY-SPP	Morus spp	6	3	D	TO REMOVE
1852	MAPLE-SILVER	Acer saccharinum	18	3	B	TO REMOVE
1853	MAPLE-SILVER	Acer saccharinum	34	2	B	TO REMOVE

TREE_NUM	SPECIES	LATIN	DBH	CONDITION	LIBERTYVILLE TREE GROUP	STATUS
1854	MAPLE-SILVER	Acer saccharinum	32	3	B	TO REMOVE
1855	MAPLE-SILVER	Acer saccharinum	35	3	B	TO REMOVE
1856	COTTONWOOD	Populus deltoides	6	3	C	TO REMOVE
1857	COTTONWOOD	Populus deltoides	10	3	C	TO REMOVE
1858	BOXELDER	Acer negundo	10	4	C	TO REMOVE
1859	BOXELDER	Acer negundo	19	3	C	TO REMOVE
1860	WALNUT-BLACK	Juglans nigra	8	4	B	TO REMOVE
1861	BOXELDER	Acer negundo	18	3	C	TO SAVE
1862	BOXELDER	Acer negundo	17	3	C	TO SAVE
1863	MAPLE-SILVER	Acer saccharinum	27	3	B	TO REMOVE
1864	CHERRY-BLACK	Prunus serotina	18	3	C	TO SAVE
1865	MAPLE-SILVER	Acer saccharinum	32	3	B	TO REMOVE
1866	MAPLE-SILVER	Acer saccharinum	29	4	B	TO REMOVE
1867	BOXELDER	Acer negundo	13	4	C	TO SAVE
1868	CHERRY-BLACK	Prunus serotina	11	3	C	TO SAVE
1869	MAPLE-SILVER	Acer saccharinum	45	3	B	TO REMOVE
1870	CHERRY-BLACK	Prunus serotina	6	4	C	TO SAVE
1871	CHERRY-BLACK	Prunus serotina	6	4	C	TO SAVE
1872	CHERRY-BLACK	Prunus serotina	15	4	C	TO REMOVE
1873	CHERRY-BLACK	Prunus serotina	11	3	C	TO SAVE
1874	WALNUT-BLACK	Juglans nigra	11	3	B	TO REMOVE
1875	CHERRY-BLACK	Prunus serotina	7	3	C	TO SAVE
1876	CHERRY-BLACK	Prunus serotina	15	4	C	TO REMOVE
1877	CHERRY-BLACK	Prunus serotina	13	3	C	TO SAVE
1878	CHERRY-BLACK	Prunus serotina	8	3	C	TO SAVE
1879	BOXELDER	Acer negundo	13	3	C	TO SAVE
1880	BOXELDER	Acer negundo	10	4	C	TO REMOVE
1881	BOXELDER	Acer negundo	14	2	C	TO REMOVE
1882	BOXELDER	Acer negundo	12	4	C	TO REMOVE
1883	BOXELDER	Acer negundo	18	4	C	TO REMOVE
1884	BOXELDER	Acer negundo	6	4	C	TO REMOVE
1885	BOXELDER	Acer negundo	24	4	C	TO REMOVE
1886	CHERRY-BLACK	Prunus serotina	13	4	C	TO REMOVE
1887	CHERRY-BLACK	Prunus serotina	17	3	C	TO REMOVE
1888	BOXELDER	Acer negundo	11	4	C	TO REMOVE
1889	MAPLE-SILVER	Acer saccharinum	49	2	B	TO REMOVE
1890	MAPLE-SILVER	Acer saccharinum	25	3	B	TO REMOVE
1891	MAPLE-SILVER	Acer saccharinum	26	4	B	TO REMOVE
1892	MAPLE-SILVER	Acer saccharinum	22	4	B	TO REMOVE
1893	BOXELDER	Acer negundo	27	4	C	TO REMOVE
1894	MAPLE-NORWAY	Acer platanoides	25	3	B	TO REMOVE
1895	BOXELDER	Acer negundo	20	4	C	TO REMOVE
1896	BOXELDER	Acer negundo	22	4	C	TO REMOVE
1897	CHERRY-BLACK	Prunus serotina	16	4	C	TO REMOVE
1898	BOXELDER	Acer negundo	24	4	C	TO REMOVE
1899	BOXELDER	Acer negundo	4	3	C	TO SAVE
1900	CHERRY-BLACK	Prunus serotina	9	4	C	TO REMOVE
1901	BOXELDER	Acer negundo	14	4	C	TO REMOVE
1902	MAPLE-SILVER	Acer saccharinum	31	4	B	TO REMOVE
1903	WILLOW-SPP	Salix spp	11	4	C	TO SAVE
1904	CHERRY-BLACK	Prunus serotina	9	3	C	TO SAVE
1905	CHERRY-BLACK	Prunus serotina	7	4	C	TO REMOVE
1906	ELM-AMERICAN	Ulmus americana	10	3	C	TO SAVE
1907	MAPLE-SILVER	Acer saccharinum	30	3	B	TO SAVE
1908	BOXELDER	Acer negundo	18	4	C	TO SAVE
1909	BOXELDER	Acer negundo	17	4	C	TO SAVE
1910	BOXELDER	Acer negundo	16	4	C	TO SAVE
1911	BOXELDER	Acer negundo	11	4	C	TO SAVE
1912	BOXELDER	Acer negundo	18	4	C	TO SAVE
1913	CHERRY-BLACK	Prunus serotina	7	4	C	TO REMOVE
1914	CHERRY-BLACK	Prunus serotina	7	4	C	TO REMOVE
1915	CHERRY-BLACK	Prunus serotina	10	4	C	TO SAVE
1916	CHERRY-BLACK	Prunus serotina	12	4	C	TO REMOVE
1917	BOXELDER	Acer negundo	17	4	C	TO SAVE
1918	CHERRY-BLACK	Prunus serotina	13	4	C	TO SAVE
1919	BOXELDER	Acer negundo	14	4	C	TO REMOVE
1920	APPLE-CRAB SPP	Malus spp	10	4	A	TO SAVE
1921	MAPLE-SILVER	Acer saccharinum	26	3	B	TO REMOVE
1922	MAPLE-SILVER	Acer saccharinum	13	3	B	TO REMOVE
1923	MAPLE-SILVER	Acer saccharinum	12	3	B	TO REMOVE
1924	BOXELDER	Acer negundo	16	4	C	TO SAVE
1925	MAPLE-SILVER	Acer saccharinum	15	3	B	TO REMOVE
1926	BOXELDER	Acer negundo	9	4	C	TO REMOVE
1927	COTTONWOOD	Populus deltoides	16	3	C	TO SAVE
1928	CHERRY-BLACK	Prunus serotina	19	4	C	TO REMOVE
1929	WILLOW-SPP	Salix spp	17	3	C	TO SAVE
1930	MAPLE-SILVER	Acer saccharinum	14	4	B	TO REMOVE
1931	COTTONWOOD	Populus deltoides	24	2	C	TO SAVE
1932	MAPLE-SILVER	Acer saccharinum	32	3	B	TO REMOVE
1933	CHERRY-BLACK	Prunus serotina	16	3	C	TO REMOVE
1934	BOXELDER	Acer negundo	11	4	C	TO REMOVE
1935	BOXELDER	Acer negundo	21	3	C	TO SAVE
1936	MAPLE-SILVER	Acer saccharinum	12	3	B	TO REMOVE
1937	MAPLE-SILVER	Acer saccharinum	10	3	B	TO REMOVE
1938	MAPLE-SILVER	Acer saccharinum	21	3	B	TO REMOVE
1939	WILLOW-SPP	Salix spp	16	3	C	TO SAVE
1940	COTTONWOOD	Populus deltoides	10	3	C	TO SAVE
1941	MAPLE-SILVER	Acer saccharinum	28	3	B	TO REMOVE
1942	WILLOW-SPP	Salix spp	13	3	C	TO SAVE
1943	CHERRY-BLACK	Prunus serotina	11	4	C	TO REMOVE
1944	BOXELDER	Acer negundo	13	4	C	TO SAVE
1945	CHERRY-BLACK	Prunus serotina	16	4	C	TO REMOVE
1946	WALNUT-BLACK	Juglans nigra	16	2	B	TO SAVE
1947	CHERRY-BLACK	Prunus serotina	11	4	C	TO REMOVE
1948	MAPLE-SILVER	Acer saccharinum	40	2	B	TO REMOVE
1949	CHERRY-BLACK	Prunus serotina	9	4	C	TO SAVE
1950	CHERRY-BLACK	Prunus serotina	14	4	C	TO REMOVE
1951	BOXELDER	Acer negundo	9	3	C	TO SAVE
1952	BOXELDER	Acer negundo	11	4	C	TO REMOVE
1953	BOXELDER	Acer negundo	18	3	C	TO SAVE
1954	CHERRY-BLACK	Prunus serotina	15	3	C	TO REMOVE
1955	BOXELDER	Acer negundo	9	3	C	TO SAVE
1956	CHERRY-BLACK	Prunus serotina	10	4	C	TO REMOVE
1957	BOXELDER	Acer negundo	6	4	C	TO SAVE
1958	MAPLE-SILVER	Acer saccharinum	31	2	B	TO REMOVE
1959	CHERRY-BLACK	Prunus serotina	12	3	C	TO SAVE
1960	BOXELDER	Acer negundo	17	4	C	TO REMOVE
1961	CHERRY-BLACK	Prunus serotina	19	4	C	TO REMOVE
1962	CHERRY-BLACK	Prunus serotina	17	4	C	TO SAVE
1963	CHERRY-BLACK	Prunus serotina	24	3	C	TO REMOVE
1964	CHERRY-BLACK	Prunus serotina	16	3	C	TO SAVE
1965	BOXELDER	Acer negundo	15	4	C	TO SAVE
1966	BOXELDER	Acer negundo	15	4	C	TO SAVE
1967	CHERRY-BLACK	Prunus serotina	27	4	C	TO SAVE
1968	CHERRY-BLACK	Prunus serotina	9	4	C	TO REMOVE
1969	BOXELDER	Acer negundo	11	3	C	TO SAVE
1970	CHERRY-BLACK	Prunus serotina	10	4	C	TO REMOVE
1971	CHERRY-BLACK	Prunus serotina	18	4	C	TO SAVE
1972	MAPLE-SILVER	Acer saccharinum	32	2	B	TO REMOVE
1973	WALNUT-BLACK	Juglans nigra	18	3	B	TO SAVE
1974	BOXELDER	Acer negundo	15	4	C	TO REMOVE
1975	WALNUT-BLACK	Juglans nigra	18	3	B	TO SAVE

TREE_NUM	SPECIES	LATIN	DBH	CONDITION	LIBERTYVILLE TREE GROUP	STATUS
1976	CHERRY-BLACK	Prunus serotina	8	4	C	TO REMOVE
1977	BOXELDER	Acer negundo	16	3	C	TO SAVE
1978	CHERRY-BLACK	Prunus serotina	14	4	C	TO REMOVE
1979	BOXELDER	Acer negundo	7	4	C	TO SAVE
1980	MAPLE-SILVER	Acer saccharinum	16	3	B	TO REMOVE
1981	BOXELDER	Acer negundo	16	4	C	TO SAVE
1982	MAPLE-SILVER	Acer saccharinum	38	2	B	TO SAVE
1983	BOXELDER	Acer negundo	10	4	C	TO SAVE
1984	CHERRY-BLACK	Prunus serotina	30	3	C	TO SAVE
1985	CHERRY-BLACK	Prunus serotina	12	4	C	TO REMOVE
1986	CHERRY-BLACK	Prunus serotina	10	3	C	TO SAVE
1987	BOXELDER	Acer negundo	9	4	C	TO SAVE
1988	CHERRY-BL

MAP OF TERRITORY TO BE ANNEXED

TO THE VILLAGE OF LIBERTYVILLE, LAKE COUNTY, ILLINOIS

THAT PART OF THE NORTHWEST QUARTER OF SECTION 8, TOWNSHIP 44 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN

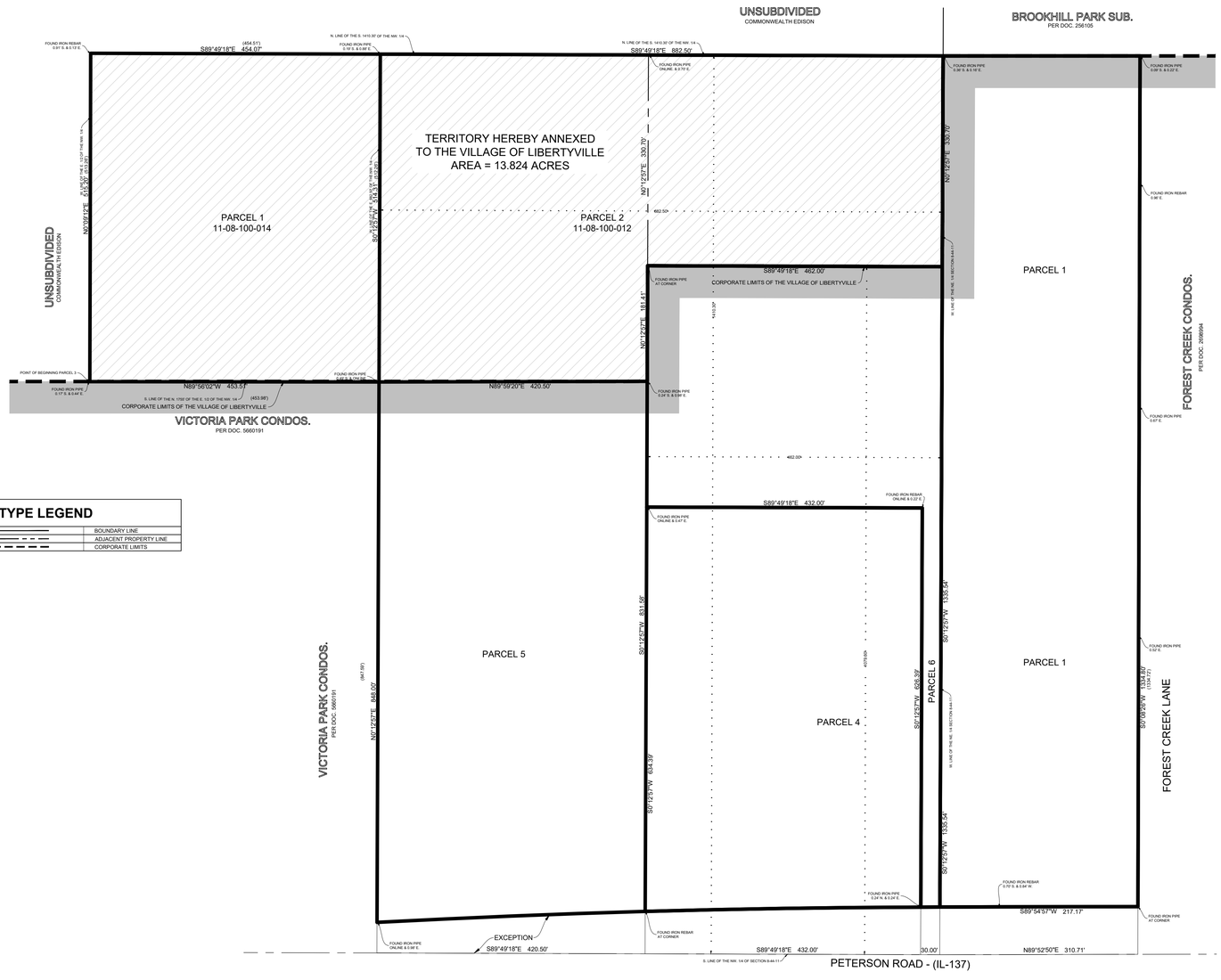
Tax PINs:
11-08-100-014 (Parcel 1)
11-08-100-012 (Parcel 2)

Survey Prepared For:
Pulte Home Company, LLC
1900 East Golf Road, Suite 300
Schaumburg, IL 60173

Site Address:
540-610 Peterson Rd.
Libertyville, IL 60048

BASIS OF BEARINGS

North American Datum of 1983 (2011)
Illinois State Plane East Zone (1201)



HATCH LEGEND

	EXISTING CORPORATE LIMITS OF THE VILLAGE OF LIBERTYVILLE
	HEREBY ANNEXED TO THE VILLAGE OF LIBERTYVILLE

LINE TYPE LEGEND

	BOUNDARY LINE
	ADJACENT PROPERTY LINE
	CORPORATE LIMITS

AREA OF ANNEXATION

PARCEL 1: 233,588 SQ.FT. 5.362 AC.
PARCEL 2: 368,588 SQ.FT. 8.461 AC.

TOTAL AREA: 602,176 SQ.FT . 13.824 AC.

GRAPHIC SCALE IN FEET
100 0 50 100 200
1"=100' @ 24"X36"

LEGAL DESCRIPTION OF TERRITORY TO BE ANNEXED

PARCEL 1:

THAT PART OF THE EAST 1/2 OF THE NORTH WEST 1/4 OF SECTION 8, TOWNSHIP 44 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS BEGINNING AT A POINT ON THE WEST LINE OF THE EAST 1/2 OF SAID NORTH WEST 1/4 WHICH IS 1755 FEET SOUTH OF THE NORTH WEST CORNER THEREOF; THENCE EAST ALONG THE SOUTH LINE OF THE NORTH 1755 FEET OF SAID EAST 1/2 OF THE NORTH WEST 1/4, A DISTANCE OF 453.98 FEET TO THE WEST LINE OF THE EAST 882.50 FEET OF THE NORTH WEST 1/4 OF SAID SECTION 8; THENCE NORTH ALONG SAID WEST LINE OF THE EAST 882.50 FEET, A DISTANCE OF 512.66 FEET TO THE NORTH LINE OF THE SOUTH 1410.30 FEET OF THE NORTH WEST 1/4 OF SAID SECTION 8; THENCE WEST ALONG SAID NORTH LINE OF THE SOUTH 1410.30 FEET OF THE NORTH WEST 1/4, 454.51 FEET TO THE WEST LINE OF THE EAST 1/2 OF THE NORTH WEST 1/4 OF SAID SECTION 8; THENCE SOUTH ALONG SAID WEST LINE OF THE EAST 1/2 OF SAID NORTH WEST 1/4, A DISTANCE OF 513.26 FEET TO THE POINT OF BEGINNING, IN LAKE COUNTY, ILLINOIS.

PARCEL 2:

THE EAST 462.0 FEET OF THE SOUTH 1410.30 FEET (AS MEASURED ALONG THE EAST AND SOUTH LINES, RESPECTIVELY) OF THE NORTH WEST 1/4 OF SECTION 8, TOWNSHIP 44 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, (EXCEPT THE SOUTH 1079.60 FEET THEREOF), ALL IN LAKE COUNTY, ILLINOIS. AND THE WEST 420.5 FEET OF THE EAST 882.50 FEET OF THE SOUTH 1410.30 FEET (AS MEASURED ALONG THE EAST AND SOUTH LINES, RESPECTIVELY) OF THE NORTH WEST 1/4 OF SECTION 8, TOWNSHIP 44 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN (EXCEPT THAT PART DESCRIBED AS FOLLOWS, TO-WIT: BEGINNING AT THE SOUTH EAST CORNER OF THE SAID WEST 420.5 FEET OF THE EAST 882.50 FEET OF THE SOUTH 1410.30 FEET OF SECTION 8; THENCE NORTHERLY ALONG THE EAST LINE OF THE SAID WEST 420.5 FEET OF THE EAST 882.50 FEET OF THE SOUTH 1410.30 FEET OF THE NORTH WEST 1/4 OF SECTION 8 FOR A DISTANCE OF 898.19 FEET; THENCE WESTERLY ALONG A LINE TO THE WEST LINE OF THE SAID EAST 882.50 FEET OF THE NORTH WEST 1/4 OF SECTION 8 TO A POINT WHICH IS 896.80 FEET NORTHERLY OF THE SOUTH LINE OF THE SAID NORTH WEST 1/4 OF SECTION 8 (AS MEASURED ALONG THE SAID WEST LINE OF THE EAST 882.50 FEET); THENCE SOUTHERLY ALONG THE SAID WEST LINE OF THE EAST 882.50 FEET OF THE SOUTH 1410.30 FEET OF THE NORTH WEST 1/4 OF SECTION 8 FOR A DISTANCE OF 896.80 FEET TO THE SAID SOUTH LINE OF THE NORTH WEST 1/4 OF SECTION 8; THENCE EASTERLY ALONG THE SAID SOUTH LINE OF THE NORTH WEST 1/4 OF SECTION 8 FOR A DISTANCE OF 420.5 FEET TO THE POINT OF BEGINNING OF THIS EXCEPTION), IN LAKE COUNTY, ILLINOIS.

SURVEY NOTES:

1. DISTANCES ARE MARKED IN FEET AND DECIMAL PLACES THEREOF. NO DIMENSION SHALL BE ASSUMED BY SCALE MEASUREMENT HEREON.
2. COMPARE THIS MAP, LEGAL DESCRIPTION AND ALL SURVEY MONUMENTS BEFORE BUILDING, AND IMMEDIATELY REPORT ANY DISCREPANCIES TO THE SURVEYOR.
3. THIS MAP IS SUBJECT TO MATTERS OF TITLE, WHICH MAY BE REVEALED BY A CURRENT TITLE REPORT, EASEMENTS, SETBACKS AND OTHER RESTRICTIONS WHICH MAY BE FOUND IN A CURRENT TITLE REPORT, LOCAL ORDINANCE'S, DEEDS OR OTHER INSTRUMENTS OF RECORD HAVE NOT BEEN SHOWN
4. BOUNDARY LINES HAVE BEEN SHOWN HEREON BASED ON AN ALTA/NSPS LAND TITLE PREPARED BY KIMLEY HORN & ASSOC. COMPLETED NOVEMBER 8, 2024

SURVEYORS CERTIFICATION:

STATE OF ILLINOIS

DUPAGE COUNTY

THIS IS TO CERTIFY THAT WE, KIMLEY-HORN & ASSOC. HAVE PLATTED THE ABOVE DESCRIBED PROPERTY FOR THE PURPOSE OF ANNEXING SAID PROPERTY INTO THE VILLAGE OF LIBERTYVILLE AND THAT PLAT DRAWN HEREON IS A TRUE AND CORRECT REPRESENTATION OF SAID PROPERTY.

DATED THIS 20TH DAY OF DECEMBER, A.D. 2024

Brad S. Strohl
Professional Land Surveyor No. 3686
Kimley-Horn and Associates, Inc.
4201 Winfield Road, Suite 600
Warrenville, IL 60555
Ph. 331-207-4823
Brad.Strohl@kimley-horn.com

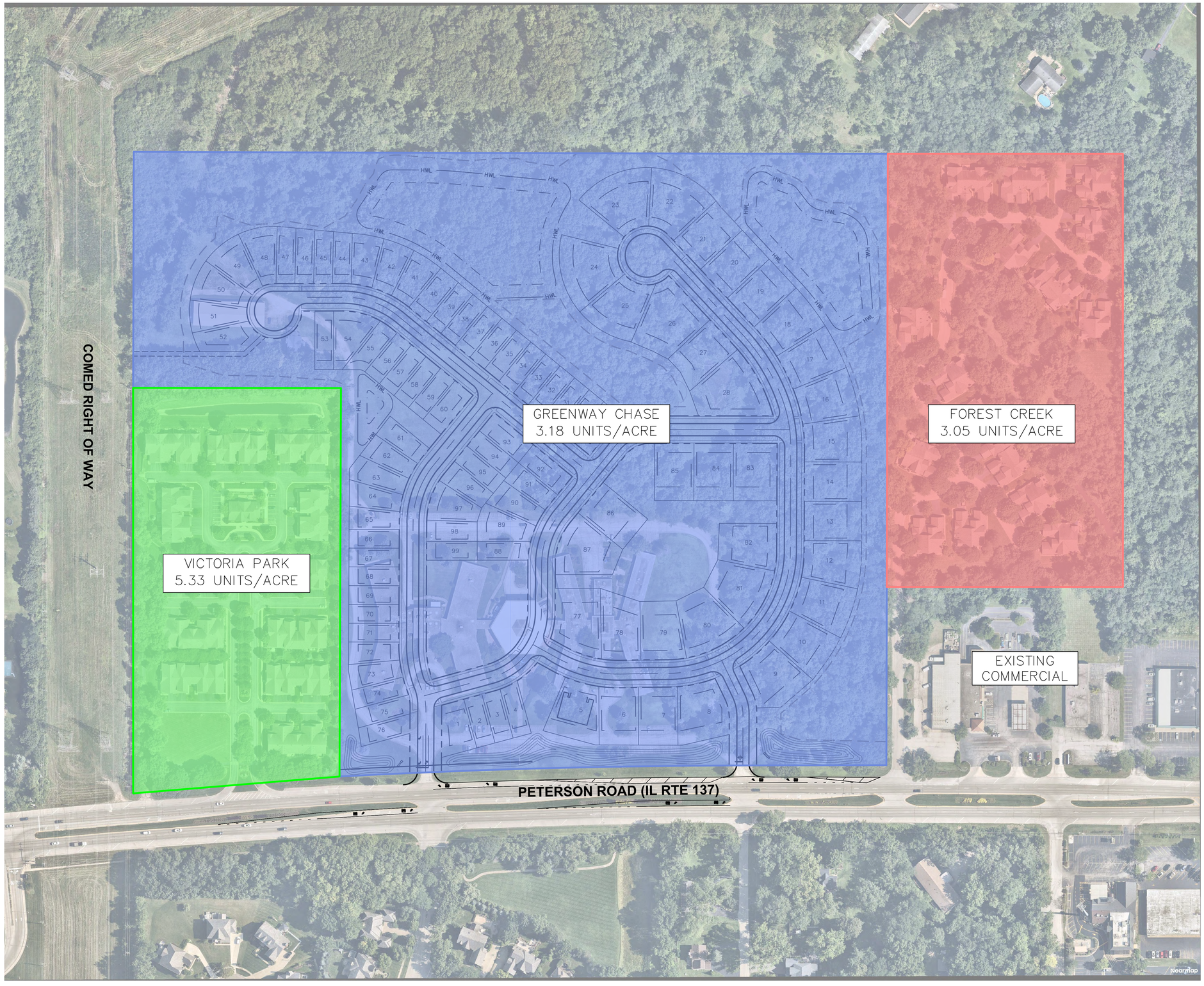
No.	DATE	REVISION DESCRIPTION
1	1/6/25	REVISED TAX PINS

Kimley»Horn
4201 Winfield Road
Warrenville, Illinois 60555
DESIGN FIRM # 184002012-0006
Tel. No. (630) 487-5550
www.kimley-horn.com

Scale	Drawn by	Checked by	Date	Project No.	Sheet No.
1"=100'	MGJ	BAS	12/18/24	168247001	1 OF 1

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DWG NAME: K:\CHS_LDEV\168247001_PULTE_LIBERTYVILLE_IL\2 DESIGN\CAD\SURVEY\SURVEY DESIGN\PLAT\OFANNEXATION-168247001.DWG PLOTTED BY STROHL, BRAD 1/6/2025 3:28 PM LAST SAVED 1/6/2025 3:26 PM



NORTH

GRAPHIC SCALE IN FEET
0 50 100 200

Call Before You Dig
JULIE
1-800-892-0123

No.	REVISIONS	DATE	BY

Kimley»Horn

© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
570 LAKE COOK ROAD, SUITE 200
DEERFIELD, IL 60015
PHONE: 847-405-9004
WWW.KIMLEY-HORN.COM

SCALE: AS NOTED
DESIGNED BY: INS
DRAWN BY: KTRM
CHECKED BY: RNM

PULTE HOME COMPANY, LLC

DENSITY EXHIBIT

GREENWAY CHASE
610 PETERSON ROAD
LIBERTYVILLE, IL 60048

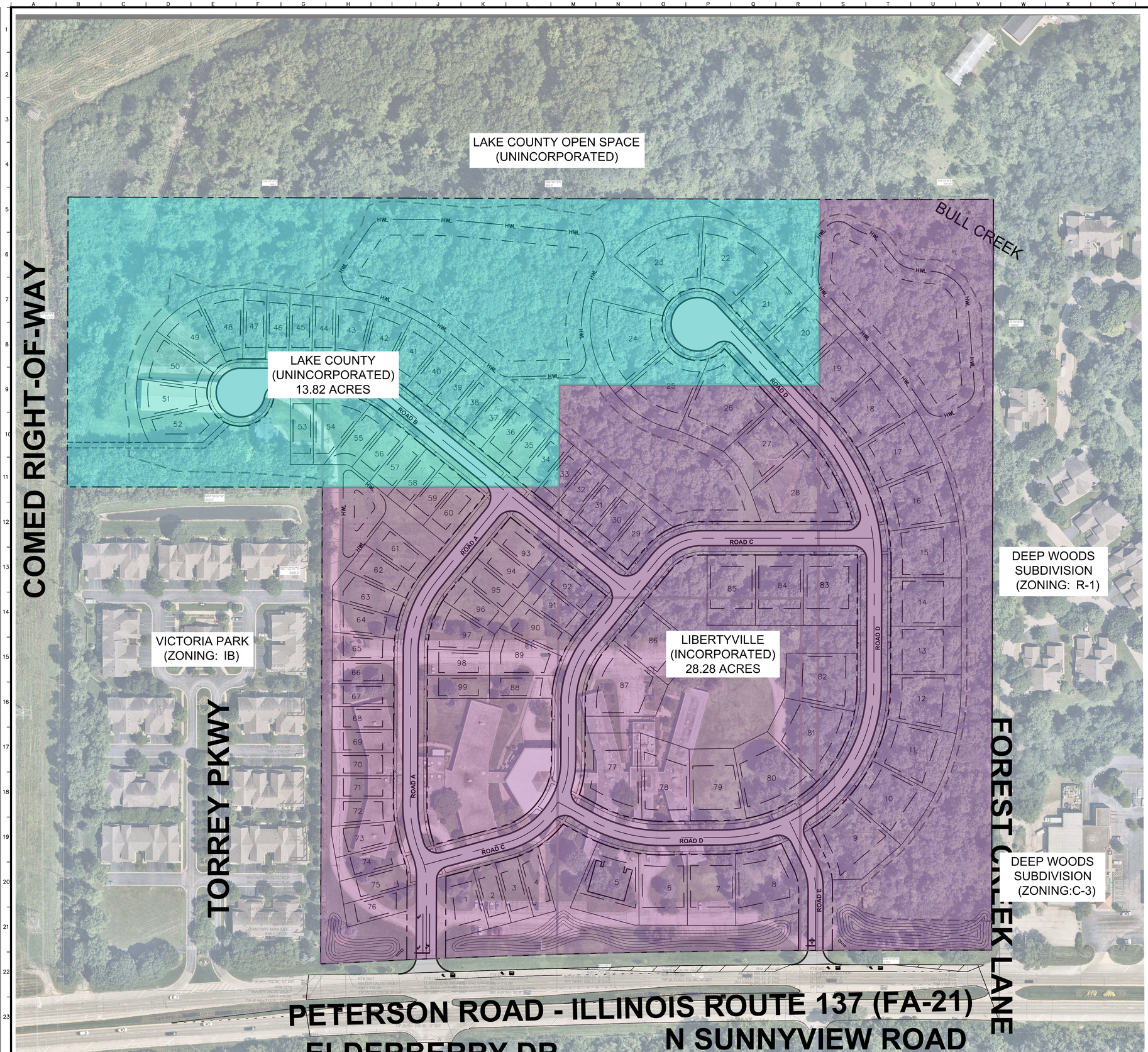
ORIGINAL ISSUE:
01/03/2025

KHA PROJECT NO.
168247001

SHEET NUMBER

EXH.

Drawing name: K:\CHS_LDEV\168247001_Pulte_Libertyville_IL\2 Design\CAD\Exhibits\168247001-Density Exhibit.dwg EXH. Mar 07, 2025 7:47am by: KiaraTR.Meller
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NORTH

GRAPHIC SCALE IN FEET
0 40 80 160

Call Before You Dig
JULIE
1-800-892-0123

No.	REVISIONS	DATE	BY

Kimley»Horn

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570 LAKE COOK ROAD, SUITE 200
DEERFIELD, IL 60015
PHONE: 847-520-9474
WWW.KIMLEY-HORN.COM

SCALE: AS NOTED
DESIGNED BY: INS
DRAWN BY: KTRM
CHECKED BY: RNM

PULTE HOME COMPANY, LLC

UNINCORPORATED ZONING EXHIBIT

GREENWAY CHASE
610 PETERSON ROAD
LIBERTYVILLE, IL 60048

ORIGINAL ISSUE: 01/03/2025
KHA PROJECT NO. 168247001
SHEET NUMBER
EXH.

Drawing name: K:\CHS_LDEV\168247001_Pulte_Libertyville_IL\2 Design\CAD\Exhibits\168247001 – Unincorporated Zoning Exhibit.dwg C2.0 Jan 09, 2025 9:43am by: derek.peterson
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Traffic Impact Study
Proposed Greenway Chase Development
Libertyville, Illinois



Prepared For:

PULTE GROUP

KLOA
Kenig, Lindgren, O'Hara, Aboona, Inc.

March 27, 2025

1. Executive Summary

This report summarizes the methodologies, results, and findings of a traffic impact study conducted by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) for a proposed residential development in Libertyville, Illinois. The site, which currently contains the Liberty Manor Extended Care facility, is located on the north side of Peterson Road (Illinois Route 137) opposite Elderberry Drive and Sunnyview Road. As proposed, the site will be redeveloped with a residential development consisting of 64 single-family homes and 70 age-restricted duplex units. Access to the development will be provided via the two existing full movement access roads off Peterson Road that align with Elderberry Drive and Sunnyview Road.

The objectives of the traffic study are as follows:

- Examine background traffic conditions including vehicular, pedestrian, bicycle, and public transportation conditions in the study area to establish a base condition.
- Assess the impact that the proposed development will have on traffic conditions in the area.
- Determine if any roadway or access improvements are necessary to accommodate traffic generated by the proposed development.

Vehicle, pedestrian, and bicycle counts were conducted during the weekday morning and evening peak periods at four intersections in the vicinity of the site in order to determine the existing traffic volumes during the general peak hours of commuter activity within each of these time periods. The intersections of Peterson Road with Forest Creek Lane, Sunnyview Road/Liberty Manor Extended Care east drive, Elderberry Lane/Liberty Manor Extended Care west drive, and Butterfield Square signalized access drive were included in this study.

With the addition of development-generated traffic as well as background growth, the following conclusions and improvements will be made:

- Outbound movements from the two access roads will be under stop sign control
- The eastern access road will provide one inbound lane and one outbound lane.
- The western access road will provide one inbound lane and two outbound lanes striped for an exclusive right-turn lane and a shared through/left-turn lane.
- The existing eastbound to northbound and westbound to southbound left-turn lanes on Peterson Road at its intersection with the west access road/Elderberry Drive will be buried within the existing median and extended to provide 215 feet of storage and 220 feet of taper consistent with IDOT's *Bureau of Design and Environment* (BDE) Manual requirements.

- An exclusive westbound to northbound right-turn lane on Peterson Road at its intersection with the west access road providing 215 feet of storage and 220 feet of taper.

- An exclusive eastbound to northbound left-turn lane on Peterson Road at its intersection with the east access road/Sunnyview Road will be buried within the existing median providing 215 feet of storage and 220 feet of taper.

- An exclusive westbound to southbound left-turn lane on Peterson Road at its intersection with the east access road/Sunnyview Road will be buried within the existing median. Given there is not enough distance to provide the required storage and taper, the exclusive left-turn lane will provide 150 feet of storage and 100 feet of taper.

- An exclusive westbound to northbound right-turn lane on Peterson Road at its intersection with the east access road. Given there is not enough frontage to provide the required storage and taper, the exclusive right-turn lane is proposed to provide 150 feet of storage and 95 feet of taper.

    - The two access roads that will serve the proposed development will help disperse the development-generated traffic, provide alternatives for the site traffic to enter and exit the development and improve emergency access.

    - Based on the results of the capacity analyses and taking into consideration the proposed geometric improvements, the traffic that will be generated by the proposed development will be accommodated by the area roadway system.

2. Introduction

This report summarizes the methodologies, results, and findings of a traffic impact study conducted by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) for a proposed residential development in Libertyville, Illinois. The site, which currently contains the Liberty Manor Extended Care facility, is located on the north side of Peterson Road (Illinois Route 137) opposite Elderberry Drive and Sunnyview Road. As proposed, the site will be redeveloped with a residential development consisting of 64 single-family homes and 70 age-restricted duplex units. Access to the development will be provided via the two existing full movement access roads off Peterson Road that align with Elderberry Drive and Sunnyview Road.

The purpose of this study was to examine background traffic conditions, assess the impact that the proposed development will have on traffic conditions in the area, and determine if any roadway or access improvements are necessary to accommodate traffic generated by the proposed development. **Figure 1** shows the location of the site in relation to the area roadway system. **Figure 2** shows an aerial view of the site.

The sections of this report present the following:

- Existing roadway conditions
- A description of the proposed development
- Directional distribution of the development traffic
- Vehicle trip generation for the development
- Future traffic conditions including access to the development
- Traffic analyses for the weekday morning and evening peak hours
- Recommendations with respect to adequacy of the site access and adjacent roadway system

Traffic capacity analyses were conducted for the weekday morning and evening peak hours for the following conditions:

1. Existing Traffic Conditions – Analyzes the capacity of the existing roadway system using peak hour traffic volumes form traffic counts conducted in 2024.

2. Year 2031 No-Build Conditions – Analyzes the capacity of the existing roadway system using existing traffic volumes increased by an ambient area growth factor not attributable to any particular development as well as the traffic to be generated by the remaining units within the Liberty Junction residential development located in the southeast quadrant of the intersection of Peterson Road with Milwaukee Avenue and the traffic to be generated by an affordable housing development to be located on the north side of Peterson Road opposite Bell Lane.

3. Year 2031 Total Projected Conditions – Analyzes the capacity of the future roadway system using the projected traffic volumes that include the Year 2031 no-build volumes and the traffic estimated to be generated by the proposed development.



Site Location **Figure 1**



Aerial View of Site **Figure 2**

3. Existing Conditions

Existing transportation conditions in the vicinity of the site were documented based on field visits conducted by KLOA, Inc. in order to obtain a database for projecting future conditions. The following provides a description of the geographical location of the site, physical characteristics of the area roadway system including lane usage and traffic control devices, and existing peak hour traffic volumes.

Development Site

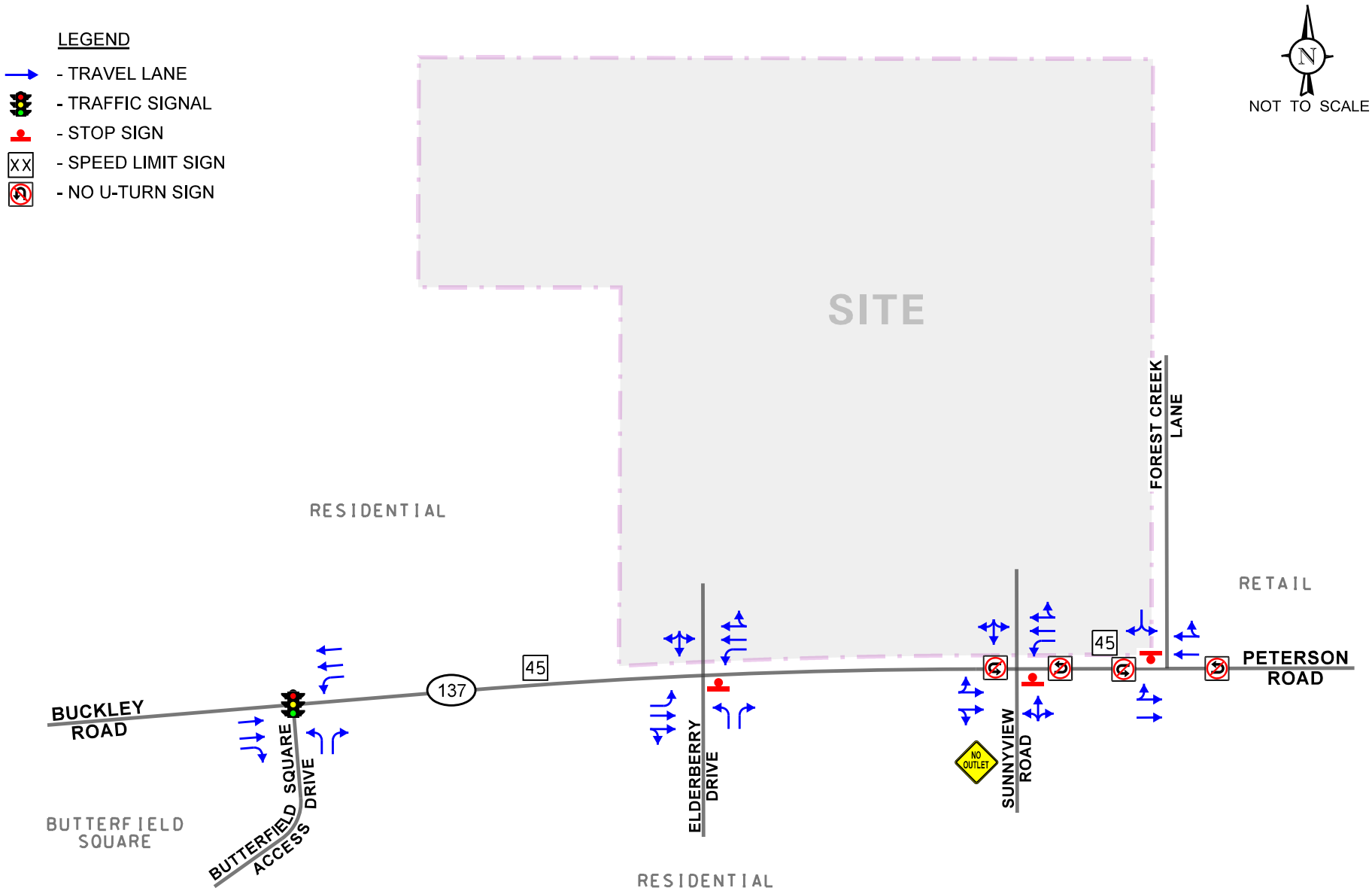
The site, which is currently occupied by the Liberty Manor Extended Care facility, is bounded by vacant land to the north, the Libertyville Tile & Carpet retail store to the east, Peterson Road to the south, and the Victoria Park townhome development to the west. Land uses in the vicinity of the site are primarily residential and retail. It should be noted that access to the site is currently served via two full movement access drives off Peterson Road located opposite Elderberry Lane and Sunnyview Road.

Existing Roadway System Characteristics

The characteristics of the existing roadways near the development are described below and illustrated in **Figure 3**.

Peterson Road (Illinois Route 137) is an east-west, principal arterial roadway that provides two lanes in each direction generally divided by a landscape median. At its unsignalized intersection with Forest Creek Lane, Peterson Road provides a through lane and a shared through/right-turn lane on the westbound approach and a shared through left-turn land and a through lane on the eastbound approach. At its unsignalized intersection with Sunnyview Road/Liberty Manor Extended Care east access drive, Peterson Road provides a shared left/through and a through/right-turn lane on the eastbound approach. The westbound approach provides an exclusive left-turn lane, a through lane and a shared through/right-turn lane. At its unsignalized intersection with Elderberry Lane/Liberty Manor Extended Care west access drive, Peterson Road provides an exclusive left-turn lane, a through lane and a shared through/right-turn lane on both approaches. At its signalized intersection with the Butterfield Square full access drive, Peterson Road provides two through lanes and an exclusive right-turn lane on the eastbound approach and an exclusive left-turn lane and two through lanes on the westbound approach. Peterson Road is under the jurisdiction of the Illinois Department of Transportation (IDOT), is designated as a Strategic Regional Arterial (SRA) in the vicinity of the site and carries an Annual Average Daily Traffic (AADT) volume of 28,800 vehicles (IDOT 2023). Peterson Road has a posted speed limit of 45 mph.

Forest Creek Lane is a north-south, private roadway that extends north from Peterson Road and provides one lane in each direction. At its unsignalized intersection with Peterson Road, Forest Creek Lane provides one lane on the southbound approach is under stop sign control. Forest Creek Lane has a posted speed limit of 15 mph.



Proposed
Greenway Chase
Libertyville, Illinois

Existing Roadway Characteristics

KLOA
Kenig,Lindgren,O'Hara,Aboona,Inc.

Job No: 24-280

Figure: 3

Sunnyview Road is a north-south, local roadway that extends south from Peterson Road for approximately 1,225 feet where the road is gated and provides one lane in each direction. At its unsignalized intersection with Peterson Road, Sunnyview Road provides one inbound lane and one outbound lane under stop sign control. Opposite Sunnyview Road is the Liberty Manor Extended care east access drive which provides one inbound lane and one outbound lane. Sunnyview Road is under the jurisdiction of Libertyville Township. South of the gate, the road is under the jurisdiction of the Village of Libertyville.

Elderberry Lane is a north-south, local roadway that extends south from Peterson Road to New Castle Drive and provides one lane in each direction. At its unsignalized intersection with Peterson Road, Sunnyview Road provides one inbound lane and one outbound lane under stop sign control. Opposite Sunnyview Road is the Liberty Manor Extended care west access drive which provides one inbound lane and one outbound lane. Sunnyview Road is under the jurisdiction of the Village of Libertyville.

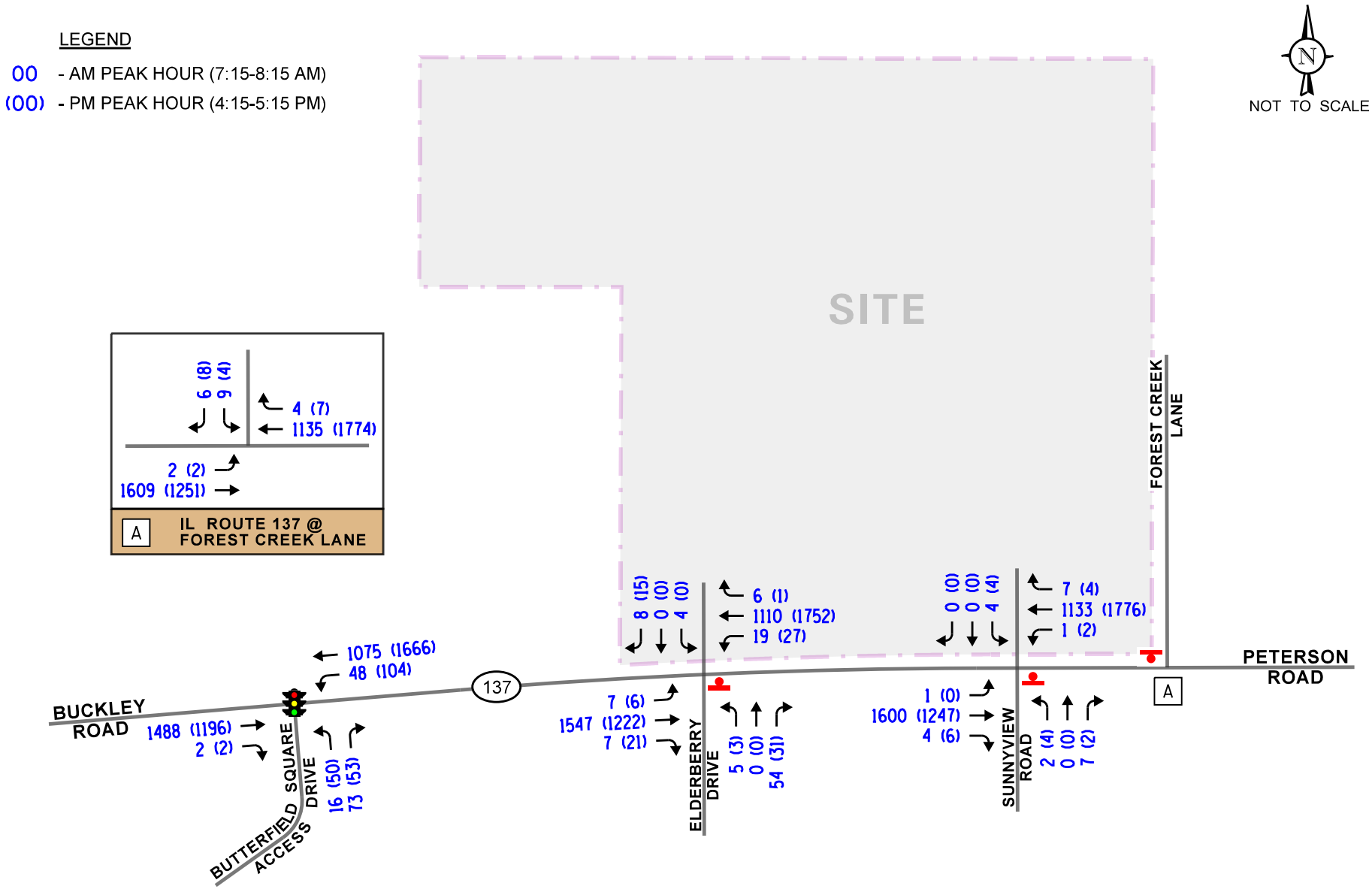
Butterfield Square East Access Drive is a north-south access drive serving the Butterfield Square shopping center. At its signalized intersection with Peterson Road, the access drive provides one inbound lane and two outbound lanes striped for an exclusive left-turn lane and an exclusive right-turn lane.

Existing Traffic Volumes

In order to determine current traffic conditions in the vicinity of the site, KLOA, Inc. conducted peak period traffic counts using Miovision Scout Video Collection Units on Tuesday, November 12, 2024 during the weekday morning (7:00 A.M. to 9:00 A.M.) and weekday evening (4:00 P.M. to 6:00 P.M.) peak periods at the following intersections:

- Peterson Road with Forest Creek Lane
- Peterson Road with Sunnyview Road/Liberty Manor Extended Care east drive
- Peterson Road with Elderberry Lane/Liberty Manor Extended Care west drive
- Peterson Road with Butterfield Square signalized access drive

The results of the traffic counts indicated that the weekday morning peak hour of traffic occurs from 7:15 A.M. to 8:15 A.M. and the weekday evening peak hour of traffic occurs from 4:15 P.M. to 5:15 P.M. Copies of the traffic count summary sheets are included in the Appendix. **Figure 4** illustrates the existing peak hour vehicle traffic volumes.



Proposed
Greenway Chase
Libertyville, Illinois

Existing Traffic Volumes

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Job No: 24-280 Figure: 4

Crash Summary

KLOA, Inc. obtained crash data for the most recent available past five years (2019 to 2023) at the intersections of Peterson Road with Forest Creek Lane, Sunnyview Road, and Elderberry Drive. A review of the crash data revealed no crashes occurred at the intersection of Peterson Road with Sunnyview Road during the review period. Further, no fatalities were reported at any of the study area intersections during the review period. A summary of the crash data for the intersections of Peterson Road with Forest Creek Lane and Elderberry Drive are shown in **Tables 1** and **2.**[1]

Table 1
PETERSON ROAD WITH FOREST CREEK LANE- CRASH SUMMARY

Year	Type of Crash Frequency						
	Angle	Object	Rear End	Sideswipe	Turning	Other	Total
2019	0	0	0	0	0	0	0
2020	0	0	0	0	0	0	0
2021	0	0	1	0	0	0	1
2022	0	0	0	0	0	0	0
2023	0	0	0	0	0	0	0
Total	**0**	**0**	**1**	**0**	**0**	**0**	**1**
Average/Year	**0**	**0**	**<1.0**	**0**	**0**	**0**	**<1.0**

Table 2
PETERSON ROAD WITH ELDERBERRY DRIVE/LIBERTY MANOR WEST DRIVE - CRASH SUMMARY

Year	Type of Crash Frequency						
	Angle	Object	Rear End	Sideswipe	Turning	Other	Total
2019	0	0	0	0	0	0	0
2020	0	0	0	0	0	0	0
2021	0	0	0	0	1	0	1
2022	0	0	1	0	1	0	2
2023	0	0	0	0	1	1	2
Total	**0**	**0**	**1**	**0**	**3**	**1**	**5**
Average/Year	**0**	**0**	**<1.0**	**0**	**<1.0**	**<1.0**	**1.0**

[1] IDOT DISCLAIMER: The motor vehicle crash data referenced herein was provided by the Illinois Department of Transportation. Any conclusions drawn from analysis of the aforementioned data are the sole responsibility of the data recipient(s).

4. Traffic Characteristics of the Proposed Development

In order to properly evaluate future traffic conditions in the surrounding area, it was necessary to determine the traffic characteristics of the proposed development, including the directional distribution and volumes of traffic that it will generate.

Proposed Site and Development Plan

As proposed, the site will be redeveloped with a residential development consisting of 64 single-family homes and 70 age-restricted duplex units with construction is anticipated to commence on the Year 2026. Access to the development will be provided via the two existing full movement access roads located on Peterson Road opposite Elderberry Drive and Sunnyview Road. The east access road will provide one inbound lane and one outbound lane with outbound movements under stop sign control. The west access drive will provide one inbound lane and two outbound lanes striped for a shared left/through lane and an exclusive right-turn lane. Outbound movements will be under stop sign control. As part of the development, the following geometric improvements on Peterson Road will be constructed.

- The existing eastbound to northbound and westbound to southbound left-turn lanes on Peterson Road at its intersection with the west access road/Elderberry Drive will be buried within the existing median and extended to provide 215 feet of storage and 220 feet of taper consistent with IDOT's *Bureau of Design and Environment* (BDE) Manual requirements.

- An exclusive westbound to northbound right-turn lane on Peterson Road at its intersection with the west access road providing 215 feet of storage and 220 feet of taper.

- An exclusive eastbound to northbound left-turn lane on Peterson Road at its intersection with the east access road/Sunnyview Road will be buried within the existing median providing 215 feet of storage and 220 feet of taper.

- An exclusive westbound to southbound left-turn lane on Peterson Road at its intersection with the east access road/Sunnyview Road will be buried within the existing median. Given there is not enough distance to provide the required storage and taper, the exclusive left-turn lane will provide 150 feet of storage and 100 feet of taper.

- An exclusive westbound to northbound right-turn lane on Peterson Road at its intersection with the east access road. Given there is not enough frontage to provide the required storage and taper, the exclusive right-turn lane is proposed to provide 150 feet of storage and 95 feet of taper.

A copy of the preliminary site plan/geometric plan is included in the Appendix.

Directional Distribution

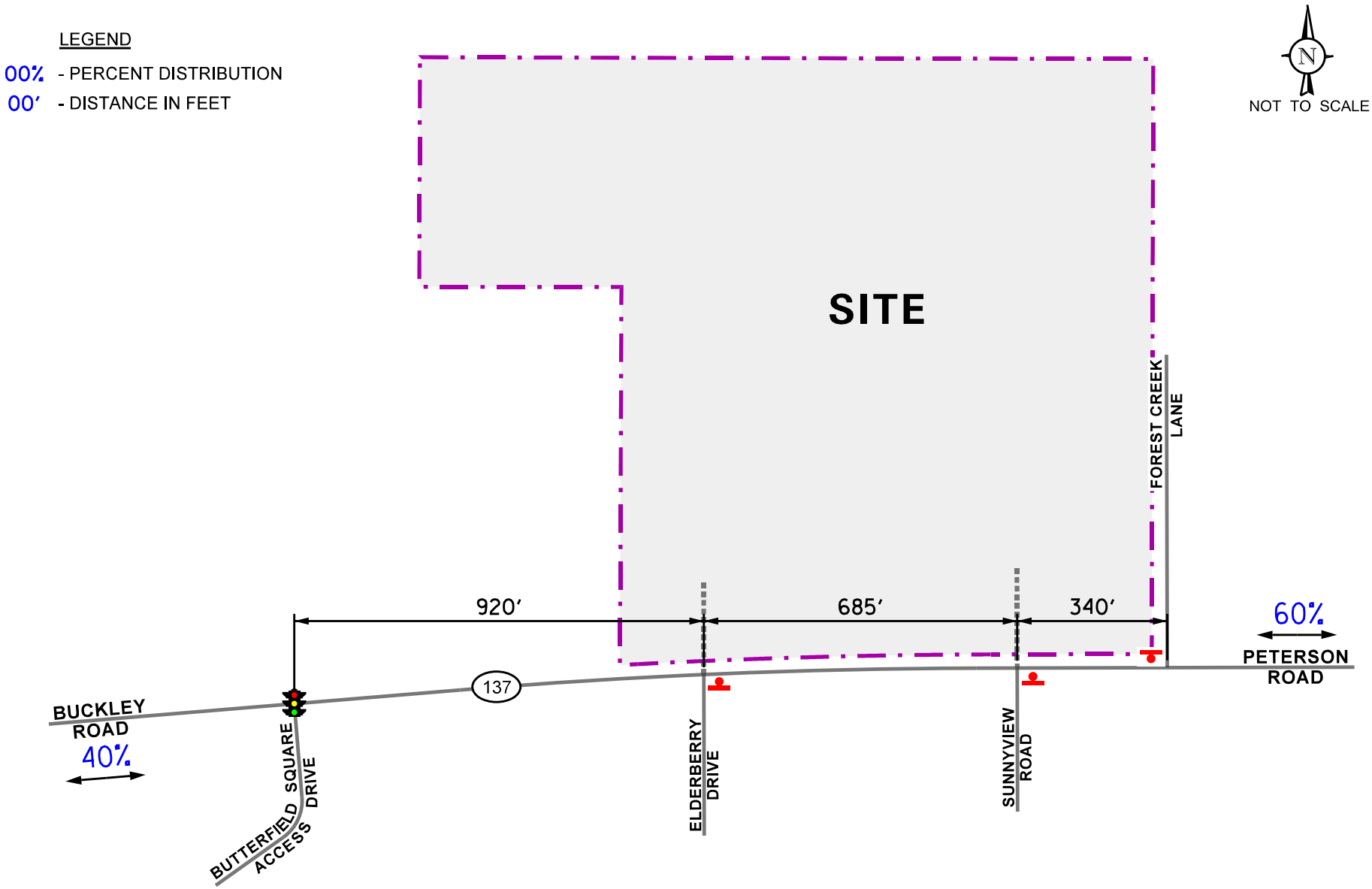
The directions from which employees and trucks will approach and depart the site were estimated based on existing travel patterns, as determined from the traffic counts. **Figure 5** illustrates the directional distribution of the site-generated traffic. Figure 5 also shows the distance, in feet, between the existing and proposed access intersections.

Development-Generated Traffic Volumes

The number of peak hour trips estimated to be generated by the proposed residential development was based on vehicle trip generation rates contained in *Trip Generation Manual*, 11th Edition, published by the Institute of Transportation Engineers (ITE). The "Single-Family Detached Housing" (Land-Use Code 210) and the "Senior Adult Housing – Single-Family" (Land Use Code 251) rates were used to determine the traffic to be generated by the development. The fitted curve equation was utilized to calculate the estimated number of trips. **Table 3** summarizes the trips projected to be generated by the development during the peak hours and on a daily basis. Copies of the ITE trip generation sheets are included in the Appendix.

Table 3
ESTIMATED PEAK HOUR AND DAILY TRIP GENERATION

ITE Land-Use Code	Type/Size	Weekday Morning Peak Hour			Weekday Evening Peak Hour			Daily Trips		
		In	Out	Total	In	Out	Total	In	Out	Total
210	Single-Family Detached (64 Units)	12	38	50	41	24	65	335	335	670
251	Senior Adult Housing – Single-Family (70 Units)	10	20	30	20	14	34	219	219	438
Total		**22**	**58**	**80**	**61**	**38**	**99**	**554**	**554**	**1,108**



Proposed
Greenway Chase
Libertyville, Illinois

Directional Distribution

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Job No: 24-280

Figure: 5

5. Projected Traffic Conditions

The total projected traffic volumes include the existing traffic volumes, increase in background traffic due to growth, and the traffic estimated to be generated by the proposed subject development.

Development Traffic Assignment

The estimated weekday morning and evening peak hour traffic volumes that will be generated by the proposed development were assigned to the roadway system in accordance with the previously described directional distribution (Figure 5). The total new traffic assignment for the development is illustrated in **Figure 6**.

Background (No-Build) Traffic Conditions

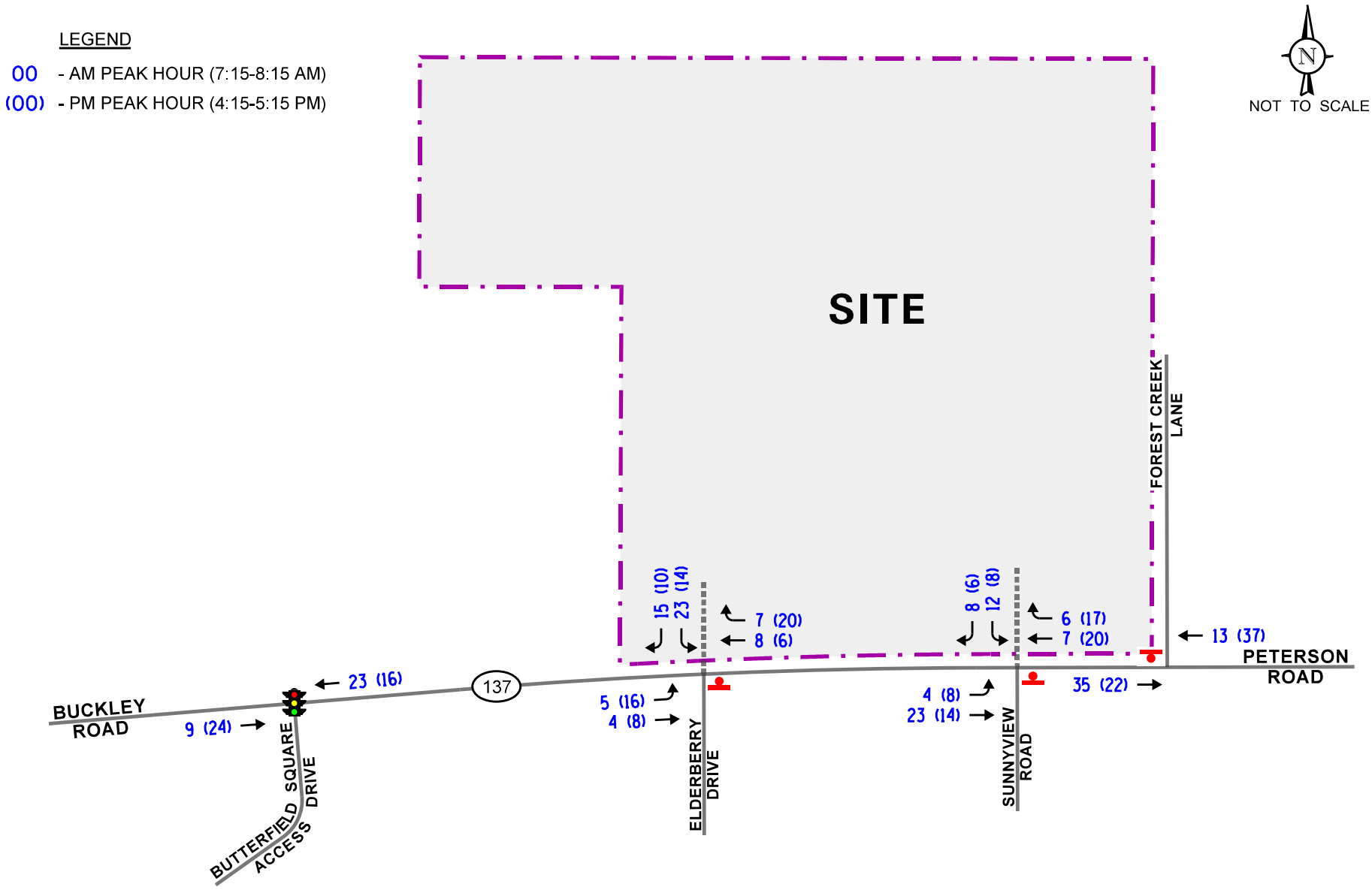
In the addition to the traffic to be generated by the proposed development, the study also considered the following additional regional growth and other developments proposed in the area:

- The existing traffic volumes (Figure 4) were increased by a regional growth factor to account for the increase in existing traffic related to regional growth in the area (i.e., not attributable to any planned development). Based on AADT projections provided by the Chicago Metropolitan Agency for Planning (CMAP), the existing traffic volumes were increased by an annually compounded growth rate of 0.3 percent per year for seven years for a total of three (3) percent. A copy of the CMAP projections letter is included in the Appendix.

- The remaining units to be sold and occupied (approximately 20 units) of the currently under construction residential development located in the southwest quadrant of the intersection of Peterson Road with Milwaukee Avenue (Illinois Route 21). This additional traffic was based on the traffic impact study for the development dated October 11, 2021 prepared by KLOA, Inc.

- The traffic volumes to be generated by a proposed residential development that will contain 34 affordable housing residential units for senior active adults and approximately 10,500 square feet of office space to be located on the north side of Peterson Road opposite Bell Lane. The traffic to be generated by this development was based on the traffic study dated December 16, 2022 prepared by KLOA, Inc.

Copies of the site traffic assignment for the two aforementioned developments are included in the Appendix. The Year 2031 no-build traffic volumes are illustrated in **Figure 7.**

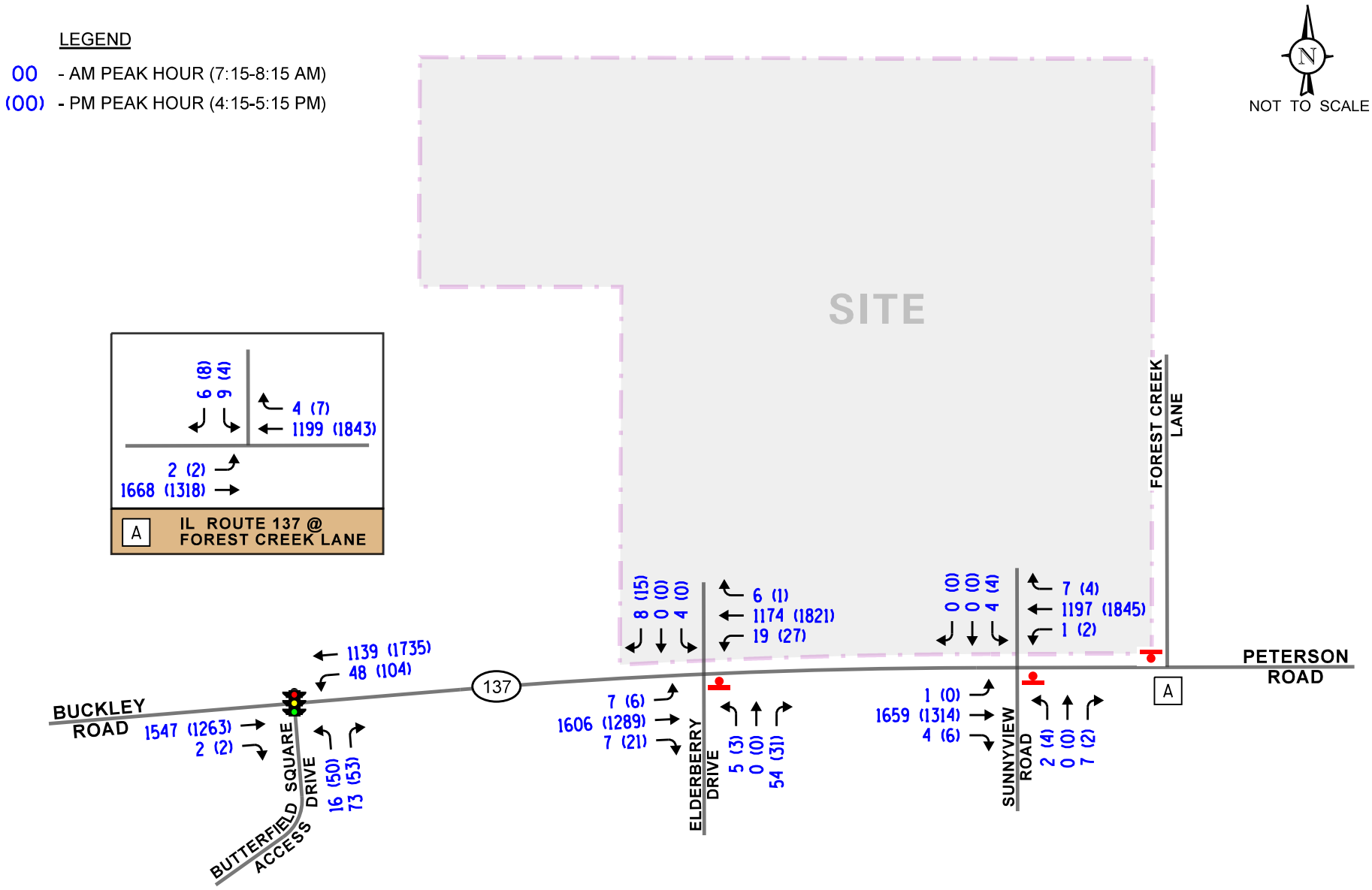


Proposed
Greenway Chase
Libertyville, Illinois

Site-Generated Traffic Volumes

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Job No: 24-280 Figure: 6



Proposed
Greenway Chase
Libertyville, Illinois

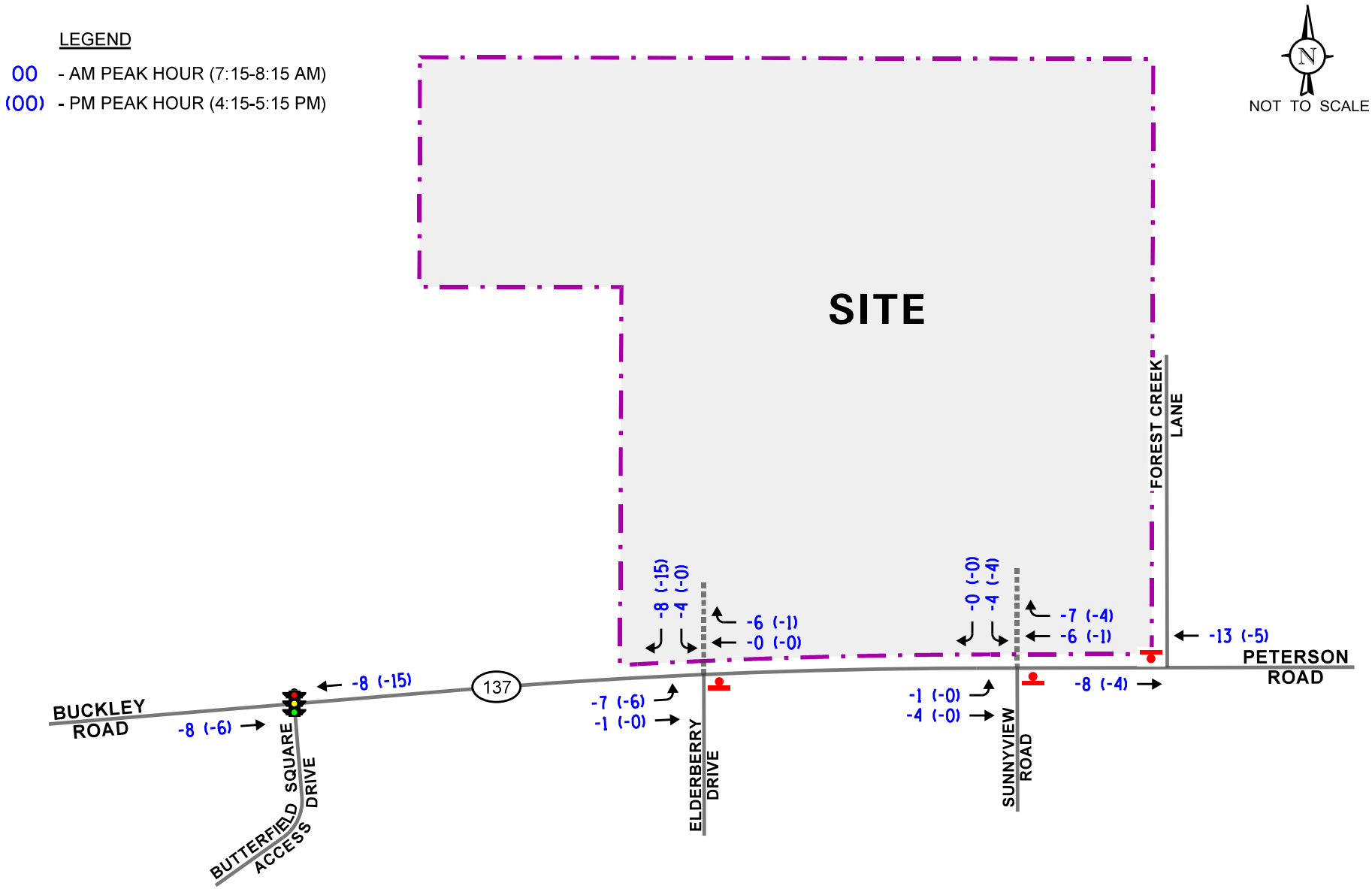
Year 2031 No-Build Traffic Volumes

KLOA
Kenig,Lindgren,O'Hara,Aboona,Inc.

Job No: 24-280 Figure: 7

Total Projected Traffic Volumes

It is important to note that the traffic volumes generated by the existing Liberty Manor Extended Care facility will be eliminated as a result of the development. A figure depicting the removal of the existing traffic volumes generated by the extended care facility is shown in **Figure 8**. The development-generated traffic (Figure 6) was added to the Year 2031 no-build traffic volumes (Figure 7) and to Figure 8 (removal of existing site-generated traffic volumes) to determine the Year 2031 total projected traffic volumes, as shown in **Figure 9.**

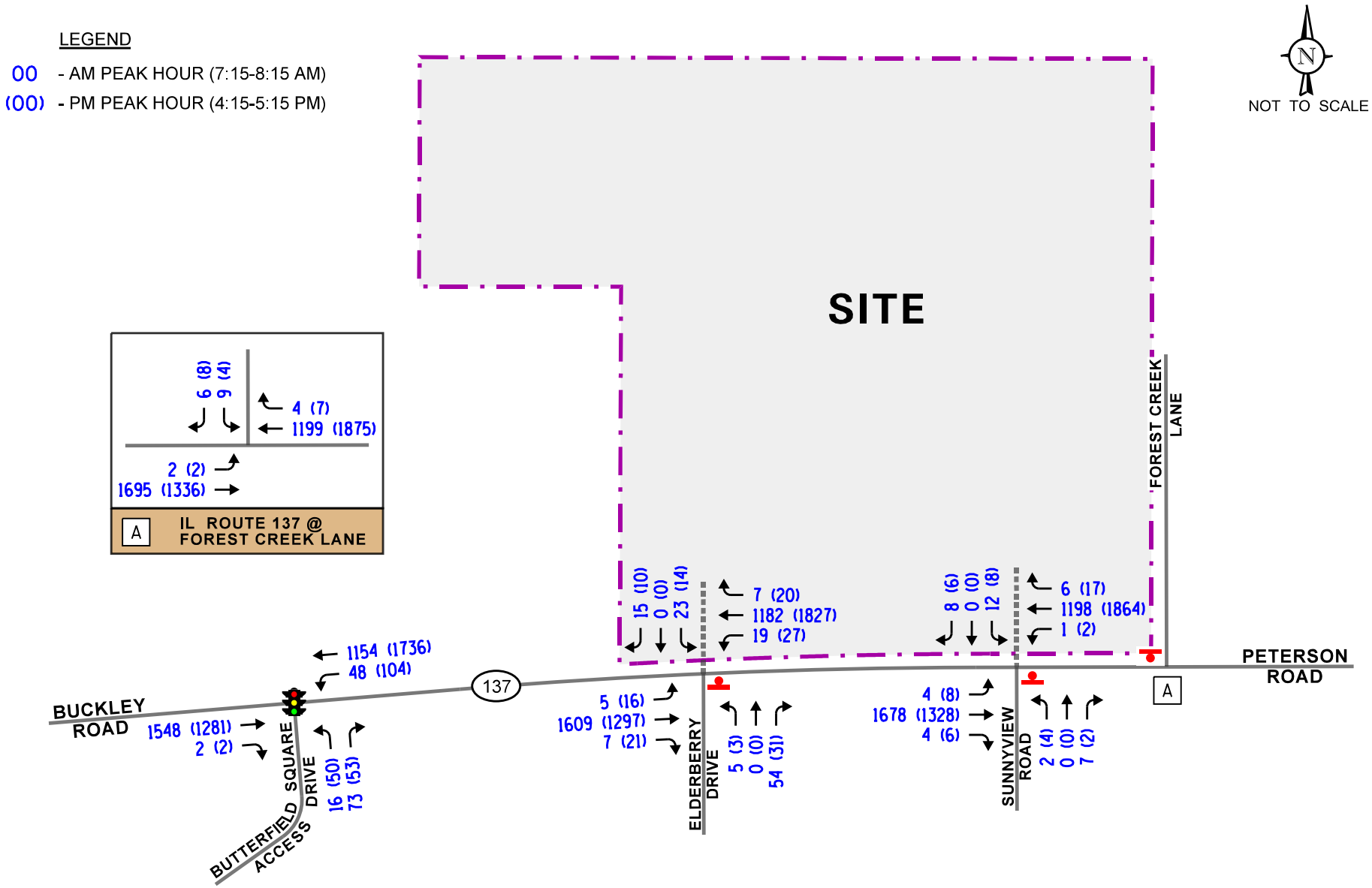


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Libertyville, Illinois

Existing Extended Care Traffic Generation Removal

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Year 2031 Total Traffic Volumes

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Job No: 24-280 Figure: 9

6. Traffic Analysis and Recommendations

The following provides an evaluation conducted for the weekday morning and evening peak hours. The analysis includes conducting capacity analyses to determine how well the roadway system and access drives are projected to operate and whether any roadway improvements or modifications are required.

Traffic Analyses

Roadway and adjacent or nearby intersection analyses were performed for the weekday morning and weekday evening peak hours for the existing, Year 2031 no-build, and Year 2031 total projected traffic volumes.

The traffic analyses were performed using the methodologies outlined in the Transportation Research Board's *Highway Capacity Manual (HCM), 7*th Edition and analyzed using Synchro/SimTraffic 12 software. The analysis for the traffic-signal controlled intersections were accomplished using field-measured cycle lengths and phasings to determine the average overall vehicle delay and levels of service.

The analyses for the unsignalized intersections determine the average control delay to vehicles at an intersection. Control delay is the elapsed time from a vehicle joining the queue at a stop sign (includes the time required to decelerate to a stop) until its departure from the stop sign and resumption of free flow speed. The methodology analyzes each intersection approach controlled by a stop sign and considers traffic volumes on all approaches and lane characteristics.

The ability of an intersection to accommodate traffic flow is expressed in terms of level of service, which is assigned a letter from A to F based on the average control delay experienced by vehicles passing through the intersection. The *Highway Capacity Manual* definitions for levels of service and the corresponding control delay for signalized intersections and unsignalized intersections are included in the Appendix of this report.

Summaries of the traffic analysis results showing the level of service and overall intersection delay (measured in seconds) for the existing, Year 2031 no-build, and Year 2031 total projected conditions are presented in **Tables 4** through **7**. A discussion of each intersection follows. Summary sheets for the capacity analyses are included in the Appendix.

Table 4
PETERSON ROAD WITH BUTTERFIELD SQUARE ACCESS DRIVE – SIGNALIZED

	Peak Hour	Eastbound		Westbound		Northbound		Overall
		T	R	L	T	L	R	
Existing Conditions	**Weekday Morning**	B 13.1	A 1.0	E 76.6	A 5.2	E 5.1	B 14.1	B 11.4
		B – 13.1		A – 8.3		C – 21.4		
	Weekday Evening	A 9.6	A 2.0	E 75.0	A 3.9	E 72.8	C 20.2	A 9.9
		A – 9.6		A – 8.1		D – 45.8		
2031 No-Build Conditions	**Weekday Morning**	B 13.6	A 1.0	E 76.6	A 5.4	E 55.1	B 14.1	B 11.6
		B – 13.6		A – 8.3		C – 21.4		
	Weekday Evening	A 10.0	A 2.0	E 75.0	A 4.1	E 72.8	C 20.2	B 10.1
		A – 10.0		A – 8.1		D – 45.8		
2031 Projected Conditions	**Weekday Morning**	B 13.6	A 1.0	E 76.6	A 5.5	E 55.1	B 14.1	B 11.6
		B – 13.6		A – 8.3		C – 21.4		
	Weekday Evening	B 10.1	A 2.0	E 75.0	A 4.1	E 72.8	C 20.2	B 10.1
		B – 10.1		A – 8.1		D – 45.8		

Letter denotes Level of Service L – Left Turn R – Right Turn
Delay is measured in seconds. T – Through

Table 5
CAPACITY ANALYSIS RESULTS – EXISTING CONDITIONS – UNSIGNALIZED

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Peterson Road with Forest Creek Lane				
• Eastbound Left/Through	B	14.8	C	16.6
• Southbound Approach	C	23.8	D	30.9
Peterson Road with Sunnyview Road/East Access Drive				
• Eastbound Left/Through	B	11.1	A	0.0
• Westbound Left Turn	B	14.3	B	12.0
• Northbound Approach	D	25.6	D	32.7
• Southbound Approach	D	34.0	F	71.9
Peterson Road with Elderberry Drive/West Access Drive				
• Eastbound Left Turn	B	12.0	C	16.4
• Westbound Left Turn	C	15.9	B	12.3
• Northbound Approach	C	22.1	C	17.5
• Southbound Approach	C	23.0	C	19.3

LOS = Level of Service
Delay is Measured in Seconds

Table 6
CAPACITY ANALYSIS RESULTS – 2031 NO BUILD CONDITIONS – UNSIGNALIZED

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Peterson Road with Forest Creek Lane				
• Eastbound Left/Through	C	15.5	C	17.4
• Southbound Approach	D	25.4	D	33.3
Peterson Road with Sunnyview Road/East Access Drive				
• Eastbound Left/Through	B	11.4	A	0.0
• Westbound Left Turn	B	14.8	B	12.4
• Northbound Approach	D	27.1	D	35.4
• Southbound Approach	E	36.8	F	80.1
Peterson Road with Elderberry Drive/West Access Drive				
• Eastbound Left Turn	B	12.5	C	17.2
• Westbound Left Turn	C	16.6	B	12.8
• Northbound Approach	C	23.3	C	18.4
• Southbound Approach	C	24.6	C	20.2

LOS = Level of Service
Delay is Measured in Seconds

Table 7
CAPACITY ANALYSIS RESULTS – 2031 FUTURE CONDITIONS – UNSIGNALIZED

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Peterson Road with Forest Creek Lane				
• Eastbound Left/Through	C	15.5	C	17.7
• Southbound Approach	D	25.5	D	34.4
Peterson Road with Sunnyview Road/East Access Drive				
• Eastbound Left Turn	B	11.5	C	18.0
• Westbound Left Turn	B	15.0	B	12.5
• Northbound Approach	D	27.8	E	37.8
• Southbound Approach	D	30.0	F	63.3
Peterson Road with Elderberry Drive/West Access Drive				
• Eastbound Left Turn	B	12.5	C	18.0
• Westbound Left Turn	C	16.6	B	12.9
• Northbound Approach	C	23.4	C	18.8
• Southbound Approach	E	38.6	F	77.3

LOS = Level of Service
Delay is Measured in Seconds

Discussion and Recommendations

The following summarizes how the intersections are projected to operate and identifies any roadway and traffic control improvements necessary to accommodate the development-generated traffic.

Peterson Road with Butterfield Square Access Drive

The results of the capacity analyses indicate that the intersection currently operates at an overall Level of Service (LOS) B during the weekday morning peak hour and LOS A during the weekday evening peak hour. Further, all turning movements operate at LOS E or better during both peak hours and Peterson Road through movements operate at LOS A. Under Year 2031 no-build conditions, this intersection is projected to continue to operate at the same overall LOS as under existing conditions during both peak hours.

Under Year 2031 total projected conditions, this intersection is projected to operate at an overall LOS B during the weekday morning and weekday evening peak hour with increases in delay of less than one second over existing and no-build conditions. Overall, the proposed development is projected to increase the volume of traffic traversing this intersection by less than one percent. As such, the intersection has sufficient reserve capacity to accommodate the traffic to be generated by the development and no roadway improvements or traffic control modifications are required.

Peterson Road with Forest Creek Lane

The results of the capacity analyses indicate that the southbound approach at this intersection operates at LOS C during the weekday morning peak hour and LOS D during the weekday evening peak hour. Eastbound left-turn movements currently operate at LOS C or better during the peak hours.

Under Year 2031 no build and total projected conditions, the southbound approach is projected to continue operating at LOS D with minimal increases in delay. Further, the eastbound left-turn movement is projected to operate at LOS C during both peak hours. As such, the traffic estimated to be generated by the proposed development will have a limited impact on the operations of this intersection.

Peterson Road with Sunnyview Road and the East Access Road

The results of the capacity analysis indicate that under existing conditions, the critical turning movements and the northbound and southbound approaches are operating at acceptable LOS with the exception of the southbound approach during the weekday evening peak hour which operates at LOS F. It is important to note that the LOS F is typical and expected when a minor road intersects a major arterial such as Peterson Road. Furthermore, it is important to note that Peterson Road provides a 28-foot-wide median break that can accommodate northbound and southbound two-part left turns.

Under Year 2031 no build conditions, the northbound approach will continue operating at the same LOS and the southbound approach will operate at LOS E and F during the weekday morning and evening peak hours respectively.

As indicated earlier and as part of the development, an eastbound left turn lane will be provided within the existing median to accommodate the projected traffic volumes. Furthermore, an exclusive westbound right-turn lane will also be provided. Based on the results of the capacity analyses for the Year 2031 total projected conditions, the eastbound and westbound left-turn movements will operate at LOS C or better. The northbound approach will operate at LOS D and E during the weekday morning and evening peak hours, respectively. The southbound approach will operate at LOS D and F during the weekday morning and evening peak hours, respectively. This level of service is typical and expected at the unsignalized intersection of an access drive or local roadway with a major arterial roadway such as Peterson Road. While outbound vehicles may experience some delay, this approach is projected to operate with a volume to capacity (v/c) ratio of less than one and 95th percentile queues of less than one vehicle indicating that vehicles will be able to turn onto Peterson Road. In addition, the results of the capacity analyses do not take into consideration gaps created in the Peterson Road traffic stream by the signalized intersection of Peterson Road with the Butterfield Square access road to the west. As such, this intersection has sufficient reserve capacity to accommodate the traffic to be generated by the development and no additional roadway improvements or traffic control modifications are required.

Peterson Road with Elderberry Drive and the West Access Road

The results of the capacity analysis indicate that under existing conditions, the critical turning movements and the northbound and southbound approaches are operating at acceptable LOS.

Under Year 2031 no build conditions, all of the critical turning movements as well as the north and south approaches will continue operating at the same LOS as under existing conditions.

As indicated earlier and as part of the development, the existing eastbound left-turn lane will be extended to meet the requirements set forth in the BDE Manual and an exclusive westbound right-turn lane will also be provided. Based on the results of the capacity analyses for the Year 2031 total projected conditions, the eastbound and westbound left turn movements from Peterson Road will operate at LOS C or better. The northbound approach will operate at LOS C during the weekday morning and evening peak hours. The southbound approach will operate at LOS E and F during the weekday morning and evening peak hours, respectively. As discussed previously, this level of service is typical and expected at the unsignalized intersection of an access drive or local roadway with a major arterial roadway such as Peterson Road. While outbound vehicles may experience some delay, this approach is projected to operate with a v/c ratio of less than one and 95th percentile queues of one vehicle or less indicating that vehicles will be able to turn onto Peterson Road. In addition, the results of the capacity analyses do not take into consideration gaps created in the Peterson Road traffic stream by the signalized intersection of Peterson Road with the Butterfield Square access road to the west. As such, this intersection has sufficient reserve capacity to accommodate the traffic to be generated by the development and no additional roadway improvements or traffic control modifications are required.

7. Conclusion

Based on the preceding analyses and recommendations, the following conclusions have been made:

- As proposed, the site will be redeveloped with a residential development consisting of 64 single-family homes and 70 age-restricted duplex units.

- Access to the redevelopment will be provided via the two existing full movement access roads on Peterson Road opposite Elderberry Drive and Sunnyview Road.

As part of the development, the following geometric improvements on Peterson Road will be constructed.

- The existing eastbound to northbound and westbound to southbound left-turn lanes on Peterson Road at its intersection with the west access road/Elderberry Drive will be buried within the existing median and extended to provide 215 feet of storage and 220 feet of taper consistent with IDOT's *Bureau of Design and Environment* (BDE) Manual requirements.

- An exclusive westbound to northbound right-turn lane on Peterson Road at its intersection with the west access road providing 215 feet of storage and 220 feet of taper.

- An exclusive eastbound to northbound left-turn lane on Peterson Road at its intersection with the east access road/Sunnyview Road will be buried within the existing median providing 215 feet of storage and 220 feet of taper.

- An exclusive westbound to southbound left-turn lane on Peterson Road at its intersection with the east access road/Sunnyview Road will be buried within the existing median. Given there is not enough distance to provide the required storage and taper, the exclusive left-turn lane will provide 150 feet of storage and 100 feet of taper.

- An exclusive westbound to northbound right-turn lane on Peterson Road at its intersection with the east access road. Given there is not enough frontage to provide the required storage and taper, the exclusive right-turn lane is proposed to provide 150 feet of storage and 95 feet of taper.

    - The two access roads that will serve the proposed development will help disperse the development-generated traffic, provide alternatives for the site traffic to enter and exit the development and improve emergency access.

    - Based on the results of the capacity analyses and taking into consideration the proposed geometric improvements, the traffic that will be generated by the proposed development will be accommodated by the area roadway system.

Appendix

Traffic Count Summary Sheets
Site Plan/Geometric Plan
ITE Trip Generation Sheets
CMAP Projections Letter
Site Traffic Assignment Figures of Adjacent Developments (From Original Traffic Study)
Level of Service Criteria
Capacity Analysis Summary Sheets

Traffic Count Summary Sheets

Peterson Road with Access Drive TMC - TMC

Tue Nov 12, 2024
Full Length (7 AM-9 AM, 4 PM-6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1245690, Location: 42.305872, -87.97968

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US

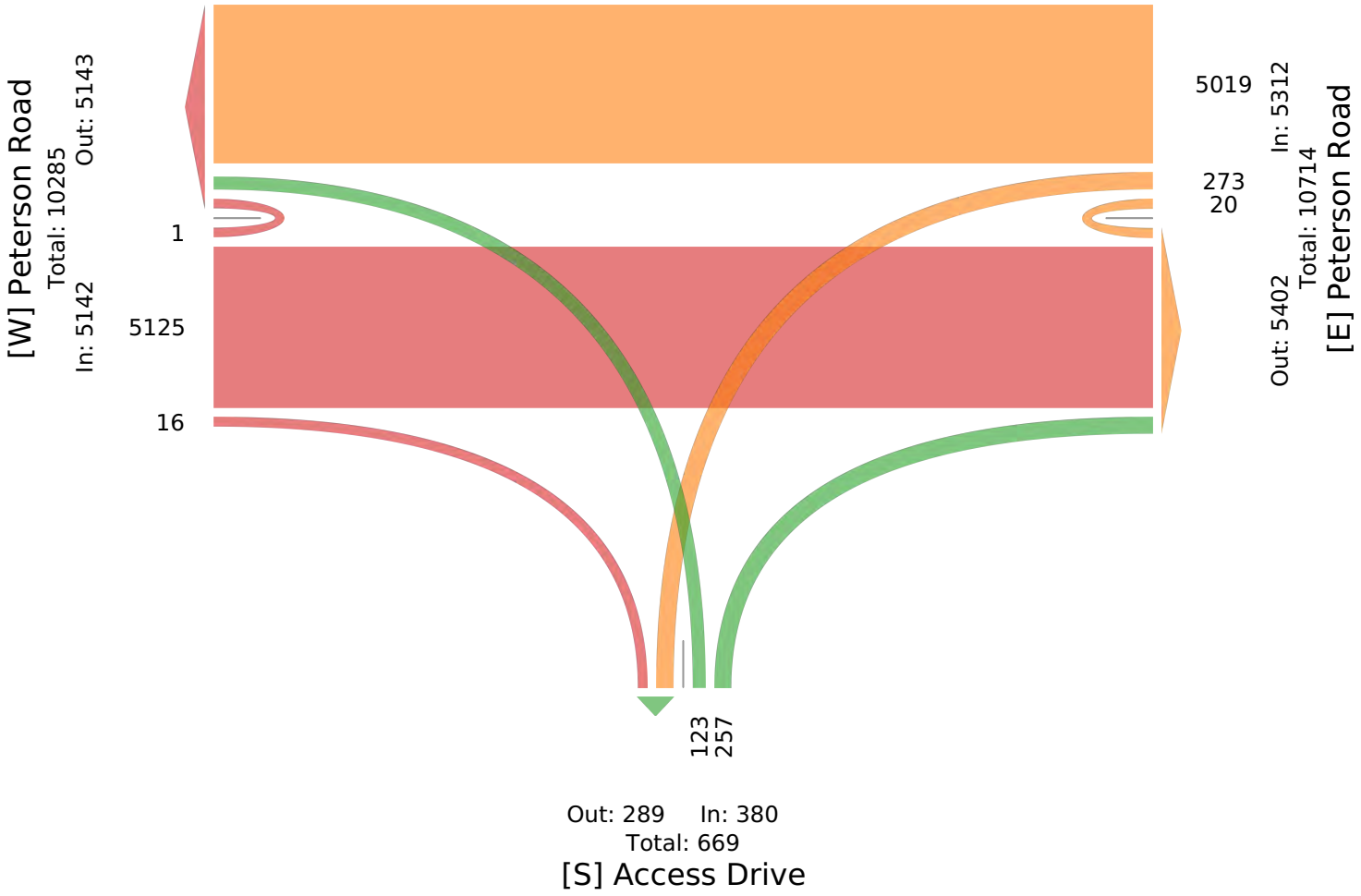
Leg	Peterson Road					Access Drive					Peterson Road					
Direction	Westbound					Northbound					Eastbound					
Time	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	**Int**
2024-11-12 7:00AM	215	6	1	**222**	0	16	3	0	**19**	0	1	330	0	**331**	0	**572**
7:15AM	265	17	0	**282**	0	19	4	0	**23**	0	1	378	0	**379**	0	**684**
7:30AM	309	7	0	**316**	0	18	4	0	**22**	0	0	373	0	**373**	0	**711**
7:45AM	259	14	0	**273**	0	15	5	0	**20**	0	0	366	0	**366**	0	**659**
Hourly Total	1048	44	1	**1093**	0	68	16	0	**84**	0	2	1447	0	**1449**	0	**2626**
8:00AM	231	10	0	**241**	0	21	3	0	**24**	0	1	363	0	**364**	0	**629**
8:15AM	210	15	2	**227**	0	20	6	0	**26**	0	1	327	1	**329**	0	**582**
8:30AM	187	10	2	**199**	0	9	4	0	**13**	0	2	362	0	**364**	0	**576**
8:45AM	160	19	3	**182**	0	17	6	0	**23**	0	1	352	0	**353**	0	**558**
Hourly Total	788	54	7	**849**	0	67	19	0	**86**	0	5	1404	1	**1410**	0	**2345**
4:00PM	389	20	0	**409**	0	21	11	0	**32**	0	1	314	0	**315**	0	**756**
4:15PM	414	20	2	**436**	0	15	10	0	**25**	0	0	297	0	**297**	0	**758**
4:30PM	392	37	2	**431**	0	16	15	0	**31**	0	1	303	0	**304**	0	**766**
4:45PM	402	26	1	**429**	0	11	14	0	**25**	0	1	267	0	**268**	0	**722**
Hourly Total	1597	103	5	**1705**	0	63	50	0	**113**	0	3	1181	0	**1184**	0	**3002**
5:00PM	443	21	2	**466**	0	11	11	0	**22**	0	0	343	0	**343**	0	**831**
5:15PM	405	9	1	**415**	0	15	9	0	**24**	0	2	284	0	**286**	0	**725**
5:30PM	389	21	2	**412**	0	11	12	0	**23**	0	0	246	0	**246**	0	**681**
5:45PM	349	21	2	**372**	0	22	6	0	**28**	0	4	220	0	**224**	0	**624**
Hourly Total	1586	72	7	**1665**	0	59	38	0	**97**	0	6	1093	0	**1099**	0	**2861**
Total	5019	273	20	**5312**	0	257	123	0	**380**	0	16	5125	1	**5142**	0	**10834**
% Approach	94.5%	5.1%	0.4%	**-**	-	67.6%	32.4%	0%	**-**	-	0.3%	99.7%	0%	**-**	-	-
% Total	46.3%	2.5%	0.2%	**49.0%**	-	2.4%	1.1%	0%	**3.5%**	-	0.1%	47.3%	0%	**47.5%**	-	-
Lights	4756	268	20	**5044**	-	251	116	0	**367**	-	14	4883	1	**4898**	-	10309
% Lights	94.8%	98.2%	100%	**95.0%**	-	97.7%	94.3%	0%	**96.6%**	-	87.5%	95.3%	100%	**95.3%**	-	95.2%
Single-Unit Trucks	101	2	0	**103**	-	3	5	0	**8**	-	2	95	0	**97**	-	208
% Single-Unit Trucks	2.0%	0.7%	0%	**1.9%**	-	1.2%	4.1%	0%	**2.1%**	-	12.5%	1.9%	0%	**1.9%**	-	1.9%
Articulated Trucks	118	3	0	**121**	-	1	1	0	**2**	-	0	119	0	**119**	-	242
% Articulated Trucks	2.4%	1.1%	0%	**2.3%**	-	0.4%	0.8%	0%	**0.5%**	-	0%	2.3%	0%	**2.3%**	-	2.2%
Buses	44	0	0	**44**	-	2	1	0	**3**	-	0	28	0	**28**	-	75
% Buses	0.9%	0%	0%	**0.8%**	-	0.8%	0.8%	0%	**0.8%**	-	0%	0.5%	0%	**0.5%**	-	0.7%
Bicycles on Road	0	0	0	**0**	-	0	0	0	**0**	-	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Peterson Road with Access Drive TMC - TMC

Tue Nov 12, 2024
Full Length (7 AM-9 AM, 4 PM-6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1245690, Location: 42.305872, -87.97968

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US



Peterson Road with Access Drive TMC - TMC

Tue Nov 12, 2024
AM Peak (7:15 AM - 8:15 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1245690, Location: 42.305872, -87.97968

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US

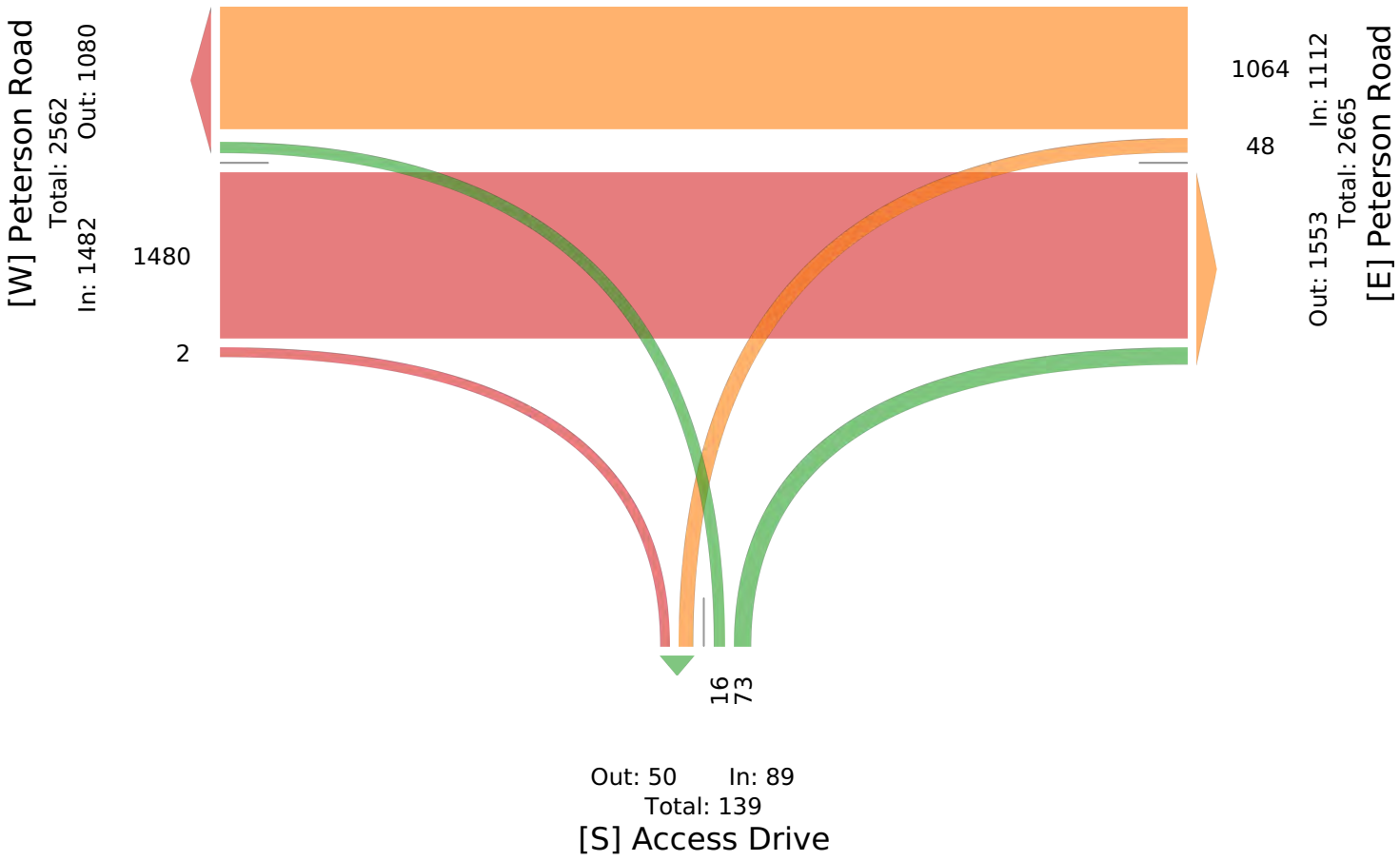
Leg	Peterson Road					Access Drive					Peterson Road					
Direction	Westbound					Northbound					Eastbound					
Time	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	**Int**
2024-11-12 7:15AM	265	17	0	**282**	0	19	4	0	**23**	0	1	378	0	**379**	0	**684**
7:30AM	309	7	0	**316**	0	18	4	0	**22**	0	0	373	0	**373**	0	**711**
7:45AM	259	14	0	**273**	0	15	5	0	**20**	0	0	366	0	**366**	0	**659**
8:00AM	231	10	0	**241**	0	21	3	0	**24**	0	1	363	0	**364**	0	**629**
Total	1064	48	0	**1112**	0	73	16	0	**89**	0	2	1480	0	**1482**	0	**2683**
% Approach	95.7%	4.3%	0%	**-**	-	82.0%	18.0%	0%	**-**	-	0.1%	99.9%	0%	**-**	-	-
% Total	39.7%	1.8%	0%	**41.4%**	-	2.7%	0.6%	0%	**3.3%**	-	0.1%	55.2%	0%	**55.2%**	-	-
PHF	0.861	0.706	-	**0.880**	-	0.869	0.800	-	**0.927**	-	0.500	0.979	-	**0.978**	-	0.943
Lights	988	46	0	**1034**	-	71	13	0	**84**	-	1	1380	0	**1381**	-	2499
% Lights	92.9%	95.8%	0%	**93.0%**	-	97.3%	81.3%	0%	**94.4%**	-	50.0%	93.2%	0%	**93.2%**	-	93.1%
Single-Unit Trucks	30	0	0	**30**	-	0	2	0	**2**	-	1	44	0	**45**	-	77
% Single-Unit Trucks	2.8%	0%	0%	**2.7%**	-	0%	12.5%	0%	**2.2%**	-	50.0%	3.0%	0%	**3.0%**	-	2.9%
Articulated Trucks	35	2	0	**37**	-	0	0	0	**0**	-	0	49	0	**49**	-	86
% Articulated Trucks	3.3%	4.2%	0%	**3.3%**	-	0%	0%	0%	**0%**	-	0%	3.3%	0%	**3.3%**	-	3.2%
Buses	11	0	0	**11**	-	2	1	0	**3**	-	0	7	0	**7**	-	21
% Buses	1.0%	0%	0%	**1.0%**	-	2.7%	6.3%	0%	**3.4%**	-	0%	0.5%	0%	**0.5%**	-	0.8%
Bicycles on Road	0	0	0	**0**	-	0	0	0	**0**	-	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Peterson Road with Access Drive TMC - TMC

Tue Nov 12, 2024
AM Peak (7:15 AM - 8:15 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1245690, Location: 42.305872, -87.97968

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US



Peterson Road with Access Drive TMC - TMC

Tue Nov 12, 2024
PM Peak (4:15 PM - 5:15 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1245690, Location: 42.305872, -87.97968

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US

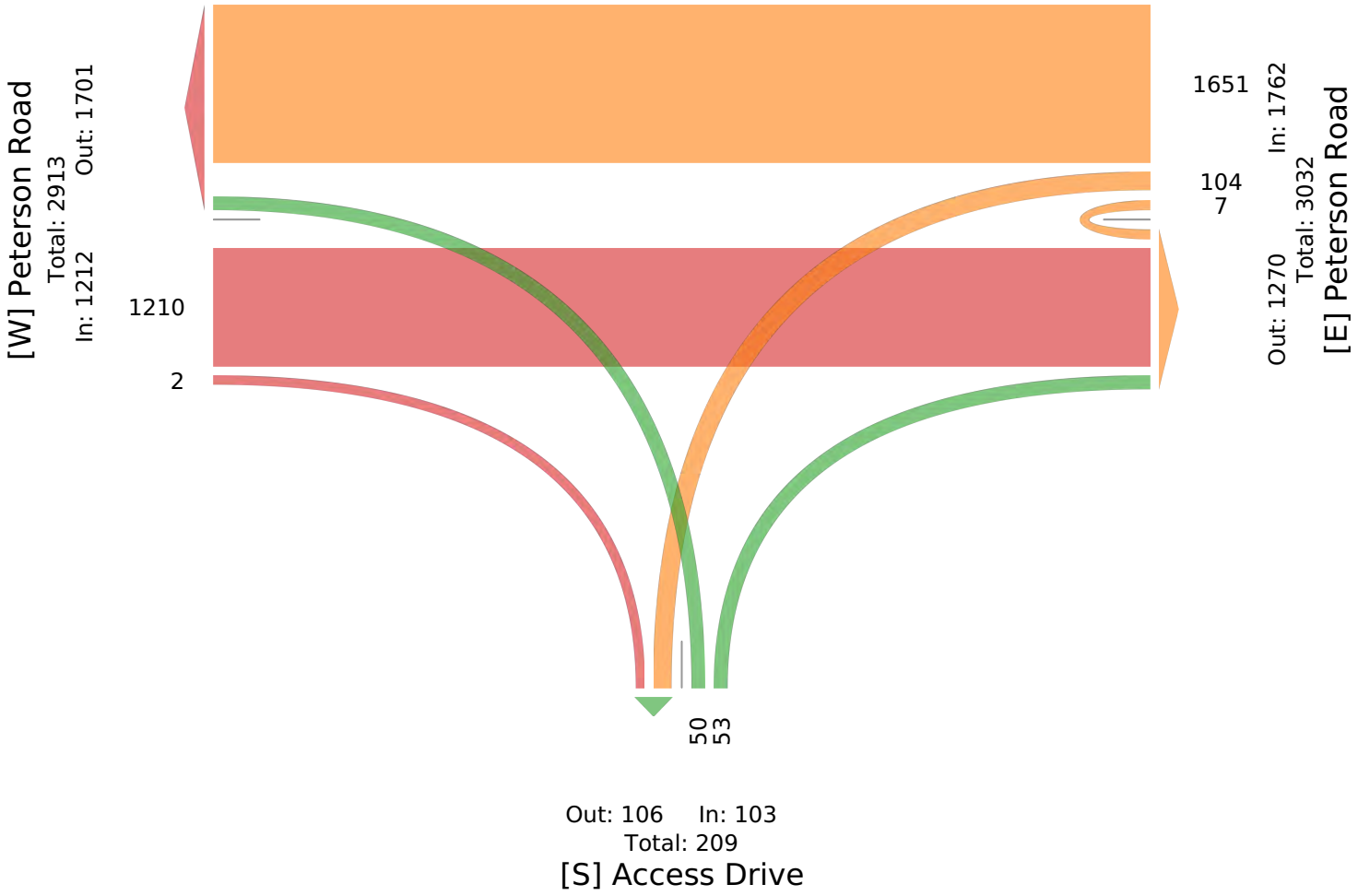
Leg	Peterson Road					Access Drive					Peterson Road					
Direction	Westbound					Northbound					Eastbound					
Time	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	**Int**
2024-11-12 4:15PM	414	20	2	**436**	0	15	10	0	**25**	0	0	297	0	**297**	0	**758**
4:30PM	392	37	2	**431**	0	16	15	0	**31**	0	1	303	0	**304**	0	**766**
4:45PM	402	26	1	**429**	0	11	14	0	**25**	0	1	267	0	**268**	0	**722**
5:00PM	443	21	2	**466**	0	11	11	0	**22**	0	0	343	0	**343**	0	**831**
Total	1651	104	7	**1762**	0	53	50	0	**103**	0	2	1210	0	**1212**	0	**3077**
% Approach	93.7%	5.9%	0.4%	**-**	-	51.5%	48.5%	0%	**-**	-	0.2%	99.8%	0%	**-**	-	-
% Total	53.7%	3.4%	0.2%	**57.3%**	-	1.7%	1.6%	0%	**3.3%**	-	0.1%	39.3%	0%	**39.4%**	-	-
PHF	0.932	0.703	0.875	**0.945**	-	0.828	0.833	-	**0.831**	-	0.500	0.882	-	**0.883**	-	0.926
Lights	1600	104	7	**1711**	-	53	50	0	**103**	-	2	1183	0	**1185**	-	2999
% Lights	96.9%	100%	100%	**97.1%**	-	100%	100%	0%	**100%**	-	100%	97.8%	0%	**97.8%**	-	97.5%
Single-Unit Trucks	25	0	0	**25**	-	0	0	0	**0**	-	0	12	0	**12**	-	37
% Single-Unit Trucks	1.5%	0%	0%	**1.4%**	-	0%	0%	0%	**0%**	-	0%	1.0%	0%	**1.0%**	-	1.2%
Articulated Trucks	21	0	0	**21**	-	0	0	0	**0**	-	0	13	0	**13**	-	34
% Articulated Trucks	1.3%	0%	0%	**1.2%**	-	0%	0%	0%	**0%**	-	0%	1.1%	0%	**1.1%**	-	1.1%
Buses	5	0	0	**5**	-	0	0	0	**0**	-	0	2	0	**2**	-	7
% Buses	0.3%	0%	0%	**0.3%**	-	0%	0%	0%	**0%**	-	0%	0.2%	0%	**0.2%**	-	0.2%
Bicycles on Road	0	0	0	**0**	-	0	0	0	**0**	-	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Peterson Road with Access Drive TMC - TMC

Tue Nov 12, 2024
PM Peak (4:15 PM - 5:15 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1245690, Location: 42.305872, -87.97968

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US



Peterson Road with Elderberry Drive TMC - TMC

Tue Nov 12, 2024
Full Length (7 AM-9 AM, 4 PM-6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1245693, Location: 42.306019, -87.976305

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US

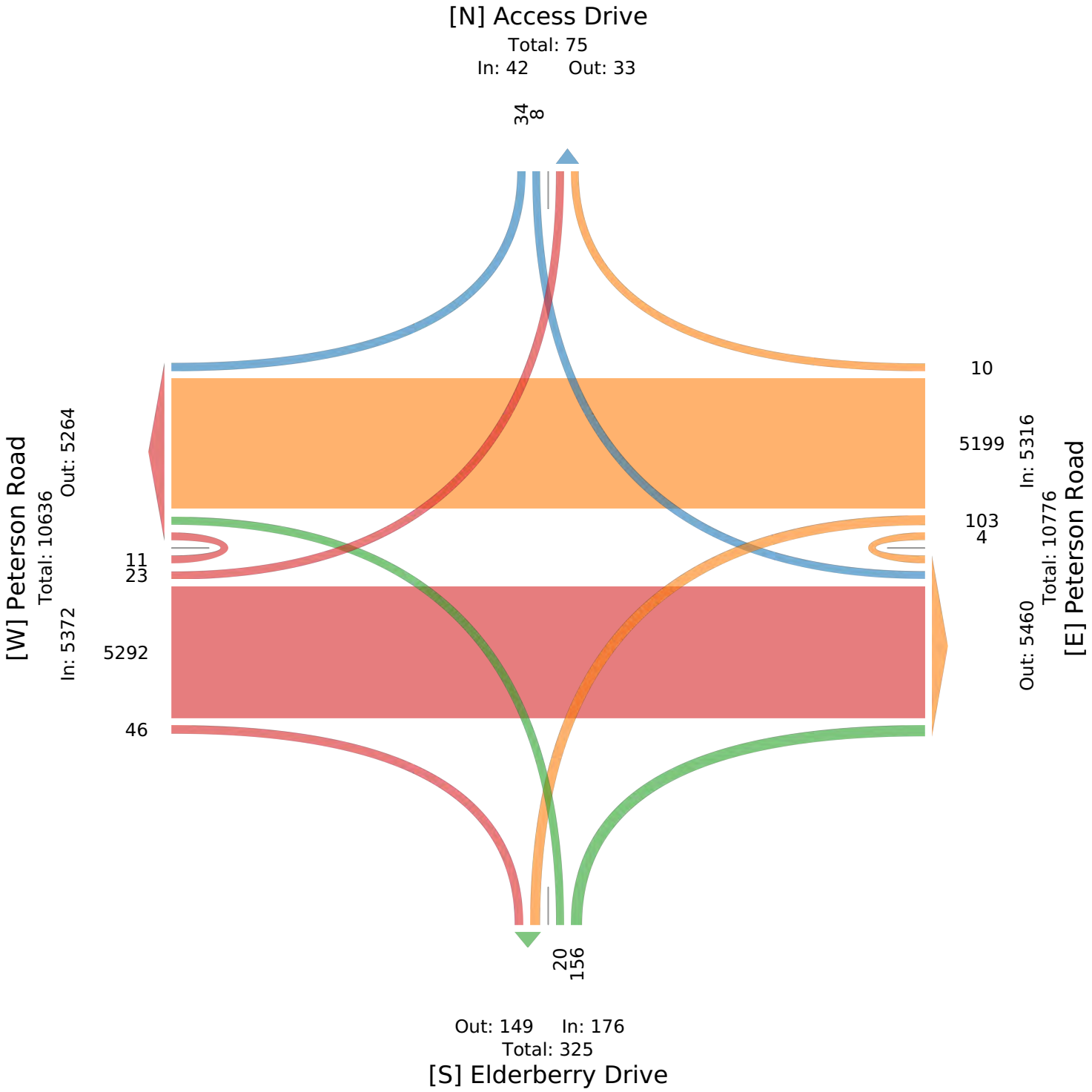
Leg	Access Drive						Peterson Road						Elderberry Drive						Peterson Road						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2024-11-12 7:00AM	3	0	0	0	**3**	0	2	210	3	0	**215**	0	7	0	1	0	**8**	0	1	352	1	0	**354**	0	**580**
7:15AM	1	0	1	0	**2**	0	0	280	2	0	**282**	0	13	0	1	0	**14**	0	0	392	0	0	**392**	0	**690**
7:30AM	2	0	1	0	**3**	0	2	307	5	0	**314**	0	16	0	0	0	**16**	0	2	384	1	1	**388**	0	**721**
7:45AM	1	0	0	0	**1**	0	3	276	4	0	**283**	0	13	0	1	0	**14**	0	0	355	3	0	**358**	0	**656**
Hourly Total	7	0	2	0	**9**	0	7	1073	14	0	**1094**	0	49	0	3	0	**52**	0	3	1483	5	1	**1492**	0	**2647**
8:00AM	4	0	2	0	**6**	0	1	229	8	1	**239**	0	12	0	3	0	**15**	0	5	376	3	1	**385**	0	**645**
8:15AM	1	0	2	0	**3**	0	0	227	6	0	**233**	0	16	0	2	0	**18**	0	3	350	5	0	**358**	0	**612**
8:30AM	2	0	0	0	**2**	0	0	190	4	0	**194**	0	9	0	1	0	**10**	0	2	360	1	0	**363**	0	**569**
8:45AM	1	0	0	0	**1**	0	1	175	6	0	**182**	0	11	0	2	0	**13**	0	2	371	1	0	**374**	0	**570**
Hourly Total	8	0	4	0	**12**	0	2	821	24	1	**848**	0	48	0	8	0	**56**	0	12	1457	10	1	**1480**	0	**2396**
4:00PM	2	0	2	0	**4**	0	0	406	10	0	**416**	0	10	0	2	0	**12**	0	2	341	2	1	**346**	0	**778**
4:15PM	3	0	0	0	**3**	0	0	434	2	0	**436**	0	14	0	2	0	**16**	0	6	300	1	1	**308**	0	**763**
4:30PM	3	0	0	0	**3**	0	0	421	9	1	**431**	0	8	0	1	0	**9**	0	3	320	0	1	**324**	0	**767**
4:45PM	3	0	0	0	**3**	0	0	425	10	2	**437**	0	6	0	0	0	**6**	0	5	256	4	1	**266**	0	**712**
Hourly Total	11	0	2	0	**13**	0	0	1686	31	3	**1720**	0	38	0	5	0	**43**	0	16	1217	7	4	**1244**	0	**3020**
5:00PM	6	0	0	0	**6**	0	1	443	6	0	**450**	0	3	0	0	0	**3**	0	7	352	1	2	**362**	0	**821**
5:15PM	1	0	0	0	**1**	0	0	407	14	0	**421**	0	5	0	1	0	**6**	0	2	292	0	0	**294**	0	**722**
5:30PM	1	0	0	0	**1**	0	0	401	6	0	**407**	0	10	0	0	0	**10**	0	5	251	0	3	**259**	0	**677**
5:45PM	0	0	0	0	**0**	0	0	368	8	0	**376**	0	3	0	3	0	**6**	0	1	240	0	0	**241**	0	**623**
Hourly Total	8	0	0	0	**8**	0	1	1619	34	0	**1654**	0	21	0	4	0	**25**	0	15	1135	1	5	**1156**	0	**2843**
Total	34	0	8	0	**42**	0	10	5199	103	4	**5316**	0	156	0	20	0	**176**	0	46	5292	23	11	**5372**	0	**10906**
% Approach	81.0%	0%	19.0%	0%	**-**	-	0.2%	97.8%	1.9%	0.1%	**-**	-	88.6%	0%	11.4%	0%	**-**	-	0.9%	98.5%	0.4%	0.2%	**-**	-	-
% Total	0.3%	0%	0.1%	0%	**0.4%**	-	0.1%	47.7%	0.9%	0%	**48.7%**	-	1.4%	0%	0.2%	0%	**1.6%**	-	0.4%	48.5%	0.2%	0.1%	**49.3%**	-	-
Lights	31	0	8	0	**39**	-	10	4942	101	4	**5057**	-	150	0	20	0	**170**	-	46	5049	21	11	**5127**	-	10393
% Lights	91.2%	0%	100%	0%	**92.9%**	-	100%	95.1%	98.1%	100%	**95.1%**	-	96.2%	0%	100%	0%	**96.6%**	-	100%	95.4%	91.3%	100%	**95.4%**	-	95.3%
Single-Unit Trucks	0	0	0	0	**0**	-	0	87	0	0	**87**	-	1	0	0	0	**1**	-	0	109	0	0	**109**	-	197
% Single-Unit Trucks	0%	0%	0%	0%	**0%**	-	0%	1.7%	0%	0%	**1.6%**	-	0.6%	0%	0%	0%	**0.6%**	-	0%	2.1%	0%	0%	**2.0%**	-	1.8%
Articulated Trucks	0	0	0	0	**0**	-	0	132	1	0	**133**	-	0	0	0	0	**0**	-	0	102	0	0	**102**	-	235
% Articulated Trucks	0%	0%	0%	0%	**0%**	-	0%	2.5%	1.0%	0%	**2.5%**	-	0%	0%	0%	0%	**0%**	-	0%	1.9%	0%	0%	**1.9%**	-	2.2%
Buses	3	0	0	0	**3**	-	0	38	1	0	**39**	-	5	0	0	0	**5**	-	0	30	2	0	**32**	-	79
% Buses	8.8%	0%	0%	0%	**7.1%**	-	0%	0.7%	1.0%	0%	**0.7%**	-	3.2%	0%	0%	0%	**2.8%**	-	0%	0.6%	8.7%	0%	**0.6%**	-	0.7%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	2	0	0	**2**	-	2
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Peterson Road with Elderberry Drive TMC - TMC

Tue Nov 12, 2024
Full Length (7 AM-9 AM, 4 PM-6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1245693, Location: 42.306019, -87.976305

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
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Peterson Road with Elderberry Drive TMC - TMC

Tue Nov 12, 2024
AM Peak (7:15 AM - 8:15 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1245693, Location: 42.306019, -87.976305

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
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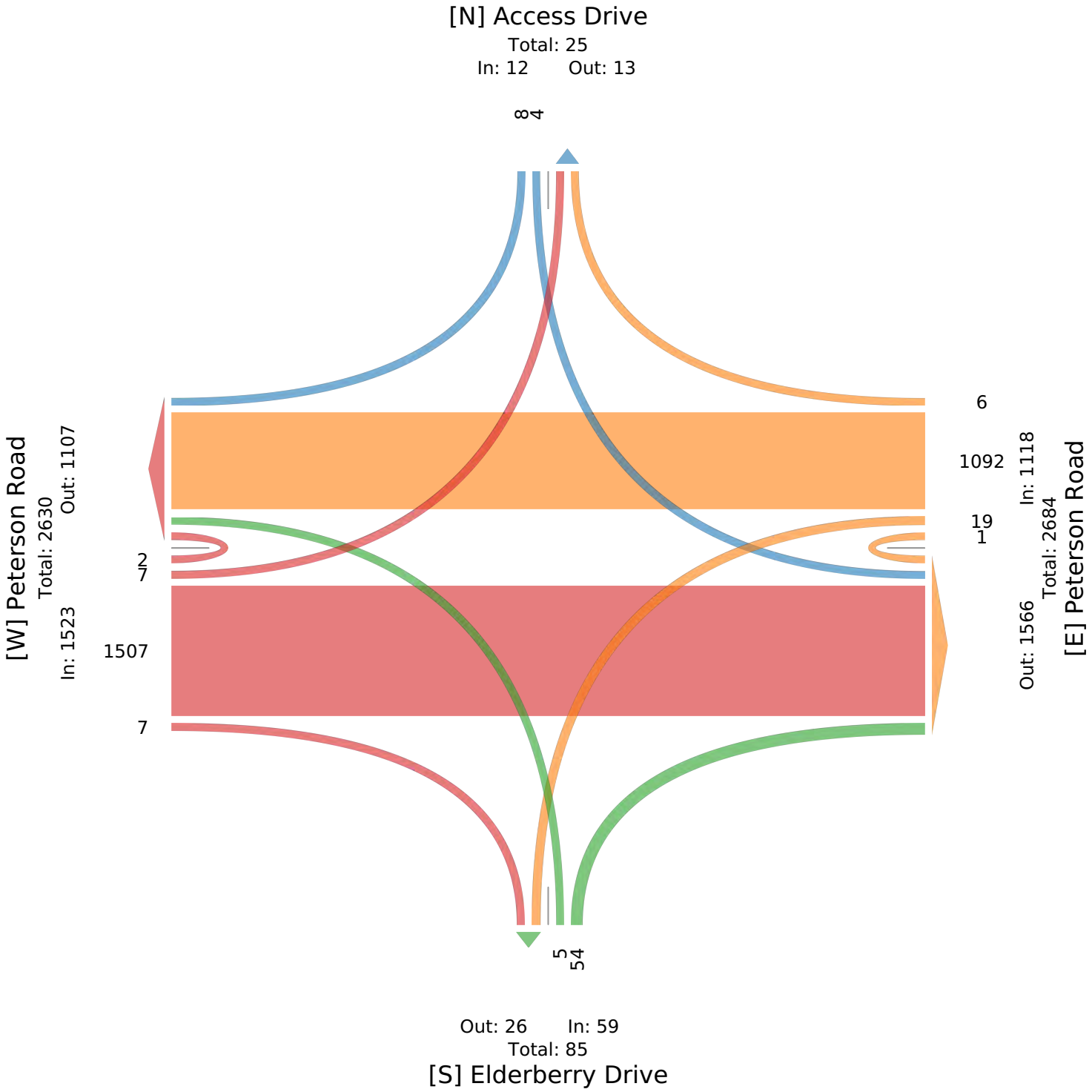
Leg / Direction	Access Drive Southbound						Peterson Road Westbound						Elderberry Drive Northbound						Peterson Road Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2024-11-12 7:15AM	1	0	1	0	**2**	0	0	280	2	0	**282**	0	13	0	1	0	**14**	0	0	392	0	0	**392**	0	**690**
7:30AM	2	0	1	0	**3**	0	2	307	5	0	**314**	0	16	0	0	0	**16**	0	2	384	1	1	**388**	0	**721**
7:45AM	1	0	0	0	**1**	0	3	276	4	0	**283**	0	13	0	1	0	**14**	0	0	355	3	0	**358**	0	**656**
8:00AM	4	0	2	0	**6**	0	1	229	8	1	**239**	0	12	0	3	0	**15**	0	5	376	3	1	**385**	0	**645**
Total	8	0	4	0	**12**	0	6	1092	19	1	**1118**	0	54	0	5	0	**59**	0	7	1507	7	2	**1523**	0	**2712**
% Approach	66.7%	0%	33.3%	0%	**-**	-	0.5%	97.7%	1.7%	0.1%	**-**	-	91.5%	0%	8.5%	0%	**-**	-	0.5%	98.9%	0.5%	0.1%	**-**	-	-
% Total	0.3%	0%	0.1%	0%	**0.4%**	-	0.2%	40.3%	0.7%	0%	**41.2%**	-	2.0%	0%	0.2%	0%	**2.2%**	-	0.3%	55.6%	0.3%	0.1%	**56.2%**	-	-
PHF	0.500	-	0.500	-	**0.500**	-	0.500	0.889	0.594	0.250	**0.890**	-	0.844	-	0.417	-	**0.922**	-	0.350	0.962	0.583	0.500	**0.973**	-	0.941
Lights	7	0	4	0	**11**	-	6	1015	17	1	**1039**	-	52	0	5	0	**57**	-	7	1404	6	2	**1419**	-	2526
% Lights	87.5%	0%	100%	0%	**91.7%**	-	100%	92.9%	89.5%	100%	**92.9%**	-	96.3%	0%	100%	0%	**96.6%**	-	100%	93.2%	85.7%	100%	**93.2%**	-	93.1%
Single-Unit Trucks	0	0	0	0	**0**	-	0	24	0	0	**24**	-	0	0	0	0	**0**	-	0	52	0	0	**52**	-	76
% Single-Unit Trucks	0%	0%	0%	0%	**0%**	-	0%	2.2%	0%	0%	**2.1%**	-	0%	0%	0%	0%	**0%**	-	0%	3.5%	0%	0%	**3.4%**	-	2.8%
Articulated Trucks	0	0	0	0	**0**	-	0	44	1	0	**45**	-	0	0	0	0	**0**	-	0	39	0	0	**39**	-	84
% Articulated Trucks	0%	0%	0%	0%	**0%**	-	0%	4.0%	5.3%	0%	**4.0%**	-	0%	0%	0%	0%	**0%**	-	0%	2.6%	0%	0%	**2.6%**	-	3.1%
Buses	1	0	0	0	**1**	-	0	9	1	0	**10**	-	2	0	0	0	**2**	-	0	10	1	0	**11**	-	24
% Buses	12.5%	0%	0%	0%	**8.3%**	-	0%	0.8%	5.3%	0%	**0.9%**	-	3.7%	0%	0%	0%	**3.4%**	-	0%	0.7%	14.3%	0%	**0.7%**	-	0.9%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	2	0	0	**2**	-	2
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0.1%	0%	0%	**0.1%**	-	0.1%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Peterson Road with Elderberry Drive TMC - TMC

Tue Nov 12, 2024
AM Peak (7:15 AM - 8:15 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1245693, Location: 42.306019, -87.976305

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US



Peterson Road with Elderberry Drive TMC - TMC

Tue Nov 12, 2024
PM Peak (4:15 PM - 5:15 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1245693, Location: 42.306019, -87.976305



Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US

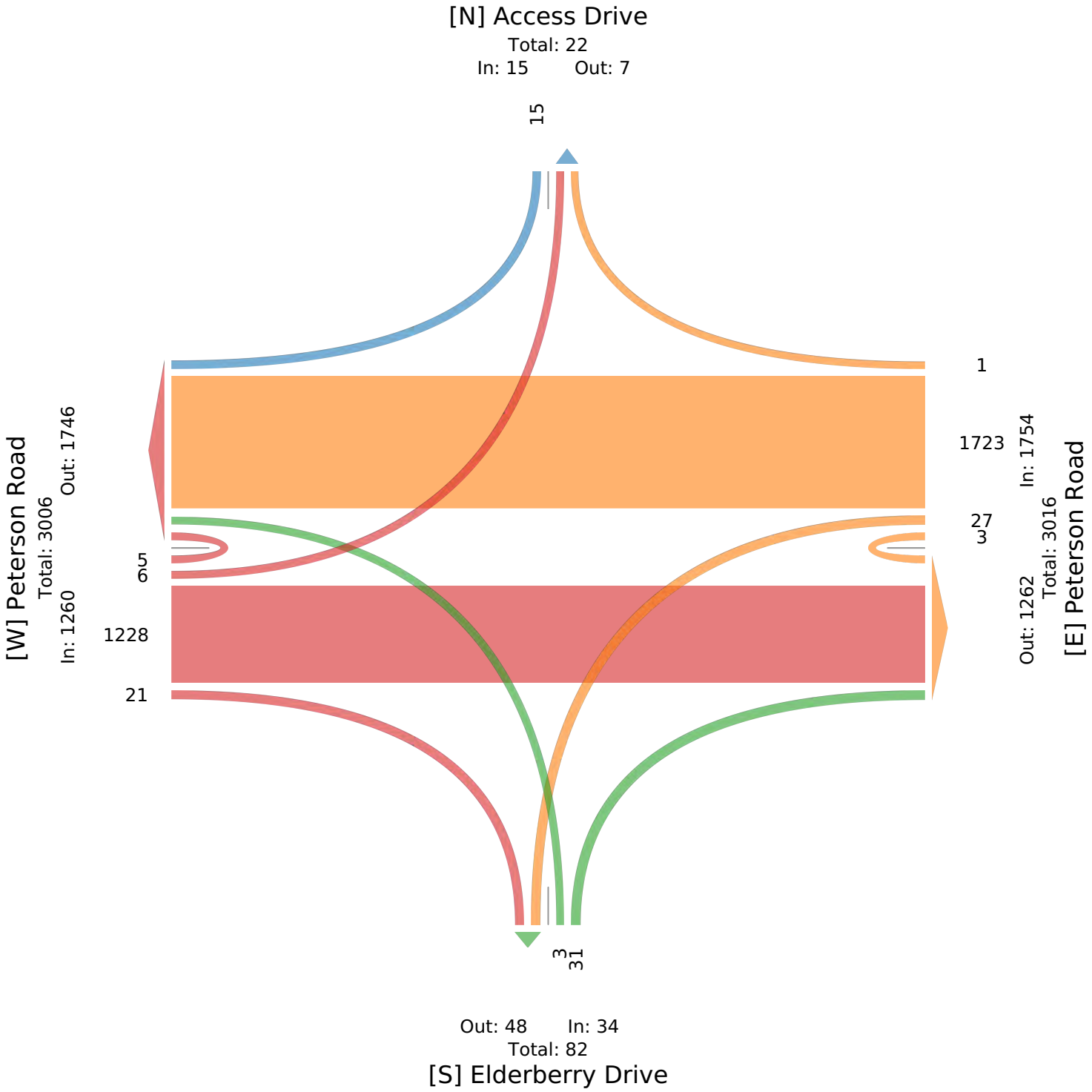
Leg	Access Drive						Peterson Road						Elderberry Drive						Peterson Road						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2024-11-12 4:15PM	3	0	0	0	**3**	0	0	434	2	0	**436**	0	14	0	2	0	**16**	0	6	300	1	1	**308**	0	**763**
4:30PM	3	0	0	0	**3**	0	0	421	9	1	**431**	0	8	0	1	0	**9**	0	3	320	0	1	**324**	0	**767**
4:45PM	3	0	0	0	**3**	0	0	425	10	2	**437**	0	6	0	0	0	**6**	0	5	256	4	1	**266**	0	**712**
5:00PM	6	0	0	0	**6**	0	1	443	6	0	**450**	0	3	0	0	0	**3**	0	7	352	1	2	**362**	0	**821**
Total	15	0	0	0	**15**	0	1	1723	27	3	**1754**	0	31	0	3	0	**34**	0	21	1228	6	5	**1260**	0	**3063**
% Approach	100%	0%	0%	0%	**-**	-	0.1%	98.2%	1.5%	0.2%	**-**	-	91.2%	0%	8.8%	0%	**-**	-	1.7%	97.5%	0.5%	0.4%	**-**	-	-
% Total	0.5%	0%	0%	0%	**0.5%**	-	0%	56.3%	0.9%	0.1%	**57.3%**	-	1.0%	0%	0.1%	0%	**1.1%**	-	0.7%	40.1%	0.2%	0.2%	**41.1%**	-	-
PHF	0.625	-	-	-	**0.625**	-	0.250	0.972	0.675	0.375	**0.974**	-	0.554	-	0.375	-	**0.531**	-	0.750	0.872	0.375	0.625	**0.870**	-	0.933
Lights	15	0	0	0	**15**	-	1	1678	27	3	**1709**	-	30	0	3	0	**33**	-	21	1201	6	5	**1233**	-	2990
% Lights	100%	0%	0%	0%	**100%**	-	100%	97.4%	100%	100%	**97.4%**	-	96.8%	0%	100%	0%	**97.1%**	-	100%	97.8%	100%	100%	**97.9%**	-	97.6%
Single-Unit Trucks	0	0	0	0	**0**	-	0	22	0	0	**22**	-	1	0	0	0	**1**	-	0	13	0	0	**13**	-	36
% Single-Unit Trucks	0%	0%	0%	0%	**0%**	-	0%	1.3%	0%	0%	**1.3%**	-	3.2%	0%	0%	0%	**2.9%**	-	0%	1.1%	0%	0%	**1.0%**	-	1.2%
Articulated Trucks	0	0	0	0	**0**	-	0	18	0	0	**18**	-	0	0	0	0	**0**	-	0	11	0	0	**11**	-	29
% Articulated Trucks	0%	0%	0%	0%	**0%**	-	0%	1.0%	0%	0%	**1.0%**	-	0%	0%	0%	0%	**0%**	-	0%	0.9%	0%	0%	**0.9%**	-	0.9%
Buses	0	0	0	0	**0**	-	0	5	0	0	**5**	-	0	0	0	0	**0**	-	0	3	0	0	**3**	-	8
% Buses	0%	0%	0%	0%	**0%**	-	0%	0.3%	0%	0%	**0.3%**	-	0%	0%	0%	0%	**0%**	-	0%	0.2%	0%	0%	**0.2%**	-	0.3%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Peterson Road with Elderberry Drive TMC - TMC

Tue Nov 12, 2024
PM Peak (4:15 PM - 5:15 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1245693, Location: 42.306019, -87.976305

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US



Peterson Road with Forest Creek Lane TMC - TMC

Tue Nov 12, 2024
Full Length (7 AM-9 AM, 4 PM-6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1245695, Location: 42.306095, -87.972528

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US

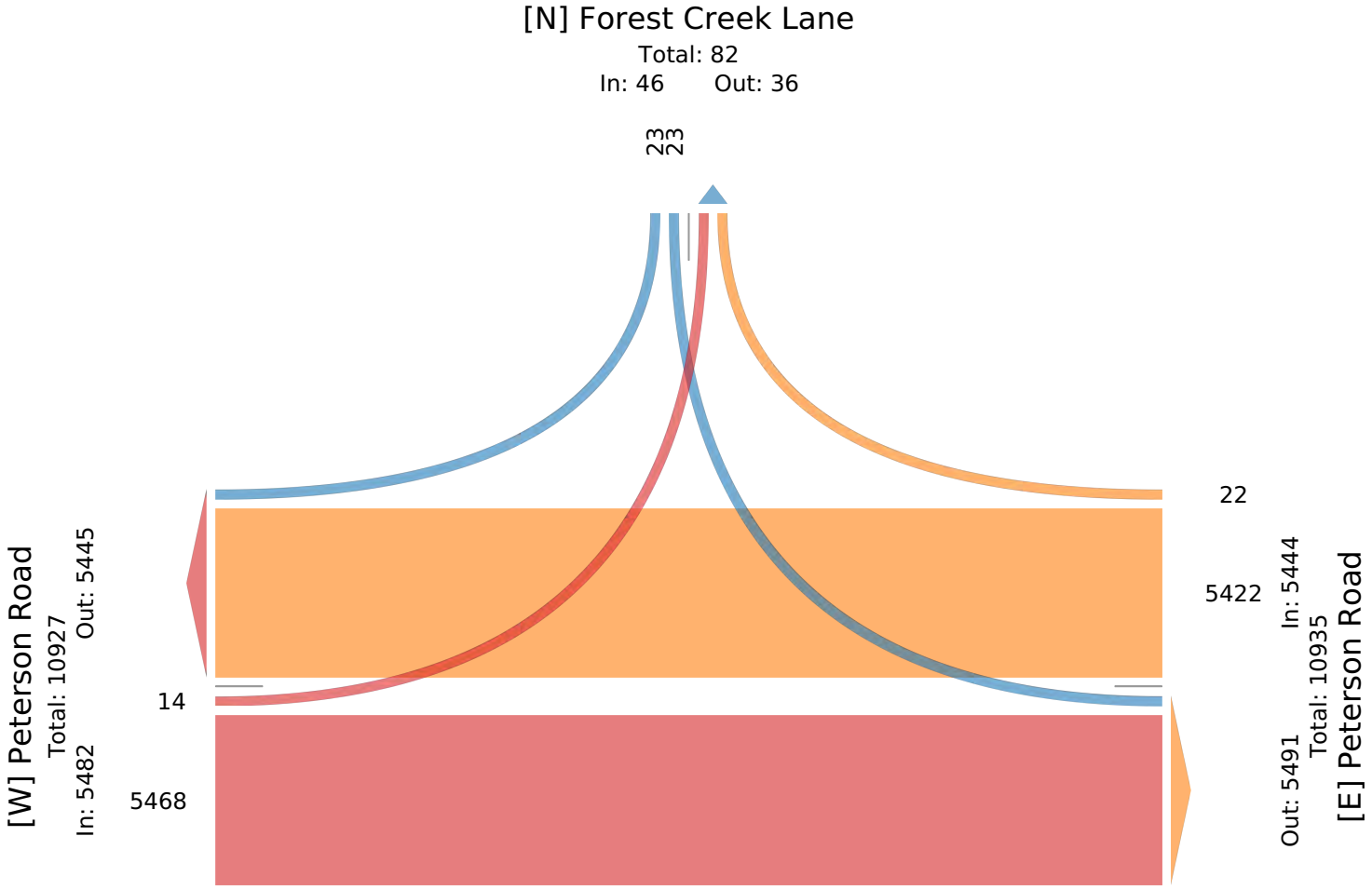
Leg	Forest Creek Lane					Peterson Road					Peterson Road					
Direction	Southbound					Westbound					Eastbound					
Time	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	T	L	U	**App**	Ped*	**Int**
2024-11-12 7:00AM	0	1	0	**1**	0	0	218	0	**218**	0	379	1	0	**380**	0	**599**
7:15AM	1	4	0	**5**	0	1	277	0	**278**	0	418	1	0	**419**	0	**702**
7:30AM	1	2	0	**3**	0	1	330	0	**331**	0	392	0	0	**392**	0	**726**
7:45AM	0	2	0	**2**	0	2	287	0	**289**	0	391	0	0	**391**	0	**682**
Hourly Total	2	9	0	**11**	0	4	1112	0	**1116**	0	1580	2	0	**1582**	0	**2709**
8:00AM	4	1	0	**5**	0	0	241	0	**241**	0	404	1	0	**405**	0	**651**
8:15AM	0	2	0	**2**	0	1	227	0	**228**	0	357	2	0	**359**	0	**589**
8:30AM	0	3	0	**3**	0	0	200	0	**200**	0	348	1	0	**349**	0	**552**
8:45AM	3	1	0	**4**	0	5	179	0	**184**	0	400	1	0	**401**	0	**589**
Hourly Total	7	7	0	**14**	0	6	847	0	**853**	0	1509	5	0	**1514**	0	**2381**
4:00PM	4	1	0	**5**	0	2	412	0	**414**	0	351	2	0	**353**	0	**772**
4:15PM	5	1	0	**6**	0	2	431	0	**433**	0	311	1	0	**312**	0	**751**
4:30PM	2	1	0	**3**	0	2	439	0	**441**	0	321	0	0	**321**	0	**765**
4:45PM	0	1	0	**1**	0	2	425	0	**427**	0	279	1	0	**280**	0	**708**
Hourly Total	11	4	0	**15**	0	8	1707	0	**1715**	0	1262	4	0	**1266**	0	**2996**
5:00PM	1	1	0	**2**	0	1	479	0	**480**	0	341	0	0	**341**	0	**823**
5:15PM	0	0	0	**0**	0	1	445	0	**446**	0	294	1	0	**295**	0	**741**
5:30PM	1	1	0	**2**	0	1	416	0	**417**	0	236	2	0	**238**	0	**657**
5:45PM	1	1	0	**2**	0	1	416	0	**417**	0	246	0	0	**246**	0	**665**
Hourly Total	3	3	0	**6**	0	4	1756	0	**1760**	0	1117	3	0	**1120**	0	**2886**
Total	23	23	0	**46**	0	22	5422	0	**5444**	0	5468	14	0	**5482**	0	**10972**
% Approach	50.0%	50.0%	0%	**-**	-	0.4%	99.6%	0%	**-**	-	99.7%	0.3%	0%	**-**	-	**-**
% Total	0.2%	0.2%	0%	**0.4%**	-	0.2%	49.4%	0%	**49.6%**	-	49.8%	0.1%	0%	**50.0%**	-	**-**
Lights	20	23	0	**43**	-	21	5173	0	**5194**	-	5246	12	0	**5258**	-	10495
% Lights	87.0%	100%	0%	**93.5%**	-	95.5%	95.4%	0%	**95.4%**	-	95.9%	85.7%	0%	**95.9%**	-	95.7%
Single-Unit Trucks	1	0	0	**1**	-	1	82	0	**83**	-	97	0	0	**97**	-	181
% Single-Unit Trucks	4.3%	0%	0%	**2.2%**	-	4.5%	1.5%	0%	**1.5%**	-	1.8%	0%	0%	**1.8%**	-	1.6%
Articulated Trucks	0	0	0	**0**	-	0	129	0	**129**	-	98	0	0	**98**	-	227
% Articulated Trucks	0%	0%	0%	**0%**	-	0%	2.4%	0%	**2.4%**	-	1.8%	0%	0%	**1.8%**	-	2.1%
Buses	2	0	0	**2**	-	0	38	0	**38**	-	27	2	0	**29**	-	69
% Buses	8.7%	0%	0%	**4.3%**	-	0%	0.7%	0%	**0.7%**	-	0.5%	14.3%	0%	**0.5%**	-	0.6%
Bicycles on Road	0	0	0	**0**	-	0	0	0	**0**	-	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Peterson Road with Forest Creek Lane TMC - TMC

Tue Nov 12, 2024
Full Length (7 AM-9 AM, 4 PM-6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1245695, Location: 42.306095, -87.972528

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US



Peterson Road with Forest Creek Lane TMC - TMC

Tue Nov 12, 2024
AM Peak (7:15 AM - 8:15 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1245695, Location: 42.306095, -87.972528

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US

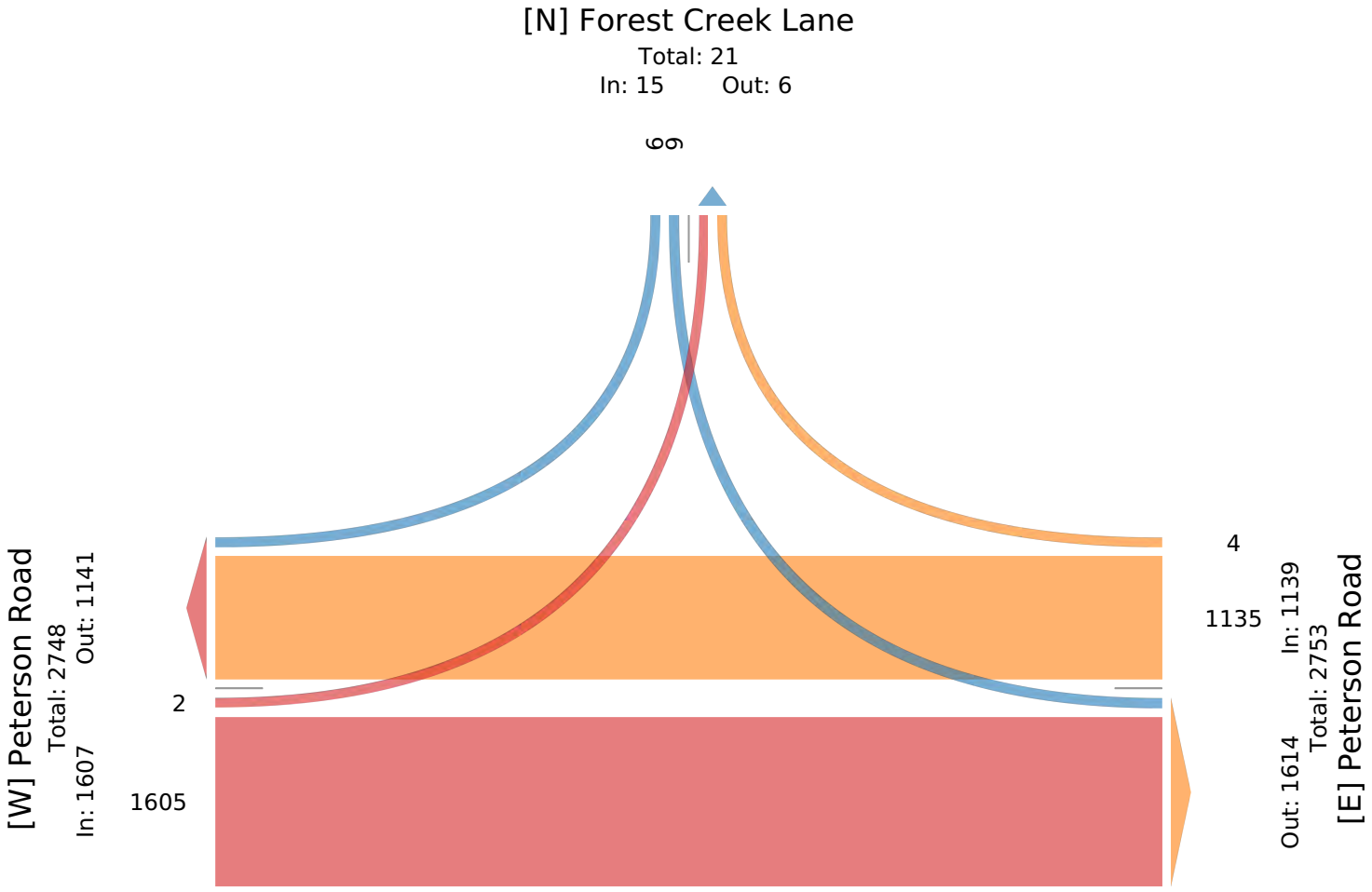
Leg	Forest Creek Lane					Peterson Road					Peterson Road					
Direction	Southbound					Westbound					Eastbound					
Time	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	T	L	U	**App**	Ped*	**Int**
2024-11-12 7:15AM	1	4	0	**5**	0	1	277	0	**278**	0	418	1	0	**419**	0	**702**
7:30AM	1	2	0	**3**	0	1	330	0	**331**	0	392	0	0	**392**	0	**726**
7:45AM	0	2	0	**2**	0	2	287	0	**289**	0	391	0	0	**391**	0	**682**
8:00AM	4	1	0	**5**	0	0	241	0	**241**	0	404	1	0	**405**	0	**651**
Total	6	9	0	**15**	0	4	1135	0	**1139**	0	1605	2	0	**1607**	0	**2761**
% Approach	40.0%	60.0%	0%	**-**	-	0.4%	99.6%	0%	**-**	-	99.9%	0.1%	0%	**-**	-	-
% Total	0.2%	0.3%	0%	**0.5%**	-	0.1%	41.1%	0%	**41.3%**	-	58.1%	0.1%	0%	**58.2%**	-	-
PHF	0.375	0.563	-	**0.750**	-	0.500	0.860	-	**0.860**	-	0.960	0.500	-	**0.959**	-	0.951
Lights	4	9	0	**13**	-	4	1065	0	**1069**	-	1520	1	0	**1521**	-	2603
% Lights	66.7%	100%	0%	**86.7%**	-	100%	93.8%	0%	**93.9%**	-	94.7%	50.0%	0%	**94.6%**	-	94.3%
Single-Unit Trucks	1	0	0	**1**	-	0	18	0	**18**	-	42	0	0	**42**	-	61
% Single-Unit Trucks	16.7%	0%	0%	**6.7%**	-	0%	1.6%	0%	**1.6%**	-	2.6%	0%	0%	**2.6%**	-	2.2%
Articulated Trucks	0	0	0	**0**	-	0	43	0	**43**	-	36	0	0	**36**	-	79
% Articulated Trucks	0%	0%	0%	**0%**	-	0%	3.8%	0%	**3.8%**	-	2.2%	0%	0%	**2.2%**	-	2.9%
Buses	1	0	0	**1**	-	0	9	0	**9**	-	7	1	0	**8**	-	18
% Buses	16.7%	0%	0%	**6.7%**	-	0%	0.8%	0%	**0.8%**	-	0.4%	50.0%	0%	**0.5%**	-	0.7%
Bicycles on Road	0	0	0	**0**	-	0	0	0	**0**	-	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Peterson Road with Forest Creek Lane TMC - TMC

Tue Nov 12, 2024
AM Peak (7:15 AM - 8:15 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1245695, Location: 42.306095, -87.972528

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US



Peterson Road with Forest Creek Lane TMC - TMC

Tue Nov 12, 2024
PM Peak (4:15 PM - 5:15 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1245695, Location: 42.306095, -87.972528

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US

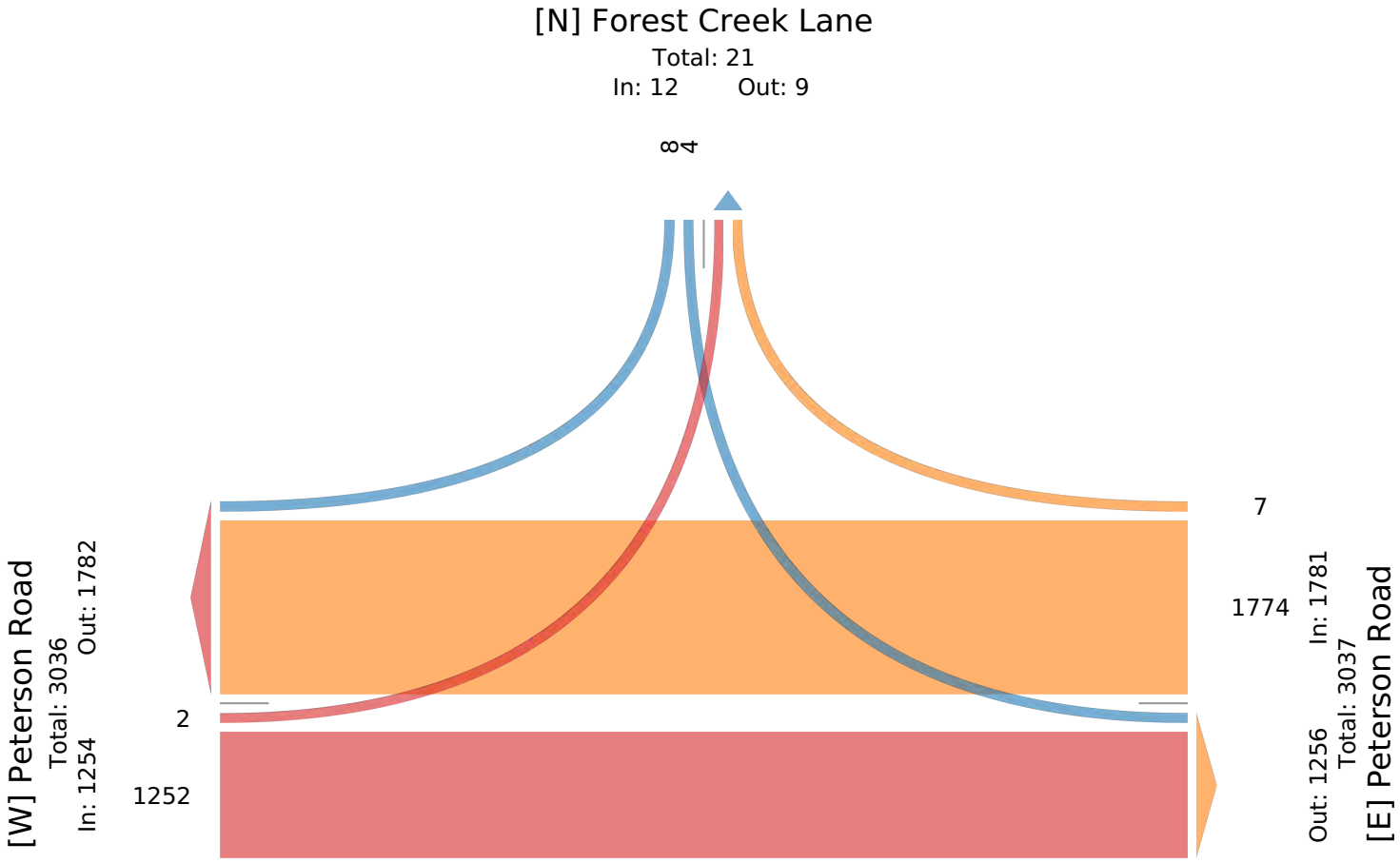
Leg Direction	Forest Creek Lane Southbound					Peterson Road Westbound					Peterson Road Eastbound					
Time	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	T	L	U	**App**	Ped*	**Int**
2024-11-12 4:15PM	5	1	0	**6**	0	2	431	0	**433**	0	311	1	0	**312**	0	**751**
4:30PM	2	1	0	**3**	0	2	439	0	**441**	0	321	0	0	**321**	0	**765**
4:45PM	0	1	0	**1**	0	2	425	0	**427**	0	279	1	0	**280**	0	**708**
5:00PM	1	1	0	**2**	0	1	479	0	**480**	0	341	0	0	**341**	0	**823**
Total	8	4	0	**12**	0	7	1774	0	**1781**	0	1252	2	0	**1254**	0	**3047**
% Approach	66.7%	33.3%	0%	**-**	-	0.4%	99.6%	0%	**-**	-	99.8%	0.2%	0%	**-**	-	-
% Total	0.3%	0.1%	0%	**0.4%**	-	0.2%	58.2%	0%	**58.5%**	-	41.1%	0.1%	0%	**41.2%**	-	-
PHF	0.400	1.000	-	**0.500**	-	0.875	0.926	-	**0.928**	-	0.918	0.500	-	**0.919**	-	0.926
Lights	8	4	0	**12**	-	7	1728	0	**1735**	-	1224	2	0	**1226**	-	2973
% Lights	100%	100%	0%	**100%**	-	100%	97.4%	0%	**97.4%**	-	97.8%	100%	0%	**97.8%**	-	97.6%
Single-Unit Trucks	0	0	0	**0**	-	0	23	0	**23**	-	12	0	0	**12**	-	35
% Single-Unit Trucks	0%	0%	0%	**0%**	-	0%	1.3%	0%	**1.3%**	-	1.0%	0%	0%	**1.0%**	-	1.1%
Articulated Trucks	0	0	0	**0**	-	0	19	0	**19**	-	14	0	0	**14**	-	33
% Articulated Trucks	0%	0%	0%	**0%**	-	0%	1.1%	0%	**1.1%**	-	1.1%	0%	0%	**1.1%**	-	1.1%
Buses	0	0	0	**0**	-	0	4	0	**4**	-	2	0	0	**2**	-	6
% Buses	0%	0%	0%	**0%**	-	0%	0.2%	0%	**0.2%**	-	0.2%	0%	0%	**0.2%**	-	0.2%
Bicycles on Road	0	0	0	**0**	-	0	0	0	**0**	-	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Peterson Road with Forest Creek Lane TMC - TMC

Tue Nov 12, 2024
PM Peak (4:15 PM - 5:15 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1245695, Location: 42.306095, -87.972528

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US



Peterson Road with Sunnyview Road TMC - TMC

Tue Nov 12, 2024
Full Length (7 AM-9 AM, 4 PM-6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1245694, Location: 42.306071, -87.973747

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US

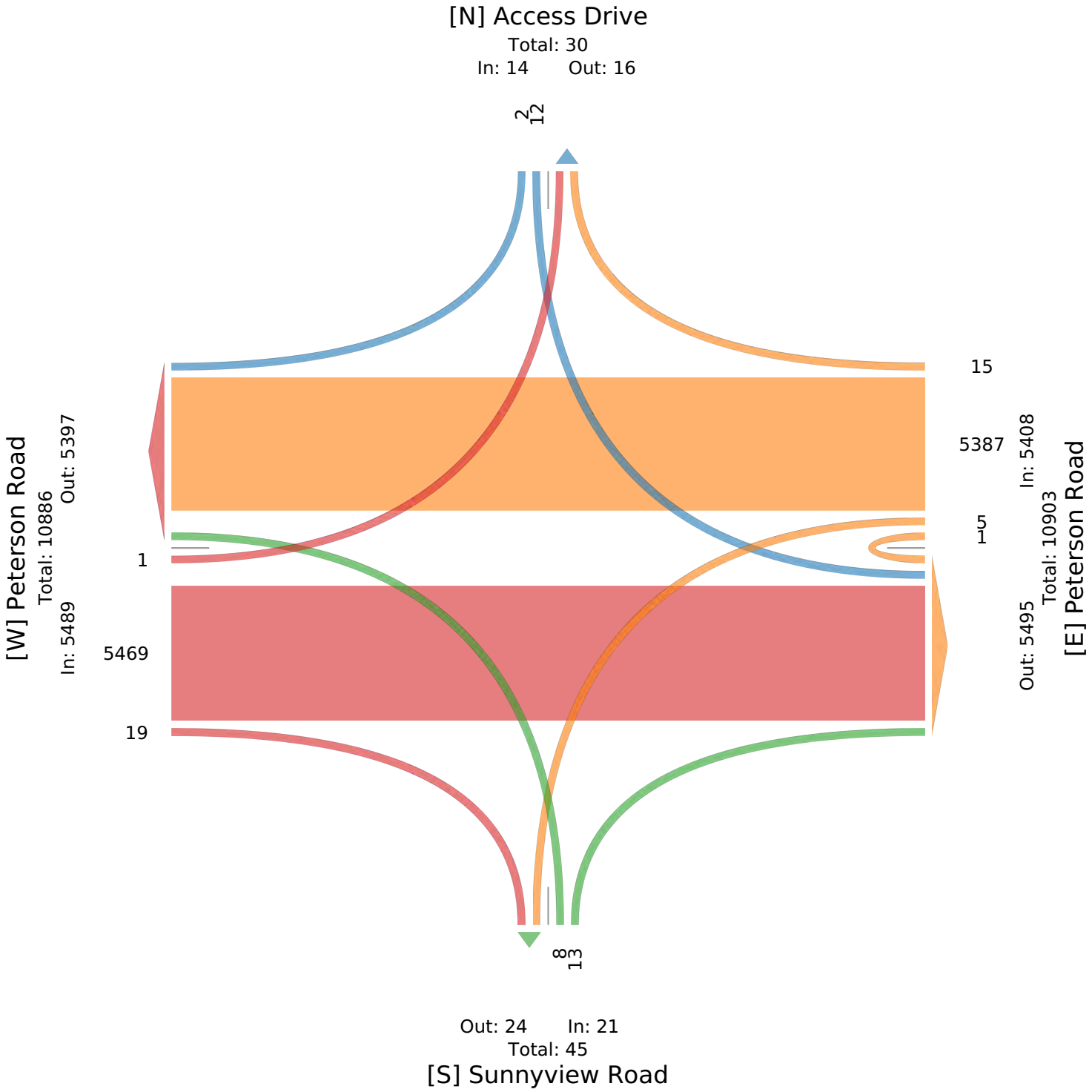
Leg / Direction	Access Drive Southbound						Peterson Road Westbound						Sunnyview Road Northbound						Peterson Road Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2024-11-12 7:00AM	0	0	0	0	**0**	0	1	218	0	0	**219**	0	0	0	0	0	**0**	0	0	380	0	0	**380**	0	**599**
7:15AM	0	0	0	0	**0**	0	1	269	0	0	**270**	0	0	0	0	0	**0**	0	0	426	0	0	**426**	0	**696**
7:30AM	0	0	1	0	**1**	0	3	331	0	0	**334**	0	3	0	0	0	**3**	0	2	381	0	0	**383**	0	**721**
7:45AM	0	0	3	0	**3**	0	3	281	0	0	**284**	0	2	0	1	0	**3**	0	0	409	0	0	**409**	0	**699**
Hourly Total	0	0	4	0	**4**	0	8	1099	0	0	**1107**	0	5	0	1	0	**6**	0	2	1596	0	0	**1598**	0	**2715**
8:00AM	0	0	0	0	**0**	0	0	249	1	0	**250**	0	2	0	1	0	**3**	0	2	384	1	0	**387**	0	**640**
8:15AM	2	0	0	0	**2**	0	0	231	0	0	**231**	0	2	0	1	0	**3**	0	2	367	0	0	**369**	0	**605**
8:30AM	0	0	0	0	**0**	0	1	194	0	1	**196**	0	1	0	1	0	**2**	0	1	338	0	0	**339**	0	**537**
8:45AM	0	0	1	0	**1**	0	0	186	0	0	**186**	0	0	0	0	0	**0**	0	2	397	0	0	**399**	0	**586**
Hourly Total	2	0	1	0	**3**	0	1	860	1	1	**863**	0	5	0	3	0	**8**	0	7	1486	1	0	**1494**	0	**2368**
4:00PM	0	0	2	0	**2**	0	1	417	0	0	**418**	0	0	0	0	0	**0**	0	2	345	0	0	**347**	0	**767**
4:15PM	0	0	0	0	**0**	0	1	427	0	0	**428**	0	0	0	0	0	**0**	0	2	306	0	0	**308**	0	**736**
4:30PM	0	0	1	0	**1**	0	2	440	1	0	**443**	0	2	0	1	0	**3**	0	0	308	0	0	**308**	0	**755**
4:45PM	0	0	2	0	**2**	0	1	435	0	0	**436**	0	0	0	1	0	**1**	0	1	280	0	0	**281**	0	**720**
Hourly Total	0	0	5	0	**5**	0	5	1719	1	0	**1725**	0	2	0	2	0	**4**	0	5	1239	0	0	**1244**	0	**2978**
5:00PM	0	0	1	0	**1**	0	0	470	0	0	**470**	0	0	0	1	0	**1**	0	2	342	0	0	**344**	0	**816**
5:15PM	0	0	0	0	**0**	0	1	433	1	0	**435**	0	0	0	1	0	**1**	0	3	317	0	0	**320**	0	**756**
5:30PM	0	0	0	0	**0**	0	0	421	0	0	**421**	0	0	0	0	0	**0**	0	0	239	0	0	**239**	0	**660**
5:45PM	0	0	1	0	**1**	0	0	385	2	0	**387**	0	1	0	0	0	**1**	0	0	250	0	0	**250**	0	**639**
Hourly Total	0	0	2	0	**2**	0	1	1709	3	0	**1713**	0	1	0	2	0	**3**	0	5	1148	0	0	**1153**	0	**2871**
Total	2	0	12	0	**14**	0	15	5387	5	1	**5408**	0	13	0	8	0	**21**	0	19	5469	1	0	**5489**	0	**10932**
% Approach	14.3%	0%	85.7%	0%	**-**	-	0.3%	99.6%	0.1%	0%	**-**	-	61.9%	0%	38.1%	0%	**-**	-	0.3%	99.6%	0%	0%	**-**	-	-
% Total	0%	0%	0.1%	0%	**0.1%**	-	0.1%	49.3%	0%	0%	**49.5%**	-	0.1%	0%	0.1%	0%	**0.2%**	-	0.2%	50.0%	0%	0%	**50.2%**	-	-
Lights	1	0	12	0	**13**	-	13	5125	5	1	**5144**	-	11	0	8	0	**19**	-	12	5230	1	0	**5243**	-	10419
% Lights	50.0%	0%	100%	0%	**92.9%**	-	86.7%	95.1%	100%	100%	**95.1%**	-	84.6%	0%	100%	0%	**90.5%**	-	63.2%	95.6%	100%	0%	**95.5%**	-	95.3%
Single-Unit Trucks	0	0	0	0	**0**	-	0	93	0	0	**93**	-	1	0	0	0	**1**	-	2	104	0	0	**106**	-	200
% Single-Unit Trucks	0%	0%	0%	0%	**0%**	-	0%	1.7%	0%	0%	**1.7%**	-	7.7%	0%	0%	0%	**4.8%**	-	10.5%	1.9%	0%	0%	**1.9%**	-	1.8%
Articulated Trucks	0	0	0	0	**0**	-	0	133	0	0	**133**	-	0	0	0	0	**0**	-	0	105	0	0	**105**	-	238
% Articulated Trucks	0%	0%	0%	0%	**0%**	-	0%	2.5%	0%	0%	**2.5%**	-	0%	0%	0%	0%	**0%**	-	0%	1.9%	0%	0%	**1.9%**	-	2.2%
Buses	1	0	0	0	**1**	-	2	36	0	0	**38**	-	1	0	0	0	**1**	-	5	28	0	0	**33**	-	73
% Buses	50.0%	0%	0%	0%	**7.1%**	-	13.3%	0.7%	0%	0%	**0.7%**	-	7.7%	0%	0%	0%	**4.8%**	-	26.3%	0.5%	0%	0%	**0.6%**	-	0.7%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	2	0	0	**2**	-	2
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Peterson Road with Sunnyview Road TMC - TMC

Tue Nov 12, 2024
Full Length (7 AM-9 AM, 4 PM-6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1245694, Location: 42.306071, -87.973747

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US



Peterson Road with Sunnyview Road TMC - TMC

Tue Nov 12, 2024
AM Peak (7:15 AM - 8:15 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1245694, Location: 42.306071, -87.973747

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US

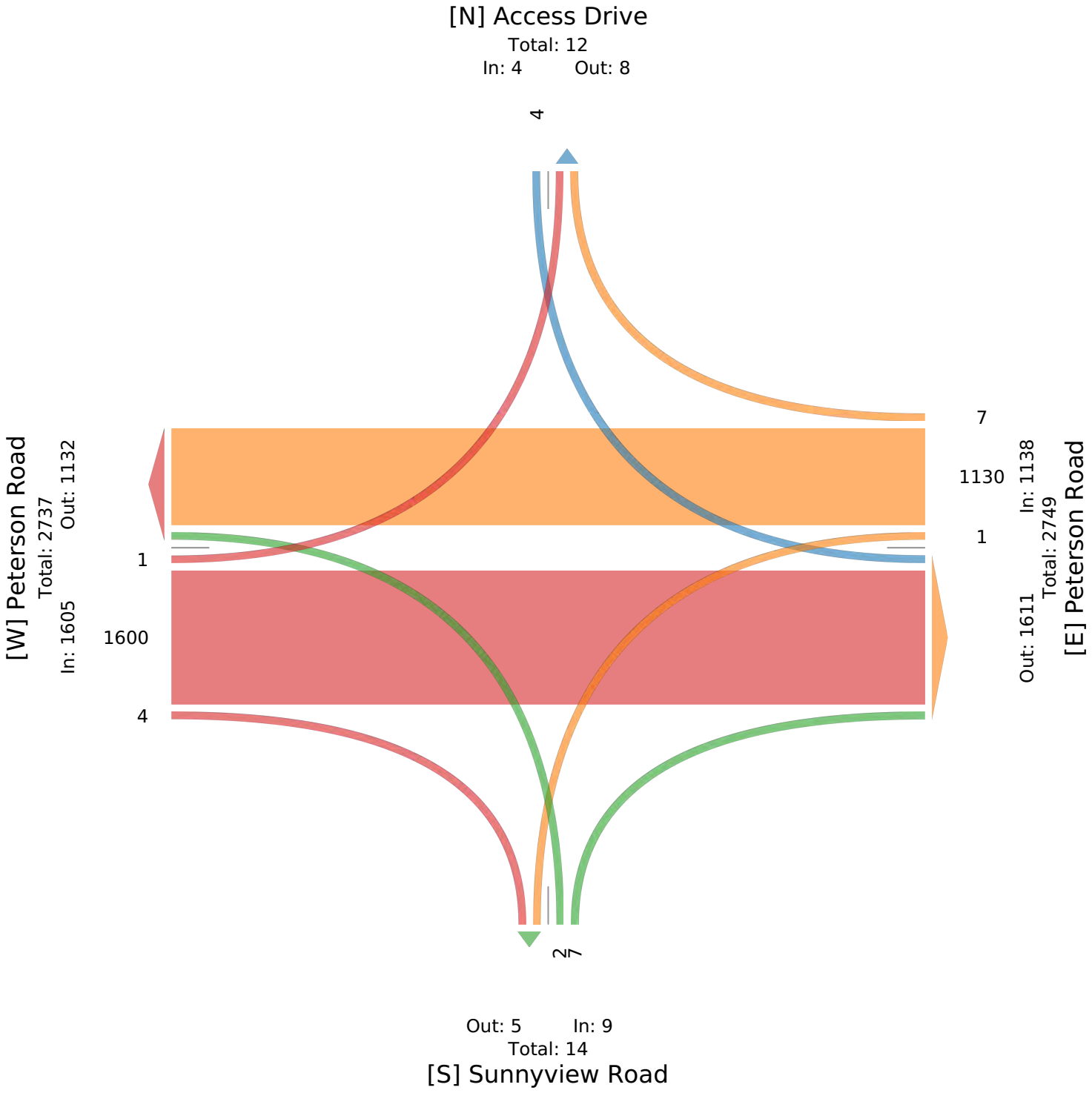
Leg / Direction	Access Drive Southbound						Peterson Road Westbound						Sunnyview Road Northbound						Peterson Road Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2024-11-12 7:15AM	0	0	0	0	**0**	0	1	269	0	0	**270**	0	0	0	0	0	**0**	0	0	426	0	0	**426**	0	**696**
7:30AM	0	0	1	0	**1**	0	3	331	0	0	**334**	0	3	0	0	0	**3**	0	2	381	0	0	**383**	0	**721**
7:45AM	0	0	3	0	**3**	0	3	281	0	0	**284**	0	2	0	1	0	**3**	0	0	409	0	0	**409**	0	**699**
8:00AM	0	0	0	0	**0**	0	0	249	1	0	**250**	0	2	0	1	0	**3**	0	2	384	1	0	**387**	0	**640**
Total	0	0	4	0	**4**	0	7	1130	1	0	**1138**	0	7	0	2	0	**9**	0	4	1600	1	0	**1605**	0	**2756**
% Approach	0%	0%	100%	0%	**-**	-	0.6%	99.3%	0.1%	0%	**-**	-	77.8%	0%	22.2%	0%	**-**	-	0.2%	99.7%	0.1%	0%	**-**	-	-
% Total	0%	0%	0.1%	0%	**0.1%**	-	0.3%	41.0%	0%	0%	**41.3%**	-	0.3%	0%	0.1%	0%	**0.3%**	-	0.1%	58.1%	0%	0%	**58.2%**	-	-
PHF	-	-	0.333	-	**0.333**	-	0.583	0.853	0.250	-	**0.852**	-	0.583	-	0.500	-	**0.750**	-	0.500	0.939	0.250	-	**0.942**	-	0.956
Lights	0	0	4	0	**4**	-	7	1052	1	0	**1060**	-	6	0	2	0	**8**	-	1	1502	1	0	**1504**	-	2576
% Lights	0%	0%	100%	0%	**100%**	-	100%	93.1%	100%	0%	**93.1%**	-	85.7%	0%	100%	0%	**88.9%**	-	25.0%	93.9%	100%	0%	**93.7%**	-	93.5%
Single-Unit Trucks	0	0	0	0	**0**	-	0	23	0	0	**23**	-	0	0	0	0	**0**	-	1	49	0	0	**50**	-	73
% Single-Unit Trucks	0%	0%	0%	0%	**0%**	-	0%	2.0%	0%	0%	**2.0%**	-	0%	0%	0%	0%	**0%**	-	25.0%	3.1%	0%	0%	**3.1%**	-	2.6%
Articulated Trucks	0	0	0	0	**0**	-	0	45	0	0	**45**	-	0	0	0	0	**0**	-	0	41	0	0	**41**	-	86
% Articulated Trucks	0%	0%	0%	0%	**0%**	-	0%	4.0%	0%	0%	**4.0%**	-	0%	0%	0%	0%	**0%**	-	0%	2.6%	0%	0%	**2.6%**	-	3.1%
Buses	0	0	0	0	**0**	-	0	10	0	0	**10**	-	1	0	0	0	**1**	-	2	8	0	0	**10**	-	21
% Buses	0%	0%	0%	0%	**0%**	-	0%	0.9%	0%	0%	**0.9%**	-	14.3%	0%	0%	0%	**11.1%**	-	50.0%	0.5%	0%	0%	**0.6%**	-	0.8%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Peterson Road with Sunnyview Road TMC - TMC

Tue Nov 12, 2024
AM Peak (7:15 AM - 8:15 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1245694, Location: 42.306071, -87.973747

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US



Peterson Road with Sunnyview Road TMC - TMC

Tue Nov 12, 2024
PM Peak (4:30 PM - 5:30 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1245694, Location: 42.306071, -87.973747



Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US

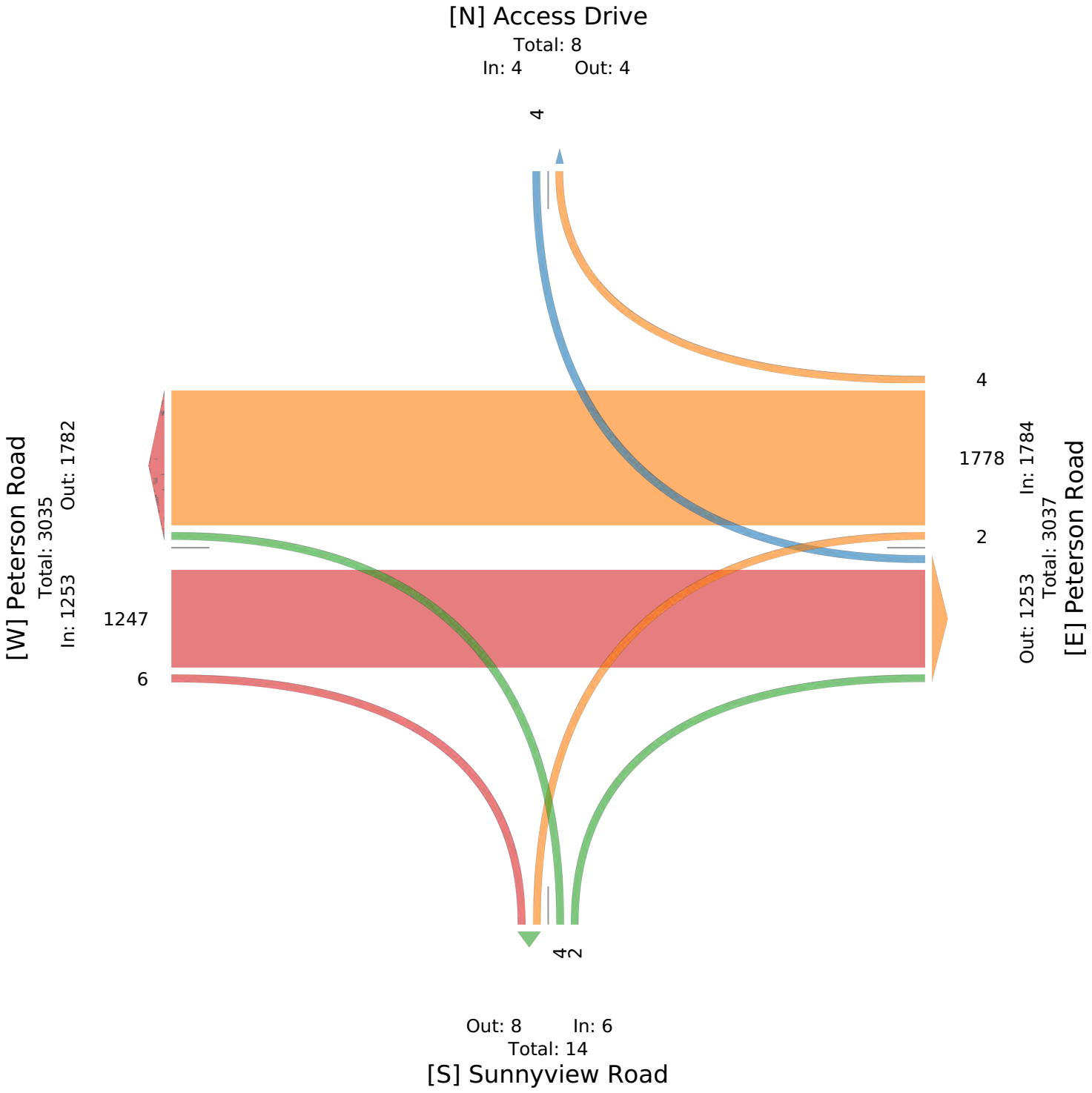
Leg / Direction	Access Drive Southbound						Peterson Road Westbound						Sunnyview Road Northbound						Peterson Road Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2024-11-12 4:30PM	0	0	1	0	**1**	0	2	440	1	0	**443**	0	2	0	1	0	**3**	0	0	308	0	0	**308**	0	**755**
4:45PM	0	0	2	0	**2**	0	1	435	0	0	**436**	0	0	0	1	0	**1**	0	1	280	0	0	**281**	0	**720**
5:00PM	0	0	1	0	**1**	0	0	470	0	0	**470**	0	0	0	1	0	**1**	0	2	342	0	0	**344**	0	**816**
5:15PM	0	0	0	0	**0**	0	1	433	1	0	**435**	0	0	0	1	0	**1**	0	3	317	0	0	**320**	0	**756**
Total	0	0	4	0	**4**	0	4	1778	2	0	**1784**	0	2	0	4	0	**6**	0	6	1247	0	0	**1253**	0	**3047**
% Approach	0%	0%	100%	0%	**-**	-	0.2%	99.7%	0.1%	0%	**-**	-	33.3%	0%	66.7%	0%	**-**	-	0.5%	99.5%	0%	0%	**-**	-	-
% Total	0%	0%	0.1%	0%	**0.1%**	-	0.1%	58.4%	0.1%	0%	**58.5%**	-	0.1%	0%	0.1%	0%	**0.2%**	-	0.2%	40.9%	0%	0%	**41.1%**	-	-
PHF	-	-	0.500	-	**0.500**	-	0.500	0.946	0.500	-	**0.949**	-	0.250	-	1.000	-	**0.500**	-	0.500	0.912	-	-	**0.911**	-	0.934
Lights	0	0	4	0	**4**	-	4	1738	2	0	**1744**	-	2	0	4	0	**6**	-	6	1216	0	0	**1222**	-	2976
% Lights	0%	0%	100%	0%	**100%**	-	100%	97.8%	100%	0%	**97.8%**	-	100%	0%	100%	0%	**100%**	-	100%	97.5%	0%	0%	**97.5%**	-	97.7%
Single-Unit Trucks	0	0	0	0	**0**	-	0	23	0	0	**23**	-	0	0	0	0	**0**	-	0	12	0	0	**12**	-	35
% Single-Unit Trucks	0%	0%	0%	0%	**0%**	-	0%	1.3%	0%	0%	**1.3%**	-	0%	0%	0%	0%	**0%**	-	0%	1.0%	0%	0%	**1.0%**	-	1.1%
Articulated Trucks	0	0	0	0	**0**	-	0	15	0	0	**15**	-	0	0	0	0	**0**	-	0	17	0	0	**17**	-	32
% Articulated Trucks	0%	0%	0%	0%	**0%**	-	0%	0.8%	0%	0%	**0.8%**	-	0%	0%	0%	0%	**0%**	-	0%	1.4%	0%	0%	**1.4%**	-	1.1%
Buses	0	0	0	0	**0**	-	0	2	0	0	**2**	-	0	0	0	0	**0**	-	0	2	0	0	**2**	-	4
% Buses	0%	0%	0%	0%	**0%**	-	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0%	0.2%	0%	0%	**0.2%**	-	0.1%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

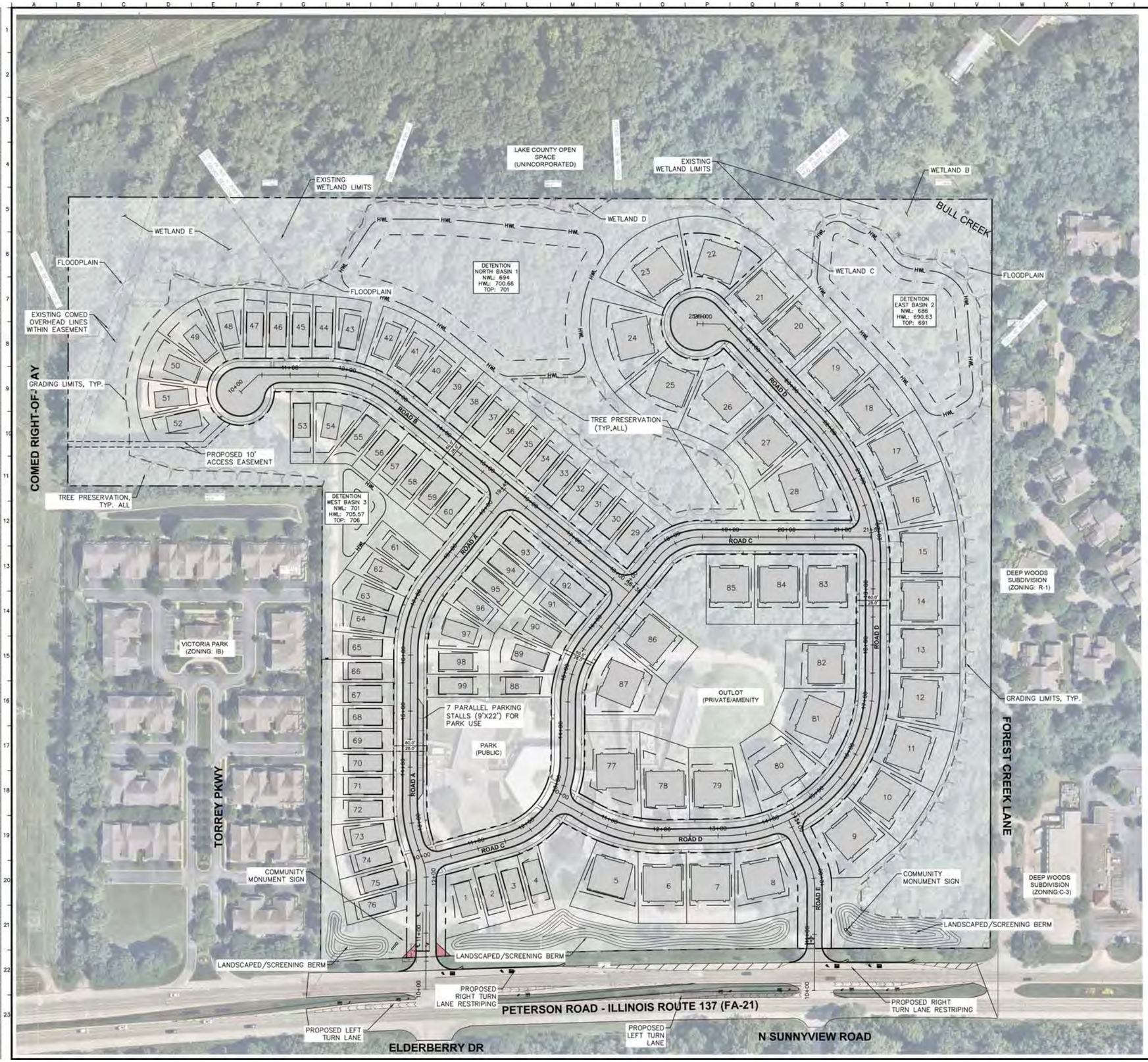
Peterson Road with Sunnyview Road TMC - TMC

Tue Nov 12, 2024
PM Peak (4:30 PM - 5:30 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1245694, Location: 42.306071, -87.973747

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US



Site Plan/Geometric Plan



NORTH

GRAPHIC SCALE IN FEET
0 40 80 160

Call Before You Dig
JULIE
1-800-892-0123

GENERAL NOTES

1. ALL DIMENSIONS REFER TO THE BACK OF CURB UNLESS OTHERWISE NOTED.
2. BUILDING DIMENSIONS ARE TO THE OUTSIDE FACE OF BUILDING UNLESS OTHERWISE NOTED.
3. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS TO VERIFY ALL BUILDING DIMENSIONS.
4. REFER TO LANDSCAPE ARCHITECT PLANS FOR MONUMENT SIGN DETAILS.

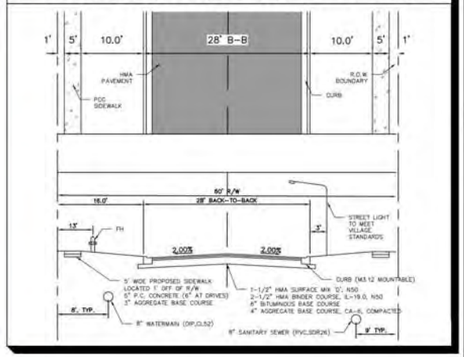
PROPERTY SUMMARY TABLE

SITE AREA	= 42.11	ACRES
R/W DEDICATION	= 6.55	ACRES
LOT AREA (CUMULATIVE)	= 17.69	ACRES
PARK DISTRICT DEDICATION	= 1.14	ACRES
PRIVATE AMENITY SPACE	= 1.41	ACRES
OPEN SPACE/DETENTION	= 2.92	ACRES
OPEN SPACE/UNDISTURBED AREA	= 12.40	ACRES
TOTAL LOTS PROVIDED	= 99	LOTS
UNIT COUNT	= 134	UNITS
ZONING SUMMARY:		
EXISTING ZONING DISTRICT	= MIXED (IB/R1/C3/UNINCORPORATED)	
PROPOSED ZONING DISTRICT	= R-7 PUD	
SINGLE FAMILY (41' X 110')	= 64	UNITS
GREENWAY CHASE SPRINGS		
FRONT YARD SETBACK	= 20	FEET
REAR YARD SETBACK	= 20	FEET
CORNER SIDE YARD SETBACK	= 15	FEET
SIDE YARD SETBACK	= 5	FEET*
*(MINIMUM 10 FT BUILDING SEPARATION)		
DUPLEXES (86' X 125')	= 70	UNITS
GREENWAY CHASE LANDINGS		
FRONT YARD SETBACK	= 20	FEET
REAR YARD SETBACK	= 30	FEET
CORNER SIDE YARD SETBACK	= 15	FEET
SIDE YARD SETBACK	= 6	FEET*
*(MINIMUM 12 FT BUILDING SEPARATION)		
MAXIMUM BUILDING COVERAGE SINGLE FAMILY	= 45%	
MAXIMUM IMPERVIOUS COVERAGE SINGLE FAMILY	= 50%	
MAXIMUM BUILDING COVERAGE DUPLEX	= 50%	
MAXIMUM IMPERVIOUS COVERAGE DUPLEX	= 55%	

FEMA NOTE

PER FLOOD INSURANCE RATE MAP PANEL NO. 17097C0161K EFFECTIVE DATE 9/19/2013, A PORTION OF THE SITE IS LOCATED IN ZONE 'AE' WITH A VARYING BASE FLOOD ELEVATION RANGING FROM 701.0 ON THE WEST SIDE TO 684.0 ON THE EAST SIDE, AS NOTED HEREIN. THE REMAINDER OF THE SITE IS LOCATED WITHIN ZONE 'X' (AREA OF MINIMAL FLOOD HAZARD).

TYPICAL ROADWAY CROSS-SECTION



No.	REVISIONS	DATE	BY
1	VILLAGE RESUBMITTAL	03/28/25	RNM
2	ARC RE-SUBMITTAL	03/07/25	DC

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
9 PARKWAY NORTH, SUITE 200
DEERFIELD, IL 60015
PHONE: 847-520-9545
WWW.KIMLEY-HORN.COM

SCALE: AS NOTED
DESIGNED BY: INS
DRAWN BY: KTM
CHECKED BY: RNM

PULTE HOME COMPANY, LLC

OVERALL SITE PLAN

GREENWAY CHASE
610 PETERSON ROAD
LIBERTYVILLE, IL 60048

ORIGINAL ISSUE: 01/03/2025
KHA PROJECT NO. 168247001
SHEET NUMBER
C2.0

Drawing name: K:\CHS_LIBEV\168247001_Pulte_Libertyville_IL\2 Design\CAD\PlanSheets\C2.0 SITE PLAN.dwg C2.0 Mar 26, 2025 4:59pm by KlarenTR.Muller
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



Kimley»Horn

610 PETERSON ROAD - LIBERTYVILLE, IL

CONCEPT GEOMETRICS EXHIBIT

03/26/2025

0 20 40 80 120

NORTH

ITE Trip Generation Sheets

Land Use: 210
Single-Family Detached Housing

Description

A single-family detached housing site includes any single-family detached home on an individual lot. A typical site surveyed is a suburban subdivision.

Specialized Land Use

Data have been submitted for several single-family detached housing developments with homes that are commonly referred to as patio homes. A patio home is a detached housing unit that is located on a small lot with little (or no) front or back yard. In some subdivisions, communal maintenance of outside grounds is provided for the patio homes. The three patio home sites total 299 dwelling units with overall weighted average trip generation rates of 5.35 vehicle trips per dwelling unit for weekday, 0.26 for the AM adjacent street peak hour, and 0.47 for the PM adjacent street peak hour. These patio home rates based on a small sample of sites are lower than those for single-family detached housing (Land Use 210), lower than those for single-family attached housing (Land Use 251), and higher than those for senior adult housing -- single-family (Land Use 251). Further analysis of this housing type will be conducted in a future edition of *Trip Generation Manual*.

Additional Data

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

For 30 of the study sites, data on the number of residents and number of household vehicles are available. The overall averages for the 30 sites are 3.6 residents per dwelling unit and 1.5 vehicles per dwelling unit.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Arizona, California, Connecticut, Delaware, Illinois, Indiana, Kentucky, Maryland, Massachusetts, Minnesota, Montana, New Jersey, North Carolina, Ohio, Ontario (CAN), Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Vermont, Virginia, and West Virginia.

Source Numbers

100, 105, 114, 126, 157, 167, 177, 197, 207, 211, 217, 267, 275, 293, 300, 319, 320, 356, 357, 367, 384, 387, 407, 435, 522, 550, 552, 579, 598, 601, 603, 614, 637, 711, 716, 720, 728, 735, 868, 869, 903, 925, 936, 1005, 1007, 1008, 1010, 1033, 1066, 1077,1078, 1079

Single-Family Detached Housing
(210)

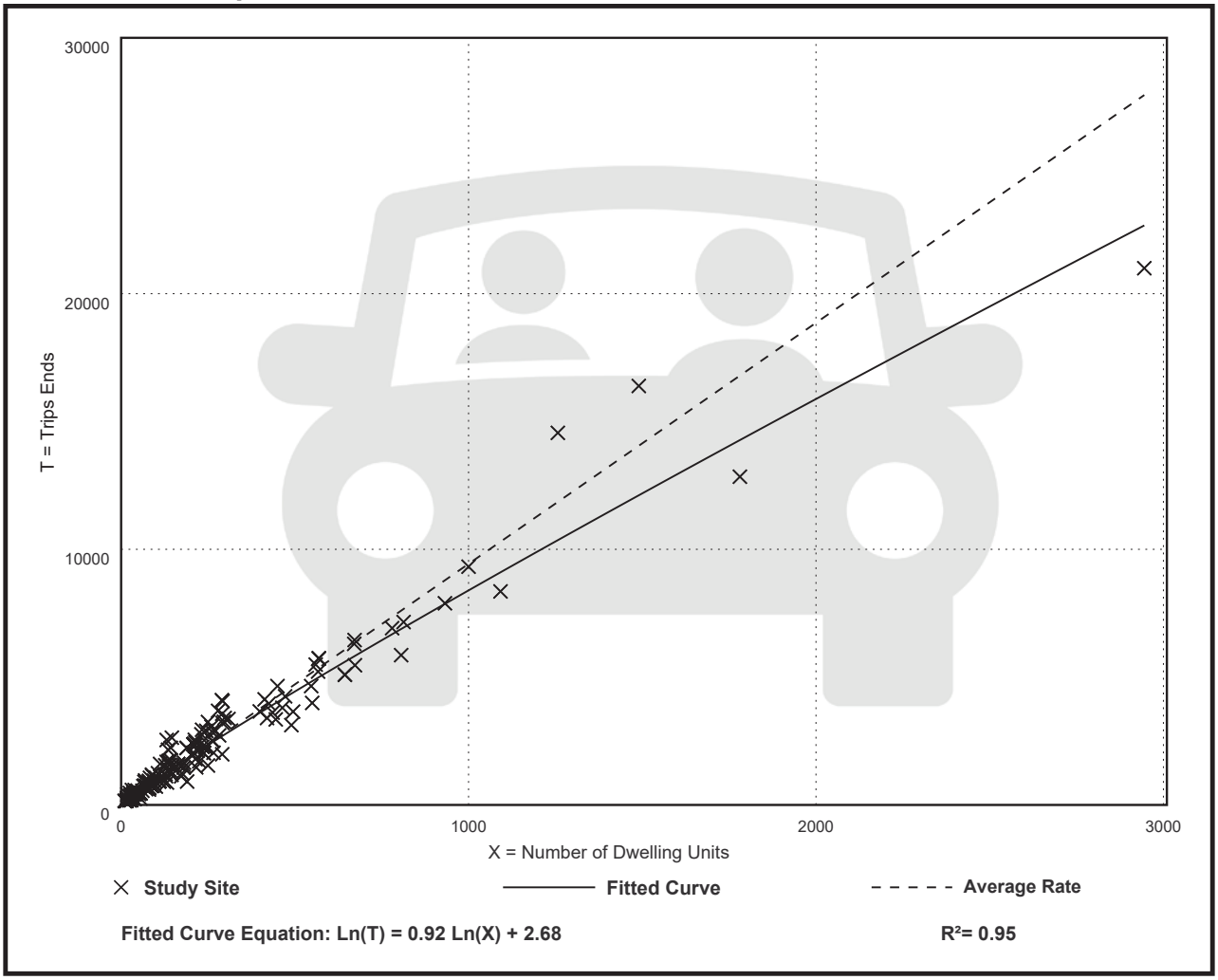
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 174
Avg. Num. of Dwelling Units: 246
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
9.43	4.45 - 22.61	2.13

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.92 Ln(X) + 2.68

R^2= 0.95

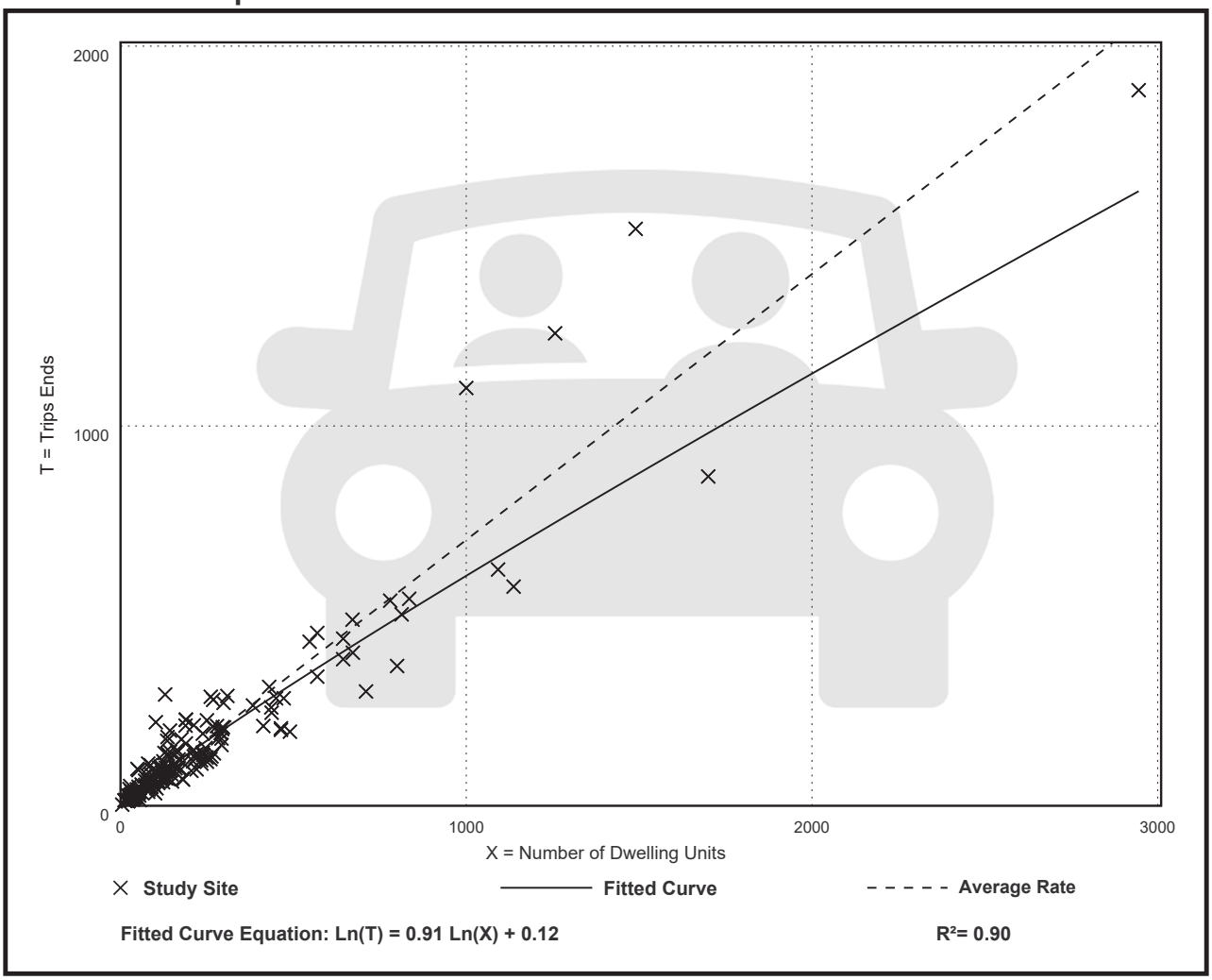
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 192
Avg. Num. of Dwelling Units: 226
Directional Distribution: 26% entering, 74% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.70	0.27 - 2.27	0.24

Data Plot and Equation



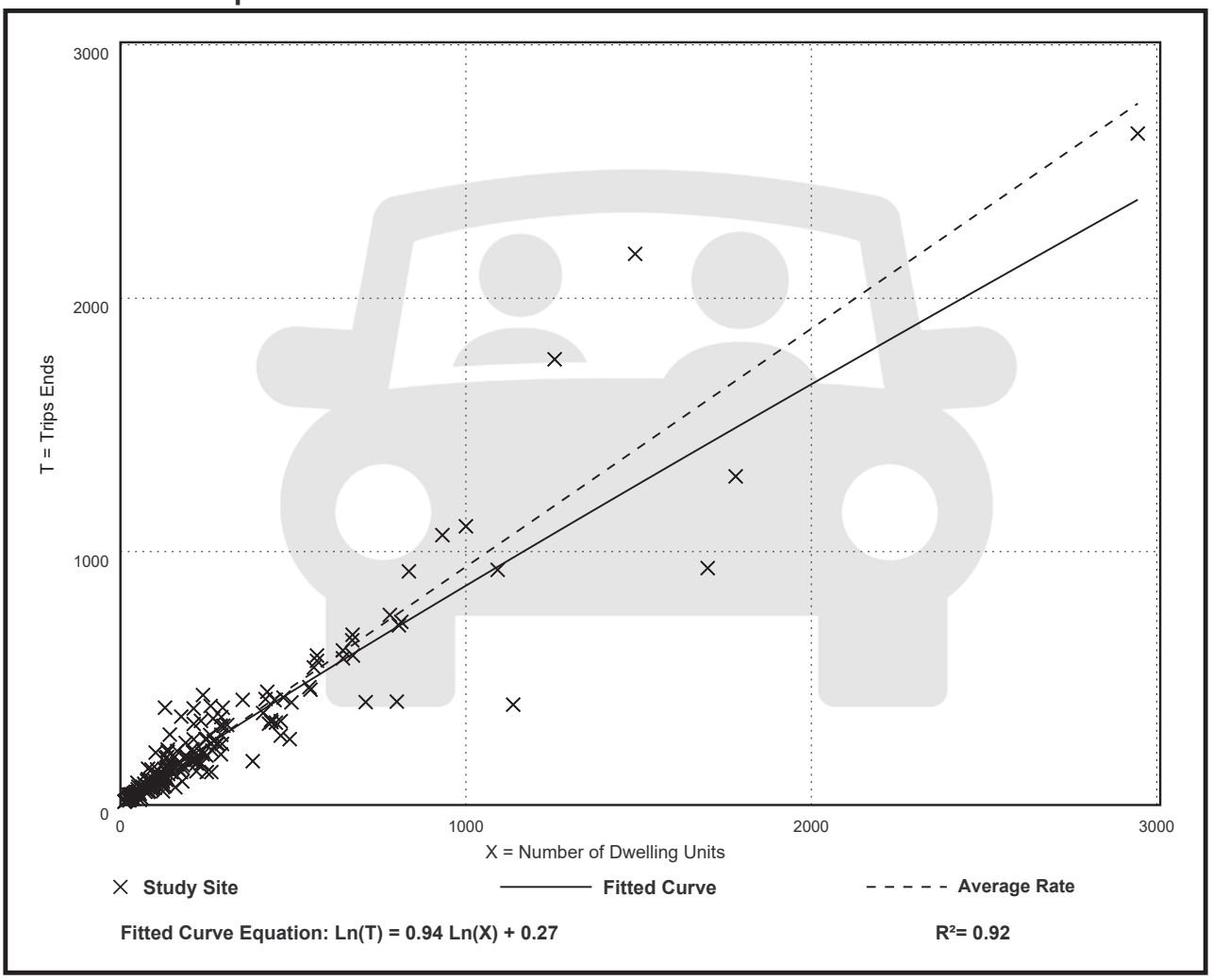
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 208
Avg. Num. of Dwelling Units: 248
Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.94	0.35 - 2.98	0.31

Data Plot and Equation



Land Use: 251
Senior Adult Housing—Single-Family

Description

Senior adult housing—single-family sites are independent living developments that are called various names including retirement communities, age-restricted housing, and active adult communities. The development has a specific age restriction for its residents, typically a minimum of 55 years of age for at least one resident of the household.

Residents in these communities are typically considered active and requiring little to no medical supervision. The percentage of retired residents varies by development. The development may include amenities such as a golf course, swimming pool, 24-hour security, transportation, and common recreational facilities. They generally lack centralized dining and on-site health facilities.

The dwelling units can be either detached or attached. The types of housing types represented by sites in the database include traditional single-family detached homes, patio homes, duplexes, and townhouses. Single-family attached housing includes any single-family housing unit that shares a wall with an adjoining dwelling unit, whether the walls are for living space, a vehicle garage, or storage space.

Senior adult housing—multifamily (Land Use 252), congregate care facility (Land Use 253), assisted living (Land Use 254), and continuing care retirement community (Land Use 255) are related land uses.

Additional Data

Caution should be used when applying trip rates for this land use as it may contain a wide variety of studies ranging from communities with very active, working residents to communities with older, retired residents. As more data become available, consideration will be given to future stratification of this land use.

Many factors affected the trip rates for detached senior adult housing. Factors such as the average age of residents, development location and size, affluence of residents, employment status, and vehicular access should be taken into consideration when conducting an analysis. Some developments were located within close proximity to medical facilities, restaurants, shopping centers, banks, and recreational activities.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

For the six sites for which data were provided for both occupied dwelling units and total dwelling units, an average of 98 percent of the units were occupied.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), California, Delaware, Florida, Maryland, New Jersey, New York, Pennsylvania, Virginia, and Washington.

Source Numbers

221, 289, 398, 421, 500, 550, 598, 601, 602, 629, 930, 1015, 1060, 1074

Senior Adult Housing - Single-Family (251)

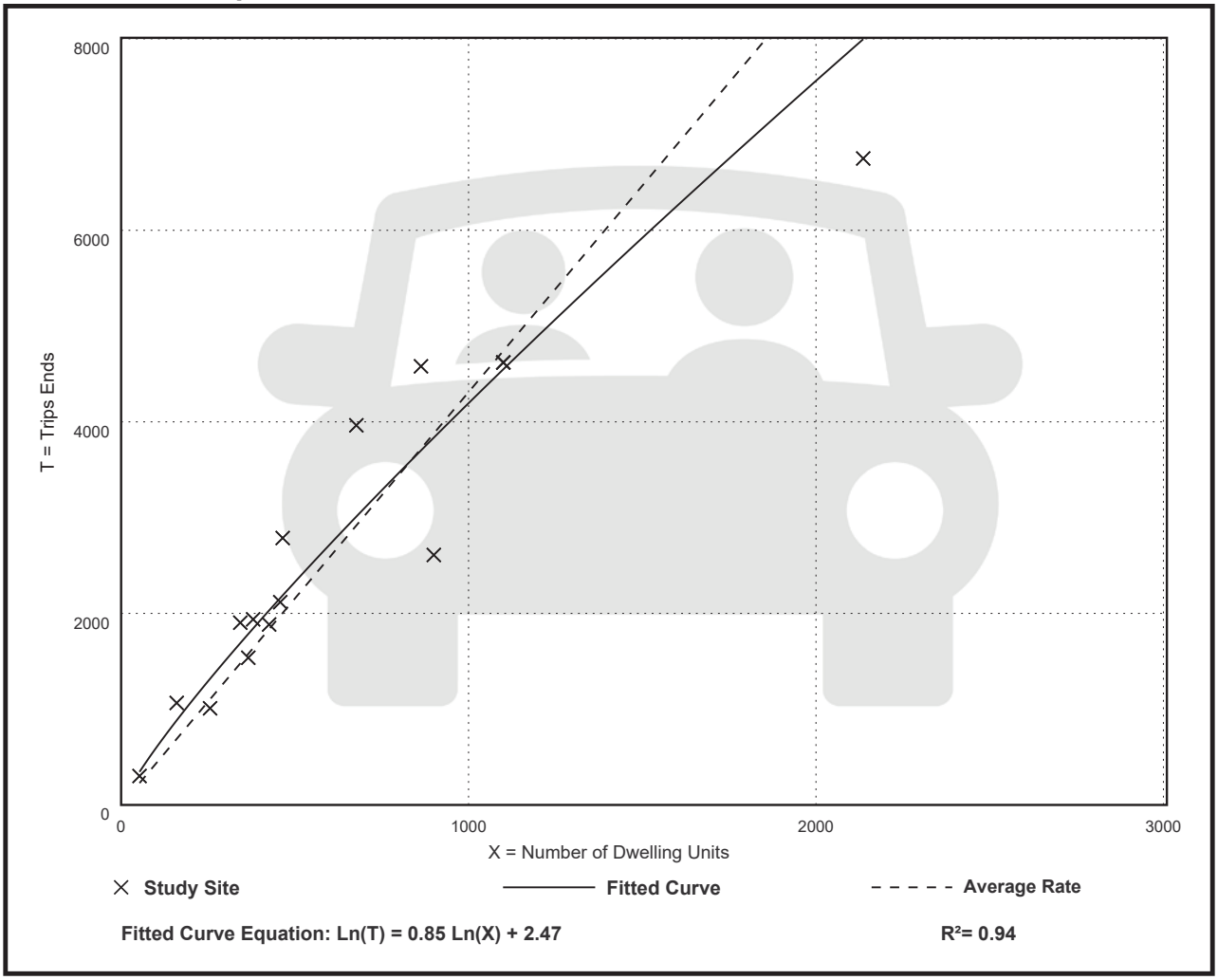
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 15
Avg. Num. of Dwelling Units: 646
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
4.31	2.90 - 6.66	1.07

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.85 Ln(X) + 2.47

R^2= 0.94

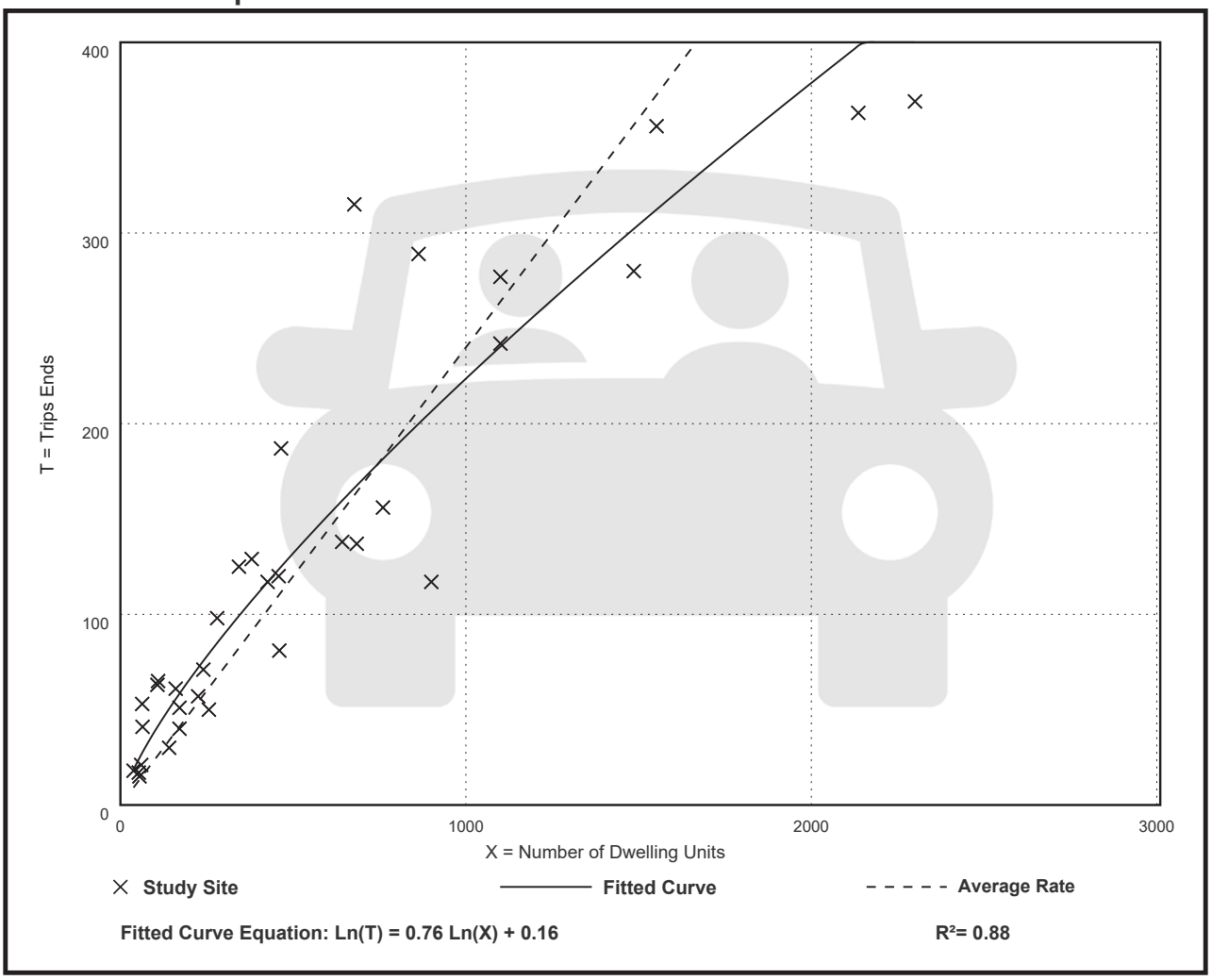
Senior Adult Housing - Single-Family
(251)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 34
Avg. Num. of Dwelling Units: 557
Directional Distribution: 33% entering, 67% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.24	0.13 - 0.84	0.10

Data Plot and Equation



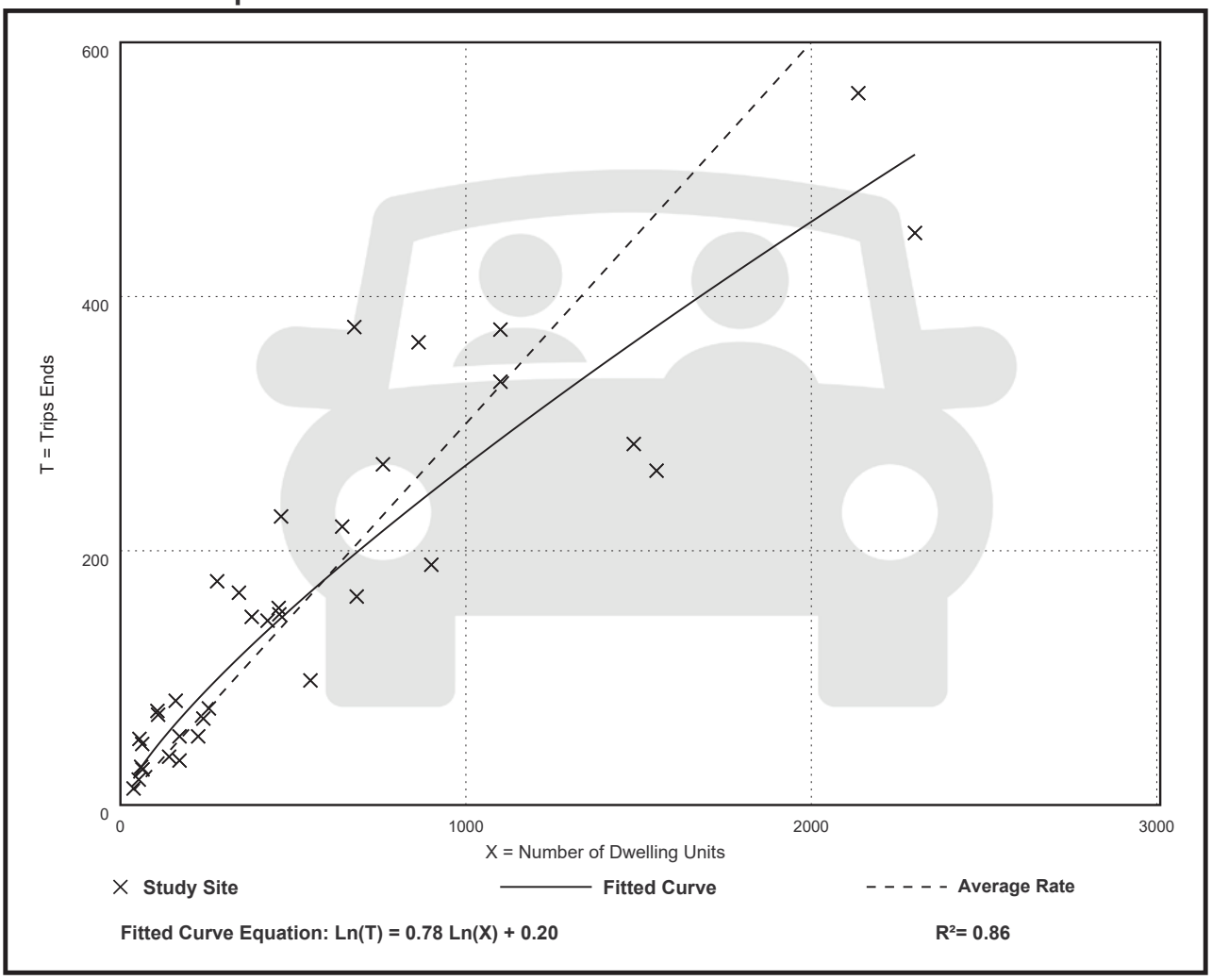
Senior Adult Housing - Single-Family
(251)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 35
Avg. Num. of Dwelling Units: 556
Directional Distribution: 61% entering, 39% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.30	0.17 - 0.95	0.12

Data Plot and Equation



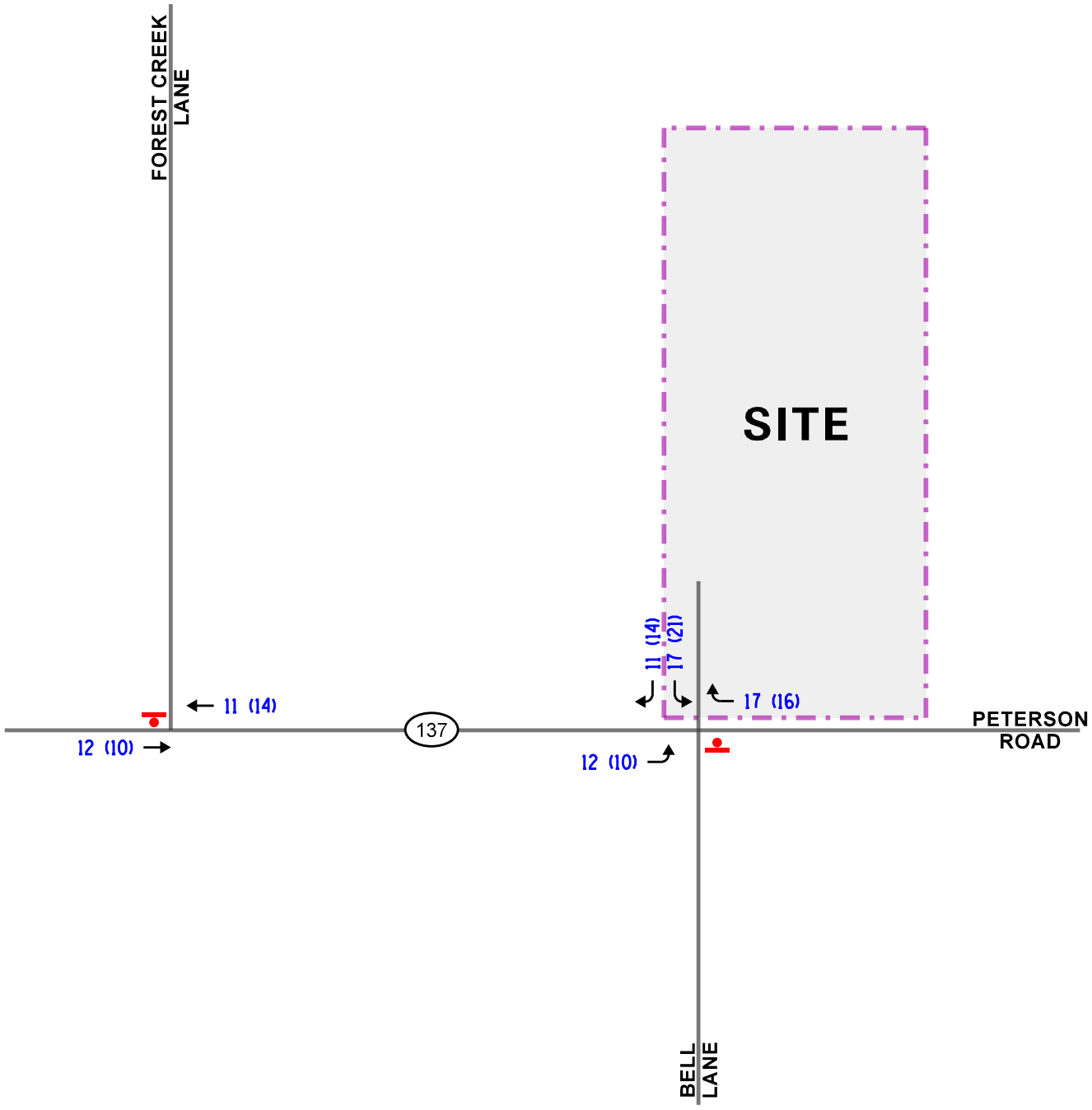
Site Traffic Assignment Figures of Adjacent Developments (From Original Traffic Study)

LEGEND

00 - AM PEAK HOUR (7:00-8:00 AM)

(00) - PM PEAK HOUR (4:15-5:15 PM)

NOT TO SCALE

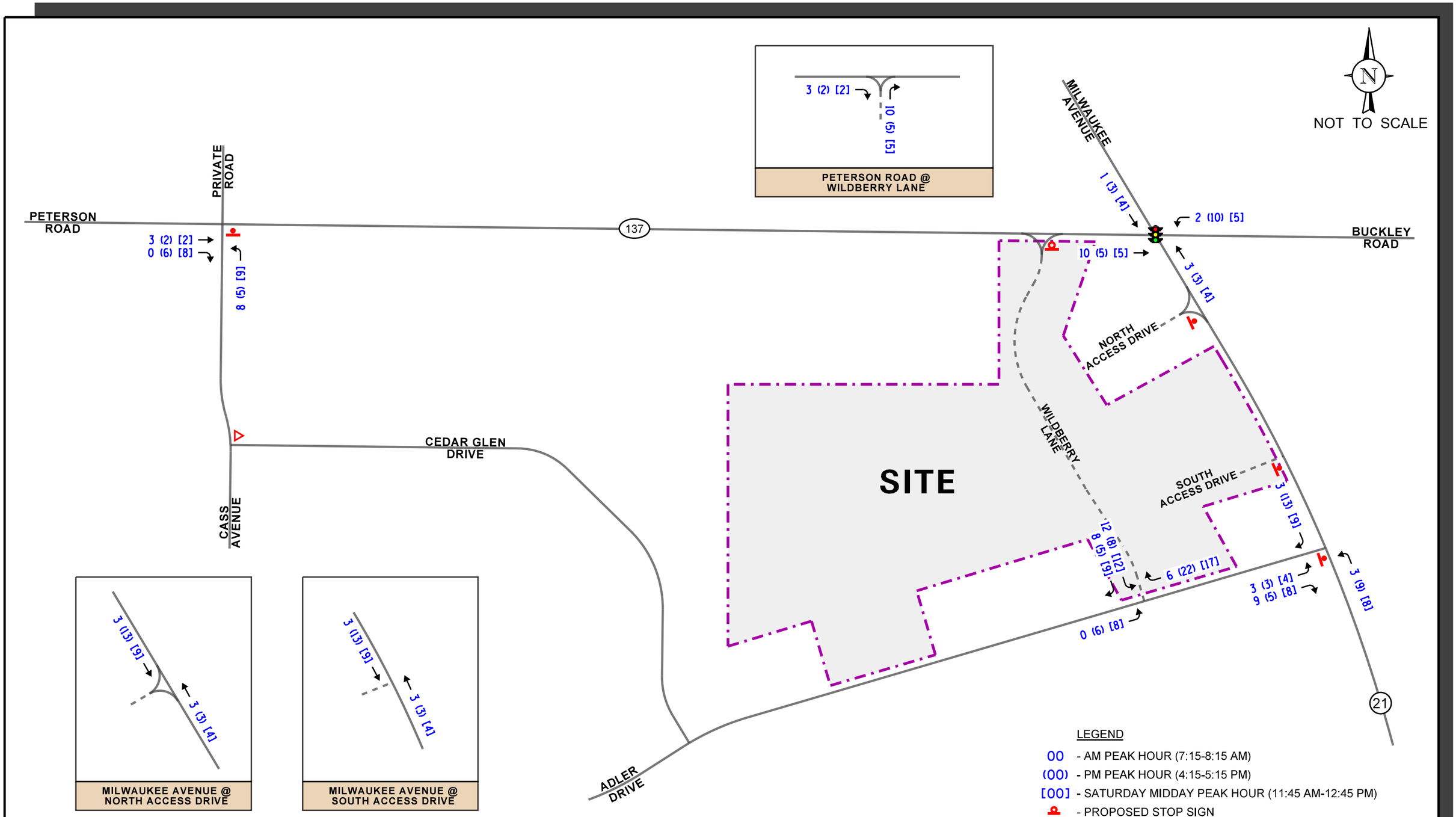


Proposed Affordable Housing Development
Libertyville, Illinois

Estimated Site-Generated Traffic Volumes

KLOA
Kenig,Lindgren,O'Hara,Aboona,Inc.

Job No: 22-013 Figure: 6



PROPOSED RESIDENTIAL DEVELOPMENT
LIBERTYVILLE, ILLINOIS

ESTIMATED SITE-GENERATED TRAFFIC VOLUMES

KLOA
Kenig,Lindgren,O'Hara,Aboona,Inc.

Job No: 21-023 Figure: 8

Level of Service Criteria

LEVEL OF SERVICE CRITERIA

Signalized Intersections		
Level of Service	**Interpretation**	**Average Control Delay (seconds per vehicle)**
A	Favorable progression. Most vehicles arrive during the green indication and travel through the intersection without stopping.	≤10
B	Good progression, with more vehicles stopping than for Level of Service A.	> 10 - 20
C	Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear. Number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.	> 20 - 35
D	The volume-to-capacity ratio is high and either progression is ineffective or the cycle length is too long. Many vehicles stop and individual cycle failures are noticeable.	> 35 - 55
E	Progression is unfavorable. The volume-to-capacity ratio is high and the cycle length is long. Individual cycle failures are frequent.	> 55 - 80
F	The volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.	> 80

Unsignalized Intersections	
Level of Service	**Average Total Delay (sec/veh)**
A	0 - 10
B	> 10 - 15
C	> 15 - 25
D	> 25 - 35
E	> 35 - 50
F	> 50

Source: *Highway Capacity Manual*, 6th Edition.

Capacity Analysis Summary Sheets

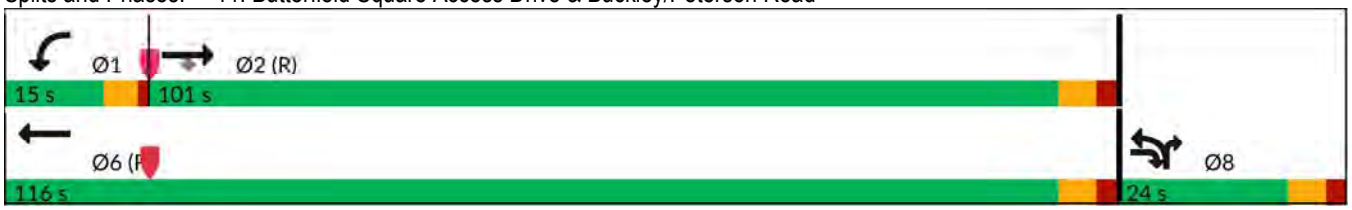
Weekday Morning Peak Hour – Existing Conditions

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1488	2	48	1075	16	73
Future Volume (vph)	1488	2	48	1075	16	73
Ideal Flow (vphpl)	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		200	270		0	0
Storage Lanes		1	1		1	1
Taper Length (ft)			240		25	
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3551	1077	1736	3551	1517	1568
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3551	1077	1736	3551	1517	1568
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		2				78
Link Speed (mph)	30			30	30	
Link Distance (ft)	990			919	330	
Travel Time (s)	22.5			20.9	7.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	7%	50%	4%	7%	19%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1583	2	51	1144	17	78
Turn Type	NA	pm+ov	Prot	NA	Prot	Prot
Protected Phases	2	8	1	6	8	8
Permitted Phases		2				
Detector Phase	2	8	1	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	9.5	24.0	24.0	24.0
Total Split (s)	101.0	24.0	15.0	116.0	24.0	24.0
Total Split (%)	72.1%	17.1%	10.7%	82.9%	17.1%	17.1%
Yellow Time (s)	4.0	4.0	3.5	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	4.5	6.0	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	C-Max	Max	None	C-Max	Max	Max
Act Effct Green (s)	98.7	123.9	8.9	110.0	18.0	18.0
Actuated g/C Ratio	0.71	0.89	0.06	0.79	0.13	0.13

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
v/c Ratio	0.63	0.00	0.47	0.41	0.09	0.29
Control Delay (s/veh)	13.1	1.0	76.6	5.2	55.1	14.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	13.1	1.0	76.6	5.2	55.1	14.1
LOS	B	A	E	A	E	B
Approach Delay (s/veh)	13.1			8.3	21.4	
Approach LOS	B			A	C	
Queue Length 50th (ft)	396	0	45	148	14	0
Queue Length 95th (ft)	477	1	91	176	38	49
Internal Link Dist (ft)	910			839	250	
Turn Bay Length (ft)		200	270			
Base Capacity (vph)	2503	953	130	2790	195	269
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.63	0.00	0.39	0.41	0.09	0.29

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 95 (68%), Referenced to phase 2:EBT and 6:WBT, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay (s/veh): 11.4		Intersection LOS: B	
Intersection Capacity Utilization 54.1%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 11: Butterfield Square Access Drive & Buckley/Peterson Road



Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	1600	4	1	1133	7	2	0	7	4	0	0
Future Vol, veh/h	1	1600	4	1	1133	7	2	0	7	4	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	105	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	6	75	0	7	0	0	0	14	0	0	0
Mvmt Flow	1	1667	4	1	1180	7	2	0	7	4	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1188	0	0	1671	0	0	2263	2860	835	2021	2859	594
Stage 1	-	-	-	-	-	-	1671	1671	-	1186	1186	-
Stage 2	-	-	-	-	-	-	592	1190	-	835	1673	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	7.18	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.44	3.5	4	3.3
Pot Cap-1 Maneuver	595	-	-	389	-	-	23	17	287	35	17	453
Stage 1	-	-	-	-	-	-	102	154	-	204	265	-
Stage 2	-	-	-	-	-	-	464	264	-	332	154	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	595	-	-	389	-	-	23	17	287	34	17	453
Mov Cap-2 Maneuver	-	-	-	-	-	-	82	96	-	128	95	-
Stage 1	-	-	-	-	-	-	102	154	-	203	264	-
Stage 2	-	-	-	-	-	-	463	263	-	323	153	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.04	0.01	25.59	34.03
HCM LOS			D	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	184	2	-	-	389	-	-	128
HCM Lane V/C Ratio	0.051	0.002	-	-	0.003	-	-	0.033
HCM Control Delay (s/veh)	25.6	11.1	0	-	14.3	-	-	34
HCM Lane LOS	D	B	A	-	B	-	-	D
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	1609	1135	4	9	6
Future Vol, veh/h	2	1609	1135	4	9	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	50	5	6	0	0	33
Mvmt Flow	2	1694	1195	4	9	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1199	0	-	0	2048	599
Stage 1	-	-	-	-	1197	-
Stage 2	-	-	-	-	851	-
Critical Hdwy	5.1	-	-	-	6.8	7.56
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.7	-	-	-	3.5	3.63
Pot Cap-1 Maneuver	370	-	-	-	50	375
Stage 1	-	-	-	-	253	-
Stage 2	-	-	-	-	384	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	370	-	-	-	49	375
Mov Cap-2 Maneuver	-	-	-	-	160	-
Stage 1	-	-	-	-	250	-
Stage 2	-	-	-	-	384	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.18	0	23.81
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	4	-	-	-	207
HCM Lane V/C Ratio	0.006	-	-	-	0.076
HCM Control Delay (s/veh)	14.8	0.2	-	-	23.8
HCM Lane LOS	B	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	1547	7	19	1110	6	5	0	54	4	0	8
Future Vol, veh/h	7	1547	7	19	1110	6	5	0	54	4	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	110	-	-	145	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	14	7	0	10	7	0	0	0	4	0	0	12
Mvmt Flow	7	1646	7	20	1181	6	5	0	57	4	0	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1187	0	0	1653	0	0	2295	2892	827	2062	2893	594
Stage 1	-	-	-	-	-	-	1664	1664	-	1224	1224	-
Stage 2	-	-	-	-	-	-	631	1228	-	838	1668	-
Critical Hdwy	4.38	-	-	4.3	-	-	7.5	6.5	6.98	7.5	6.5	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.34	-	-	2.3	-	-	3.5	4	3.34	3.5	4	3.42
Pot Cap-1 Maneuver	521	-	-	352	-	-	22	16	311	32	16	424
Stage 1	-	-	-	-	-	-	103	155	-	193	254	-
Stage 2	-	-	-	-	-	-	441	253	-	331	155	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	521	-	-	352	-	-	20	15	311	25	15	424
Mov Cap-2 Maneuver	-	-	-	-	-	-	79	91	-	106	84	-
Stage 1	-	-	-	-	-	-	101	153	-	182	239	-
Stage 2	-	-	-	-	-	-	407	238	-	266	152	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.05	0.27	22.11	23.02
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	79	311	521	-	-	352	-	-	213
HCM Lane V/C Ratio	0.067	0.185	0.014	-	-	0.057	-	-	0.06
HCM Control Delay (s/veh)	53.6	19.2	12	-	-	15.9	-	-	23
HCM Lane LOS	F	C	B	-	-	C	-	-	C
HCM 95th %tile Q(veh)	0.2	0.7	0	-	-	0.2	-	-	0.2

Capacity Analysis Summary Sheets

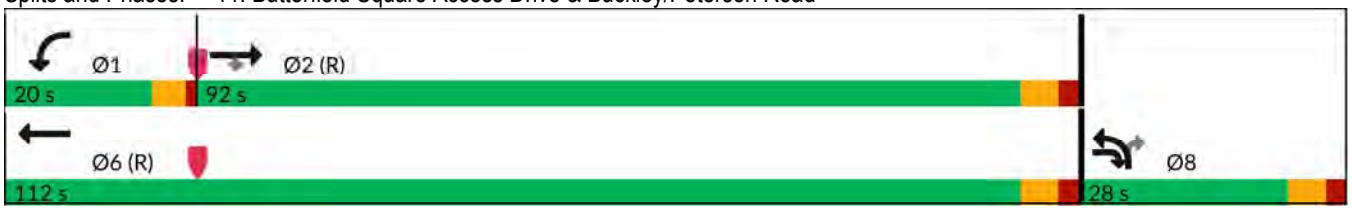
Weekday Evening Peak Hour – Existing Conditions

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1196	2	104	1666	50	53
Future Volume (vph)	1196	2	104	1666	50	53
Ideal Flow (vphpl)	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		200	270		0	0
Storage Lanes		1	1		1	1
Taper Length (ft)			240		25	
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3725	1615	1805	3689	1805	1615
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3725	1615	1805	3689	1805	1615
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		2				57
Link Speed (mph)	30			30	30	
Link Distance (ft)	990			919	330	
Travel Time (s)	22.5			20.9	7.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	0%	0%	3%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1286	2	112	1791	54	57
Turn Type	NA	pm+ov	Prot	NA	Prot	Perm
Protected Phases	2	8	1	6	8	
Permitted Phases		2				8
Detector Phase	2	8	1	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	9.5	24.0	24.0	24.0
Total Split (s)	92.0	28.0	20.0	112.0	28.0	28.0
Total Split (%)	65.7%	20.0%	14.3%	80.0%	20.0%	20.0%
Yellow Time (s)	4.0	4.0	3.5	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	4.5	6.0	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	C-Min	None	None	C-Min	None	None
Act Effct Green (s)	102.4	117.9	13.9	122.0	9.6	9.6
Actuated g/C Ratio	0.73	0.84	0.10	0.87	0.07	0.07

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
v/c Ratio	0.47	0.00	0.63	0.56	0.44	0.35
Control Delay (s/veh)	9.6	2.0	75.0	3.9	72.8	20.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	9.6	2.0	75.0	3.9	72.8	20.2
LOS	A	A	E	A	E	C
Approach Delay (s/veh)	9.6			8.1	45.8	
Approach LOS	A			A	D	
Queue Length 50th (ft)	245	0	100	198	48	0
Queue Length 95th (ft)	362	2	160	283	93	44
Internal Link Dist (ft)	910			839	250	
Turn Bay Length (ft)		200	270			
Base Capacity (vph)	2724	1484	210	3215	283	301
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.00	0.53	0.56	0.19	0.19

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay (s/veh): 9.9		Intersection LOS: A	
Intersection Capacity Utilization 57.9%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 11: Butterfield Square Access Drive & Buckley/Peterson Road



Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1247	6	2	1776	4	4	0	2	4	0	0
Future Vol, veh/h	0	1247	6	2	1776	4	4	0	2	4	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	105	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	2	0	0	2	0	0	0	0	0	0	0
Mvmt Flow	0	1341	6	2	1910	4	4	0	2	4	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1914	0	0	1347	0	0	2303	3262	674	2587	3263	957
Stage 1	-	-	-	-	-	-	1344	1344	-	1916	1916	-
Stage 2	-	-	-	-	-	-	959	1918	-	670	1347	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	314	-	-	518	-	-	21	9	402	13	9	262
Stage 1	-	-	-	-	-	-	163	222	-	71	116	-
Stage 2	-	-	-	-	-	-	280	116	-	417	222	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	314	-	-	518	-	-	21	9	402	13	9	262
Mov Cap-2 Maneuver	-	-	-	-	-	-	103	73	-	58	73	-
Stage 1	-	-	-	-	-	-	163	222	-	71	116	-
Stage 2	-	-	-	-	-	-	279	116	-	415	222	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	0.01	32.65	71.91
HCM LOS			D	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	137	314	-	-	518	-	-	58
HCM Lane V/C Ratio	0.047	-	-	-	0.004	-	-	0.074
HCM Control Delay (s/veh)	32.7	0	-	-	12	-	-	71.9
HCM Lane LOS	D	A	-	-	B	-	-	F
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.2

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	1251	1774	7	4	8
Future Vol, veh/h	2	1251	1774	7	4	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	2	3	0	0	0
Mvmt Flow	2	1345	1908	8	4	9

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1915	0	-	0	2588	958
Stage 1	-	-	-	-	1911	-
Stage 2	-	-	-	-	677	-
Critical Hdwy	4.1	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	314	-	-	-	21	262
Stage 1	-	-	-	-	104	-
Stage 2	-	-	-	-	472	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	314	-	-	-	21	262
Mov Cap-2 Maneuver	-	-	-	-	82	-
Stage 1	-	-	-	-	103	-
Stage 2	-	-	-	-	472	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.21	0	30.92
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	6	-	-	-	152
HCM Lane V/C Ratio	0.007	-	-	-	0.085
HCM Control Delay (s/veh)	16.6	0.2	-	-	30.9
HCM Lane LOS	C	A	-	-	D
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	1222	21	27	1752	1	3	0	31	0	0	15
Future Vol, veh/h	6	1222	21	27	1752	1	3	0	31	0	0	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	110	-	-	145	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	2	0	0	3	0	0	0	3	0	0	0
Mvmt Flow	6	1314	23	29	1884	1	3	0	33	0	0	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1885	0	0	1337	0	0	2338	3281	668	2612	3292	942
Stage 1	-	-	-	-	-	-	1338	1338	-	1942	1942	-
Stage 2	-	-	-	-	-	-	1000	1943	-	670	1349	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.96	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.33	3.5	4	3.3
Pot Cap-1 Maneuver	322	-	-	523	-	-	20	9	398	12	9	268
Stage 1	-	-	-	-	-	-	164	224	-	69	113	-
Stage 2	-	-	-	-	-	-	264	113	-	418	221	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	322	-	-	523	-	-	17	8	398	10	8	268
Mov Cap-2 Maneuver	-	-	-	-	-	-	94	66	-	52	66	-
Stage 1	-	-	-	-	-	-	161	219	-	65	107	-
Stage 2	-	-	-	-	-	-	235	107	-	375	217	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.08	0.19	17.5	19.32
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	94	398	322	-	-	523	-	-	268
HCM Lane V/C Ratio	0.034	0.084	0.02	-	-	0.056	-	-	0.06
HCM Control Delay (s/veh)	44.7	14.9	16.4	-	-	12.3	-	-	19.3
HCM Lane LOS	E	B	C	-	-	B	-	-	C
HCM 95th %tile Q(veh)	0.1	0.3	0.1	-	-	0.2	-	-	0.2

Capacity Analysis Summary Sheets

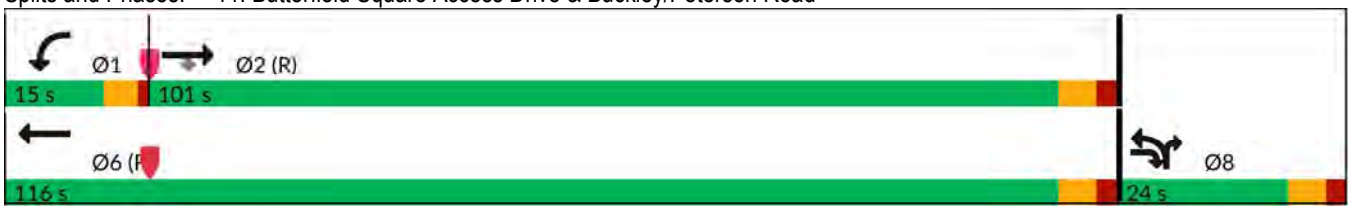
Weekday Morning Peak Hour – No-Build Conditions

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1547	2	48	1139	16	73
Future Volume (vph)	1547	2	48	1139	16	73
Ideal Flow (vphpl)	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		200	270		0	0
Storage Lanes		1	1		1	1
Taper Length (ft)			240		25	
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3551	1077	1736	3551	1517	1568
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3551	1077	1736	3551	1517	1568
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		2				78
Link Speed (mph)	30			30	30	
Link Distance (ft)	990			919	330	
Travel Time (s)	22.5			20.9	7.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	7%	50%	4%	7%	19%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1646	2	51	1212	17	78
Turn Type	NA	pm+ov	Prot	NA	Prot	Prot
Protected Phases	2	8	1	6	8	8
Permitted Phases		2				
Detector Phase	2	8	1	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	9.5	24.0	24.0	24.0
Total Split (s)	101.0	24.0	15.0	116.0	24.0	24.0
Total Split (%)	72.1%	17.1%	10.7%	82.9%	17.1%	17.1%
Yellow Time (s)	4.0	4.0	3.5	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	4.5	6.0	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	C-Max	Max	None	C-Max	Max	Max
Act Effct Green (s)	98.7	123.9	8.9	110.0	18.0	18.0
Actuated g/C Ratio	0.71	0.89	0.06	0.79	0.13	0.13

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
v/c Ratio	0.66	0.00	0.47	0.43	0.09	0.29
Control Delay (s/veh)	13.6	1.0	76.6	5.4	55.1	14.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	13.6	1.0	76.6	5.4	55.1	14.1
LOS	B	A	E	A	E	B
Approach Delay (s/veh)	13.6			8.3	21.4	
Approach LOS	B			A	C	
Queue Length 50th (ft)	426	0	45	162	14	0
Queue Length 95th (ft)	512	1	91	191	38	49
Internal Link Dist (ft)	910			839	250	
Turn Bay Length (ft)		200	270			
Base Capacity (vph)	2503	953	130	2790	195	269
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.00	0.39	0.43	0.09	0.29

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 95 (68%), Referenced to phase 2:EBT and 6:WBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay (s/veh): 11.6		Intersection LOS: B	
Intersection Capacity Utilization 55.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 11: Butterfield Square Access Drive & Buckley/Peterson Road



Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	1659	4	1	1197	7	2	0	7	4	0	0
Future Vol, veh/h	1	1659	4	1	1197	7	2	0	7	4	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	105	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	6	75	0	7	0	0	0	14	0	0	0
Mvmt Flow	1	1728	4	1	1247	7	2	0	7	4	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1254	0	0	1732	0	0	2358	2989	866	2119	2987	627
Stage 1	-	-	-	-	-	-	1732	1732	-	1253	1253	-
Stage 2	-	-	-	-	-	-	626	1256	-	866	1734	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	7.18	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.44	3.5	4	3.3
Pot Cap-1 Maneuver	562	-	-	369	-	-	19	14	273	29	14	431
Stage 1	-	-	-	-	-	-	93	144	-	185	246	-
Stage 2	-	-	-	-	-	-	444	245	-	319	143	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	562	-	-	369	-	-	19	14	273	28	14	431
Mov Cap-2 Maneuver	-	-	-	-	-	-	75	88	-	117	88	-
Stage 1	-	-	-	-	-	-	93	143	-	185	245	-
Stage 2	-	-	-	-	-	-	442	244	-	309	143	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.05	0.01	27.14	36.77
HCM LOS			D	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	172	2	-	-	369	-	-	117
HCM Lane V/C Ratio	0.055	0.002	-	-	0.003	-	-	0.035
HCM Control Delay (s/veh)	27.1	11.4	0	-	14.8	-	-	36.8
HCM Lane LOS	D	B	A	-	B	-	-	E
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	1668	1199	4	9	6
Future Vol, veh/h	2	1668	1199	4	9	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	50	5	6	0	0	33
Mvmt Flow	2	1756	1262	4	9	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1266	0	-	0	2146	633
Stage 1	-	-	-	-	1264	-
Stage 2	-	-	-	-	882	-
Critical Hdwy	5.1	-	-	-	6.8	7.56
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.7	-	-	-	3.5	3.63
Pot Cap-1 Maneuver	343	-	-	-	43	355
Stage 1	-	-	-	-	233	-
Stage 2	-	-	-	-	370	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	343	-	-	-	42	355
Mov Cap-2 Maneuver	-	-	-	-	148	-
Stage 1	-	-	-	-	230	-
Stage 2	-	-	-	-	370	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.2	0	25.36
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	4	-	-	-	193
HCM Lane V/C Ratio	0.006	-	-	-	0.082
HCM Control Delay (s/veh)	15.5	0.2	-	-	25.4
HCM Lane LOS	C	A	-	-	D
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	1606	7	19	1174	6	5	0	54	4	0	8
Future Vol, veh/h	7	1606	7	19	1174	6	5	0	54	4	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	110	-	-	145	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	14	7	0	10	7	0	0	0	4	0	0	12
Mvmt Flow	7	1709	7	20	1249	6	5	0	57	4	0	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1255	0	0	1716	0	0	2392	3023	858	2162	3023	628
Stage 1	-	-	-	-	-	-	1727	1727	-	1293	1293	-
Stage 2	-	-	-	-	-	-	665	1296	-	869	1731	-
Critical Hdwy	4.38	-	-	4.3	-	-	7.5	6.5	6.98	7.5	6.5	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.34	-	-	2.3	-	-	3.5	4	3.34	3.5	4	3.42
Pot Cap-1 Maneuver	489	-	-	332	-	-	18	13	296	27	13	402
Stage 1	-	-	-	-	-	-	94	145	-	175	235	-
Stage 2	-	-	-	-	-	-	420	235	-	317	144	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	489	-	-	332	-	-	16	12	296	20	12	402
Mov Cap-2 Maneuver	-	-	-	-	-	-	72	83	-	97	77	-
Stage 1	-	-	-	-	-	-	92	142	-	164	221	-
Stage 2	-	-	-	-	-	-	386	220	-	252	142	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.05	0.26	23.33	24.64
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	72	296	489	-	-	332	-	-	196
HCM Lane V/C Ratio	0.073	0.194	0.015	-	-	0.061	-	-	0.065
HCM Control Delay (s/veh)	58.6	20.1	12.5	-	-	16.6	-	-	24.6
HCM Lane LOS	F	C	B	-	-	C	-	-	C
HCM 95th %tile Q(veh)	0.2	0.7	0	-	-	0.2	-	-	0.2

Capacity Analysis Summary Sheets

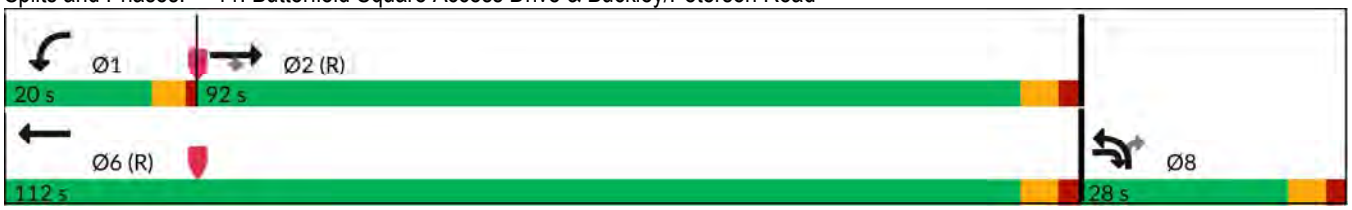
Weekday Evening Peak Hour – No-Build Conditions

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1263	2	104	1735	50	53
Future Volume (vph)	1263	2	104	1735	50	53
Ideal Flow (vphpl)	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		200	270		0	0
Storage Lanes		1	1		1	1
Taper Length (ft)			240		25	
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3725	1615	1805	3689	1805	1615
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3725	1615	1805	3689	1805	1615
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		2				57
Link Speed (mph)	30			30	30	
Link Distance (ft)	990			919	330	
Travel Time (s)	22.5			20.9	7.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	0%	0%	3%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1358	2	112	1866	54	57
Turn Type	NA	pm+ov	Prot	NA	Prot	Perm
Protected Phases	2	8	1	6	8	
Permitted Phases		2				8
Detector Phase	2	8	1	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	9.5	24.0	24.0	24.0
Total Split (s)	92.0	28.0	20.0	112.0	28.0	28.0
Total Split (%)	65.7%	20.0%	14.3%	80.0%	20.0%	20.0%
Yellow Time (s)	4.0	4.0	3.5	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	4.5	6.0	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	C-Min	None	None	C-Min	None	None
Act Effct Green (s)	102.4	117.9	13.9	122.0	9.6	9.6
Actuated g/C Ratio	0.73	0.84	0.10	0.87	0.07	0.07

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
v/c Ratio	0.50	0.00	0.63	0.58	0.44	0.35
Control Delay (s/veh)	10.0	2.0	75.0	4.1	72.8	20.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	10.0	2.0	75.0	4.1	72.8	20.2
LOS	A	A	E	A	E	C
Approach Delay (s/veh)	10.0			8.1	45.8	
Approach LOS	A			A	D	
Queue Length 50th (ft)	266	0	100	215	48	0
Queue Length 95th (ft)	392	2	160	308	93	44
Internal Link Dist (ft)	910			839	250	
Turn Bay Length (ft)		200	270			
Base Capacity (vph)	2724	1484	210	3215	283	301
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.00	0.53	0.58	0.19	0.19

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay (s/veh): 10.1		Intersection LOS: B	
Intersection Capacity Utilization 59.7%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 11: Butterfield Square Access Drive & Buckley/Peterson Road



Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1314	6	2	1845	4	4	0	2	4	0	0
Future Vol, veh/h	0	1314	6	2	1845	4	4	0	2	4	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	105	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	2	0	0	2	0	0	0	0	0	0	0
Mvmt Flow	0	1413	6	2	1984	4	4	0	2	4	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1988	0	0	1419	0	0	2412	3409	710	2697	3410	994
Stage 1	-	-	-	-	-	-	1416	1416	-	1990	1990	-
Stage 2	-	-	-	-	-	-	996	1992	-	706	1419	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	294	-	-	486	-	-	18	7	381	11	7	247
Stage 1	-	-	-	-	-	-	147	205	-	64	107	-
Stage 2	-	-	-	-	-	-	266	107	-	397	205	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	294	-	-	486	-	-	17	7	381	10	7	247
Mov Cap-2 Maneuver	-	-	-	-	-	-	93	67	-	52	67	-
Stage 1	-	-	-	-	-	-	147	205	-	64	106	-
Stage 2	-	-	-	-	-	-	265	106	-	395	205	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	0.01	35.39	80.08
HCM LOS			E	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	125	294	-	-	486	-	-	52
HCM Lane V/C Ratio	0.052	-	-	-	0.004	-	-	0.082
HCM Control Delay (s/veh)	35.4	0	-	-	12.4	-	-	80.1
HCM Lane LOS	E	A	-	-	B	-	-	F
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	1318	1843	7	4	8
Future Vol, veh/h	2	1318	1843	7	4	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	2	3	0	0	0
Mvmt Flow	2	1417	1982	8	4	9

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1989	0	-	0	2698	995
Stage 1	-	-	-	-	1985	-
Stage 2	-	-	-	-	713	-
Critical Hdwy	4.1	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	293	-	-	-	18	247
Stage 1	-	-	-	-	95	-
Stage 2	-	-	-	-	452	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	293	-	-	-	18	247
Mov Cap-2 Maneuver	-	-	-	-	75	-
Stage 1	-	-	-	-	94	-
Stage 2	-	-	-	-	452	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.24	0	33.27
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	5	-	-	-	140
HCM Lane V/C Ratio	0.007	-	-	-	0.092
HCM Control Delay (s/veh)	17.4	0.2	-	-	33.3
HCM Lane LOS	C	A	-	-	D
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	1289	21	27	1821	1	3	0	31	0	0	15
Future Vol, veh/h	6	1289	21	27	1821	1	3	0	31	0	0	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	110	-	-	145	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	2	0	0	3	0	0	0	3	0	0	0
Mvmt Flow	6	1386	23	29	1958	1	3	0	33	0	0	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1959	0	0	1409	0	0	2447	3427	704	2723	3438	980
Stage 1	-	-	-	-	-	-	1410	1410	-	2017	2017	-
Stage 2	-	-	-	-	-	-	1037	2017	-	706	1422	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.96	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.33	3.5	4	3.3
Pot Cap-1 Maneuver	301	-	-	491	-	-	16	7	377	10	7	253
Stage 1	-	-	-	-	-	-	148	207	-	62	104	-
Stage 2	-	-	-	-	-	-	251	104	-	397	204	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	301	-	-	491	-	-	14	7	377	8	7	253
Mov Cap-2 Maneuver	-	-	-	-	-	-	85	60	-	47	59	-
Stage 1	-	-	-	-	-	-	145	202	-	58	97	-
Stage 2	-	-	-	-	-	-	221	97	-	355	200	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.08	0.19	18.42	20.2
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	85	377	301	-	-	491	-	-	253
HCM Lane V/C Ratio	0.038	0.088	0.021	-	-	0.059	-	-	0.064
HCM Control Delay (s/veh)	48.9	15.5	17.2	-	-	12.8	-	-	20.2
HCM Lane LOS	E	C	C	-	-	B	-	-	C
HCM 95th %tile Q(veh)	0.1	0.3	0.1	-	-	0.2	-	-	0.2

Capacity Analysis Summary Sheets

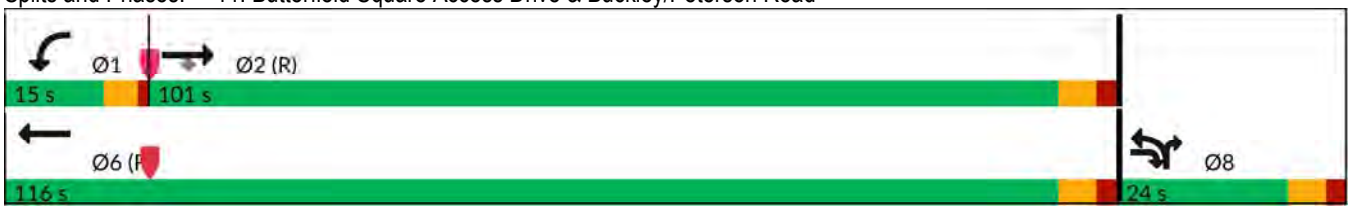
Weekday Morning Peak Hour – Projected Conditions

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1548	2	48	1154	16	73
Future Volume (vph)	1548	2	48	1154	16	73
Ideal Flow (vphpl)	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		200	270		0	0
Storage Lanes		1	1		1	1
Taper Length (ft)			240		25	
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3551	1077	1736	3551	1517	1568
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3551	1077	1736	3551	1517	1568
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		2				78
Link Speed (mph)	30			30	30	
Link Distance (ft)	990			919	330	
Travel Time (s)	22.5			20.9	7.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	7%	50%	4%	7%	19%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1647	2	51	1228	17	78
Turn Type	NA	pm+ov	Prot	NA	Prot	Prot
Protected Phases	2	8	1	6	8	8
Permitted Phases		2				
Detector Phase	2	8	1	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	9.5	24.0	24.0	24.0
Total Split (s)	101.0	24.0	15.0	116.0	24.0	24.0
Total Split (%)	72.1%	17.1%	10.7%	82.9%	17.1%	17.1%
Yellow Time (s)	4.0	4.0	3.5	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	4.5	6.0	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	C-Max	Max	None	C-Max	Max	Max
Act Effct Green (s)	98.7	123.9	8.9	110.0	18.0	18.0
Actuated g/C Ratio	0.71	0.89	0.06	0.79	0.13	0.13

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
v/c Ratio	0.66	0.00	0.47	0.44	0.09	0.29
Control Delay (s/veh)	13.6	1.0	76.6	5.5	55.1	14.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	13.6	1.0	76.6	5.5	55.1	14.1
LOS	B	A	E	A	E	B
Approach Delay (s/veh)	13.6			8.3	21.4	
Approach LOS	B			A	C	
Queue Length 50th (ft)	427	0	45	164	14	0
Queue Length 95th (ft)	513	1	91	195	38	49
Internal Link Dist (ft)	910			839	250	
Turn Bay Length (ft)		200	270			
Base Capacity (vph)	2503	953	130	2790	195	269
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.00	0.39	0.44	0.09	0.29

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 95 (68%), Referenced to phase 2:EBT and 6:WBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay (s/veh): 11.6		Intersection LOS: B	
Intersection Capacity Utilization 55.2%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 11: Butterfield Square Access Drive & Buckley/Peterson Road



Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	1678	4	1	1198	6	2	0	7	12	0	8
Future Vol, veh/h	4	1678	4	1	1198	6	2	0	7	12	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	215	-	-	150	-	150	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	6	75	0	7	0	0	0	14	0	0	0
Mvmt Flow	4	1748	4	1	1248	6	2	0	7	13	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1254	0	0	1752	0	0	2384	3015	876	2132	3010	624
Stage 1	-	-	-	-	-	-	1758	1758	-	1250	1250	-
Stage 2	-	-	-	-	-	-	626	1256	-	882	1760	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	7.18	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.44	3.5	4	3.3
Pot Cap-1 Maneuver	562	-	-	362	-	-	18	14	269	29	14	433
Stage 1	-	-	-	-	-	-	90	140	-	186	247	-
Stage 2	-	-	-	-	-	-	443	245	-	311	139	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	562	-	-	362	-	-	18	13	269	28	13	433
Mov Cap-2 Maneuver	-	-	-	-	-	-	72	86	-	116	86	-
Stage 1	-	-	-	-	-	-	89	139	-	185	246	-
Stage 2	-	-	-	-	-	-	434	244	-	301	138	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.03	0.01	27.83	30.03
HCM LOS			D	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	167	562	-	-	362	-	-	165
HCM Lane V/C Ratio	0.056	0.007	-	-	0.003	-	-	0.127
HCM Control Delay (s/veh)	27.8	11.5	-	-	15	-	-	30
HCM Lane LOS	D	B	-	-	B	-	-	D
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.4

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	1695	1199	4	9	6
Future Vol, veh/h	2	1695	1199	4	9	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	50	5	6	0	0	33
Mvmt Flow	2	1784	1262	4	9	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1266	0	-	0	2161	633
Stage 1	-	-	-	-	1264	-
Stage 2	-	-	-	-	896	-
Critical Hdwy	5.1	-	-	-	6.8	7.56
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.7	-	-	-	3.5	3.63
Pot Cap-1 Maneuver	343	-	-	-	42	355
Stage 1	-	-	-	-	233	-
Stage 2	-	-	-	-	364	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	343	-	-	-	41	355
Mov Cap-2 Maneuver	-	-	-	-	146	-
Stage 1	-	-	-	-	230	-
Stage 2	-	-	-	-	364	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.21	0	25.5
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	4	-	-	-	191
HCM Lane V/C Ratio	0.006	-	-	-	0.083
HCM Control Delay (s/veh)	15.5	0.2	-	-	25.5
HCM Lane LOS	C	A	-	-	D
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	1609	7	19	1182	7	5	0	54	23	0	15
Future Vol, veh/h	5	1609	7	19	1182	7	5	0	54	23	0	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	215	-	-	215	-	215	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	14	7	0	10	7	0	0	0	4	0	0	12
Mvmt Flow	5	1712	7	20	1257	7	5	0	57	24	0	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1265	0	0	1719	0	0	2395	3031	860	2164	3028	629
Stage 1	-	-	-	-	-	-	1726	1726	-	1298	1298	-
Stage 2	-	-	-	-	-	-	669	1305	-	866	1730	-
Critical Hdwy	4.38	-	-	4.3	-	-	7.5	6.5	6.98	7.5	6.5	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.34	-	-	2.3	-	-	3.5	4	3.34	3.5	4	3.42
Pot Cap-1 Maneuver	484	-	-	331	-	-	18	13	295	27	13	402
Stage 1	-	-	-	-	-	-	94	145	-	174	234	-
Stage 2	-	-	-	-	-	-	418	232	-	318	144	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	484	-	-	331	-	-	16	12	295	~ 20	12	402
Mov Cap-2 Maneuver	-	-	-	-	-	-	72	83	-	97	77	-
Stage 1	-	-	-	-	-	-	93	143	-	163	220	-
Stage 2	-	-	-	-	-	-	377	218	-	254	143	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.04	0.26	23.37	38.62
HCM LOS			C	E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	72	295	484	-	-	331	-	-	97	402
HCM Lane V/C Ratio	0.073	0.194	0.011	-	-	0.061	-	-	0.253	0.04
HCM Control Delay (s/veh)	58.6	20.1	12.5	-	-	16.6	-	-	54.5	14.3
HCM Lane LOS	F	C	B	-	-	C	-	-	F	B
HCM 95th %tile Q(veh)	0.2	0.7	0	-	-	0.2	-	-	0.9	0.1

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Capacity Analysis Summary Sheets

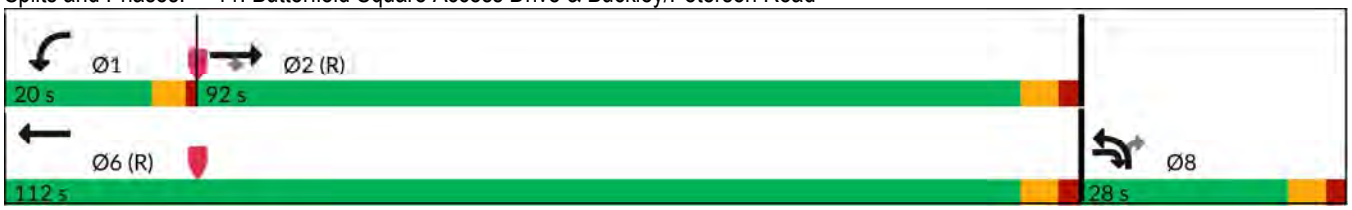
Weekday Evening Peak Hour – Projected Conditions

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1281	2	104	1736	50	53
Future Volume (vph)	1281	2	104	1736	50	53
Ideal Flow (vphpl)	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		200	270		0	0
Storage Lanes		1	1		1	1
Taper Length (ft)			240		25	
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3725	1615	1805	3689	1805	1615
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3725	1615	1805	3689	1805	1615
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		2				57
Link Speed (mph)	30			30	30	
Link Distance (ft)	990			919	330	
Travel Time (s)	22.5			20.9	7.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	0%	0%	3%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1377	2	112	1867	54	57
Turn Type	NA	pm+ov	Prot	NA	Prot	Perm
Protected Phases	2	8	1	6	8	
Permitted Phases		2				8
Detector Phase	2	8	1	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	9.5	24.0	24.0	24.0
Total Split (s)	92.0	28.0	20.0	112.0	28.0	28.0
Total Split (%)	65.7%	20.0%	14.3%	80.0%	20.0%	20.0%
Yellow Time (s)	4.0	4.0	3.5	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	4.5	6.0	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	C-Min	None	None	C-Min	None	None
Act Effct Green (s)	102.4	117.9	13.9	122.0	9.6	9.6
Actuated g/C Ratio	0.73	0.84	0.10	0.87	0.07	0.07

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
v/c Ratio	0.51	0.00	0.63	0.58	0.44	0.35
Control Delay (s/veh)	10.1	2.0	75.0	4.1	72.8	20.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	10.1	2.0	75.0	4.1	72.8	20.2
LOS	B	A	E	A	E	C
Approach Delay (s/veh)	10.1			8.1	45.8	
Approach LOS	B			A	D	
Queue Length 50th (ft)	272	0	100	215	48	0
Queue Length 95th (ft)	401	2	160	308	93	44
Internal Link Dist (ft)	910			839	250	
Turn Bay Length (ft)		200	270			
Base Capacity (vph)	2724	1484	210	3215	283	301
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.00	0.53	0.58	0.19	0.19

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay (s/veh): 10.1		Intersection LOS: B	
Intersection Capacity Utilization 59.8%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 11: Butterfield Square Access Drive & Buckley/Peterson Road



Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	1328	6	2	1864	17	4	0	2	8	0	6
Future Vol, veh/h	8	1328	6	2	1864	17	4	0	2	8	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	215	-	-	105	-	125	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	2	0	0	2	0	0	0	0	0	0	0
Mvmt Flow	9	1428	6	2	2004	18	4	0	2	9	0	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2023	0	0	1434	0	0	2455	3475	717	2740	3460	1002
Stage 1	-	-	-	-	-	-	1448	1448	-	2009	2009	-
Stage 2	-	-	-	-	-	-	1006	2027	-	731	1452	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	285	-	-	480	-	-	16	7	376	10	7	244
Stage 1	-	-	-	-	-	-	140	198	-	62	105	-
Stage 2	-	-	-	-	-	-	262	102	-	384	197	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	285	-	-	480	-	-	15	6	376	9	7	244
Mov Cap-2 Maneuver	-	-	-	-	-	-	86	60	-	50	64	-
Stage 1	-	-	-	-	-	-	136	192	-	62	104	-
Stage 2	-	-	-	-	-	-	254	102	-	370	191	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.11	0.01	37.84	63.3
HCM LOS			E	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	116	285	-	-	480	-	-	76
HCM Lane V/C Ratio	0.056	0.03	-	-	0.004	-	-	0.197
HCM Control Delay (s/veh)	37.8	18	-	-	12.5	-	-	63.3
HCM Lane LOS	E	C	-	-	B	-	-	F
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0	-	-	0.7

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	1336	1875	7	4	8
Future Vol, veh/h	2	1336	1875	7	4	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	2	3	0	0	0
Mvmt Flow	2	1437	2016	8	4	9

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	2024	0	-	0	2742	1012
Stage 1	-	-	-	-	2020	-
Stage 2	-	-	-	-	723	-
Critical Hdwy	4.1	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	285	-	-	-	17	241
Stage 1	-	-	-	-	91	-
Stage 2	-	-	-	-	447	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	285	-	-	-	16	241
Mov Cap-2 Maneuver	-	-	-	-	72	-
Stage 1	-	-	-	-	90	-
Stage 2	-	-	-	-	447	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.25	0	34.41
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	5	-	-	-	135
HCM Lane V/C Ratio	0.008	-	-	-	0.095
HCM Control Delay (s/veh)	17.7	0.2	-	-	34.4
HCM Lane LOS	C	A	-	-	D
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	16	1297	21	27	1827	20	3	0	31	14	0	10
Future Vol, veh/h	16	1297	21	27	1827	20	3	0	31	14	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	215	-	-	145	-	215	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	2	0	0	3	0	0	0	3	0	0	0
Mvmt Flow	17	1395	23	29	1965	22	3	0	33	15	0	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1986	0	0	1417	0	0	2481	3484	709	2754	3474	982
Stage 1	-	-	-	-	-	-	1440	1440	-	2023	2023	-
Stage 2	-	-	-	-	-	-	1040	2044	-	732	1452	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.96	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.33	3.5	4	3.3
Pot Cap-1 Maneuver	294	-	-	487	-	-	16	7	375	~ 10	7	252
Stage 1	-	-	-	-	-	-	142	200	-	61	103	-
Stage 2	-	-	-	-	-	-	250	100	-	384	197	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	294	-	-	487	-	-	13	6	375	~ 8	6	252
Mov Cap-2 Maneuver	-	-	-	-	-	-	80	52	-	46	57	-
Stage 1	-	-	-	-	-	-	134	188	-	57	97	-
Stage 2	-	-	-	-	-	-	225	94	-	329	186	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.22	0.19	18.76	77.26
HCM LOS			C	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	80	375	294	-	-	487	-	-	46	252
HCM Lane V/C Ratio	0.04	0.089	0.058	-	-	0.06	-	-	0.329	0.043
HCM Control Delay (s/veh)	51.9	15.5	18	-	-	12.9	-	-	118.2	19.9
HCM Lane LOS	F	C	C	-	-	B	-	-	F	C
HCM 95th %tile Q(veh)	0.1	0.3	0.2	-	-	0.2	-	-	1.1	0.1

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Illinois Department of Transportation
Office of Highways Project Implementation / Region 1 / District 1
201 West Center Court / Schaumburg, Illinois 60196-1096

PERMITS
Location: IL 137 (Peterson Road) opposite Elderberry Drive and Sunny view Road
Municipality: Village of Libertyville, Lake County
Re: Residential Development
Reference No: 049-128316

February 28, 2025

Mr. Javier Millan
KLOA
9575 West Higgins Road
Rosemont, IL 60018

Dear Mr. Millan:

IDOT has completed its review of your engineering plans for the subject location. Our comments are marked on the enclosed plan set, which must be returned with your next submittal, and are detailed below:

Programming – Geometrics Comments

1. Traffic Impact Study: a. Please add an executive summary.
    a. Correct typos marked on Page 4.
    b. In section 3, note the anticipated year of construction.
    c. Please note whether average trip rates or equations were used for trip generation. Equations should be used where available.
    d. In Table 3, please show explicitly how existing trips were deducted and net new trips arrived at. See comments on Page 11.
    e. On Page 12, it appears that “20 percent” should be “2 percent”. Please confirm that this was a typographical error and did not affect the calculations.
    f. Move the Figure showing removal of existing trips from the Appendix to the main text. See Page 15.
    g. On Page 23, please list the movements that you are defining as critical.
    h. Suggest removing reference to the Milwaukee Avenue signal as providing gaps for exiting site traffic. The signal is too far away to provide a significant platooning benefit.

2. Concept Geometrics Exhibit:
    a. Show proposed stop signs at the exits.
    b. Dimension radii at the access drives.
    c. Please add a 10-foot multi-use path along entire frontage.
    d. Show proposed crosswalks.
    e. Is curb & gutter proposed along the right turn lanes?
    f. The proposed right turn lane at the eastern entrance is substandard. Use a shorter taper length in order to meet the minimum 150-foot storage length.
    g. Please revise the left turn lane design to provide a neutral or positive offset (preferred) per BDE Chapter 36.

3. Please provide the ADA Project Alert Form (DE PD0038) and location map to DOT.D1.ADA@illinois.gov. Please cc the following GSU staff on the email. jason.salley@illinois.gov; andrew.moore@illinois.gov; christopher.kersten@illinois.gov

Please revise your plans in accordance with the above comments and resubmit via **one of the following methods** to continue the review process:

- Hard copies of two (2) revised 11” x 17” copies of engineering plans, and a written disposition to comments, or
- Electronically via email or through the SharePoint, OneDrive, or other file-sharing website.

If you have any questions regarding this matter, please contact Abdul Khalique at (847) 705-4146.

Very truly yours,

Jose Rios, P.E.
Region One Engineer

By:
Jonathan E. Karabowicz, P.E.
Traffic Permits Engineer

Kenig,Lindgren,O'Hara,Aboona,Inc.

9575 West Higgins Road, Suite 400 | Rosemont, Illinois 60018
p: 847-518-9990 | f: 847-518-9987

April 1, 2025

Mr. Nicholas Andriano
Manager of Land Planning and Entitlement
Pulte Group
1900 E. Golf Road #300
Schaumburg, Illinois 60173

Re: Greenway Chase Development
Libertyville, Illinois

Dear Mr. Andriano:

Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) has reviewed the comments presented by Civiltech Engineering regarding the above-referenced development in the letter dated February 14, 2025 and offers the following responses.

1. **An updated IDOT access permit onto Peterson Road will be required for the development due to the change in land use and density proposed. If not already done so, a plan submittal to IDOT including the TIS should be made as soon as possible to begin the permit review process and minimize development delays.**

   The traffic study and preliminary geometric plan was already submitted to IDOT. Comments were received on February 28, 2025 and the traffic study/geometric plan has been revised to reflect IDOT's comments.

2. **The existing Libertyville Manor driveways and proposed site access roads onto Peterson Road are missing stop signs on the relevant roadway configuration and traffic exhibits.**

   Based on our field visit and observations, currently there are no stop signs for the Libertyville Manor driveways. However, stop signs will be provided at both access drives under future conditions.

3. **We concur with the A.M. and P.M. peak hours selected for analysis based on the collected traffic count data.**

   Noted.

4. **We concur with the background growth rates and assumptions provided in Section 4 of the TIS used to generate 2030 No-Build traffic volumes per CMAP traffic projections. We also concur with the inclusion of the two nearby residential developments being planned and/or constructed, as it provides a conservative estimate given that some of this development is likely accounted for in the CMAP projections.**

   Noted.

5. We concur with the use of the ITE Trip Generation manual in determining the magnitude of site-generated trips for the proposed development. The raw A.M. and P.M. peak hour and weekday daily trip generation estimates as presented in Table 3 of the TIS are reasonable based on the number of dwelling units stated in the TIS.

Noted.

6. We concur with the directional distribution of site-generated trips as shown in Figure 6 of the TIS based on the prevailing traffic volumes along Peterson Road, as well as the ease of ingress and egress from the proposed site access locations.

Noted.

7. We concur with the removal of the existing Libertyville Manor traffic from the future condition traffic analyses, as those trips will no longer be generated at the site.

Noted.

8. In Table 4, the northbound left turn delay should be 55.1 instead of 5.1.

Noted. Please see the revised traffic impact study.

9. While we do not anticipate the intersection at Elderberry Drive warranting a traffic signal based on volumes, performing such an analysis should be considered to rule out the need for one.

A traffic signal warrant study was conducted on March 5, 2025 and is included with this resubmittal.

10. We concur that, based on the results of the traffic capacity analysis, the access intersections and nearby signalized intersections will continue to operate acceptably with the anticipated site-generated traffic. While some of the side-street movements operate at LOS E or F, the delay is not excessive for the vehicles making those movements, and the movements are not over capacity.

Noted.

11. We concur with the recommendations for modifying the existing left and right turn storage lengths on Peterson Road at Elderberry Drive.

Noted.

12. Per IDOT's Bureau of Design and Environment Manual, Chapter 46, Section 3.04, we concur that an eastbound left turn lane should be provided at Sunnyview Road, if IDOT allows a full access into the development at that location. Since Peterson Road is a Strategic Regional Arterial, and this is a residential development with low entering and exiting volumes, IDOT may choose to only allow the single full access at Elderberry Drive and limit the eastern access into the site to right-in/right-out only. Westbound right turn lanes are not explicitly required at either intersection based on IDOT BDE criteria due to the low volumes of right turns into the proposed site but also are not prohibited by the BDE either. Turn lane requirements and allowable access would be determined by IDOT as part of coordination for a revised access permit for the site.

Noted. Please be aware that based on IDOT's review comments, the Department is in agreement with the two full access drives with minor modifications to the geometric plan. IDOT's comments are included with this resubmittal.

Should you have any questions or require further information, please let me know.

Sincerely,

Javier Millan
Principal

Enc.

Kenig,Lindgren,O'Hara,Aboona,Inc.

9575 West Higgins Road, Suite 400 | Rosemont, Illinois 60018
p: 847-518-9990 | f: 847-518-9987

March 27, 2025

Mr. Jonathan Karabowicz, PE
Traffic Permit Engineer
Region 1/District 1
Illinois Department of Transportation
201 W. Center Court
Schaumburg, Illinois 60194

Re: Proposed Greenway Chase
Libertyville, Illinois
Ref. No. 049-128316

Dear Jon:

Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) has received IDOT's comments regarding the above-referenced development in the letter dated February 28, 2025 and offers the following responses.

Programming – Geometric Comments:

1. Traffic Impact Study: a. Please add an executive summary.

Noted. Please see revised traffic impact study.

a. Correct typos marked on Page 4.

Noted. Please see revised traffic impact study.

b. In section 3, note the anticipated year of construction.

Noted. Please see revised traffic impact study.

c. Please note whether average trip rates or equations were used for trip generation. Equations should be used where available.

Noted. Please see revised traffic impact study.

d. In Table 3, please show explicitly how existing trips were deducted and net new trips arrived at. See comments on Page 11.

Noted. Please see revised traffic impact study.

e. On Page 12, it appears that "20 percent" should be "2 percent". Please confirm that this was a typographical error and did not affect the calculations.

Noted. This was a typographical error and did not affect the calculations. Please see revised traffic impact study.

f. Move the Figure showing removal of existing trips from the Appendix to the main text. See Page 15.

Noted. Please see revised traffic impact study.

g. On Page 23, please list the movements that you are defining as critical.

Noted. Please see revised traffic impact study.

h. Suggest removing reference to the Milwaukee Avenue signal as providing gaps for exiting site traffic. The signal is too far away to provide a significant platooning benefit.

Noted. Please see revised traffic impact study.

2. Concept Geometrics Exhibit:

a. Show proposed stop signs at the exits.

Noted. Please see revised preliminary geometric plan.

b. Dimension radii at the access drives.

Noted. Please see revised preliminary geometric plan.

c. Please add a 10-foot multi-use path along entire frontage.

Provided that IL 137 (Peterson Rd) is an SRA and that the property lacks any pedestrian connections on the west or east, applicant is seeking relief from this request. Both applicant and municipality concur on this measure.

d. Show proposed crosswalks.

Please refer to the above response. No multi-use pathways are proposed along the route so no crosswalks are necessary.

e. Is curb & gutter proposed along the right turn lanes?

Curb and gutter will be provided along the storage length of the proposed right-turn lanes. Please see the revised preliminary geometric plan.

f. The proposed right turn lane at the eastern entrance is substandard. Use a shorter taper length in order to meet the minimum 150-foot storage length.

Noted. Please see the revised preliminary geometric plan.

g. Please revise the left turn lane design to provide a neutral or positive offset (preferred) per BDE Chapter 36.

Noted. Please see revised preliminary geometric plan.

3. Please provide the ADA Project Alert Form (DE PD0038) and location map to IDOT.D1.ADA@illinois.gov. Please cc the following GSU staff on the email. jason.salley@illinois.gov; andrew.moore@illinois.gov; christopher.kersten@illinois.gov

Please refer to the above response. No multi-use pathways are proposed along the route so no ADA project alert form is necessary.

If you have any questions or require further information, please let me know.

Sincerely,

Javier Millan
Principal

Enc.

Kenig,Lindgren,O'Hara,Aboona,Inc.

9575 West Higgins Road, Suite 400 | Rosemont, Illinois 60018
p: 847-518-9990 | f: 847-518-9987

MEMORANDUM TO: Matt Brolley, PE
Pulte Group

FROM: Javier Millan
Principal

Luay Aboona, PE, PTOE
Principal

DATE: March 5, 2025

SUBJECT: Traffic Signal Warrant Analysis
Peterson Road with Elderberry Drive
Libertyville, Illinois

This report summarizes the methodologies, results, and findings of a traffic signal warrant analysis conducted by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) for the intersection of Peterson Road (IL 137) and Elderberry Drive/Libertyville Manor Extended Care west access drive in Libertyville, Illinois. As proposed, the Libertyville Manor Extended Care facility will be redeveloped with a residential development (Greenway Chase) consisting of 64 single-family homes and 70 age-restricted duplex units. Access to the development will be provided via the two existing full movement access roads off Peterson Road that align with Elderberry Drive and Sunnyview Road. The intersection of Peterson Road with Elderberry Drive will serve as the main entrance to the development. **Figure 1** shows the location of the intersection.

The purpose of the study is to determine if the traffic that will be generated by the proposed development will warrant the need for a traffic signal at the intersection of Peterson Road with Elderberry Drive/Greenway Chase west access drive.

Existing Conditions

Peterson Road (Illinois Route 137) is an east-west, principal arterial roadway that provides two lanes in each direction generally divided by a landscape median. At its unsignalized intersection with Elderberry Lane/Liberty Manor Extended Care west access drive, Peterson Road provides an exclusive left-turn lane, a through lane and a shared through/right-turn lane on both approaches. Peterson Road is under the jurisdiction of the Illinois Department of Transportation (IDOT), is designated as a Strategic Regional Arterial (SRA) in the vicinity of the site and carries an Annual Average Daily Traffic (AADT) volume of 28,800 vehicles (IDOT 2023). Peterson Road has a posted speed limit of 45 mph.



Location of Subject Intersection **Figure 1**

Elderberry Lane is a north-south, local roadway that extends south from Peterson Road to New Castle Drive and provides one lane in each direction. At its unsignalized intersection with Peterson Road, Sunnyview Road provides one inbound lane and one outbound lane under stop sign control. Opposite Sunnyview Road is the Liberty Manor Extended care west access drive which provides one inbound lane and one outbound lane. Sunnyview Road is under the jurisdiction of the Village of Libertyville.

Existing Traffic Volumes

As part of the traffic study conducted by KLOA, Inc. and dated December 20, 2024, peak period traffic counts were conducted at the intersection of Peterson Road with Elderberry Drive/Libertyville Manor Extended Care west drive on Tuesday, November 12, 2024 during the weekday morning (7:00 A.M. to 9:00 A.M.) and weekday evening (4:00 P.M. to 6:00 P.M.) peak periods. The hourly results of the traffic counts are summarized in **Table 1**, which shows the individual movements for the intersection.

Table 1
PETERSON ROAD WITH ELDERBERRY DRIVE/LIBERTYVILLE MANOR EXTENDED CARE ACCESS DRIVE
TRAFFIC VOLUME SUMMARY – TUESDAY, NOVEMBER 12, 2024

Hour	Peterson Road (Two-Way Traffic)	Elderberry Drive Northbound Approach				Libertyville Manor Drive Southbound Approach				Intersection Total
		Left	Through	Right	Total	Left	Through	Right	Total	
7:00 AM	2586	3	0	49	52	2	0	7	9	2647
8:00 AM	2328	8	0	48	56	4	0	8	12	2396
4:00 PM	2964	5	0	38	43	2	0	11	13	3020
5:00 PM	2810	4	0	21	25	0	0	8	8	2843

Crash Data

KLOA, Inc. obtained crash data for the most recent available past five years (2019 to 2023) at the intersection of Peterson Road with Elderberry Drive. A review of the crash data revealed no fatalities were reported at the study intersection during the review period. A summary of the crash data for the intersection of Peterson Road with Elderberry Drive is shown in **Table 2.** [1]

Table 2
PETERSON ROAD WITH ELDERBERRY DRIVE/LIBERTY MANOR WEST DRIVE - CRASH SUMMARY

Year	Type of Crash Frequency						
	Angle	Object	Rear End	Sideswipe	Turning	Other	Total
2019	0	0	0	0	0	0	0
2020	0	0	0	0	0	0	0
2021	0	0	0	0	1	0	1
2022	0	0	1	0	1	0	2
2023	0	0	0	0	1	1	2
Total	**0**	**0**	**1**	**0**	**3**	**1**	**5**
Average/Year	**0**	**0**	**<1.0**	**0**	**<1.0**	**<1.0**	**1.0**

Traffic Signal Warrant Analysis

Typically, the installation of a traffic signal requires the satisfaction of one or more of the following nine warrants from the Federal Highway Administration's *Manual on Uniform Traffic Control Devices for Streets and Highways* (MUTCD), 11th Edition. The satisfaction of one or more of the warrants does not in itself justify the installation of a traffic signal. A review of the intersection's physical characteristics and traffic conditions is also necessary to determine whether traffic control signal installation is justified.

Warrant 1 (A and B): Eight-Hour Vehicular Volume
Warrant 2: Four-Hour Vehicular Volume
Warrant 3: Peak Hour
Warrant 4: Pedestrian Volume
Warrant 5: School Crossing
Warrant 6: Coordinated Signal System
Warrant 7: Crash Experience
Warrant 8: Roadway Network
Warrant 9: Intersection Near a Railroad Grade Crossing

[1] IDOT DISCLAIMER: The motor vehicle crash data referenced herein was provided by the Illinois Department of Transportation. Any conclusions drawn from analysis of the aforementioned data are the sole responsibility of the data recipient(s).

Given that Peterson Road is designated as an SRA route, Warrant 1 is the only warrant IDOT will accept for the installation of a traffic signal. However, for the purposes of this evaluation, KLOA, Inc. also evaluated Warrant 2, 3 and 7. A description of each of the four warrants are summarized below:

Warrant 1 (Eight-Hour Vehicular Volume) has three conditions: Condition A-Minimum Vehicular Volume, Condition B-Interruption of Continuous Traffic, or a combination of both Conditions A and B. Condition A is intended for application where a large volume of intersecting traffic is the principal reason to consider installing a traffic signal. Condition B is intended for application where the traffic volume on a major street is so heavy the traffic on a minor intersecting street suffers excessive delay or conflict in entering or crossing the major street. Warrant 1 Conditions A or B are satisfied when the traffic volumes for each of any eight hours of an average day are above a threshold value of minor street traffic, which varies depending on the major street traffic volume and the number of travel lanes on the major and minor streets. For this analysis and per IDOT's directive, a minimum of 600 vehicles and 200 vehicles are needed for each hour on Peterson Road and Elderberry Drive, respectively, for Warrant 1A. For Warrant 1B, a minimum of 900 vehicles and 150 vehicles are needed on Peterson Road and Elderberry Drive, respectively.

Warrant 2 (Four-Hour Vehicular Volume) is applied when the volume of intersecting traffic is the principal reason to consider installing a traffic signal. The warrant is satisfied when the traffic volumes for each of any four hours of an average day are above a threshold value of minor street traffic, which varies depending on the major street traffic volume and the number of travel lanes.

Warrant 3 (Peak Hour) is intended for application when traffic conditions are such that for a minimum of one hour of an average day, the minor street traffic suffers undue delay when entering or crossing the major street. As with Warrant 2, the threshold value of minor street traffic varies depending on the major street traffic volume and number of travel lanes. This signal warrant is primarily used in cases where a high volume of traffic is discharged over a short time.

Warrant 7 (Crash Experience) is applicable where the severity and frequency of traffic crashes are susceptible to correction by the presence of a traffic signal. The warrant is satisfied when five or more crashes have occurred within a 12-month period and specific traffic or pedestrian volume threshold values are exceeded for the major and minor streets.

Existing Traffic Conditions Signal Warrant Analysis

Table 3 summarizes the hourly traffic volumes traversing the subject intersection for the 12-hour period. The table also highlights which hours of the day satisfy the minimum volume threshold for Warrant 1A, Warrant 1B, combination of Warrant 1A/1B, Warrant 2, and Warrant 3. It should be noted that the traffic signal warrant analysis assumed that the Old Castle Road approach has a two-lane approach as it is striped for an exclusive left-turn lane and an exclusive right-turn lane.

Table 3
PETERSON ROAD WITH ELDERBERRY DRIVE
EXISTING CONDITIONS VOLUME WARRANT SUMMARY

Hour	Peterson Road (Major)	Elderberry Drive (Minor)	Signal Warrants			
			Warrant 1		Warrant 2 (4-Hour)	Warrant 3 (1-Hour)
			Warrant 1A (8-Hour)	Warrant 1B (8-Hour)		
7:00 to 8:00 AM	2586	52	No	No	No	No
8:00 to 9:00 AM	2328	56	No	No	No	No
9:00 to 10:00 AM	1600*	38^	No	No	No	No
10:00 to 11:00 AM	1500*	37^	No	No	No	No
11:00 to 12:00 PM	1650*	34^	No	No	No	No
12:00 to 1:00 PM	1715*	38^	No	No	No	No
1:00 to 2:00 PM	1695*	40^	No	No	No	No
2:00 to 3:00 PM	1970*	41^	No	No	No	No
3:00 to 4:00 PM	2355*	42^	No	No	No	No
4:00 to 5:00 PM	2964	43	No	No	No	No
5:00 to 6:00 PM	2810	25	No	No	No	No
6:00 to 7:00 PM	1790*	20^	No	No	No	No
Total Hours Met:			**0**	**0**	**0**	**0**
Required Hours:			**8**	**8**	**4**	**1**
Warrant Satisfied:			**No**	**No**	**No**	**No**

* Estimated two-way traffic based on IDOT's travel statistics and 12-hour counts of other State routes conducted by KLOA, Inc.
^ Estimated based on ITE hourly distribution of Single-Family Detached Housing

Existing Conditions Traffic Signal Warrant Findings

The following summarizes the results of the evaluation of the existing traffic volumes:

- Warrant 1A: None of the hourly volumes satisfy the minimum volumes when eight hours are required.
- Warrant 1B: None of the hourly volumes satisfy the minimum volumes when eight hours are required.
- Warrant 2: None of the hourly volumes satisfy the minimum volumes when four hours are required.
- Warrant 3: None of the hourly volumes or the peak hour volumes satisfy the minimum volumes when one hour is required.

In addition, since the intersection has only experienced, on average, one crash per year, the intersection does not meet Warrant 7 (Crash Experience).

As such, the results of the traffic signal warrant study have shown that the intersection does not currently satisfy any of the traffic volume warrants (Warrants 1, 2, and 3) or the crash experience warrant (Warrant 7).

Future Conditions Evaluation

While the existing traffic volumes do not warrant the installation of a traffic signal at the intersection of Peterson Road with Elderberry Drive, the study also examined the future traffic volumes to be generated by the proposed Greenway Chase development.

The number of peak hour trips estimated to be generated by the proposed residential development was based on vehicle trip generation rates contained in *Trip Generation Manual*, 11th Edition, published by the Institute of Transportation Engineers (ITE). The "Single-Family Detached Housing" (Land-Use Code 210) and the "Senior Adult Housing – Single-Family" (Land Use Code 251) rates were used to determine the traffic to be generated by the development. **Table 4** summarizes the trips projected to be generated by the development during the peak hours and on a daily basis. It should be noted that the existing use on site is/has generated traffic and as such the proposed development traffic is a net increase. Copies of the ITE trip generation sheets are included in the Appendix.

Table 4
ESTIMATED PEAK HOUR AND DAILY TRIP GENERATION

ITE Land-Use Code	Type/Size	Weekday Morning Peak Hour			Weekday Evening Peak Hour			Daily Trips		
		In	Out	Total	In	Out	Total	In	Out	Total
210	Single-Family Detached (64 Units)	12	38	50	41	24	65	335	335	670
251	Senior Adult Housing – Single-Family (70 Units)	10	20	30	20	14	34	219	219	438
Total		**22**	**58**	**80**	**61**	**38**	**99**	**554**	**554**	**1,108**

Greenway Chase Development Assignment

The traffic to be generated by the Greenway Chase development was assigned to the access road off Peterson Road based on existing travel patterns in the area and hourly distributions provided within the ITE Trip Generation Manual. **Table 5** summarizes the hourly traffic volumes traversing the subject intersection for a 12-hour period and those to be generated by the Greenway Chase development. It is important to note that while the Greenway Chase development will have two full access roads intersecting Peterson Road, in order to provide for a conservative analysis, it was assumed that all of the traffic to be generated by the development will exit off the access road opposite Elderberry Drive.

Future Conditions (Greenway Chase Development) Traffic Signal Warrant Findings

Inspection of Table 4 indicates that based the results of the traffic signal warrant study, the future volumes by the Greenway Chase development will not satisfy any of the traffic volume warrants (Warrants 1, 2, and 3) or the crash experience warrant (Warrant 7).

Table 5
PETERSON ROAD WITH ELDERBERRY DRIVE
FUTURE CONDITIONS (GREENWAY CHASE DEVELOPMENT) VOLUME WARRANT SUMMARY

Hour	Peterson Road (Major)	Elderberry Drive (Minor)	Greenway Chase New Access Road Southbound Approach (Minor)	Signal Warrants			
				Warrant 1		Warrant 2 (4-Hour)	Warrant 3 (1-Hour)
				Warrant 1A (8-Hour)	Warrant 1B (8-Hour)		
7:00 to 8:00 AM	2586	52	51	No	No	No	No
8:00 to 9:00 AM	2328	56	47	No	No	No	No
9:00 to 10:00 AM	1600*	38^	37	No	No	No	No
10:00 to 11:00 AM	1500*	37^	37	No	No	No	No
11:00 to 12:00 PM	1650*	34^	34	No	No	No	No
12:00 to 1:00 PM	1715*	38^	36	No	No	No	No
1:00 to 2:00 PM	1695*	40^	36	No	No	No	No
2:00 to 3:00 PM	1970*	41^	35	No	No	No	No
3:00 to 4:00 PM	2355*	42^	36	No	No	No	No
4:00 to 5:00 PM	2964	43	39	No	No	No	No
5:00 to 6:00 PM	2810	25	37	No	No	No	No
6:00 to 7:00 PM	1790*	20^	32	No	No	No	No
Total Hours Met:20				**0**	**0**	**0**	**0**
Required Hours:				**8**	**8**	**4**	**1**
Warrant Satisfied:				**No**	**No**	**No**	**No**

* Estimated two-way traffic based on IDOT's travel statistics and 12-hour counts of other State routes conducted by KLOA, Inc.
^ Estimated based on ITE hourly distribution of Single-Family Detached Housing

Conclusion

Based on the preceding evaluation, neither the existing nor projected future traffic volumes will warrant the installation of a traffic signal at the intersection of Peterson Road with Elderberry Drive. Even under the conservative assumption that all of the traffic to be generated by the proposed Greenway Chase development will enter and exit off the access road opposite Elderberry Drive, the future traffic volumes will not warrant the installation of a traffic signal at the intersection of Peterson Road with Elderberry Drive. As such, the outbound traffic from the proposed access road should be under stop sign control.

Furthermore, it is important to note that per IDOT's directives, new signal installations along suburban SRA routes shall be spaced no less than 1,000 feet from another traffic signal in order to maintain good traffic progression along the arterial roadway. Given that the intersection of Peterson Road with Elderberry Drive is located approximately 920 feet east of the signalized intersection of Peterson Road with the Butterfield Square access drive, the installation of a traffic signal will be very difficult should a traffic signal be warranted in the future by a more intense land use.

Appendix

Land Use: 210
Single-Family Detached Housing

Description

A single-family detached housing site includes any single-family detached home on an individual lot. A typical site surveyed is a suburban subdivision.

Specialized Land Use

Data have been submitted for several single-family detached housing developments with homes that are commonly referred to as patio homes. A patio home is a detached housing unit that is located on a small lot with little (or no) front or back yard. In some subdivisions, communal maintenance of outside grounds is provided for the patio homes. The three patio home sites total 299 dwelling units with overall weighted average trip generation rates of 5.35 vehicle trips per dwelling unit for weekday, 0.26 for the AM adjacent street peak hour, and 0.47 for the PM adjacent street peak hour. These patio home rates based on a small sample of sites are lower than those for single-family detached housing (Land Use 210), lower than those for single-family attached housing (Land Use 251), and higher than those for senior adult housing -- single-family (Land Use 251). Further analysis of this housing type will be conducted in a future edition of *Trip Generation Manual*.

Additional Data

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

For 30 of the study sites, data on the number of residents and number of household vehicles are available. The overall averages for the 30 sites are 3.6 residents per dwelling unit and 1.5 vehicles per dwelling unit.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Arizona, California, Connecticut, Delaware, Illinois, Indiana, Kentucky, Maryland, Massachusetts, Minnesota, Montana, New Jersey, North Carolina, Ohio, Ontario (CAN), Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Vermont, Virginia, and West Virginia.

Source Numbers

100, 105, 114, 126, 157, 167, 177, 197, 207, 211, 217, 267, 275, 293, 300, 319, 320, 356, 357, 367, 384, 387, 407, 435, 522, 550, 552, 579, 598, 601, 603, 614, 637, 711, 716, 720, 728, 735, 868, 869, 903, 925, 936, 1005, 1007, 1008, 1010, 1033, 1066, 1077,1078, 1079

Single-Family Detached Housing
(210)

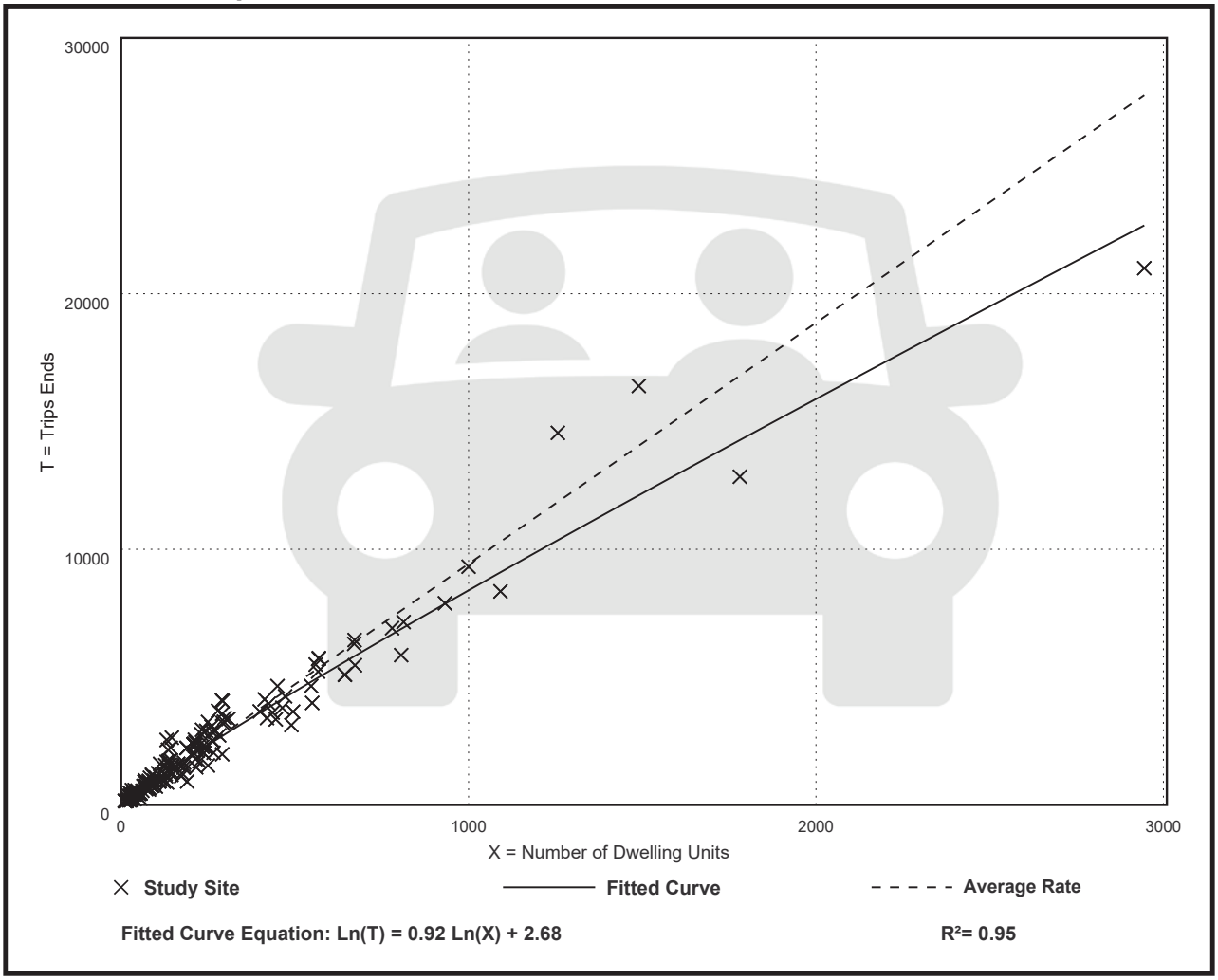
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 174
Avg. Num. of Dwelling Units: 246
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
9.43	4.45 - 22.61	2.13

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.92 Ln(X) + 2.68

R^2= 0.95

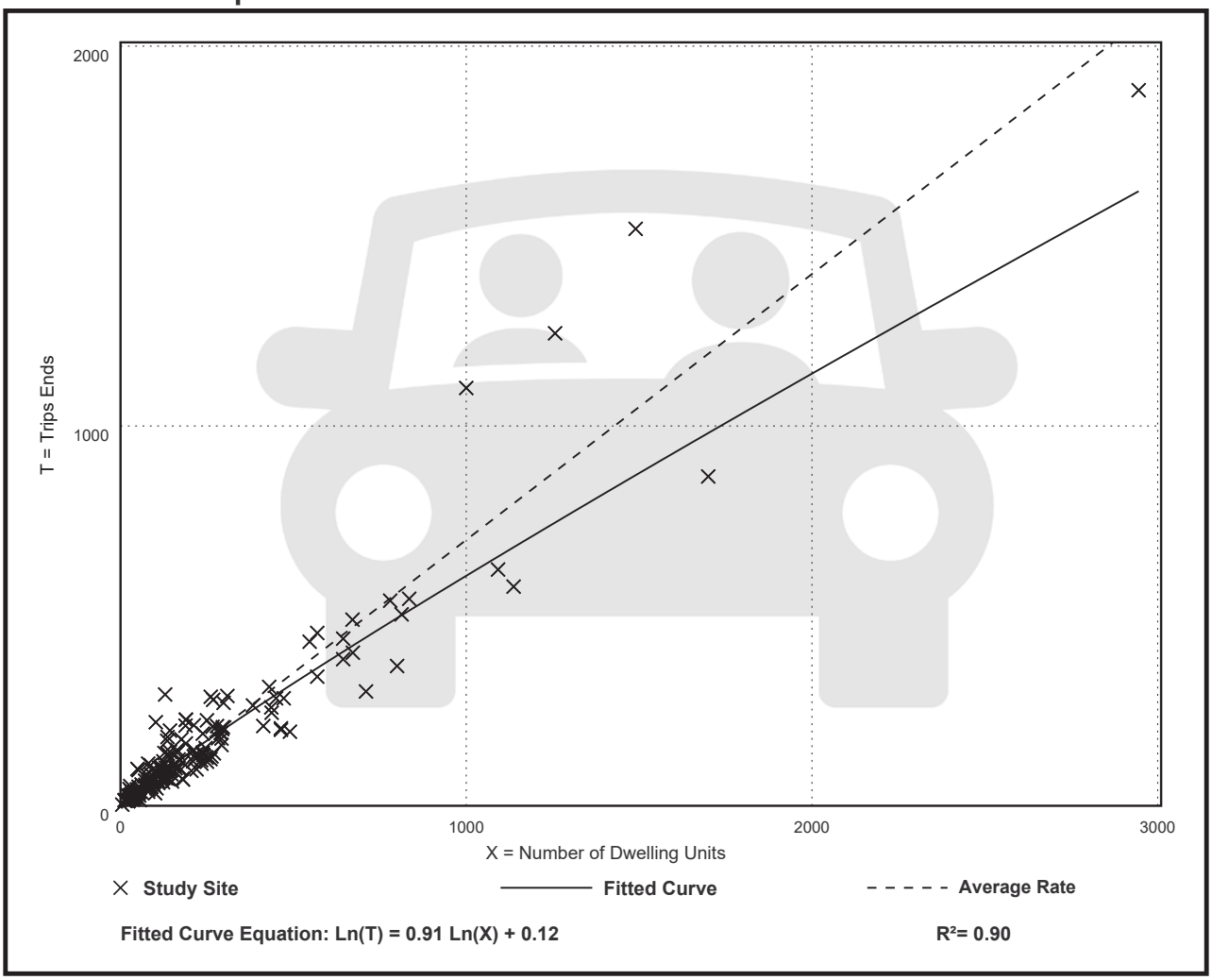
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 192
Avg. Num. of Dwelling Units: 226
Directional Distribution: 26% entering, 74% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.70	0.27 - 2.27	0.24

Data Plot and Equation



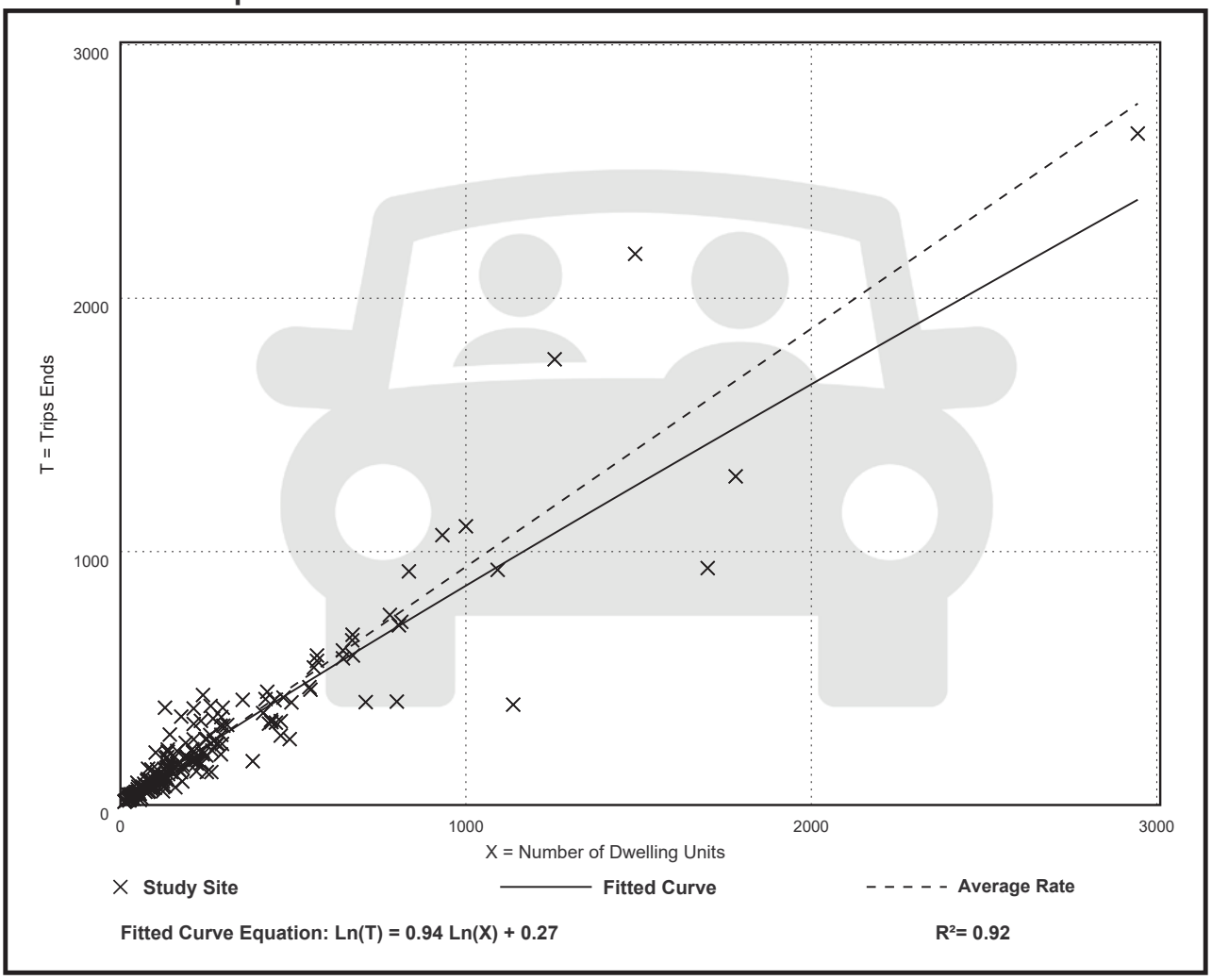
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 208
Avg. Num. of Dwelling Units: 248
Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.94	0.35 - 2.98	0.31

Data Plot and Equation



Land Use: 251
Senior Adult Housing—Single-Family

Description

Senior adult housing—single-family sites are independent living developments that are called various names including retirement communities, age-restricted housing, and active adult communities. The development has a specific age restriction for its residents, typically a minimum of 55 years of age for at least one resident of the household.

Residents in these communities are typically considered active and requiring little to no medical supervision. The percentage of retired residents varies by development. The development may include amenities such as a golf course, swimming pool, 24-hour security, transportation, and common recreational facilities. They generally lack centralized dining and on-site health facilities.

The dwelling units can be either detached or attached. The types of housing types represented by sites in the database include traditional single-family detached homes, patio homes, duplexes, and townhouses. Single-family attached housing includes any single-family housing unit that shares a wall with an adjoining dwelling unit, whether the walls are for living space, a vehicle garage, or storage space.

Senior adult housing—multifamily (Land Use 252), congregate care facility (Land Use 253), assisted living (Land Use 254), and continuing care retirement community (Land Use 255) are related land uses.

Additional Data

Caution should be used when applying trip rates for this land use as it may contain a wide variety of studies ranging from communities with very active, working residents to communities with older, retired residents. As more data become available, consideration will be given to future stratification of this land use.

Many factors affected the trip rates for detached senior adult housing. Factors such as the average age of residents, development location and size, affluence of residents, employment status, and vehicular access should be taken into consideration when conducting an analysis. Some developments were located within close proximity to medical facilities, restaurants, shopping centers, banks, and recreational activities.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

For the six sites for which data were provided for both occupied dwelling units and total dwelling units, an average of 98 percent of the units were occupied.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), California, Delaware, Florida, Maryland, New Jersey, New York, Pennsylvania, Virginia, and Washington.

Source Numbers

221, 289, 398, 421, 500, 550, 598, 601, 602, 629, 930, 1015, 1060, 1074

Senior Adult Housing - Single-Family (251)

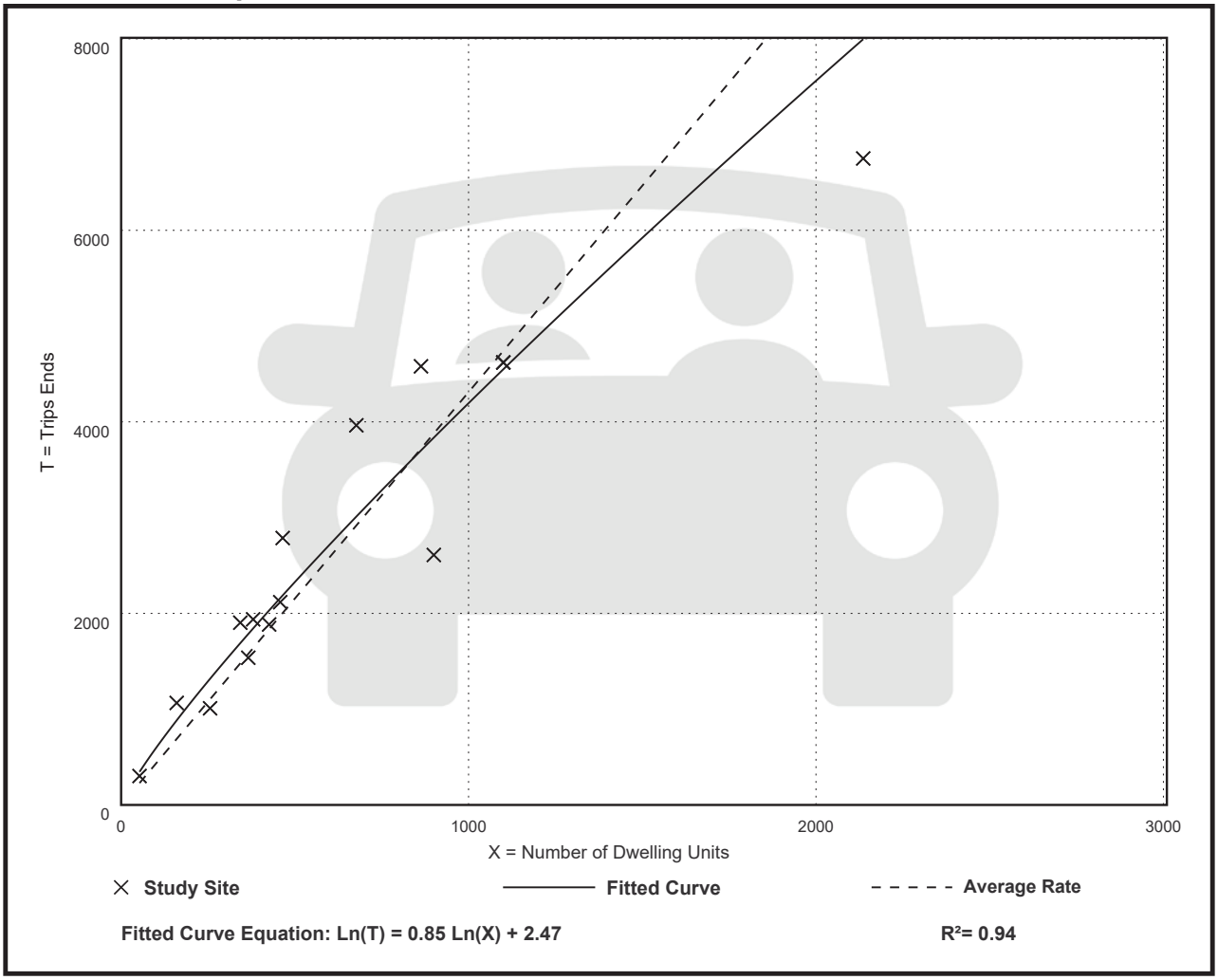
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 15
Avg. Num. of Dwelling Units: 646
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
4.31	2.90 - 6.66	1.07

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.85 Ln(X) + 2.47

R^2= 0.94

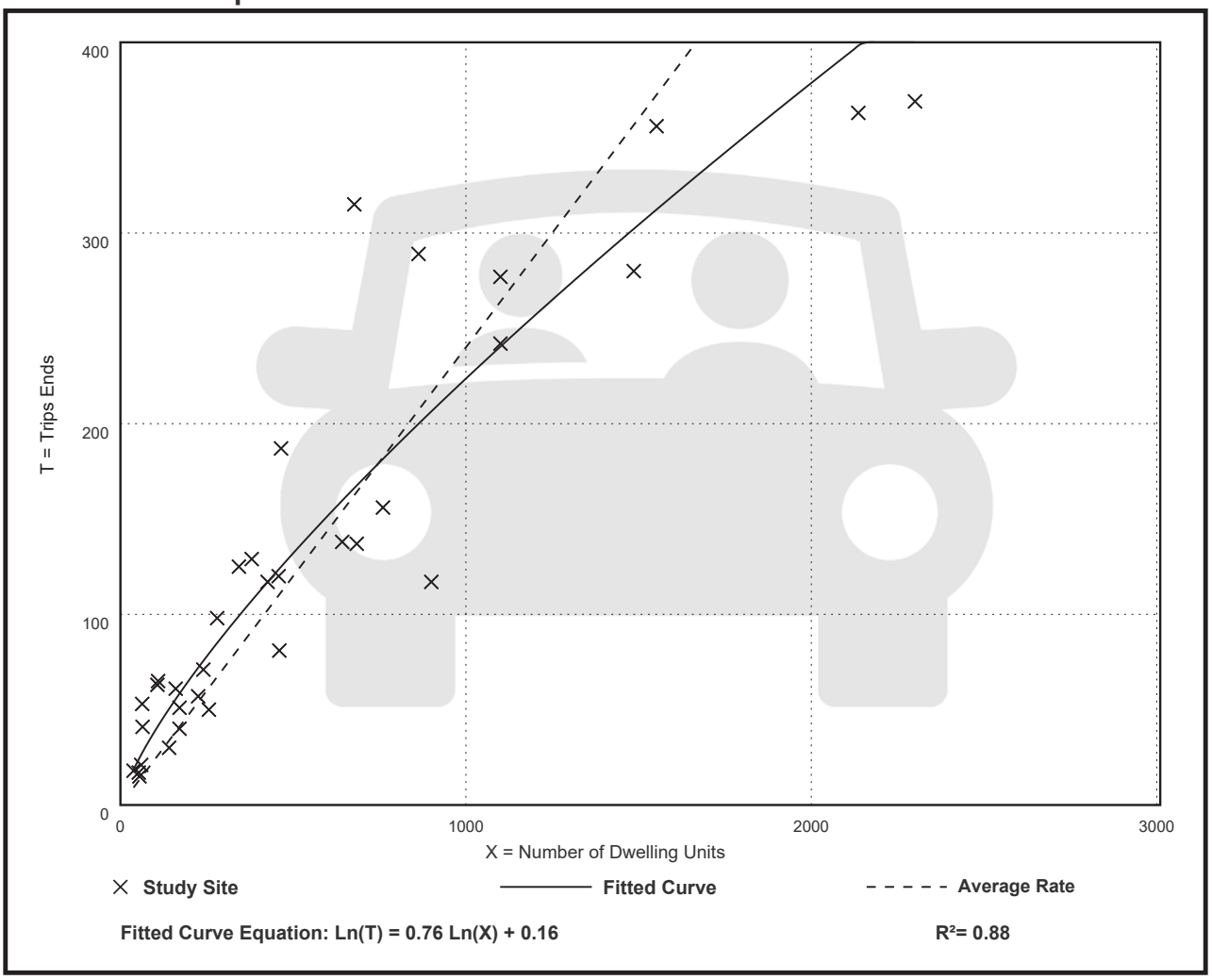
Senior Adult Housing - Single-Family
(251)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 34
Avg. Num. of Dwelling Units: 557
Directional Distribution: 33% entering, 67% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.24	0.13 - 0.84	0.10

Data Plot and Equation



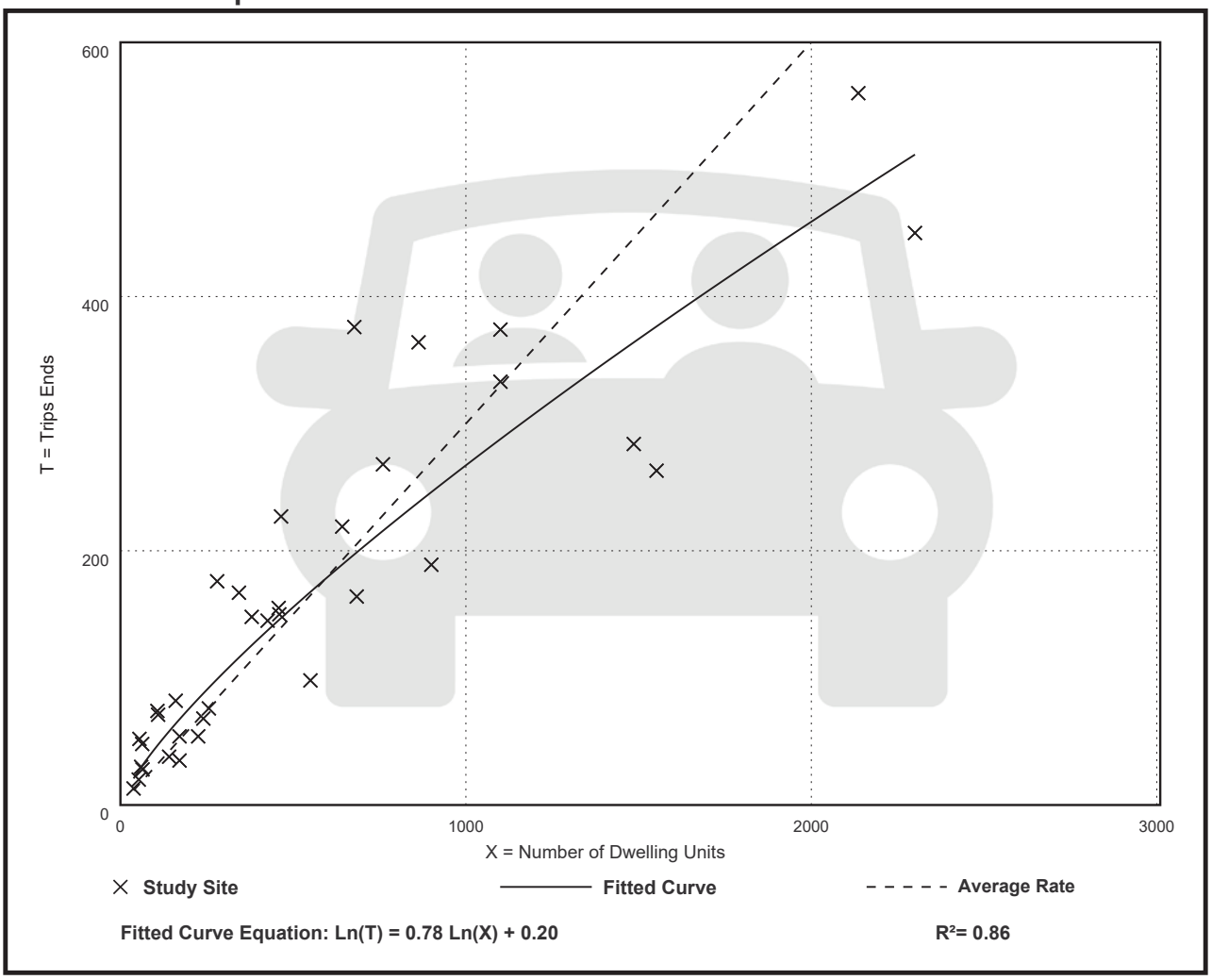
Senior Adult Housing - Single-Family
(251)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 35
Avg. Num. of Dwelling Units: 556
Directional Distribution: 61% entering, 39% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.30	0.17 - 0.95	0.12

Data Plot and Equation



Hourly Distribution of Entering and Exiting Vehicle Trips by Land Use

Source: ITE *Trip Generation Manual*, 11th Edition

Land Use Code	210			210			210		
Land Use	Single-Family Detached Housing			Single-Family Detached Housing			Single-Family Detached Housing		
Setting	General Urban/Suburban			General Urban/Suburban			General Urban/Suburban		
Time Period	Weekday			Saturday			Sunday		
# Data Sites	7			3			2		
	% of 24-Hour Vehicle Trips			% of 24-Hour Vehicle Trips			% of 24-Hour Vehicle Trips		
Time	Total	Entering	Exiting	Total	Entering	Exiting	Total	Entering	Exiting
12:00 - 1:00 AM	0.3%	0.5%	0.2%	0.8%	0.6%	1.0%	0.6%	0.6%	0.6%
1:00 - 2:00 AM	0.2%	0.2%	0.1%	0.4%	0.6%	0.2%	0.6%	1.2%	0.0%
2:00 - 3:00 AM	0.2%	0.3%	0.1%	0.3%	0.4%	0.2%	0.0%	0.0%	0.0%
3:00 - 4:00 AM	0.2%	0.2%	0.2%	0.5%	0.4%	0.6%	0.3%	0.0%	0.6%
4:00 - 5:00 AM	0.6%	0.3%	0.8%	0.5%	0.6%	0.4%	0.0%	0.0%	0.0%
5:00 - 6:00 AM	1.2%	0.5%	2.0%	1.0%	0.8%	1.2%	1.8%	1.8%	1.8%
6:00 - 7:00 AM	3.7%	1.6%	5.8%	1.0%	0.4%	1.5%	1.5%	1.8%	1.2%
7:00 - 8:00 AM	6.5%	3.1%	10.0%	2.0%	0.8%	3.3%	1.8%	0.6%	3.0%
8:00 - 9:00 AM	6.2%	3.8%	8.5%	3.8%	2.5%	5.2%	4.7%	0.6%	9.0%
9:00 - 10:00 AM	4.6%	3.3%	5.8%	5.5%	5.0%	6.0%	4.7%	3.5%	6.0%
10:00 - 11:00 AM	4.9%	4.2%	5.6%	8.2%	6.2%	10.2%	11.5%	8.8%	14.4%
11:00 - 12:00 PM	5.3%	5.4%	5.1%	7.2%	8.7%	5.8%	7.7%	8.2%	7.2%
12:00 - 1:00 PM	5.7%	5.7%	5.7%	7.7%	7.3%	8.1%	9.2%	10.5%	7.8%
1:00 - 2:00 PM	6.1%	6.1%	6.0%	8.1%	7.1%	9.0%	9.8%	10.5%	9.0%
2:00 - 3:00 PM	6.6%	7.1%	6.1%	8.0%	8.7%	7.3%	5.9%	5.8%	6.0%
3:00 - 4:00 PM	7.5%	8.7%	6.2%	9.2%	9.8%	8.7%	4.4%	5.8%	3.0%
4:00 - 5:00 PM	8.9%	10.5%	7.4%	6.2%	6.9%	5.4%	8.3%	8.2%	8.4%
5:00 - 6:00 PM	8.7%	10.0%	7.3%	8.4%	9.6%	7.1%	9.8%	11.1%	8.4%
6:00 - 7:00 PM	7.2%	8.5%	5.9%	6.0%	7.3%	4.6%	6.2%	5.8%	6.6%
7:00 - 8:00 PM	5.1%	6.1%	4.2%	5.1%	4.8%	5.4%	5.3%	7.0%	3.6%
8:00 - 9:00 PM	4.6%	6.1%	3.1%	4.8%	6.0%	3.7%	4.1%	5.8%	2.4%
9:00 - 10:00 PM	3.3%	4.4%	2.3%	2.4%	2.7%	2.1%	0.3%	0.6%	0.0%
10:00 - 11:00 PM	1.6%	2.1%	1.0%	1.7%	1.5%	1.9%	1.5%	1.8%	1.2%
11:00 - 12:00 AM	1.0%	1.3%	0.6%	1.4%	1.5%	1.3%	0.0%	0.0%	0.0%

Hourly Distribution of Entering and Exiting Vehicle Trips by Land Use

Source: ITE *Trip Generation Manual* , 11th Edition

Land Use Code	251			251		
Land Use	Senior Adult Housing - Single-Family			Senior Adult Housing - Single-Family		
Setting	General Urban/Suburban			General Urban/Suburban		
Time Period	Weekday			Sunday		
# Data Sites	8			1		
	% of 24-Hour Vehicle Trips			% of 24-Hour Vehicle Trips		
Time	Total	Entering	Exiting	Total	Entering	Exiting
12:00 - 1:00 AM	0.2%	0.3%	0.1%	0.4%	0.4%	0.2%
1:00 - 2:00 AM	0.1%	0.2%	0.1%	0.0%	0.0%	0.0%
2:00 - 3:00 AM	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%
3:00 - 4:00 AM	0.1%	0.1%	0.1%	0.1%	0.0%	0.2%
4:00 - 5:00 AM	0.2%	0.1%	0.4%	0.2%	0.1%	0.3%
5:00 - 6:00 AM	0.7%	0.2%	1.2%	0.2%	0.1%	0.2%
6:00 - 7:00 AM	2.3%	1.0%	3.7%	0.8%	0.6%	1.2%
7:00 - 8:00 AM	5.4%	2.8%	8.0%	1.5%	0.8%	2.2%
8:00 - 9:00 AM	6.4%	3.9%	8.8%	5.1%	3.5%	7.0%
9:00 - 10:00 AM	6.8%	5.2%	8.4%	6.2%	4.3%	8.6%
10:00 - 11:00 AM	7.1%	6.1%	8.1%	6.2%	3.9%	8.9%
11:00 - 12:00 PM	7.5%	7.1%	7.9%	10.5%	10.5%	10.5%
12:00 - 1:00 PM	7.9%	7.8%	7.9%	8.9%	8.5%	9.3%
1:00 - 2:00 PM	7.3%	7.3%	7.3%	8.9%	10.1%	7.4%
2:00 - 3:00 PM	7.4%	7.8%	7.0%	9.9%	11.3%	8.1%
3:00 - 4:00 PM	7.9%	9.0%	6.8%	10.9%	11.6%	9.9%
4:00 - 5:00 PM	7.8%	9.4%	6.2%	8.4%	9.2%	7.4%
5:00 - 6:00 PM	7.8%	9.4%	6.1%	8.2%	8.8%	7.5%
6:00 - 7:00 PM	6.3%	7.2%	5.3%	6.9%	7.7%	6.0%
7:00 - 8:00 PM	3.9%	5.1%	2.7%	2.5%	2.4%	2.6%
8:00 - 9:00 PM	2.9%	4.4%	1.5%	2.5%	3.2%	1.5%
9:00 - 10:00 PM	2.1%	3.1%	1.2%	1.2%	1.5%	0.7%
10:00 - 11:00 PM	1.3%	1.8%	0.8%	0.6%	1.0%	0.2%
11:00 - 12:00 AM	0.6%	0.8%	0.3%	0.3%	0.4%	0.2%

RESTRICTIONS for STRATEGIC REGIONAL ARTERIAL ROUTES

- MUTCD 2000 Traffic Signal Warrants #1 (Condition A/B only - Combination of Warrants), #2, and #3 will be deleted for Strategic Regional Arterial (SRA) routes.

    - Warrant 1 (Condition A/B-Combination of Warrants) allows a traffic signal where Warrant 1 (Condition A) and Warrant 1 (Condition B) have at least 80 percent of the stated major and minor street values for the same eight hours of a typical day.

    - Warrant 2 allows a traffic signal where the four-hour vehicular volume requirements are met.

    - Warrant 3 allows a traffic signal where the peak hour volume requirement is met.

- The 70 percent factor (70% columns in Table 4C-1 of 2000 MUTCD) shall not be applied for locations where vehicle speed limits or 85th-percentile speeds exceed 40 mph or for intersections that lie within an isolated community along an SRA route.

- The minimum minor street volumes for Warrant #1 (Condition B only) shall be increased from 75 vehicles per hour to 100 for a single-lane minor approach and from 100 vehicles per hour to 150 for a two or more lane minor approach along an SRA route. The corresponding 80% volumes for Warrant #7 are also increased accordingly, from 60 to 80 vehicles per hour for a single-lane minor approach and from 80 to 120 vehicles per hour for a two or more lane minor approach along an SRA route.

- New signal installations along SRA routes shall be spaced no less than approximately one-half mile apart on rural SRA routes, no less than approximately one-quarter mile apart (1,320 feet) on suburban SRA routes, and no less than approximately 1,000 feet apart on urban SRA routes. These spacing may be reduced to no less than 1000 feet on urban and suburban SRA routes and no less than one-quarter mile on rural SRA routes where it can be shown that it will not adversely affect signal progression. However, at no time should the spacing be less than 1,000 feet on urban and suburban SRA routes or one-quarter mile on rural SRA routes.

Image# 053940770004 Type: DW
Recorded: 05/13/2015 at 11:50:27 AM
Receipt#: 2015-00028049
Page 1 of 4
Fees: $39.00
IL Rental Housing Fund: $9.00
Lake County IL Recorder
Mary Ellen Vanderventer Recorder
File 7194196

THIS INSTRUMENT WAS PREPARED BY AND AFTER RECORDING SHOULD BE RETURNED TO:
John P. Fadden
Tenney & Bentley, LLC
111 West Washington St., Ste. 1900
Chicago, IL 60602

SEND SUBSEQUENT TAX BILLS TO:
SB Reserve Properties, Inc.
610 Peterson Road
Libertyville, IL 60048
Attention: Milan Stokovich, President

WARRANTY DEED

THE GRANTOR, SB HOLDINGS, LTD., an Illinois corporation, of the Village of Libertyville, County of Lake, State of Illinois in consideration of the payment of TEN AND NO/100 DOLLARS ($10.00) and other good and valuable considerations in hand received, hereby CONVEYS and WARRANTS to SB RESERVE PROPERTIES, INC., an Illinois corporation, of 610 Peterson Road, Libertyville, IL 60048, the following described unimproved real estate situated in the County of Lake, State of Illinois, to wit:

Parcel 1: That part of the East Half of the Northwest Quarter of Section 8, Township 44 North, Range 11 East of the Third Principal Meridian, described as beginning at a point on the West line of the East Half of said Northwest Quarter which is 1755 feet South of the Northwest corner thereof; thence East along the South line of the North 1755 feet of said East Half of the Northwest Quarter, a distance of 453.98 feet to the West line of the East 882.50 feet of the Northwest Quarter of said Section 8; thence North along said West line of the East 882.50 feet, a distance of 512.66 feet to a point on the North line of the South 1410.3 feet of the Northwest Quarter of said Section 8; thence Westerly along said North line, a distance of 454.51 feet, more or less to a point on the West line of the East Half of said Northwest Quarter of Section 8; thence South along said West line of the East Half of said Northwest Quarter, a distance of 513.72 feet to the point of beginning, in Lake County, Illinois

Permanent Index No. 11-08-100-014
Address of Real Estate: 17710 West Peterson Road, Libertyville, Illinois 60048

Parcel 2A: The West 420.50 feet of the East 882.50 feet of the South 1410.30 feet as measured along the East and South lines respectively of the Northwest Quarter of Section 8, Township 44 North, Range 11 East of the Third Principal Meridian, except that part described as follows, to-wit: Beginning at the Southeast corner of said West 420.50 feet of the East 882.50 feet of the South 1410.30 feet of the Northwest Quarter of Section 8; thence Northerly along the East line of said West 420.50 feet of the East 882.50 feet of the South 1410.30 feet of the Northwest Quarter of Section 8 for a distance of 898.19 feet; thence Westerly along a line to the West line of said 882.50 feet of the Northwest quarter of Section 8 to a

(4)

point which is 896.80 feet Northerly of the South line of said Northwest Quarter of Section 8, as measured along the said West line of the East 882.50 feet; thence Southerly along the said West line of the East 882.50 feet of the South 1410.30 feet of the Northwest Quarter of Section 8 for a distance of 896.80 feet to the said South line of the Northwest Quarter of Section 8; thence Easterly along the said South line of the Northwest Quarter of Section 8 for a distance of 420.5 feet to the place of beginning of this exception, all in Lake County, Illinois

and

Parcel 2B: The East 462.0 feet of the South 1410.30 feet as measured along the East and South lines respectively of the Northwest Quarter of Section 8, Township 44 North, Range 11 East of the Third Principal Meridian, except the South 1079.60 feet of the East 462.0 feet thereof, all in Lake County, Illinois

EXCEPTING, however, and RESERVING unto Commonwealth Edison Company, its successors and assigns, the perpetual right, easement and authority to construct, install, operate, use, maintain, repair, replace, relocate, renew and remove poles, crossarms, wires, cables, conduit and other overhead and underground equipment, or both, for the transmission and distribution of electric energy in, upon, under, over, across and along the North 10 feet of Parcel 2B and the North and West 10 feet of Parcel 2A, together with the right of access thereto at all times for any and all such purposes, and also the right to trim or cut down from time to time such trees, bushes, shrubs and saplings which interfere or threaten to interfere with any of the rights reserved hereunder.

Permanent Index No. 11-08-100-012
Address of Real Estate: 17590 West Peterson Road, Libertyville, Illinois 60048

Parcel 3: The South 1079.60 feet of the East 462.0 feet as measured along the East and South lines respectively, of the Northwest Quarter of Section 8, Township 44 North, Range 11 East of the Third Principal Meridian, except the West 432.0 feet of the South 701.0 feet, and except that part thereof taken for highway purposes, all in Lake County, Illinois

Permanent Index No. 11-08-100-036
Address of Real Estate: Rear 610 Peterson Road, Libertyville, Illinois 60048

Parcel 4: That part of the Northeast Quarter of Section 8, Township 44 North, Range 11 East of the Third Principal Meridian, described as follows: Beginning at a point on the South line of and 6.82 chains West from the Southeast corner of said Northeast Quarter; thence West along said South line, 2229.68 feet to the Southwest corner of said Northeast Quarter; thence North along the West line of said Northeast Quarter, 1410.30 feet; thence East 2230.38 feet to a point which is 6.82 chains West from the East line of said Northeast Quarter and 1405.2 feet North from the South line of said Northeast Quarter; thence South to the place of beginning (excepting therefrom the following: (a) the East 1920.68 feet thereof; (b) that part thereof, if any, falling in Brookhill Park, a subdivision of parts of Sections 8 and 9, Township and Range aforesaid, recorded April 24, 1925, as Document 256105, in Book "M" of Plats, page 100; and also (c) excepting therefrom that part conveyed by Warranty Deed dated September 25, 1967, to the State of Illinois for the use of Department of Public Works and Buildings described as follows: Part of the

Northeast Quarter of Section 8, Township 44 North, Range 11 East of the Third Principal Meridian, bounded and fully described as follows: Beginning at the Southwest corner of said Northeast Quarter; thence Easterly along the South line of said Northeast Quarter, 309.00 feet; thence Northerly parallel to the East line of said Northeast Quarter, 74.81 feet; thence Westerly toward a point on the West line of said Northeast Quarter, said point being 75.00 feet Northerly from the Southwest corner of said Northeast Quarter, 217.17 feet to a point of curve toward the South; thence on said curve to the South, the radius of which is 17,263.74 feet, 91.83 feet to a point on the West line of said Northeast Quarter, this point being 74.76 feet Northerly from the Southwest corner of said Northeast Quarter; thence Southerly on the West line of said Northeast Quarter, 74.76 feet to said point of beginning), in Lake County, Illinois

Permanent Index No. 11-08-200-001
Address of Real Estate: 540 Peterson Road, Libertyville, Illinois 60048

DATED this 20Th. day of April, 2015.

SB HOLDINGS, LTD

By: Milan Stokovich
MILAN STOKOVICH, President

ATTEST: John Stokovich
JOHN STOKOVICH, Secretary

State of Illinois, County of Lake ss.

I, the undersigned, a Notary Public in and for the County and State aforesaid, DO HEREBY CERTIFY that Milan Stokovich, President, and John Stokovich, Secretary, of SB Holdings, Ltd., personally known to me to be the same persons whose names are subscribed to the foregoing instrument, appeared before me this day in person and acknowledged that as such President and Secretary, they signed and delivered the said instrument, pursuant to authority given by the Board of Directors of said corporation, as their free and voluntary act, and as the free and voluntary act and deed of said corporation, for the uses and purposes therein set forth.

GIVEN under my hand and official seal, this 20th day of April, 2015.

Laura Ferrigan
Notary Public

My commission expires August 5, 2015

Exempt under provisions of paragraph e, 35 ILCS 200/31-45, Real Estate Transfer Tax Act and Lake County Ordinance.

Milan Stokovich 04/20/2015
Buyer, Seller or Representative

Date

Official Seal
Laura Ferrigan
Notary Public, State of Illinois
Lake County
My Commission Expires August 5, 2015

PLAT ACT AFFIDAVIT

STATE OF ILLINOIS)
) SS
COUNTY OF LAKE)

Milan Stokovich, being duly sworn on oath, state that I reside at 217 Church Street, Libertyville, Illinois, and that the attached deed is not in violation of the Plat Act, Ch. 765 ILCS 205/1.1(b), as the provisions of this Act do not apply and no plat is required due to the following allowed exception **(Circle the number applicable to the attached deed):**

1. The division of subdivision of land into parcels or tracts of five (5) acres or more in size which does not involve any new streets or easements of access.

2. The divisions of lots of blocks of less than one (1) acre in any recorded subdivision which does not involve any new streets or easements of access.

(3.) The sale or exchange of parcels of land between owners of adjoining and contiguous land.

4. The conveyance of parcels of land or interest therein for use as right of way for railroads or other public utility facilities, which does not involve any new streets or easements of access.

5. The conveyance of land owned by a railroad or other public utility which does not involve any new streets or easements of access;

6. The conveyance of land for highway or other public purposes or grants or conveyances relating to the dedication of land for public use or instruments relating to the vacation of land impressed with a public use.

7. Conveyances made to correct descriptions in prior conveyances.

8. The sale or exchange of parcels or tracts of land following onto no more than 2 parts of a particular parcel or tract of land existing on July 17, 1959 and not involving any new streets or easements of access.

9. The sale of a single lot of less than five (5) acres from a larger tract when a survey is made by an Illinois Registered Land surveyor; provided, that this exemption shall not apply to the sale of any subsequent lots from the same larger tract of land, as determined by the dimensions and configuration of the larger tract on October 1, 1973 and provided also that this exemption does not invalidate any local requirements applicable to the subdivision of land.

10. The conveyance of land does not involve any land division and is described in the same manner as title was taken by grantor(s).

APPLICANT further states that this affidavit is made for the purpose of inducing the RECORDER OF LAKE COUNTY, ILLINOIS, to accept the attached deed for recording. (This affidavit is not applicable to Facsimile Assignment of Beneficial Interest.)

Milan Stokovich

Milan Stokovich

Subscribed and sworn to before me
this 13th day of May, 2015.

Laura Ferrigan
Notary Public
My commission expires: August 5, 2015

Official Seal
Laura Ferrigan
Notary Public, State of Illinois
Lake County
My Commission Expires August 5, 2015

JPF:sar/2454

PART OF LIBERTYVILLE T.S.S
T.P. 5830

DEED IN TRUST

QUIT CLAIM
~~(WARRANTY)~~

2561477

The above space for recorder's use only

THIS INDENTURE WITNESSETH, That the Grantor, COMMONWEALTH EDISON COMPANY

of the County of Cook and State of Illinois, for and in consideration of the sum of Ten Dollars ($ 10.00), in hand paid, and of other good and valuable considerations, receipt of which is hereby duly acknowledged, Convey~~s~~ and Warrant~~s~~ Quit Claims unto LIBERTYVILLE NATIONAL BANK, a National Banking Association, and duly authorized to accept and execute trusts within the State of Illinois, as Trustee under provisions of a certain Trust Agreement, dated the 7th day of April 19 87, and known as Trust Number 241, the following described real estate in the County of Lake and State of Illinois, to-wit:

(SEE LEGAL DESCRIPTION ON REVERSE)

1987 APR 29 PM 2:31
Brandy J. Hunter
RECORDER
LAKE COUNTY, ILLINOIS

P.I.N. 11-08-100-006

~~SUBJECT TO~~-

TO HAVE AND TO HOLD the said real estate with the appurtenances, upon the trusts, and for the uses and purposes herein and in said Trust Agreement set forth.

Full power and authority is hereby granted to said Trustee to improve, manage, protect and subdivide said real estate or any part thereof, to dedicate parks, streets, highways or alleys and to vacate any subdivision or part thereof, and to resubdivide said real estate as often as desired, to contract to sell, to grant options to purchase to sell on any terms, to convey either with or without consideration, to convey said real estate or any part thereof to a successor or successors in trust and to grant to such successor or successors in trust all of the title, estate, powers and authorities vested in said Trustee, to donate, to dedicate, to mortgage, pledge or otherwise encumber said real estate, or any part thereof, to lease said real estate, or any part thereof, from time to time, in possession or reversion, by leases to commence in praesenti or in futuro, and upon any terms and for any period or periods of time, not exceeding in the case of any single demise the term of 198 years, and to renew or extend leases upon any terms and for any period or periods of time and to amend, change or modify leases and the terms and provisions thereof at any time or times hereafter, to contract to make leases and to grant options to lease and options to renew leases and options to purchase the whole or any part of the reversion and to contract respecting the manner of fixing the amount of present or future rentals, to partition or to exchange said real estate, or any part thereof, for other real or personal property, to grant easements or charges of any kind, to release, convey or assign any right, title or interest in or about or easement appurtenant to said real estate or any part thereof, and to deal with said real estate and every part thereof in all other ways and for such other considerations as it would be lawful for any person owning the same, whether similar to or different from the ways above specified, at any time or times hereafter.

In no case shall any party dealing with said Trustee, or any successor in trust, in relation to said real estate, or to whom said real estate or any part thereof shall be conveyed, contracted to be sold, leased or mortgaged by said Trustee, or any successor in trust, be obliged to see to the application of any purchase money, rent or money borrowed or advanced on said real estate, or be obliged to see that the terms of this trust have been complied with, or be obliged to inquire into the authority, necessity or expediency of any act of said Trustee, or be obliged or privileged to inquire into any of the terms of said Trust Agreement; and every deed, trust deed, mortgage lease or other instrument executed by said Trustee, or any successor in trust, in relation to said real estate shall be conclusive evidence in favor of every person (including the Registrar of Titles of said county) relying upon or claiming under any such conveyance lease or other instrument, (a) that at the time of the delivery thereof the trust created by this Indenture and by said Trust Agreement was in full force and effect, (b) that such conveyance or other instrument was executed in accordance with the trusts, conditions and limitations contained in this Indenture and in said Trust Agreement or in all amendments thereof, if any, and binding upon all beneficiaries thereunder, (c) that said Trustee, or any successor in trust, was duly authorized and empowered to execute and deliver every such deed, trust deed, lease, mortgage or other instrument and (d) if the conveyance is made to a successor or successors in trust, that such successor or successors in trust have been properly appointed and are fully vested with all the title, estate, rights, powers, authorities, duties and obligations of its, his or their predecessor in trust.

This conveyance is made upon the express understanding and condition that neither Libertyville National Bank, individually or as Trustee, nor its successor or successors in trust shall incur any personal liability or be subjected to any claim, judgment or decree for anything it or they or its or their agent or attorneys may do or omit to do in or about the said real estate or under the provisions of this Deed or said Trust Agreement or any amendment thereto, or for injury to person or property happening in or about said real estate, any and all such liability being hereby expressly waived and released. Any contract, obligation or indebtedness incurred or entered into by the Trustee in connection with said real estate may be entered into by it in the name of the then beneficiaries under said Trust Agreement as their attorney-in-fact, hereby irrevocably appointed for such purposes, or at the election of the Trustee, in its own name, as Trustee of an express trust and not individually (and the trustee shall have no obligation whatsoever with respect to any such contract, obligation or indebtedness except only so far as the trust property and funds in the actual possession of the Trustee shall be applicable for the payment and discharge thereof). All persons and corporations whomsoever and whatsoever shall be charged with notice of this condition from the date of the filing for record of this Deed.

The interest of each and every beneficiary hereunder and under said Trust Agreement and of all persons claiming under them or any of them shall be only in the earnings, avails and proceeds arising from the sale or any other dispositions of said real estate, and such interest is hereby declared to be personal property, and no beneficiary hereunder shall have any title or interest, legal or equitable, in or to said real estate as such, but only an interest in the earnings, avails and proceeds thereof as aforesaid, the intention hereof being to vest in said Libertyville National Bank, the entire legal and equitable title in fee simple, in and to all of the real estate above described.

If the title to any of the above real estate is now or hereafter registered, the Registrar of Titles is hereby directed not to register or note in the certificate of title or duplicate thereof, or memorial, the words "in trust," or "upon condition," or "with limitations," or words of similar import, in accordance with the statute in such case made and provided, and said trustee shall not be required to produce the said Agreement or a copy thereof, or any extracts therefrom, as evidence that any transfer, charge or other dealing involving the registered lands is in accordance with the true intent and meaning of the trust.

And the said grantor~~s~~ hereby expressly waive and release any and all right or benefit under and by virtue of any and all statutes of the State of Illinois, providing for the exemption of homesteads from sale on execution or otherwise.

In Witness Whereof, the grantor~~s~~ aforesaid ha~~s~~ hereunto set its hand and seal this 22nd day of April 19 87

~~Assistant Secretary~~ (SEAL) R. J. Manning (SEAL)
Vice President

State of Illinois
County of Cook

I, Kenneth W. Johnson a Notary Public in and for said County, in the state aforesaid, do hereby certify that R. J. Manning, Vice President and W. J. Gouwens, Assistant Secretary, of the Commonwealth Edison Company

personally known to me to be the same person~~s~~ whose name~~s~~ are subscribed to the foregoing instrument, appeared before me this day in person and they signed, sealed and delivered the said instrument as their free and voluntary act, for the uses and purposes therein set forth, including the release and waiver of the right of homestead.

Given under my hand and notarial seal this 22nd day of April 19 87

Kenneth W. Johnson
Notary Public

My Commission expires June 11, 1989.

Prepared By:

LIBERTYVILLE NATIONAL BANK
200 N. Milwaukee Avenue
Libertyville, Illinois 60048

Mail to: Nikon Stokovich
610 Ratoon Rd, Libertyville, IL 60048
For information only insert street address of above described property.

Mail to: Griffin & Fadden
150 S. Wacker Drive, Suite 500
Chicago, IL 60606 Attn: John Fadden

Document Number

2 x P

LEGAL DESCRIPTION

2561477

That part of the East half of the Northwest Quarter of Section 8, Township 44 North, Range 11 East of the Third Principal Meridian, described as beginning at a point on the West line of the East half of said Northwest Quarter which is 1755 feet South of the Northwest corner thereof; thence East along the South line of the North 1755 feet of said East half of the Northwest Quarter a distance of 453.98 feet to the West line of the East 882.50 feet of the Northwest Quarter of said Section 8; thence North along said West line of the East 882.50 feet, a distance of 512.66 feet to the North line of the South 1410.30 feet of the Northwest Quarter of said Section 8; thence West along said North line of the South 1410.30 feet of the Northwest Quarter 454.51 feet to the West line of the East half of the Northwest Quarter of said Section 8; thence South along said West line of the East half of said Northwest Quarter a distance of 513.26 feet to the point of beginning, all in Lake County, Illinois.

EXCEPTING, however, and RESERVING unto Commonwealth Edison Company, its successors and assigns, the perpetual right, easement and authority to construct, install, operate, use, maintain, repair, replace, relocate, renew and remove poles, crossarms, wires, cables, conduit and other overhead and underground equipment, or both, for the transmission and distribution of electric energy in, upon, under, over, across and along the North and West ten feet of the premises and along that part of the Premises described as follows:

Beginning on the West line of the East half of the Northwest Quarter of Section 8, Township 44 North, Range 11 East of the Third Principal Meridian, at a point 1723.26 feet South of the Northwest corner thereof; thence Northeast along the centerline of a 20 foot wide easement, 10 feet on each side of said centerline, forming an angle of 18 degrees, 32 minutes 44 seconds to the right of said West line, a distance of 507.78 feet to a point on the North line of the South 1410.30 feet of the East half of the Northwest Quarter of said Section 8 and the end of said easement. Said point being 161.50 feet East, as measured along the North line of the South 1410.30 feet, of the West line of the East half of the Northwest Quarter of said Section 8. Side lines of said easement to be prolonged or shortened to intersect property lines, situated in Lake County, Illinois.

together with the right of access thereto at all times for any and all such purposes, and also the right to trim or cut down from time to time such trees, bushes, shrubs and saplings which interfere or threaten to interfere with any of the rights reserved hereunder.

Lake County Real Estate Transfer Tax
has been paid in the same amount as
the State of Illinois Real Estate Transfer
Tax.

17.50

STATE OF ILLINOIS
REAL ESTATE TRANSFER TAX
APR 29 '87
DEPT. OF REVENUE
17.50
RB.11247

95410954

678 ON 03
3001

2561477

PLAT ACT AFFIDAVIT

APR 2 9 1987

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

Kenneth W. Johnson, being duly sworn on oath, states that he is a duly authorized agent of COMMONWEALTH EDISON COMPANY. That the attached deed is not in violation of Section 1 of Chapter 109 of the Illinois Revised Statutes for one of the following reasons:

1. The sale or exchange is of an entire tract of land not being subdivided by the owner into 2 or more parts; any of which is less than 5 acres.

2. The division or subdivision of land is into parcels or tracts of 5 acres or more in size which does not involve any new streets or easements of access.

3. The division is of lots or blocks of less than 1 acre in any recorded subdivision which does not involve any new streets or easements of access.

4. The sale or exchange of parcels of land is between owners of adjoining and contiguous land.

5. The conveyance is of parcels of land or interests therein for use as right-of-way for railroads or other public utility facilities and other pipelines, which does not involve any new streets or easements of access.

(6.) The conveyance is of land owned by a railroad or other public utility which does not involve any new streets or easements of access.

7. The conveyance is of land for highway or other public purposes or grants or conveyances relating to the dedication of land for public use or instruments relating to the vacation of land impressed with a public use.

8. The conveyance is made to correct descriptions in prior conveyances.

9. The sale or exchange is of parcels or tracts of land following the division into no more than two parts of a particular parcel or tract of land existing on July 17, 1959, and not involving any new streets or easements of access.

10. The sale is of a single lot of less than 5 acres from a larger tract when a survey is made by a registered surveyor; provided, that this exemption shall not apply to the sale of any subsequent lots from the same larger tract of land, as determined by the dimensions and configuration of the larger tract on October 1, 1973, and provided also that this exemption does not invalidate any local requirements applicable to the subdivision of land.

CIRCLE NUMBER ABOVE WHICH IS APPLICABLE TO ATTACHED DEED.

Affiant further states that he makes this affidavit for the purpose of inducing the Recorder of Deeds of Lake County Illinois, to accept the attached deed for recording.

Kenneth W. Johnson

SUBSCRIBED AND SWORN to before me this 29th day of April, 1987.

Notary Public

EASEMENT GRANT

FOR AND IN CONSIDERATION of the sum of Ten Dollars ($10.00) and other good and valuable consideration, the receipt of which is hereby acknowledged, LIBERTYVILLE NATIONAL BANK, a National Banking Association, and duly authorized to accept and execute trusts within the State of Illinois, not personally or individually, but solely as Trustee under provisions of a certain Trust Agreement dated the 1st day of October, 1986, and known as Trust Number 202 (hereinafter called "Grantor"), does hereby grant and convey unto NORTH SHORE GAS COMPANY, a corporation organized and existing under the laws of the State of Illinois (hereinafter called "Grantee"), and unto its successors and assigns, a permanent right of way and non-exclusive easement to construct, reconstruct, renew, replace, operate, maintain, inspect, alter, repair, remove, change the size of or abandon in place all or any part of a pipeline or pipelines for the transportation of gas and such valves, fittings, meters and other equipment and appurtenances as may be necessary or convenient for such operation, through, under, along, over and across the following described real estate situated in the County of Lake, and State of Illinois:

The West thirty-three (33) feet of the South one hundred ten (110) feet of the North 1755.0 feet of the West 420.5 feet of the East 882.5 feet of the East half of the Northwest Quarter of Section 8, Township 44 North, Range 11, East of the Third Principal Meridian, in Lake County, Illinois,

26133380

and also the right to use, from time to time, any adjoining or adjacent vacant land of said Grantor when reasonably required in the construction, reconstruction, renewing, replacing, operating, maintaining, inspecting, altering, repairing, removing, changing the size of or abandoning in place all or any part of said gas pipeline or pipelines, valves, fittings, meters and other equipment and appurtenance as aforesaid, through, under, along, over or across the real estate above described.

And the Grantor does expressly covenant that it is the title-holder in fee of said real estate, and has good right to grant said right of way and easement and that the Grantee, its employees, agents, assigns and lessees shall at all times have free access to and egress from and over said real estate to construct, reconstruct, renew, replace, operate, maintain, inspect, alter, repair, remove, change the size of or abandon in place all or any part of said gas pipeline or pipelines and such valves, fittings, meters and other equipment and appurtenances as aforesaid.

The Grantor retains all of its rights to the use and occupation of said real estate not inconsistent with the use by the Grantee, its successors or assigns, of the right of way and easement herein granted for the purposes aforesaid, and agrees that the erection or construction of any building or other structure on or over the real estate above described or any part thereof by the Grantor its successors, assigns or lessees, shall be conclusively deemed to be a use of said real estate inconsistent with the easement herein granted.

IN WITNESS WHEREOF, the Grantor has caused this instrument to be duly executed and its corporate seal to be hereto affixed by the proper corporate officers thereunto duly authorized, this 17th day of SEPTEMBER, A.D. 1987.

LIBERTYVILLE NATIONAL BANK,
not personally or individually,
but solely as Trustee under
Trust Number 202

By _____
1TS President

LIBERTYVILLE NATIONAL BANK CORPORATE SEAL

ATTEST:

_____
ASST. TRUST OFFICER ~~Secretary~~

2613380

This Instrument Prepared By:
Cynthia VanBogaert, Attorney For
North Shore Gas Company
3001 Grand Avenue
Waukegan, Illinois 60085

ACKNOWLEDGMENT

STATE OF ILLINOIS)
)
COUNTY OF LAKE)

I, the undersigned, a Notary Public, in and for said County, in the State aforesaid, DO HEREBY CERTIFY that William J Westeaman personally known to me to be the ~~———~~ President of LIBERTYVILLE NATIONAL BANK and Steven A. Risley ~~———~~ personally known to me to be the Vice Pres. + Asst Trust Officer ~~Secretary~~ of said corporation, and personally known to me to be the same persons whose names are subscribed to the foregoing instrument, appeared before me this day in person and severally acknowledged that as such ~~Vice~~ President and V. Pres + Asst Trust Off. ~~Secretary~~, respectively, they signed and delivered the said instrument and caused the corporate seal of said corporation to be affixed thereto, as their free and voluntary act and as the free and voluntary act and deed of said corporation, for the uses and purposes therein set forth.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my Official Seal, this 17th day of September, A.D. 1987.

Nancy J. Hautop
Notary Public

My Commission Expires:

12-6-90

"OFFICIAL SEAL"
NANCY J. HAUTOP
Notary Public, State of Illinois
My Commission Expires 12/6/90

26 13380

RECORDER
LAKE COUNTY, ILLINOIS
1987 SEP 18 AM 11:32
Frank J. Kuntz

Mail To:
North Shore Gas Co.
3001 Grand Ave.
Waukegan, Il.
Attn: Engineering Dept.

PAID

EASEMENT GRANT

FOR AND IN CONSIDERATION of the sum of Ten Dollars ($10.00) and other good good and valuable consideration, the receipt of which is hereby acknowledged, MILAN STOKOVICH, JOHN STOKOVICH, AND NICHOLAS STOKOVICH (hereinafter called "Grantor"), does hereby grant and convey unto NORTH SHORE GAS COMPANY, a corporation organized and existing under the laws of the State of Illinois (hereinafter called "Grantee"), and unto its successors and assigns, a permanent right of way and non-exclusive easement to construct, reconstruct, renew, replace, operate, maintain, inspect, alter, repair, remove, change the size of or abandon in place all or any part of a pipeline or pipelines for the transportation of gas and such valves, fittings, meters and other equipment and appurtenances as may be necessary or convenient for such operation, through, under, along, over and across the following described real estate situated in the County of Lake, and State of Illinois:

> The West thirty three (33) feet of the West 420.5 feet of the East 882.5 feet of that part of the East 1/2 of the Northwest 1/4 of Section 8, Township 44 North, Range 11, East of the Third Principal Meridian, lying South of the North 1,755 feet thereof, except that part thereof described as follows: Beginning at a point on the East line of said parcel, 66.61 feet Northerly from the South line of said Northwest Quarter; thence Southerly along said East line, 66.61 feet to the South line of said Northwest Quarter; thence Westerly on the South line of said Northwest Quarter, 420.5 feet; thence Northerly parallel to the East line of said Northwest Quarter, 47.99 feet; thence Easterly on a curve varying toward the South, the radius of which is 17,263.74 feet, to said point of beginning, in Lake County, Illinois,

and also the right to use, from time to time, any adjoining or adjacent vacant land of said Grantor when reasonably required in the construction, reconstruction, renewing, replacing, operating, maintaining, inspecting, altering, repairing, removing, changing the size of or abandoning in place all or any part of said gas pipeline or pipelines, valves, fittings, meters and other equipment and appurtenance as aforesaid, through, under, along, over or across the real estate above described.

And the Grantor does expressly covenant that it is the owner in fee of said real estate, and has good right to grant said right of way and easement and that the Grantee, its employees, agents, assigns and lessees shall at all

times have free access to and egress from and over said real estate to construct, lay, repair, renew, maintain, remove, change the size of or abandon in place all or any part of said gas pipeline or pipelines and such valves, fittings, meters and other equipment and appurtenances as aforesaid.

The Grantor retains all of its rights to the use and occupation of said real estate not inconsistent with the use by the Grantee, its successors or assigns, of the right of way and easement herein granted for the purposes aforesaid, and agrees that the erection or construction of any building or other structure on or over the real estate above described or any part thereof by the Grantor its successors, assigns or lessees, shall be conclusively deemed to be a use of said real estate inconsistent with the easement herein granted.

IN WITNESS WHEREOF, the Grantor has caused this instrument to be duly executed this 18th day of September, A.D. 1987.

Milan Stokovich
Grantor

John Stokovich
Grantor

Nicholas Stokovich
Grantor

2614460

RECORDER
LAKE COUNTY, ILLINOIS
1987 SEP 22 PM 2:42

Frankie J. Kuster

ACKNOWLEDGMENT

STATE OF ILLINOIS)
)
COUNTY OF LAKE)

I, the undersigned, a Notary Public, in and for said County, in the State aforesaid, DO HEREBY CERTIFY that MILAN STOKOVICH, JOHN STOKOVICH, AND NICHOLAS STOKOVICH, personally known to me to be the same persons whose names are subscribed to the foregoing instrument, appeared before me this day in person and severally acknowledged that they signed, sealed, and delivered the said instrument as their free and voluntary act for the uses and purposes therein set forth.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my Official Seal, this 18th day of September, A.D. 1987.

Stephen J. Duncan
Notary Public

My Commission Expires:
July 15, 1991

STEPHEN J. DUNCAN NOTARY PUBLIC LAKE COUNTY, IL

This Instrument Prepared By:
Cynthia VanBogaert, Attorney For
North Shore Gas Company
3001 Grand Avenue
Waukegan, Illinois 60085

Mail To:
North Shore Gas Co.
3001 Grand Ave.
Waukegan, IL
Attn: Engineering Dept.

PMD

NSA 10-88

GRANT OF EASEMENT

The Grantor(s), **Milan Stokovich, John Stokovich and Nicholas Stokovich**

in consideration of the sum of One Dollar and other valuable consideration, receipt of which is hereby acknowledged, hereby give(s) and grant(s) to COMMONWEALTH EDISON COMPANY, an Illinois Corporation and **Illinois Bell Telephone Company, an Illinois** Corporation, their respective licensees, successors and assigns, jointly and severally, an easement to construct, operate, maintain, renew, relocate and remove, from time to time, poles, wires, cables, conduits, manholes, transformers, pedestals and other facilities used in connection with overhead and underground transmission and distribution of electricity, sounds and signals, together with right of access to the same and the right, from time to time, to trim or remove trees, bushes and saplings and to clear obstructions from the surface and subsurface as may be reasonably required incident to the grant herein given, in, over, under, across, along and upon the surface of property situated in Section 8, Township 44 North, Range 11, East of the Third Principal Meridian in Lake County, Illinois described as follows:

The Westerly ten (10) feet of:

The West 420.5 feet of the East 882.5 feet of that part of the East 1/2 of the Northwest 1/4 of Section 8, Township 44 North, Range 11, East of the Third Principal Meridian, lying South of the North 1755 Feet thereof, except that part thereof described as follows: Beginning at a point on the East line of said parcel, 66.61' Northerly from the South line of said Northwest quarter; thence Southerly along said east line, 66.61' to the South line of said Northwest quarter; thence Westerly on the South line of said Northwest quarter, 420.5'; thence Northerly parallel to the East line of said Northwest quarter, 47.99'; thence easterly on a curve varying toward the South, the radius of which is 17,263.74, to said point of beginning, in Lake County, Illinois.

Commonly Known As: 17620 Peterson Road
Libertyville, Illinois

P.I.N. 11-08-100-008

PAID

This instrument prepared by Alan Lawrence (name) P. O. Box 767, Chicago, Illinois 60690, on behalf of Commonwealth Edison Company

26044995

For Individual Signatures

IN WITNESS WHEREOF, the Grantor(s), set(s) **their** hand(s) and seal(s) hereto this 29 day of January, 19 88.

Milan Stokovich Seal
John Stokovich Seal
Nicholas Stokovich Seal
Seal

For Corporate or Trust Signature

IN WITNESS WHEREOF, the Grantor _____

has caused this instrument to be executed on its behalf and its corporate seal to be affixed hereto this _____ day of _____, 19____.

ATTEST: _____ By _____

_____ Secretary _____ President [Trust Officer]

Complete the Appropriate Acknowledgment on Reverse Side Hereof

2

2064995

RECORDER
LAKE COUNTY, ILLINOIS

1988 MAR 16 PM 3:17

Frank J. Nuetzel

AFTER RECORDING RETURN TO:
COMMONWEALTH EDISON COMPANY
C/O REAL ESTATE DEPARTMENT
P.O. BOX 767
CHICAGO, ILLINOIS 60690

If grantors are individuals, complete the following:

State Of Illinois
County Of Lake

I, the undersigned, a Notary Public in and for the said County and State aforesaid, do hereby certify that Milan Stokovich, John Stokovich and Nicholas Stokovich, personally known to me to be the same person(s) whose name(s) is/are subscribed to the foregoing instrument, appeared before me this day in person and acknowledged that he/she/they signed, sealed and delivered this instrument as his/her/their free and voluntary act for the uses and purposes therein set forth.

GIVEN under my hand and NOTARIAL SEAL this 29th day of January, 1988.

"OFFICIAL SEAL"
TAMI L. MILLER
Notary Public, State of Illinois
My Commission Expires 11/16/91

Tami L. Miller
Notary Public

If grantor is a corporation or trust, complete the following:

State Of _____
County Of _____

I, the undersigned, a Notary Public in and for the said County and State aforesaid, do hereby certify that _____, (_____ President)(Trust Officer) of the _____, and _____, _____ Secretary of said corporation, personally known to me to be the same persons whose names are subscribed to the foregoing instrument, appeared before me this day in person and acknowledged that they signed and delivered said instrument as their own free and voluntary act and as the free and voluntary act of said corporation for the uses and purposes therein set forth; and the said _____ Secretary then and there acknowledged that he/she, as custodian of the seal of said corporation, did affix the seal to the foregoing instrument as his/her free and voluntary act and the free and voluntary act of said corporation, for the uses and purposes therein set forth.

GIVEN under my hand and NOTARIAL SEAL this _____ day of _____, 19____.

_____
Notary Public

LEGAL DESCRIPTION

PARCEL NO. 1

The East 462.0 feet of the South 1410.30 feet as measured along the East and South lines respectively of the Northwest Quarter of Section 8, Township 44 North, Range 11, East of the 3rd Principal Meridian, except the South 1079.60 feet of the East 462.0 feet there, all in Lake County, Illinois.

PARCEL NO. 2

The West 420.5 feet of the East 882.50 feet of the South 1410.30 feet as measured along the East and South lines respectively of the Northwest Quarter of Section 8, Township 44 North, Range 11 East of the 3rd Principal Meridian, except that part described as follows to-wit; beginning at the Southeast corner of the said West 420.5 feet of the East 882.50 feet of the South 1410.30 feet of the Northwest Quarter of Section 8, thence Northerly along the East line of the said West 420.5 feet of the East 882.50 feet of the South 1410.30 feet of the Northwest Quarter of Section 8 for a distance of 898.19 feet, thence Westerly along a line to the West line of the said East 882.50 feet of the Northwest Quarter of Section 8 to a point which is 896.80 feet Northerly of the South line of the said Northwest Quarter of Section 8, as measured along the said West line of the East 882.50 feet; thence Southerly along the said West line of the East 882.50 feet of the South 1410.30 feet of the Northwest Quarter of Section 8 for a distance 896.80 feet to the said South line of the Northwest Quarter of Section 8, thence Easterly along the said South line of the Northwest Quarter of Section 8 for a distance of 420.5 feet to the place of beginning of this exception all in Lake County, Illinois.

EXCEPTING, however, and RESERVING unto Commonwealth Edison Company, its successors and assigns, the perpetual right, easement and authority to construct, install, operate, use, maintain, repair, replace, relocate, renew and remove poles, crossarms, wires, cables, conduit and other overhead and underground equipment, or both, for the transmission and distribution of electric energy in, upon, under, over, across and along the North 10 feet of Parcel No. 1 and the North and West 10 feet of Parcel No. 2, together with the right of access thereto at all times for any and all such purposes, and also the right to trim or cut down from time to time such trees, bushes, shrubs and saplings which interfere or threaten to interfere with any of the rights reserved hereunder.

Parcel 3: That part of the East 1/2 of the North West 1/4 of Section 8, Township 44 North, Range 11, East of the Third Principal Meridian, described as beginning at a point on the West line of the East 1/2 of said North West 1/4 which is 1755 feet South of the North West corner thereof; thence East along the South line of the North 1755 feet of said East 1/2 of the North West 1/4, a distance of 453.98 feet to the West line of the East 882.50 feet of the North West 1/4 of said Section 8; thence North along said West line of the East 882.50 feet, a distance of 512.66 feet to the North line of the South 1410.30 feet of the North West 1/4 of said Section 8; thence West along said North line of the South 1410.30 feet of the North West 1/4, 454.51 feet to the West line of the East 1/2 of the North West 1/4 of said Section 8; thence South along said West line of the East 1/2 of said North West 1/4, a distance of 513.26 feet to the point of beginning, in Lake County, Illinois.

3029902

Illinois Department of
Natural Resources

One Natural Resources Way Springfield, Illinois 62702-1271
http://dnr.state.il.us

JB Pritzker, Governor

Natalie Phelps Finnie, Director

October 16, 2024

Ryan Martin
Ryan Martin
570 Lake Cook Road Suite 200
Deerfield, IL 60015

RE: Residential Community Libertyville
Project Number(s): 2504971
County: Lake

Dear Applicant:

This letter is in reference to the project you recently submitted for consultation. The natural resource review provided by EcoCAT identified protected resources that may be in the vicinity of the proposed action. The Department has evaluated this information and concluded that adverse effects are unlikely. Therefore, consultation under 17 Ill. Adm. Code Part 1075 is terminated.

However, the Department recommends
• All lighting should be fully shielded fixtures that emit no light upward.
• Only “warm-white” or filtered LEDs (CCT < 3,000 K; S/P ratio < 1.2) should be used to minimize blue emission.
• Only light the exact space with the amount (lumens) needed to meet highway safety requirement.
• If LEDs are to be used, avoid the temptation to over-light based on the higher luminous efficiency of LEDs.

This consultation is valid for two years unless new information becomes available that was not previously considered; the proposed action is modified; or additional species, essential habitat, or Natural Areas are identified in the vicinity. If the project has not been implemented within two years of the date of this letter, or any of the above listed conditions develop, a new consultation is necessary.

The natural resource review reflects the information existing in the Illinois Natural Heritage Database at the time of the project submittal, and should not be regarded as a final statement on the site being considered, nor should it be a substitute for detailed site surveys or field surveys required for environmental assessments. If additional protected resources are encountered during the project’s implementation, you must comply with the applicable statutes and regulations. Also, note that termination does not imply IDNR's authorization or endorsement of the proposed action.

Please contact me if you have questions regarding this review.

Adam Rawe

Illinois Department of
Natural Resources

One Natural Resources Way Springfield, Illinois 62702-1271
http://dnr.state.il.us

JB Pritzker, Governor

Natalie Phelps Finnie, Director

Adam Rawe
Division of Ecosystems and Environment
217-785-5500

BMP PLAN SUMMARY AND MANAGEMENT & MONITORING PLAN

PROJECT SITE:

Teerling Lakes
New Lenox, Will County, Illinois

PREPARED FOR:
Pulte Home Corporation
1900 East Golf Road
Schaumburg, Illinois 60173

PREPARED BY:
V3 Companies
7325 Janes Avenue
Woodridge, Illinois 60517
630.724.9200

February 27, 2025

TABLE OF CONTENTS

INTRODUCTION 1

CONSTRUCTION AND REVEGETATION 1

- CONSTRUCTION, SOILS AND TOPDRESSING SPECIFICATIONS 1
- PRE-SEEDING AND PLANTING WEED CONTROL 2
- SEEDING SPECIFICATIONS 2
- PICKERELWEED PLANTING SPECIFICATIONS 3
- PLANTING ZONES 3
- EROSION CONTROL BLANKET INSTALLATION SPECIFICATIONS 4
- PREDATOR CONTROL 5
- IRRIGATION 5

MANAGEMENT & MONITORING PLAN 5

- STORMWATER BASIN AND BMP MANAGEMENT 6
- PERFORMANCE STANDARDS 9
- MONITORING 9

APPENDICES

APPENDIX I NATIVE BMP AND PLANTING PLAN

APPENDIX II NATIVE SEED AND PLUG MIXES

APPENDIX III HYDROGRAPHS

INTRODUCTION

This BMP Plan Summary and Management & Monitoring Plan (MMP) has been prepared on behalf of Pulte Home Corporation for the proposed naturalized stormwater management facilities and enhancement of existing ponds associated with the proposed Teerling Lakes development. The site is located north of W Maple Road, east of S Cedar Road, south of W Bruce Road, and west of Blodgett Road in unincorporated Will County, Illinois (Section 34, T36N, R11E; 41.554900°N, −87.961101°W; Mokena Quadrangle).

The proposed naturalized plantings are shown on the Native BMP and Planting Plan (Plan) provided in Appendix I. As the Plan indicates, ten naturalized stormwater basins and/or enhancement of existing ponds are proposed throughout phase I & II of the development. Phase I & II are the first stage of the development and stormwater permit, an additional basin located in the southeast corner of the development is currently proposed under phase III of the development and will be permitted separately. The naturalized areas will be established with native seed mixes developed based on anticipated soil and hydrologic conditions.

The purpose of establishing native vegetation in these stormwater basins and existing ponds is to provide an aesthetically pleasing and environmentally beneficial alternative to riprap and turf grass stormwater areas. Native vegetation aids in sediment and toxicant retention/removal, and provides cover for wildlife. Besides providing cover and a food source for wildlife, prairie vegetation greatly reduces or eliminates the need for irrigation, aeration, fertilization, and use of many of chemicals (i.e. herbicides, fungicides, etc.) typically required by maintained turf grass. Prairie vegetation also provides better soil stabilization than turf grass (i.e., bluegrass, etc.) due to extensive root systems, many reaching depths of ten feet below the soil surface. These extensive root systems allow prairie vegetation to withstand drought and nutrient deficiencies in the soil. The extensive root systems also allow rainwater to percolate into the soil, aiding in groundwater recharge, instead of direct runoff typical of conventional basin designs.

CONSTRUCTION AND REVEGETATION

This section of the plan details construction and revegetation of the naturalized areas.

CONSTRUCTION, SOILS AND TOPDRESSING SPECIFICATIONS

Grading and excavation of the stormwater facilities shall be completed in accordance with the engineering plans in order to achieve the requisite storage volumes.

The following specifications shall be followed to minimize impacts to the stormwater facilities and provide a suitable medium for native vegetation establishment:

1. All areas to be planted or seeded with native vegetation shall be over-excavated a minimum of 1 foot below final grade to allow for the placement of topdress material, unless a one-foot thick topsoil layer is present following excavation to proposed final grade.

2. Topdress material for the proposed native vegetation areas can originate from on-site. These soils are adequate to promote native vegetation establishment. If additional topdress material is needed, the topdress material shall contain an organic matter content of 3% or more and a clay content of 27% or less.
3. Wheel-based vehicles (scrapers, endloaders, etc.) shall not be used for topdressing work. Only low ground pressure wide-track equipment (quadtrack tractor, wide track dozer, backhoe, or approved by Engineer) shall haul, move and spread topdress material.
4. Following the 1-foot of topdress placement, the surface shall be thoroughly disked using a small farm type disc (not a large construction disc) and/or Harley rake for all native seeding areas. Topdress material shall not be handled or the surface disked when wet.
5. No wheeled traffic shall occur in the naturalized seeding areas after the final disking is complete, with the exception of a small farm type tractor if used for seeding.
6. All construction activities in the naturalized areas must be done under dry conditions.

PRE-SEEDING AND PLANTING WEED CONTROL

If any areas identified on the Plan are not disturbed as a result of grading or lie fallow long enough following final grading to allow non-native/invasive species to germinate a pre seeding/plug planting weed control event shall take place using a non-selective aquatic safe herbicide. All herbicide shall be applied according to manufacturer's specifications to ensure that the treatment is successful. All treated areas shall allow 14 days to pass after treatment to allow the chemicals to work and break down.

Areas not disturbed by grading may need to be sprayed out multiple times throughout the growing season to ensure that the non-native seed bank is depleted. Following each spray out the area may need to be mowed to reduce vegetation height and promote the breakdown of the dead vegetation. If multiple spray outs and mowings result in a layer of detritus thick enough that may impede proper seed soil contact following seeding a prescribed burn may need to be implemented to remove the dead vegetation.

SEEDING SPECIFICATIONS

1. The restoration contractor shall furnish, transport, and install the native seed mixes as specified for the respective areas shown on the Plan.
2. Seeding activities of the permanent matrices shall be performed after the seed bed has been properly prepared, as applicable, between November 1 after the first frost and ending when snow cover exceeds 2-inches in depth or areas are covered with ice and June 15th of the following year.
3. If construction activities are finished outside the permanent seeding window, the area can be stabilized with a temporary cover crop or permanent seeded with a supplemental seeding during the prescribed window the following year if needed to achieve standards.
4. Seed shall be surface sown with a broadcast seeder and lightly raked in or with a native drop seeder.
5. All seed sources shall be within a 200-mile radius of the project site and be true to name and variety.

6. Seeding shall only occur in areas that will receive erosion blanket installation within 48 hours (see section below).

PICKERELWEED PLANTING SPECIFICATIONS

1. The restoration contractor shall furnish, transport and install all container grown plants for all planting zones as specified on the Plan.
2. Herbaceous planting activities shall be performed no earlier than May 15th and no later than July 15th under favorable conditions (i.e., proper hydrology). Planting outside this window may be feasible, however additional measures may need to be implemented to ensure successful establishment of the plant plugs.
3. All plugs shall be container grown in open bottom pots with the following minimum dimensions: 2 3/8 inches square by 3-inches deep or a minimum root area of 11 cubic inches. At time of planting, all plant plugs shall have minimum shoot heights of 14-inches and well-developed root systems that hold planting soil together when removed from the container. Soil saturation shall be maintained for all container plants until installation.
4. Plant material shall not be provided as dormant (i.e., sprouted tubers, sprouted rhizomes or bare root) unless specified in the plans.

PLANTING ZONES

Selection of the plant species in the stormwater facilities and naturalized enhancement areas are based on their suitability to the anticipated soil and hydrologic conditions following construction. The hydrographs (Appendix III) indicate a normal drawdown of all the stormwater basins and ponds to the Normal Water Line (NWL) within three to five days for any given modeled precipitation event.

Pickerelweed plant plugs tolerant of large hydraulic fluctuations shall be installed in emergent shelves identified on the Plan. These shelves are designed to dissipate wave action based on prevailing winds to help reduce shoreline erosion as well as provide habitat for waterfowl and aquatic species. Plug installations shall be conducted only under suitable hydrologic conditions. If suitable hydrologic conditions are not established during the plant installation window, plant installation may be postponed until the subsequent growing season when appropriate hydrology is established. Depending on nursery stock, water levels may need to be manipulated during installation and the establishment window to ensure that at least fifty percent of each plant is above the water line.

A broad-spectrum mesic prairie seed mix comprised of native grasses, sedges and forbs shall be installed on the stormwater basin slopes and a wet prairie seed mix at the base of the basins to accommodate the hydrologic bounce following a precipitation event. Additionally, a savanna seed mix designed to enhance the existing mature savanna grove is proposed. Turf grass buffers shall be installed a minimum of three feet wide along any pedestrian path or back of lots to create a transition zone to the native plantings. See Appendix II for the seed and plug mixes. These mixes are described below.

Mesic Prairie Seed Mix (15.8 acres). A broad-spectrum native seed mix, a mix that contains native grasses, sedges and forbs, shall be installed on the slopes of the stormwater basins. Seed on the basin slopes shall be sown all the way down to the wet prairie seeding zone. Additionally, the mesic prairie mix shall overlap the wet prairie zone by two feet. Overlapping the seed mixes will increase floristic diversity and create a transition zone to have species for varying hydrologic conditions. Following seeding activities, a biodegradable erosion blanket (i.e. North American Green S75) shall be installed to stabilize the seed prior to cover crop germination and establishment of the permanent plant species. Blanket shall be secured with staples according to the manufacture's specifications.

Wet Prairie Seed Mix (1.4 acres). A wet prairie seed mix, a mix that contains native grasses, sedges, rushes, and forbs shall be installed at the NWL of all stormwater basins and existing ponds up approximately four feet up the slope to as depicted on the Plan to accommodate hydraulic bounce following precipitation events. Following seeding activities erosion control blanket (i.e. North American Green S75BN or comparable) shall be installed to stabilize the seed prior to cover crop germination and establishment of the permanent plant species. Blanket shall be secured with staples according to the manufacture's specifications.

Savanna Seed Mix Zone (3.5 acres). A savanna seed mix, a mix that contains native grasses, sedges and forbs will be installed within the existing mature savanna area as identified on the Plan. Grading in this zone aside from the pedestrian path is not proposed, existing vegetation in this area shall be sprayed out and mowing or prescribed burning may be necessary prior to seeding. Depending on seeding technique and timing, erosion control measures may need to be implemented. It is the responsibility of the restoration contractor to monitor this zone and all seeding zones for erosion and rectify any issues in a timely manner. All erosion control activities shall be completed according to the manufacture's specifications.

Pickerelweed Plugs (0.3 acres). The Pickerelweed plug mix shall be installed in the areas shown on the Plan. These zones were designed on the prevailing wind side of the open water ponds to help dissipate wave action to reduce shoreline erosion and create additional habitat for waterfowl and aquatic species. The Pickerelweed zones shall be twelve inches below the NWL or less and shall be inundated throughout the growing season. Plugs shall be planted approximately three feet on center with at least 50% of leaf surface above the normal water level. A total of 5,000 plant plugs shall be installed per acre within this zone under suitable hydrologic conditions.

EROSION CONTROL BLANKET INSTALLATION SPECIFICATIONS

North American Green (NAG) S75 BioNet (or comparable) shall be installed over all native seeding areas with bare soil (mesic and wet prairie) as shown on the Plan. The savanna area shall be monitored for erosion and rectified in a timely manner if erosion occurs. Blanket shall be installed within 48 hours and/or prior to forecasted rain, so no seeded area remains unprotected. Therefore, the area seeded shall be based on whatever can be blanketed within 48 hours. Installation of all erosion control materials shall be in accordance with the manufacturer's specifications.

PREDATOR CONTROL

A predator control system shall be installed to help achieve the site goals and performance standards by discouraging herbivores such as but not limited to geese, ducks and muskrats from consuming and uprooting newly planted native plugs in the Pickerelweed zones.

1. The materials shall include: 1-inch X 1-inch X 4-foot wood stakes with one end pointed, chicken wire fencing fabric or wire hardware cloth with mesh openings not to exceed 2-inches, 6-inch wire landscape staples, masons string and UV rated zip ties.
2. All areas receiving native plant plugs shall be protected by predator control fence. The fence, consisting of three-foot-high chicken wire fence mounted securely on 1-inch X 1-inch X 4-foot wood stakes in such a manner that one foot of wood stake with pointed end will extend below the fence fabric. The wood stakes will be no greater than 6 feet apart and installed approximately one foot deep into the soil so that the bottom of the fence fabric rests firmly on the soil surface. This fence shall be installed in conjunction with site seeding and native plug installation.
3. Fencing shall be installed above the NWL of all areas receiving plugs to make a protective perimeter. Wooden stakes shall be installed surrounding the Pickerelweed in a manner to allow masons twin to be strung across the top of the planted surface to deter geese and ducks from landing in the newly planted areas.
4. It is the responsibility of the contractor to remove the predator control fencing once the vegetation is established or the performance standards are met/sign off is achieved.

IRRIGATION

While not anticipated, it is the responsibility of the restoration contractor to monitor the site during and after the Pickerelweed plugs are installed. Due to the unpredictable nature of precipitation events and hydrology of the stormwater basins while the residential development is being constructed the water levels shall be monitored and an irrigation schedule shall be implemented if the water level drops below the planting zone and the soil is no longer saturated.

MANAGEMENT & MONITORING PLAN

This MMP for the Teerling Lakes development establishes a means by which the stormwater and naturalized areas may be evaluated relative to pre-established goals and performance standards.

The duration of the monitoring program is three years, beginning after all seeding and planning zones are installed. If native areas are dormant seeded, the following spring shall commence the first growing season. The three-year management and monitoring program will be the responsibility of Pulte Home Corporation.

STORMWATER BASIN AND BMP MANAGEMENT

Proper management is critical for successful establishment of the proposed plant communities. Periodic mowing, selective herbicide application and prescribed burning are commonly used management techniques for natural plant communities.

The invasive species that require control include, but are not limited to, the following species provided in Table 1.

Table 1: Non-Native and Invasive Species
American Silver-Berry (*Elaeagnus commutata)*
Asian Bittersweet (*Celastrus orbiculatus*)
Garden Bird's-Foot-Trefoil (*Lotus corniculatus*)
Black Locust (*Robinia pseudoacacia*)
Bull Thistle *(Cirsium vulgare)*
Lesser Burrdock (*Arctium minus*)
Canadian Goldenrod (*Solidago canadensis*)
Canadian Thistle (*Cirsium arvense*)
Cat-Tail (*Typha* spp.)
Chinese Yam (*Discorea oppositifolia*)
Common Reed (*Phragmites australis)*
Crack Willow (*Salix fragilis*)
Creeping-Jenny (*Lysimachia nummularia*)
Crownvetch (*Securigera varia)*
Curly Pondweed (*Potamageton crispus*)
Dames Rocket (*Hesperis matronalis*)
Eurasian-Buttercup (*Ficaria verna*)
Eurasian Water-Milfoil (*Myriophyllum spicatum*)
European Barberry (*Berberis vulgaris*)
European Buckthorn (*Rhamnus cathartica*)
Garlic-Mustard (*Alliaria petiolata*)
Giant Hogweed (*Heracleum mantegazzianum*)
Glossy False Buckthorn (*Frangula alnus*)
Greater Flowering-Rush (*Butomus umbellatus*)
Japanese Barberry (*Berberis thunbergii*)
Japanese Bristle Grass (*Setaria faberi*)
Japanese Honeysuckle (*Lonicera japonica*)
Japanese Hop (*Humulus japonica*)
Japanese-Knotweed (*Reynoutria japonica*)
Japanese Stilt Grass (*Microstegium vimineum*)
Jetbead (*Rhodotypos scandens*)

Leafy Spurge (*Euphorbia esula*)
Littleleaf Linden (*Tilia cordata*)
Morrow's Honeysuckle (*Lonicera morrowii*)
Nodding Plumeless-Thistle (*Carduus nutans)*
Privet *(Ligustrum* spp.)
Purple Loosestrife (*Lythrum salicaria*)
Ragweed (*Ambrosia* spp.)
Rambler Rose (*Rosa multiflora*)
Red/White Clover (*Trifollium* spp.)
Reed Canary Grass *(Phalaris arundinacea*)
Russian Olive (*Elaeagnus angustifolia)*
Sandbar Willow (*Salix interior*)
Seaside Goldenrod (*Solidago sempevirens*)
Showy Fly-Honeysuckle (*Lonicera* x *bella*)
Spotted knapweed (*Centaurea stoebe* subsp. *micranthos*)
Tall Goldenrod (*Solidago altissima*)
Teasel (*Dipsacus* spp.*)*
Twinsisters (*Lonicera tatarica*)
Watercress (*Nasturtium officinale*)
Wild Parsnip (*Pastinaca sativa*)
Yellow Sweet-Clover (*Melilotus officinalis*)

First and Second Year Mowing. During the first two growing seasons after seeding, mowing or selective weed whipping the vegetation in the mesic prairie, wet prairie and savanna zones (under dry conditions) shall occur as needed to maintain a plant height of no greater than 18 to 20 inches. To accomplish this, high-mowing the vegetation to a height of 6 to 9 inches several times during the growing season will be needed. Mowing will aid new plant growth as to allow more sunlight to reach young prairie seedlings. Mowing will aid in the control of annual weeds, which can undermine seeding efforts.

Herbicide Application. Management of the vegetation in all areas should include selective application of herbicide to control aggressive plant species, such as, but not limited to, reed canary grass (*Phalaris arundinacea*), cattails (*Typha spp.*), purple loosestrife (*Lythrum salicaria*), common reed (*Phragmites australis*), thistles (*Cirsium spp.*), teasel (*Dipsacus spp.*), and sweet clover (*Melilotus spp.*). These species, including others, can displace desirable species, thereby reducing floristic diversity in the naturalized areas. Controlling these species will be required to achieve the performance standards for the project.

Natural regeneration of cattails, common reed and reed canary grass along the basin shoreline and Pickerelweed zones will likely occur following construction. A pre-planting control shall be conducted if any of these species or other weeds are present. Hand pulling cattails can be conducted when the cattails are small enough to ensure that the entire root is removed. Off-site disposal of cattails will be

required. Larger cattails will require herbicide applications. Cattail and common reed coverage shall be no greater than 5% in aggregate prior to plant installation. Aggressive control of these species will be required after planting and throughout the management period to ensure native plant establishment. After planting, the hand-wick/bar-wick application method to control these species will likely be required.

A determination regarding the type of herbicide to be used should be made when it is known which nuisance species are present on the site. Depending on the target weed species, a selective herbicide may be available. The choice of herbicide and timing of herbicide application shall be made by a trained, licensed professional based on the target weed species and conditions. Care should be taken to monitor site weather conditions to limit herbicide drift, overspray, and ensure it is rainfast.

It is recommended that a minimum of four annual weed control application events are conducted throughout the three-year period. Below is a general guideline on the suggested schedule and target species for the application periods:

- Application Period One (early spring – April/May): problematic species such as, but not limited to, reed canary grass, red/white clover, cool season adventive grasses.
- Application Period Two (late spring to early summer – May/June): problematic species such as, but not limited to, teasel, white/yellow sweet clover, thistle.
- Application Period Three (mid to late summer – July/August): problematic species such as, but not limited to, tall goldenrod, hairy aster, ragweed, cattails, purple loosestrife.
- Application Period Four (late summer and fall – September/October): problematic species such as, but not limited to, reed canary grass, thistle, common reed, red/white clover, cool season grasses.

Prescribed Burning. One prescribed burn may be conducted in the naturalized area during the three-year period. If deemed safe by the contractor and owner, the prescribed burn should be scheduled in the spring or fall of the third full growing season. Prescribed burning can reduce exotic weed species that may establish from seeds or rootstock material in the topsoil that is in situ or placed in these areas. Additionally, burning encourages the growth of native plant species from the established mixes and inhibits the growth of certain non-native vegetation.

Long-Term Mowing in Lieu of Prescribed Burning. If burning is deemed unsafe, end of growing season mowing can be conducted instead. Mowing the vegetation at the end of the growing season around November would be conducted annually after the vegetation has established (after year 2). This end of growing season mowing will partially replace some of the benefits provided by fire, in an area where prescribed burning is not feasible, mowing will be to a height of 6-9 inches. The mowing will only occur under dry or frozen ground conditions, so that soil disturbance from wheel ruts is avoided.

PERFORMANCE STANDARDS

Performance standards are established for proposed projects involving naturalized areas so that the relative success may be evaluated. If the performance standards are not achieved by the end of the three-year management and monitoring program, the permittee is responsible for correction of any deficiencies through further management activities, which may include replanting.

1. Within 3 months of seed installation (or three months into the growing season if dormant seeded), at least 90% of the native seeded areas, as measured by aerial coverage, shall be vegetated. A minimum 90% vegetative coverage shall be achieved in the second year and maintained throughout, and at the end of the three-year period for this area.
2. At the end of the second growing season, relative coverage of non-native species in the native seeding zones cannot exceed 50%. As such, relative coverage of natives shall be 50% or greater at the end of the second growing season.
3. At the end of the third growing season, relative coverage of non-native species in the native seeding zones cannot exceed 25%. As such, relative coverage of natives shall be 75% or greater at the end of the third growing season.
4. At the end of the third growing season, the top three most dominant species based on relative coverage in the naturalized areas shall not be non-native. These species shall include, but not be limited to, the following: reed canary grass (*Phalaris arundinacea*); common reed (*Phragmites australis*); field thistle (*Cirsium arvense*); buckthorn (*Rhamnus spp.*); cattails (*Typha spp.*); teasel (*Dipsacus spp.*); purple loosestrife (*Lythrum salicaria*); clover (*Trifolium spp.*); and sweet clover (*Melilotus spp*.).
5. At the end of the third growing season the Pickerelweed zones shall achieve 50% or greater native relative cover.

MONITORING

Vegetation Monitoring. Annual vegetation monitoring in the naturalized areas shall be conducted during the three-year period beginning immediately following planting/seeding. Vegetative transects/quadrats shall be added following seeding and plant installation in a manner that represents the site and different plant communities. The vegetation monitoring inspections shall be conducted twice per year (May/June and August/September).

Annual Monitoring Report. An annual monitoring report shall be submitted to the Village of New Lenox and Pulte Home Corporation by January 31 of each year during the three-year period or until performance standards are met and signoff is achieved.

The annual report must include a review of site progression towards meeting the performance standards and propose any necessary remedial actions. More specifically, the monitoring report must contain the following information, which will be based on data collected during the monitoring inspections.

1. A summary of management activities conducted during the year.
2. Representative photographs depicting general site conditions.
3. Provide the top three dominant species and relative vegetative coverage as needed to evaluate the performance standards.
4. Evaluate the status of the areas relative to the performance standards.
5. Recommend management activities for the following year to address any issues related to site success.

APPENDIX I

NATIVE BMP AND PLANTING PLAN

N

S Cedar Rd
17630
17720
17200
17151
1214
S Chicago Bloomington Trl
S Chicago Bloomington Trl
S Cedar Rd

LEGEND

Planting Plan

- Mesic Prairie Seed Mix (15.8 acres)
- Savanna Seed Mix (3.5 acres)
- Wet Prairie Seed Mix (1.4 acres)
- Pickerelweed Plugs (0.3 acres)

Development Phases

- Phase 1
- Phase 2
- Phase 3

100 0 100 200 Feet

7325 Janes Avenue
Woodridge, IL 60517
630.724.9200 phone
www.v3co.com

Visio, Vertere, Virtute...
"The Vision To Transform With Excellence"

PROJECT NO.: 240556
CREATED BY: DJJ
DATE: 02/26/2025
SCALE: See Scale Bar

CLIENT:
Pulte Home Corporation
1900 E. Golf Road
Schaumburg, IL 60173

BASE LAYER:
Will County
Aerial Imagery
2023

TITLE:
NATIVE BMP AND PLANTING PLAN

SITE:
Teerling Lakes
New Lenox, Will County, Illinois

FIGURE:
B1

J:\2025\251674\Wetland\FIGC_Plant_251674.mxd

N

Blodgett Rd

LEGEND

Planting Plan

- Mesic Prairie Seed Mix (15.8 acres)
- Savanna Seed Mix (3.5 acres)
- Wet Prairie Seed Mix (1.4 acres)
- Pickerelweed Plugs (0.3 acres)

Development Phases

- Phase 1
- Phase 2
- Phase 3

100 0 100 200 Feet

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CLIENT:
Pulte Home Corporation
1900 E. Golf Road
Schaumburg, IL 60173

BASE LAYER:
Will County
Aerial Imagery
2023

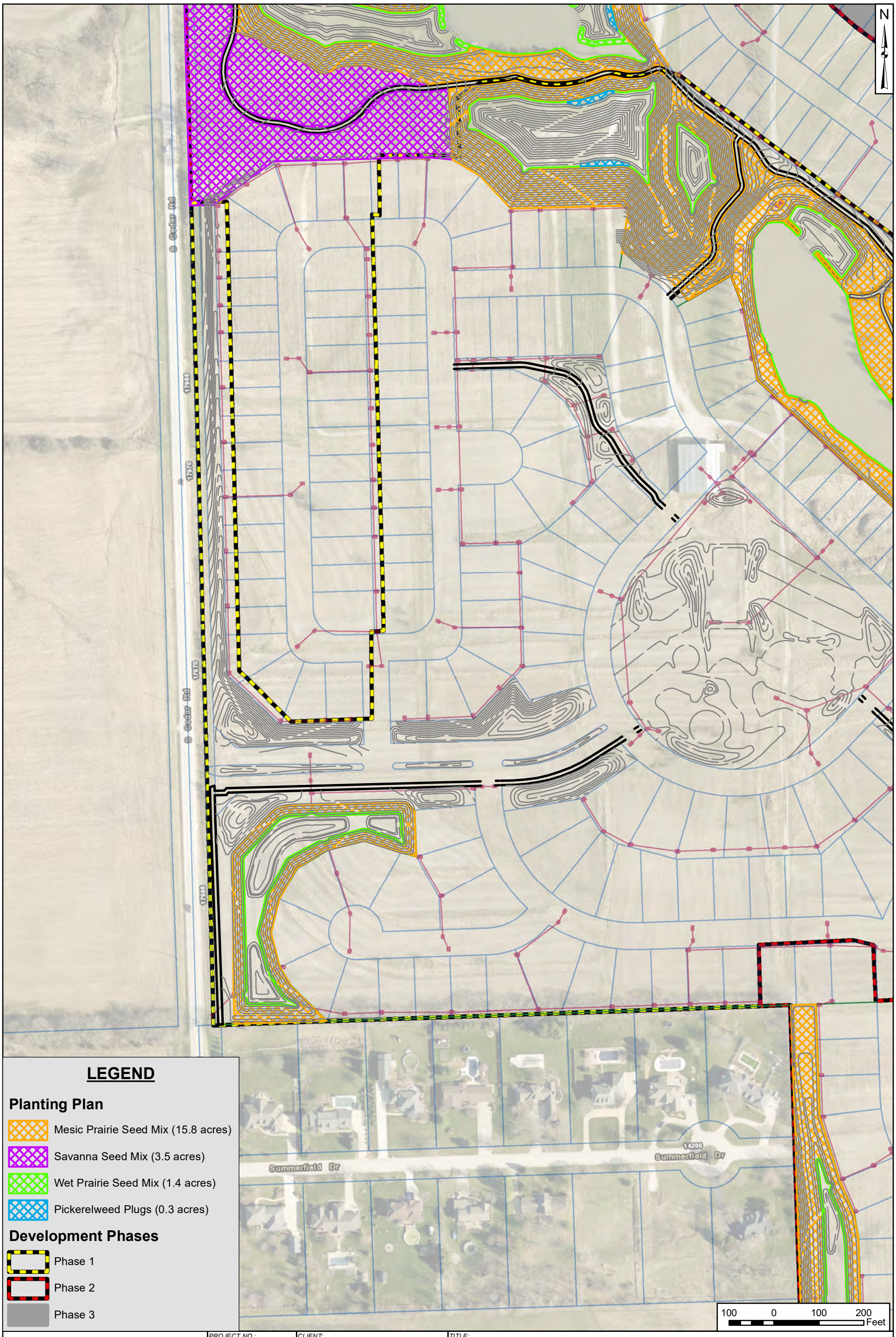
TITLE:

NATIVE BMP AND PLANTING PLAN

SITE:
Teerling Lakes
New Lenox, Will County, Illinois

FIGURE: B2

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LEGEND

Planting Plan

- Mesic Prairie Seed Mix (15.8 acres)
- Savanna Seed Mix (3.5 acres)
- Wet Prairie Seed Mix (1.4 acres)
- Pickerelweed Plugs (0.3 acres)

Development Phases

- Phase 1
- Phase 2
- Phase 3

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DATE:	02/26/2025
SCALE:	See Scale Bar

CLIENT:
Pulte Home Corporation
1900 E. Golf Road
Schaumburg, IL 60173

BASE LAYER:
Will County
Aerial Imagery
2023

TITLE:
NATIVE BMP AND PLANTING PLAN

SITE:
Teerling Lakes
New Lenox, Will County, Illinois

FIGURE:
B3

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N

Blodgett Rd

14200 Summerfield Dr

17700

Cynthia Ln

LEGEND

Planting Plan

- Mesic Prairie Seed Mix (15.8 acres)
- Savanna Seed Mix (3.5 acres)
- Wet Prairie Seed Mix (1.4 acres)
- Pickerelweed Plugs (0.3 acres)

Development Phases

- Phase 1
- Phase 2
- Phase 3

100 0 100 200 Feet

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Woodridge, IL 60517
630.724.9200 phone
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PROJECT NO.: 240556
CREATED BY: DJJ
DATE: 02/26/2025
SCALE: See Scale Bar

CLIENT:
Pulte Home Corporation
1900 E. Golf Road
Schaumburg, IL 60173

BASE LAYER:
Will County
Aerial Imagery
2023

TITLE:
NATIVE BMP AND PLANTING PLAN

SITE:
Teerling Lakes
New Lenox, Will County, Illinois

FIGURE:
B4

J:\2025\251674\Wetland\FIGC_Plant_251674.mxd

N

14200 Summerfield Dr

LEGEND

Planting Plan

- Mesic Prairie Seed Mix (15.8 acres)
- Savanna Seed Mix (3.5 acres)
- Wet Prairie Seed Mix (1.4 acres)
- Pickerelweed Plugs (0.3 acres)

Development Phases

- Phase 1
- Phase 2
- Phase 3

100 0 100 200 Feet

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PROJECT NO.: 240556
CREATED BY: DJJ
DATE: 02/26/2025
SCALE: See Scale Bar

CLIENT:
Pulte Home Corporation
1900 E. Golf Road
Schaumburg, IL 60173

BASE LAYER:
Will County
Aerial Imagery
2023

TITLE:
NATIVE BMP AND PLANTING PLAN

SITE:
Teerling Lakes
New Lenox, Will County, Illinois

FIGURE:
B5

J:\2025\251674\Wetland\FIGC_Plant_251674.mxd

APPENDIX II

NATIVE SEED AND PLUG MIXES

MESIC PRAIRIE SEED MIX (15.8 acres)			
Type	Species	Common Name	Seeding Rate (lbs/ac)
Forbs	*Asclepias tuberosa*	Butterfly Weed	0.3125
	Aster laevis	Smooth Blue Aster	0.0313
	Aster novae-angliae	New England Aster	0.0313
	Astragalus canadensis	Canadian Milk Vetch	0.1875
	Baptisia leucantha	White Wild Indigo	0.5000
	Cassia fasciculata	Partridge Pea	0.2500
	Coreopsis lanceolata	Sand Coreopsis	0.1875
	Coreopsis palmata	Prairie Coreopsis	0.1250
	Coreopsis tripteris	Tall Coreopsis	0.1250
	Dalea candidum	White Prairie Clover	0.0630
	Dalea purpureum	Purple Prairie Clover	0.1250
	Desmodium illinoense	Illinois Tick-Trefoil	0.2500
	Echinacea pallida	Pale Purple Coneflower	0.2500
	Echinacea purpurea	Broad-leaved Pur. Coneflower	0.5000
	Eryngium yuccifolium	Rattlesnake Master	0.1875
	Euthamia graminifolia	Grass-Leaved Goldenrod	0.0313
	Heliopsis helianthoides	False Sunflower	0.1875
	Lespedeza capitata	Round-Headed Bush Clover	0.1875
	Monarda fistulosa	Wild Bergamot	0.1250
	Parthenium integrafolium	Wild Quinine	0.1875
	Penstemon digitalis	Foxglove Beard Tongue	0.1250
	Potentilla arguta	Prairie Cinquifoil	0.0313
	Pycnanthemum virginianum	Mountain Mint	0.0313
	Ratibida pinnata	Yellow Coneflower	0.2500
	Rudbeckia hirta	Black-eyed Susan	0.2500
	Rudbeckia subtomentosa	Sweet Black-eyed Susan	0.2500
	Silphium integrifolium	Rosin Weed	0.3125
	Solidago speciosa	Showy Goldenrod	0.0313
	Tradescantia ohiensis	Ohio Spiderwort	0.2500
	Verbena stricta	Hoary Vervain	0.1250
	Vernonia fasciculata	Ironweed	0.0625
	Zizia aurea	Golden Alexanders	0.2500
		sub total	5.8130
Grasses & Sedges	*Andropogon gerardii*	Big Bluestem	0.500
	Bouteloua curtipendula	Side-oats Grama	6.000
	Carex bicknellii	Bicknells Sedge	0.125
	Carex brevior	Shorter Sedge	0.125
	Carex molesta	Field Oval Sedge	0.125
	Carex vulpinoidea	Fox Sedge	0.250
	Elymus canadensis	Canada Wild Rye	3.000
	Elymus virginicus	Virginia Wild Rye	2.000
	Panicum virgatum	Switch Grass	1.000
	Schizachyrium scoparius	Little Bluestem	6.000
		sub total	19.125
		Total Permanent Species:	24.938
Cover	*Avena sativa*	Seed Oats	32.000

WET PRAIRIE SEED MIX (1.4 acres)			
Type	Species	Common Name	Seeding Rate (lbs/ac)
Forbs	*Asclepias incarnata*	Swamp Milkweed	0.312500
	Bidens cernua	Nodding Bur Marigold	0.125000
	Boltonia asteroides	False Aster	0.062500
	Epilobium coloratum	Cinnamon Willow Herb	0.031250
	Euthamia graminifolia	Grass-Leaved Goldenrod	0.031250
	Eutrochium maculatum	Joe Pye Weed	0.062500
	Helenium autumnale	Sneezeweed	0.125000
	Liatris pycnostachya	Prairie Blazing Star	0.250000
	Lobelia cardinalis	Cardinal Flower	0.031250
	Lobelia siphilitica	Blue Lobelia	0.031250
	Lythrum alatum	Winged Loosetrife	0.015625
	Mimulus ringens	Monkey Flower	0.015625
	Oligoneuron riddellii	Riddell's Goldenrod	0.125000
	Physostegia virginiana	Obedient Plant	0.250000
	Pycnanthemum virginianum	Mountain Mint	0.031250
	Senna hebecarpa	Wild Senna	0.500000
	Symphyotrichum novae-angliae	New Endland Aster	0.062500
	Verbena hastata	Blue Vervain	0.125000
	Veronia fasciculata	Common Ironweed	0.125000
	Veronicastrum virginicum	Culvers Root	0.031250
		sub total	2.343750
Grasses & Sedges	*Calamagrostis canadensis*	Blue Joint Grass	0.06250
	Carex cristatella	Crested Oval Sedge	0.12500
	Carex scoparia	Lance-Fruited Oval Sedge	0.12500
	Carex tribuloided	Awl-Fruited Oval Sedge	0.12500
	Elymus riparius	Riverbank Rye	2.00000
	Elymus virginicus	Virginia Wild Rye	3.00000
	Glyceria striata	Fowl Manna Grass	0.06250
	Leersia oryziodes	Rice Cut Grass	0.50000
	Panicum virgatum	Switch Grass	1.25000
	Scirpus atrovirens	Dark-Green Bulrush	0.03125
	Scirpus cyperinus	Wool Grass	0.01563
	Scirpus pendulus	Rufous Bulrush	0.03125
	Spartina pectinata	Prairie Cord Grass	1.25000
		sub total	8.51563
		Total Permanent Species:	10.85938
Cover	*Avena sativa*	Seed Oats	32.000

SAVANNA SEED MIX (3.5 acres)			
Type	Scientific Name	Common Name	Seeding Rate (lbs/ac)
Forbs	*Agastache scrophulariaefolia*	Purple Giant Hyssop	0.0625
	Anemone cylindrica	Thimble Weed	0.1250
	Aquilegia canadensis	Wild Columbine	0.1250
	Asclepias tuberosa	Butterfly Weed	0.5000
	Aster azureus	Sky Blue Aster	0.0625
	Aster novae-angliae	New England Aster	0.1250
	Aster sagittifolius	Arrow-leaved Aster	0.0625
	Astragalus canadensis	Canada Milk Vetch	0.1250
	Baptisia leucantha	White Wild Indigo	0.5000
	Blephilia ciliata	Downy Wood Mint	0.0625
	Campanula americana	Tall Bellflower	0.1250
	Desmodium canadensis	Showy Tick-Trefoil	0.1875
	Echinacea pallida	Purple Coneflower	0.3750
	Echinacea purpurea	Broad-leaved Pur. Coneflower	0.5000
	Eupatorium purpureum	Purple Joe Pye Weed	0.1250
	Heliopsis helianthoides	False Sunflower	0.3125
	Monarda fistulosa	Wild Bergamot	0.2500
	Penstemon digitalis	Foxglove Beard Tongue	0.2500
	Persicaria virginiana	Woodland Knotweed	0.1250
	Ratibida pinnata	Yellow Coneflower	0.5000
	Rudbeckia hirta	Black-eyed Susan	0.2500
	Rudbeckia subtomentosa	Sweet Black-eyed Susan	0.1250
	Scrophularia marilandica	Late Figwort	0.0625
	Silene stellata	Starry Campion	0.1250
	Silphium integrifolium	Rosin Weed	0.2500
	Solidago rigida	Stiff Goldenrod	0.1250
	Solidago ulmifolia	Elm-leaved Goldenrod	0.1250
	Thalictrum dasycarpum	Purple Meadow Rue	0.1250
	Triostemum perfoliatum	Early Horse Gentian	1.0000
	Zizia aurea	Golden Alexanders	0.5000
		sub total	7.1875
Grasses & Sedges	*Andropogon gerardii*	Big Bluestem	0.5000
	Andropogon scoparius	Little Bluestem	3.0000
	Bouteloua curtipendula	Side-oats Grama	5.0000
	Bromus kalmii	Prairie Brome	0.5000
	Carex cephalophora	Oval-Leaf Sedge	0.1250
	Cinna arundinacea	Wood Reed Grass	0.0625
	Diarrhena obvata	Beak Grass	0.5000
	Elymus canadensis	Canada wild rye	2.0000
	Elymus hystrix	Bottlebrush Grass	0.2500
	Elymus virginicus	Virginia Wild Rye	3.0000
		sub total	14.9375
		Total Permanent Species:	22.1250
Cover	*Avena Sativa*	Seed Oats	32.000

PICKERELWEED PLUGS (0.3 acres) (5,000 plugs per acre)		
Species	Common Name	Quantity
Pontederia cordata	Pickerelweed	1,500
	Total:	**1,500**

APPENDIX III

HYDROGRAPHS

Turf Legend :

- General Turf Mix A . . . . . SY
- Low Maintenance Turf Mix B . . . . . SY
- Low Meadow Seed Mix C . . . . . SY
- Native & Naturalized Basin Plantings . . . . . SY
  (See Plans Prepared by V3)
- SOD (Main Entrance Areas & Sign) . . . . . SY
- Central Park . . . . . SY
  (See Engineering)

Note: See Sheet L.112 for Individual Lot Turf

Note: Turf Mix A, B & C will be drill-seeded and covered with a S-75 Erosion Blanket except as noted.

Transitions & Buffers :

Note: In areas where there's a path between a house and the pond, the full area between the house and path shall be Seed Mix B and regularly mowed.

Note: In areas with no path, and native turf immediately behind the home, there shall be a 6.5' wide (one blanket width) transition of Seed Mix B along the lot line and regulary mowed.

Note: All paths in native turf areas shall have a 6.5' wide (one blanket width) border of Seed Mix B along both sides and regularly mowed.

SOD :

Shall be 100% Kentucky Bluegrass (min. 4 var.) tightly knit sod on a mineral soil back.

General Turf Mix A :

To be drill-seeded and covered with an S-75 BN straw blanket, in all maintained turf areas as specified on the plans. Seed shall be installed at a rate of 200lbs. per acre.

65% Improved Kentucky Bluegrass (minimum three varieties)
25% Improved Perennial Ryegrass (minimum two varieties with endophytes)
10% Creeping Red Fescue

Low Maintenance Fescue Turf Mix B :

The Low Maintenance Turf Grass is to be installed as a transition. To be drill seeded and covered with an S-75 BN straw blanket except shorelines.

IDOT 1B Low Maintenance Mix:

75%	Fine Leaf Turf-Type Fescue - 3 varieties:	150#
	(⅓ Crossfire II TTF)*	
	(⅓ Bladerunner TTF)*	
	(⅓ Cayenne TTF)*	
10%	Perennial Ryegrass	20#
10%	Creeping Red Fescue	20#
5%	Red Top	10#
		200# / Acre

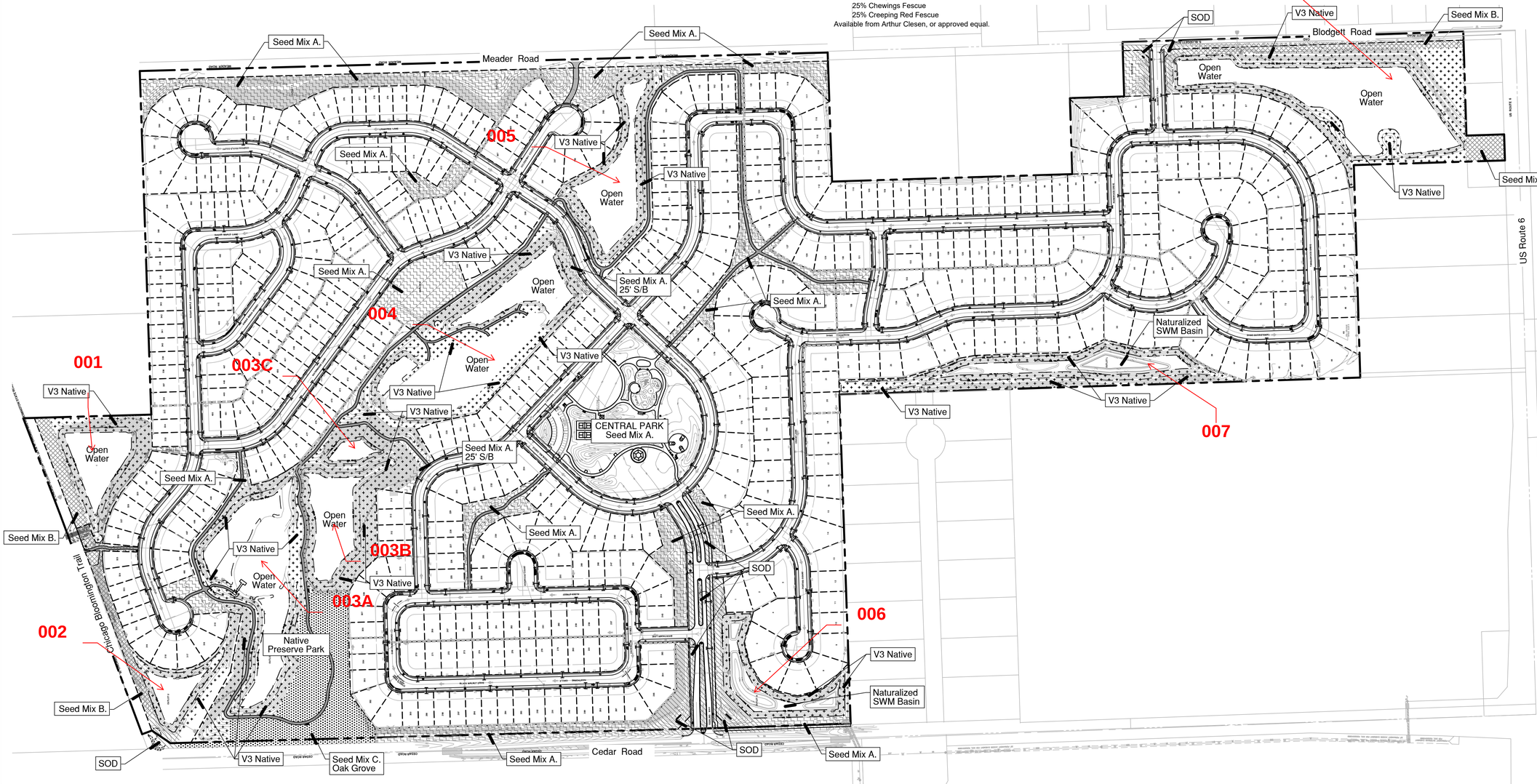
*TTF varieties available from Auther Clesen, or other approved sources.

Low Meadow - Seed Mix C :

Understory turf for the existing oak grove. A "Highland" fine fescue mix drill-seeded and maintained unmowed.

25% Hard Fescue
25% Sheeps Fescue
25% Chewings Fescue
25% Creeping Red Fescue

Available from Arthur Clesen, or approved equal.



SIGNATURE DESIGN GROUP

Land Planning
Landscape Architecture
Environmental Site Design

132 N. WASHINGTON ST. - NAPERVILLE, IL 60540 - 630.305.3980 Fax 630.305.3994

project:

Teerling Lakes

Cedar Road
New Lenox, Illinois

sheet description:

Turf Exhibit

owner:

PULTEGROUP

0 100 200 300 500 700

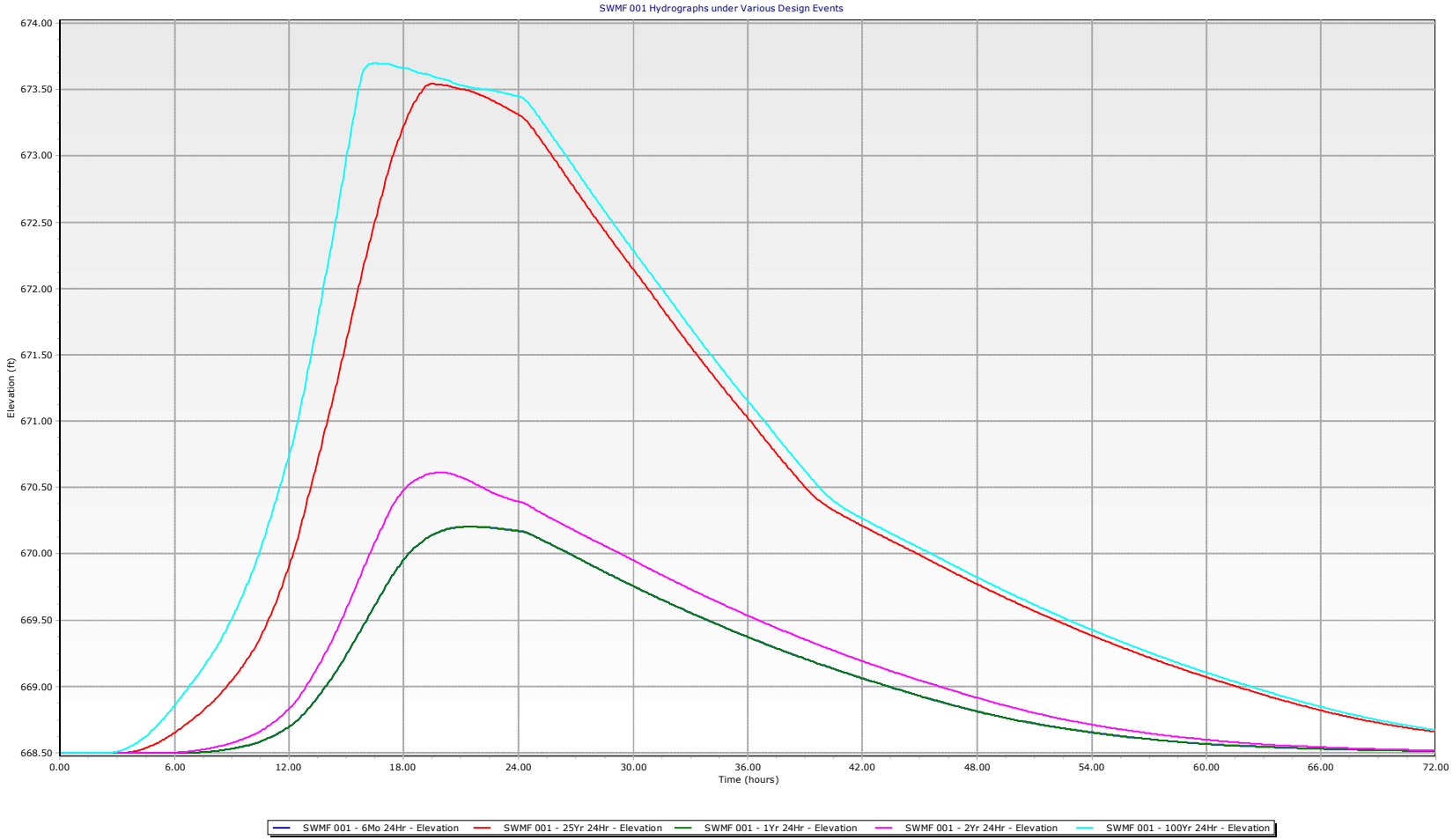
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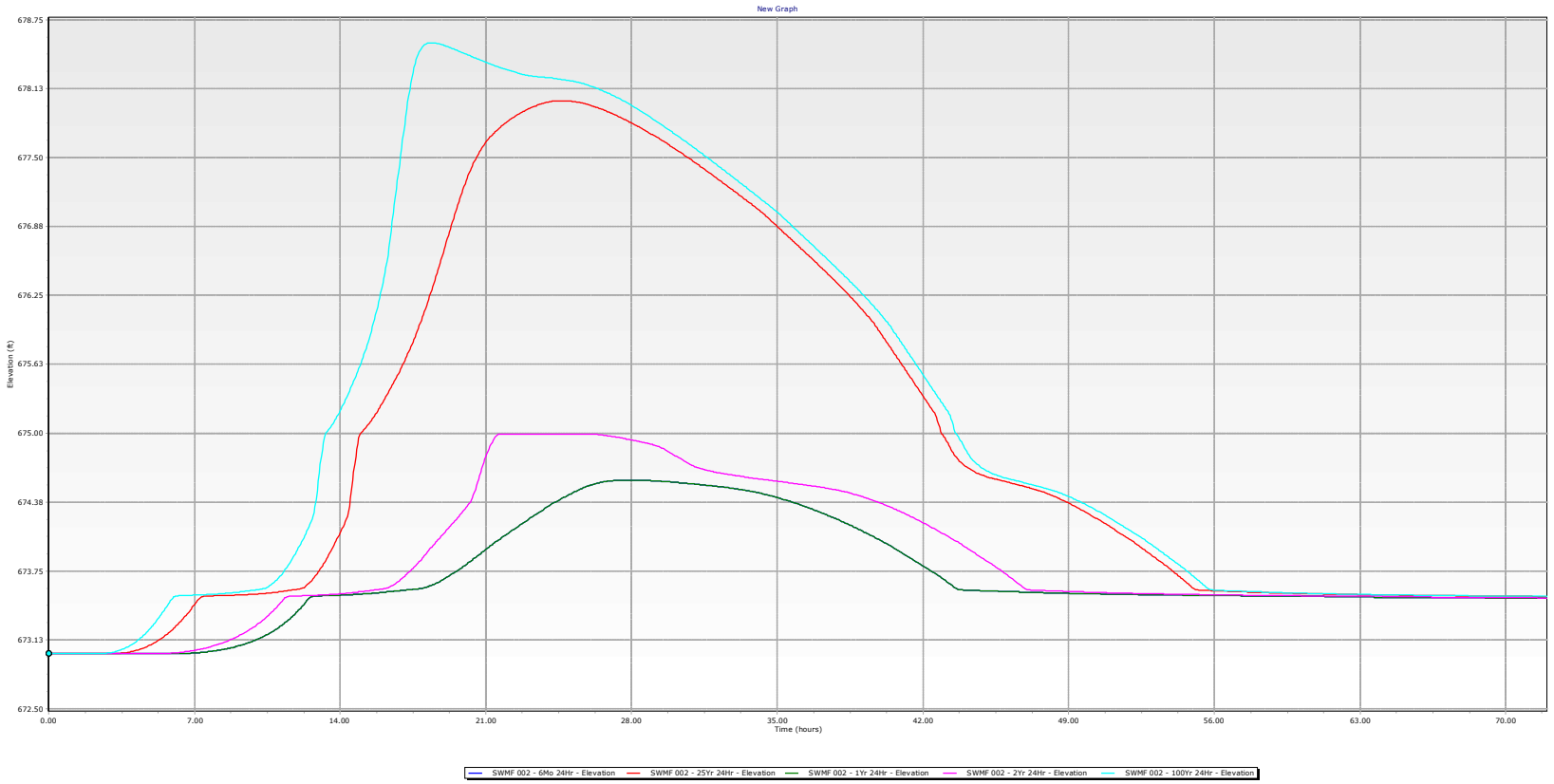
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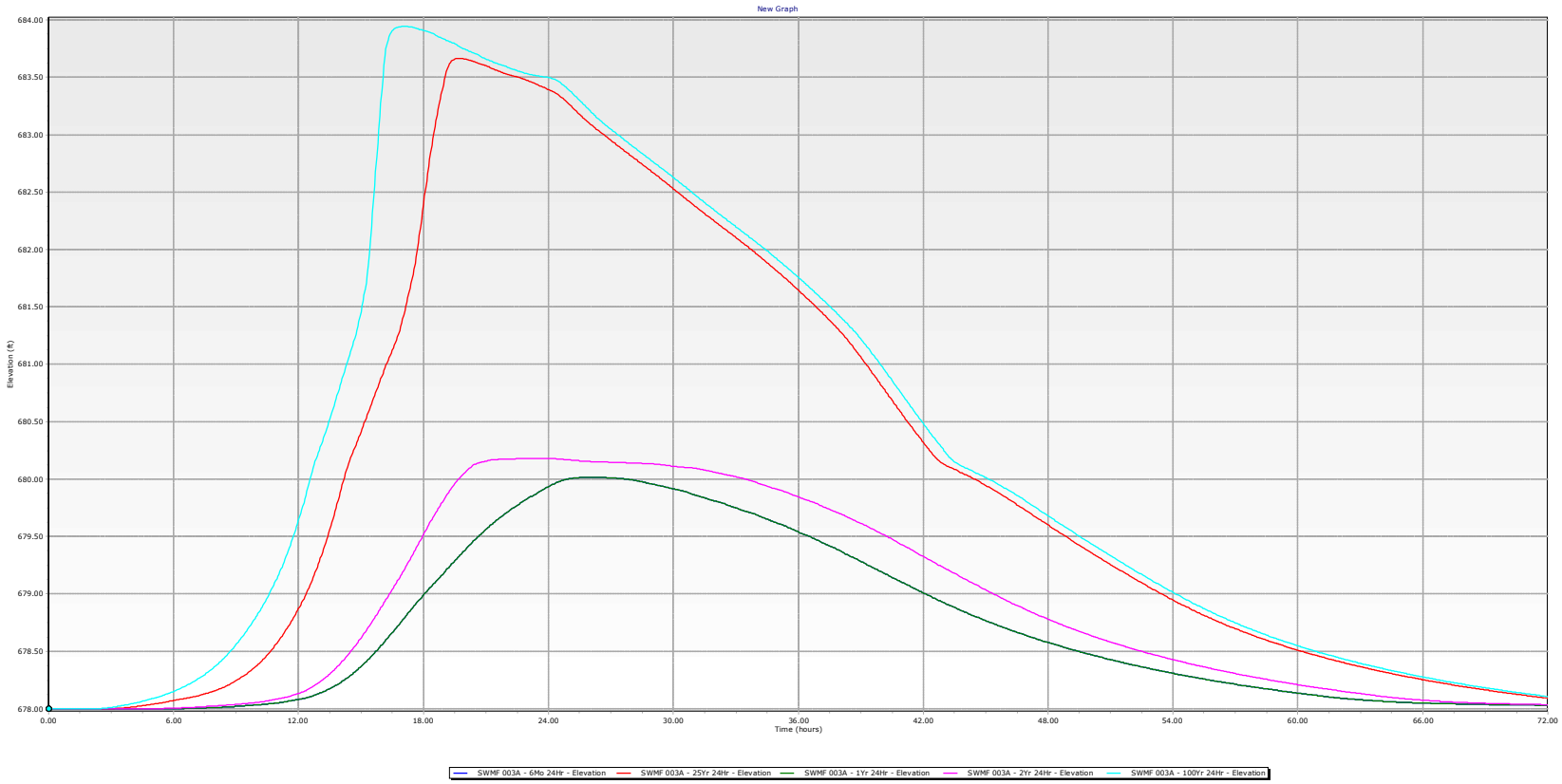
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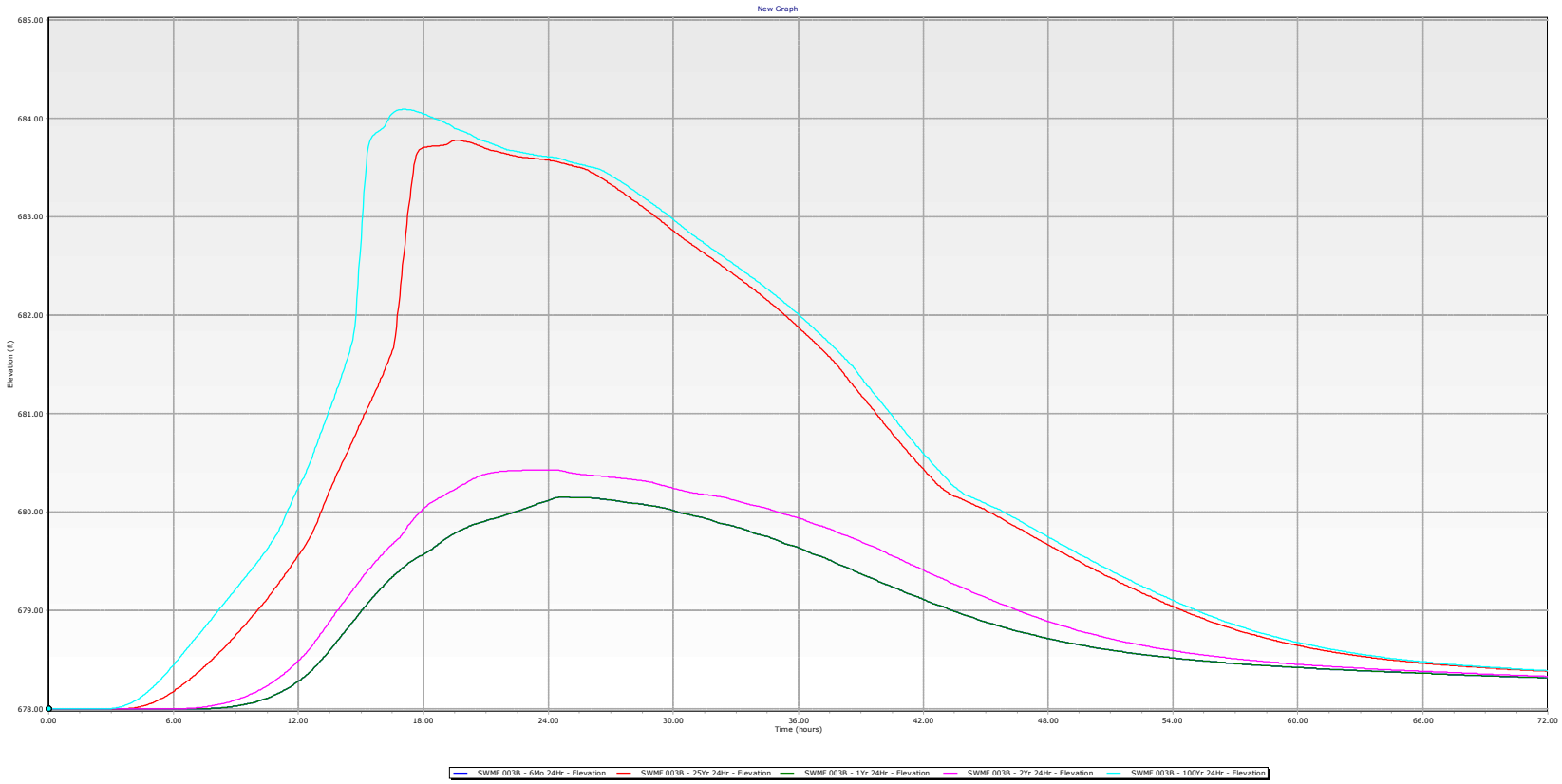
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checked by:
project no.: 24014
sheet no.: L.110

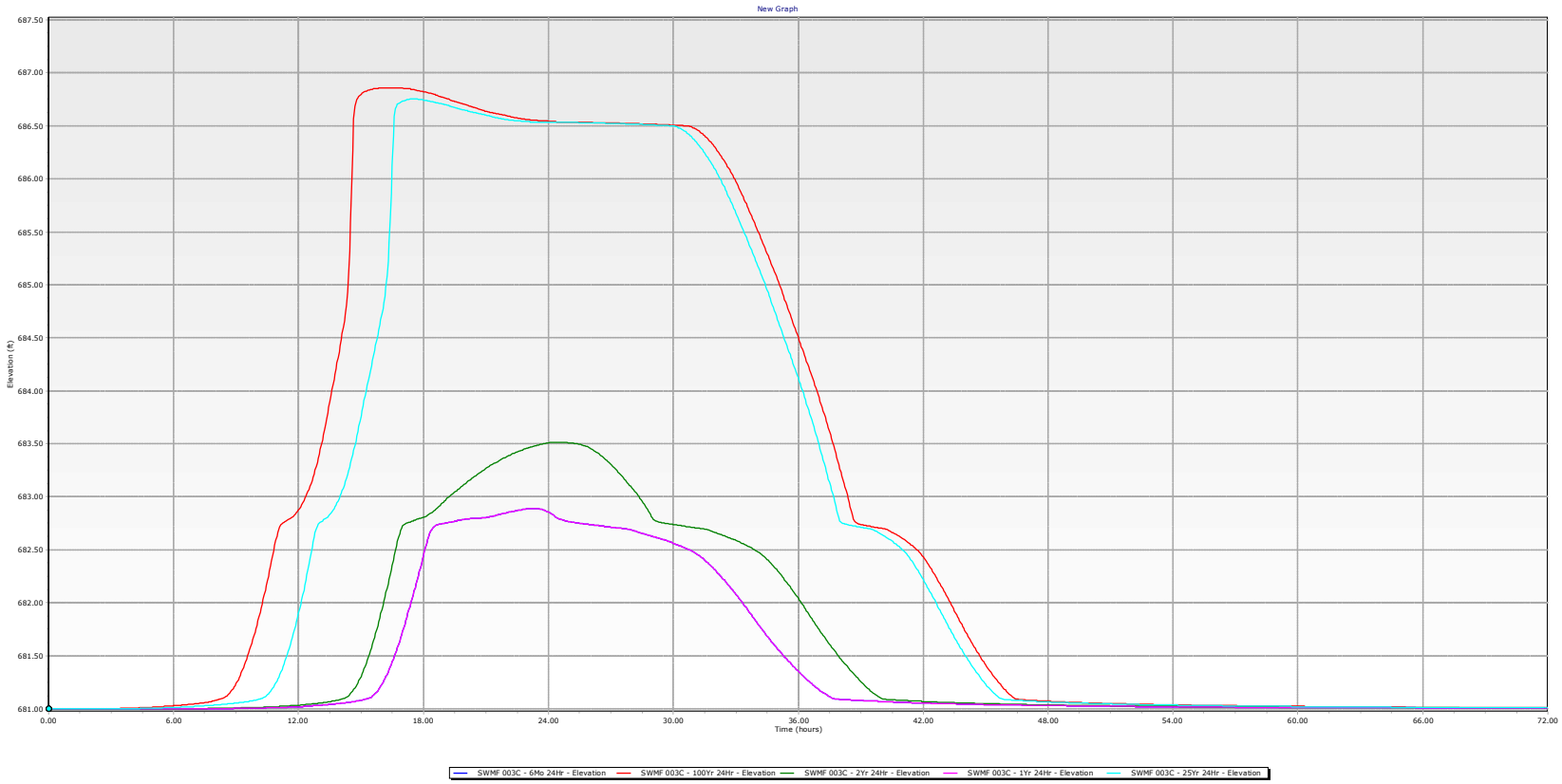
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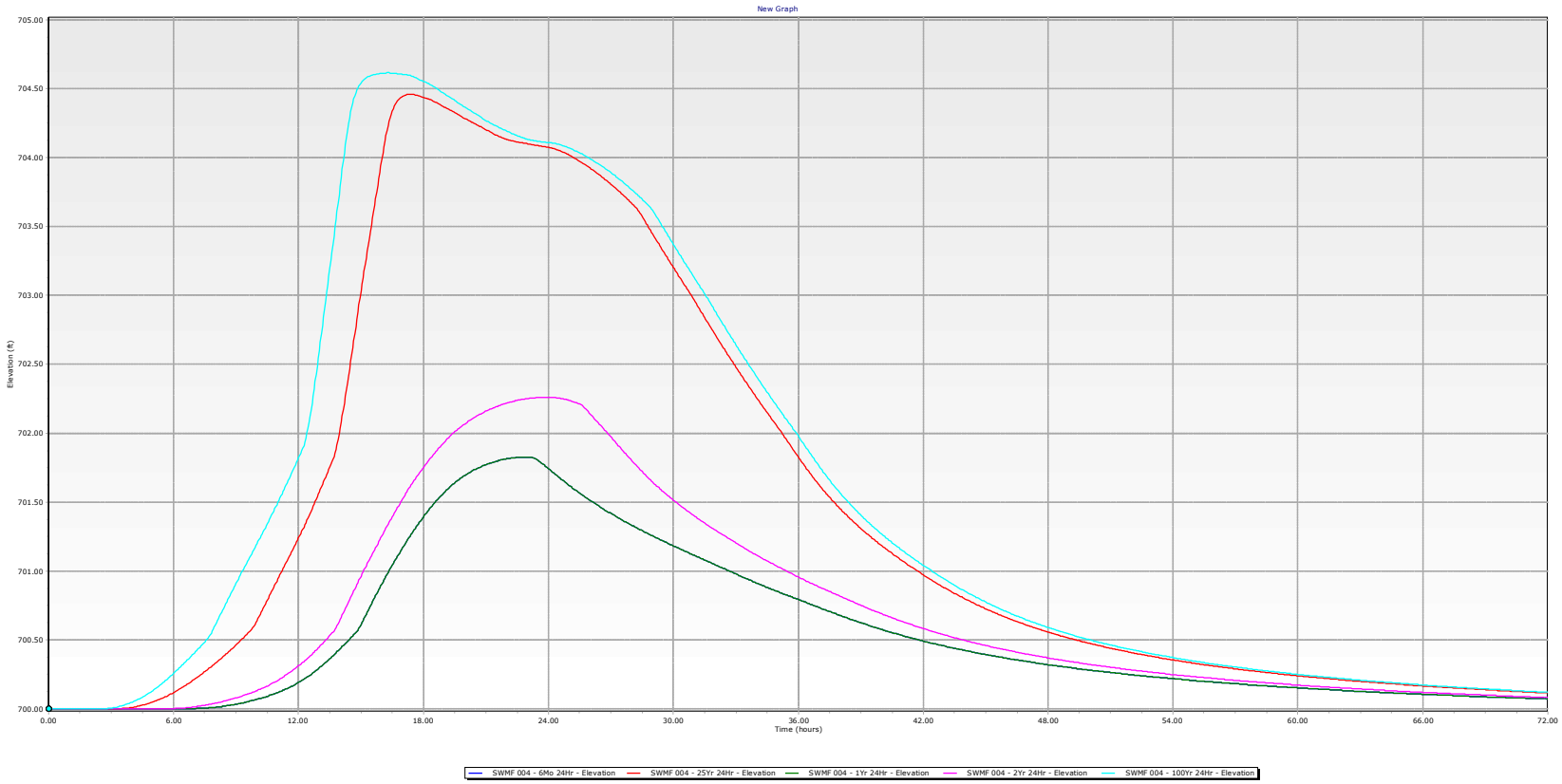

SWMF 001 Hydrographs under Various Design Events
Elevation (ft)
674.00
673.50
673.00
672.50
672.00
671.50
671.00
670.50
670.00
669.50
669.00
668.50
0.00
6.00
12.00
18.00
24.00
30.00
36.00
42.00
48.00
54.00
60.00
66.00
72.00
Time (hours)
SWMF 001 - 6Mo 24Hr - Elevation
SWMF 001 - 25Yr 24Hr - Elevation
SWMF 001 - 1Yr 24Hr - Elevation
SWMF 001 - 2Yr 24Hr - Elevation
SWMF 001 - 100Yr 24Hr - Elevation

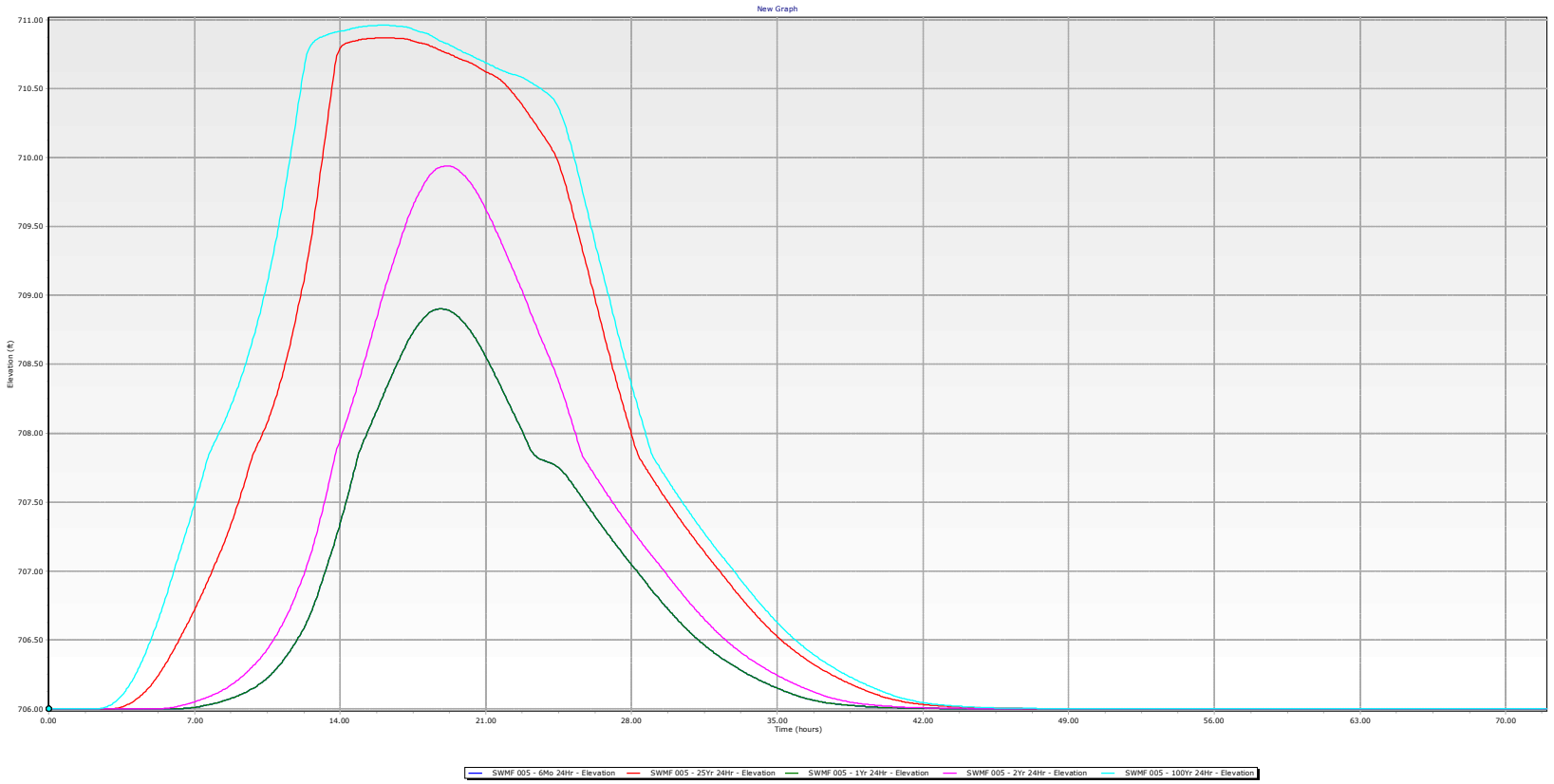

New Graph
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677.50
676.88
676.25
675.63
675.00
674.38
673.75
673.13
672.50
Elevation (ft)
0.00
7.00
14.00
21.00
28.00
35.00
42.00
49.00
56.00
63.00
70.00
Time (hours)
SWMF 002 - 6Mo 24Hr - Elevation
SWMF 002 - 25Yr 24Hr - Elevation
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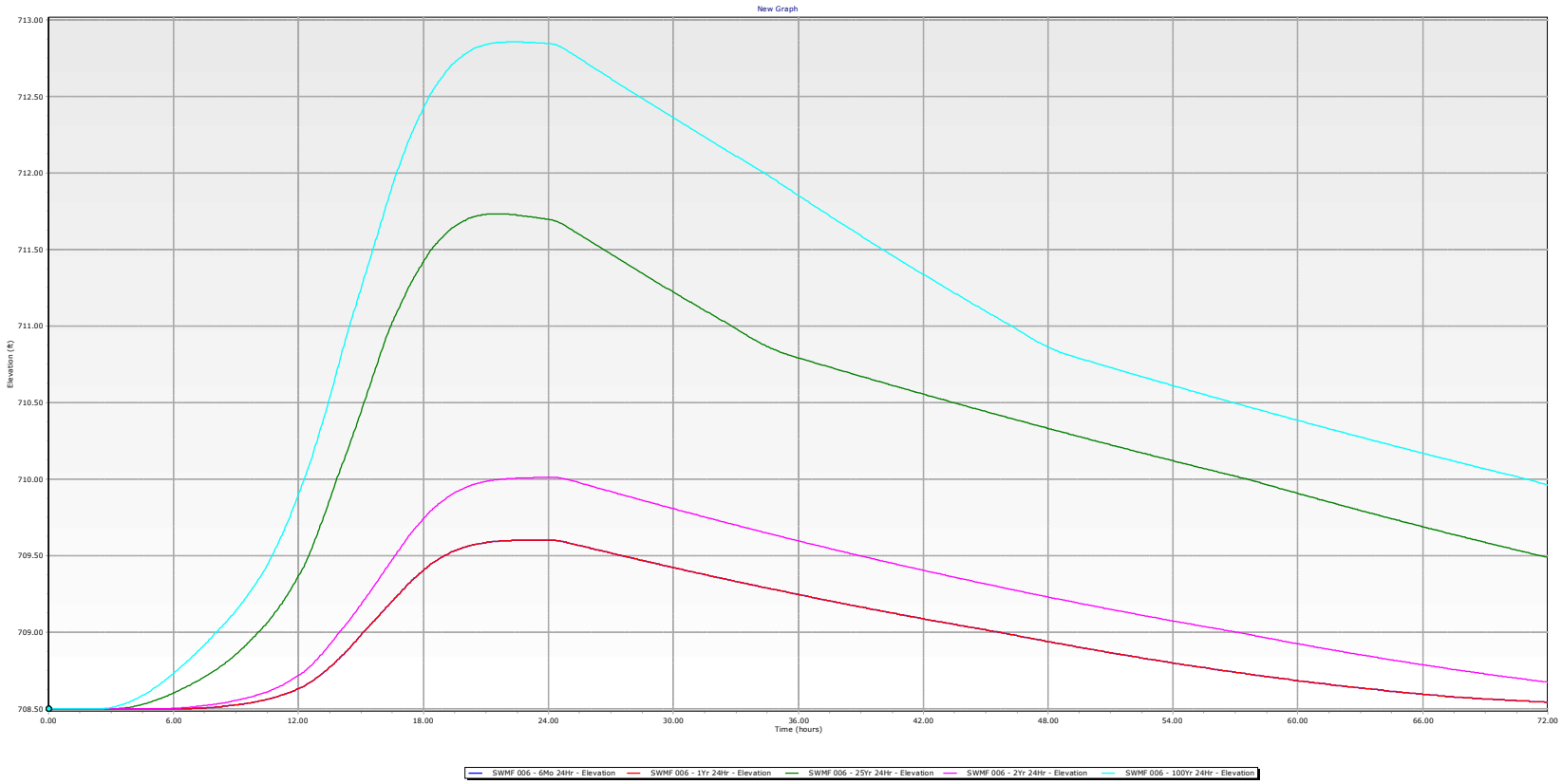

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683.50
683.00
682.50
682.00
681.50
681.00
680.50
680.00
679.50
679.00
678.50
678.00
Elevation (ft)
0.00
6.00
12.00
18.00
24.00
30.00
36.00
42.00
48.00
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SWMF 003A - 25Yr 24Hr - Elevation
SWMF 003A - 1Yr 24Hr - Elevation
SWMF 003A - 2Yr 24Hr - Elevation
SWMF 003A - 100Yr 24Hr - Elevation

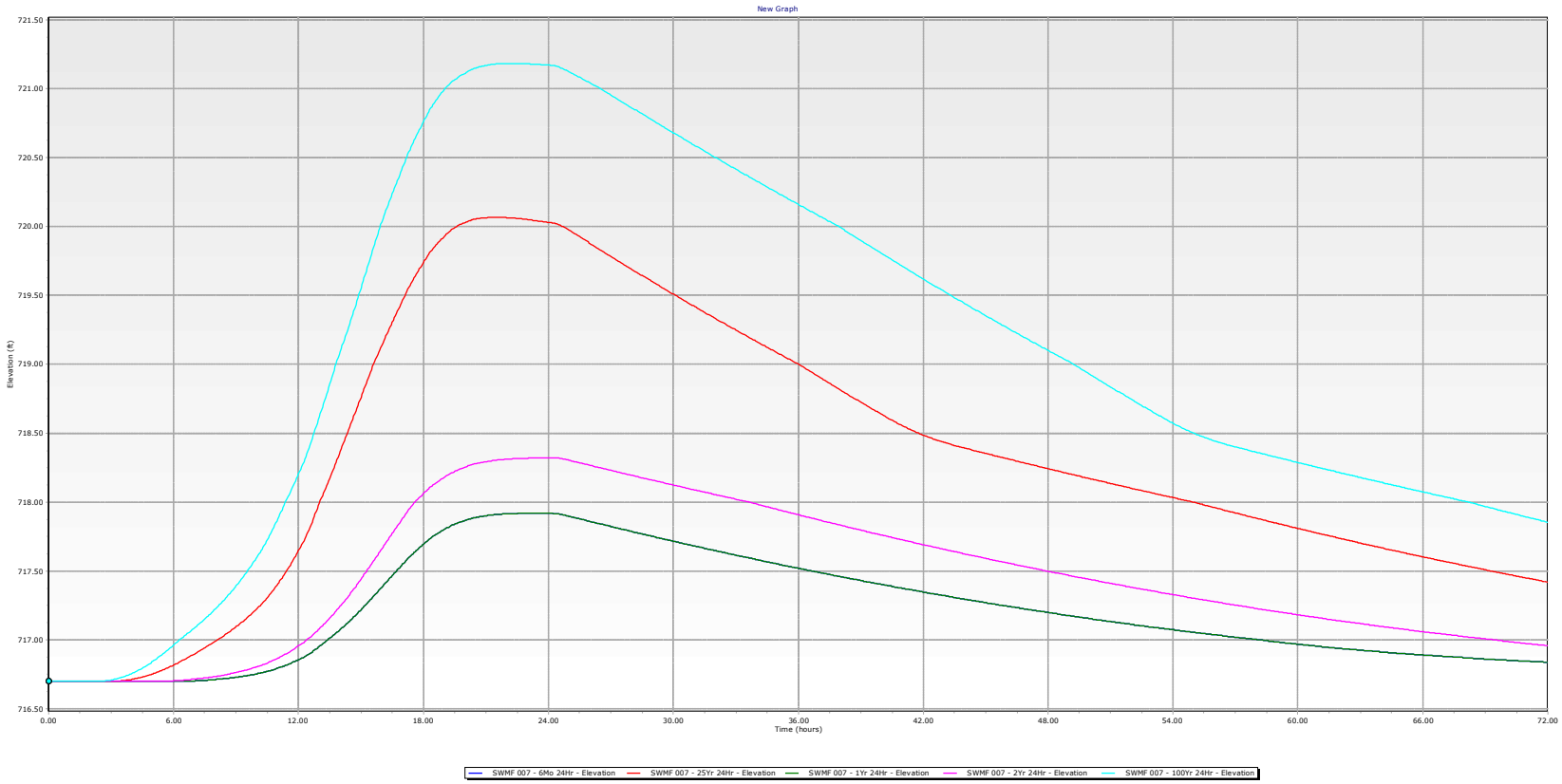

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SWMF 003B - 100Yr 24Hr - Elevation

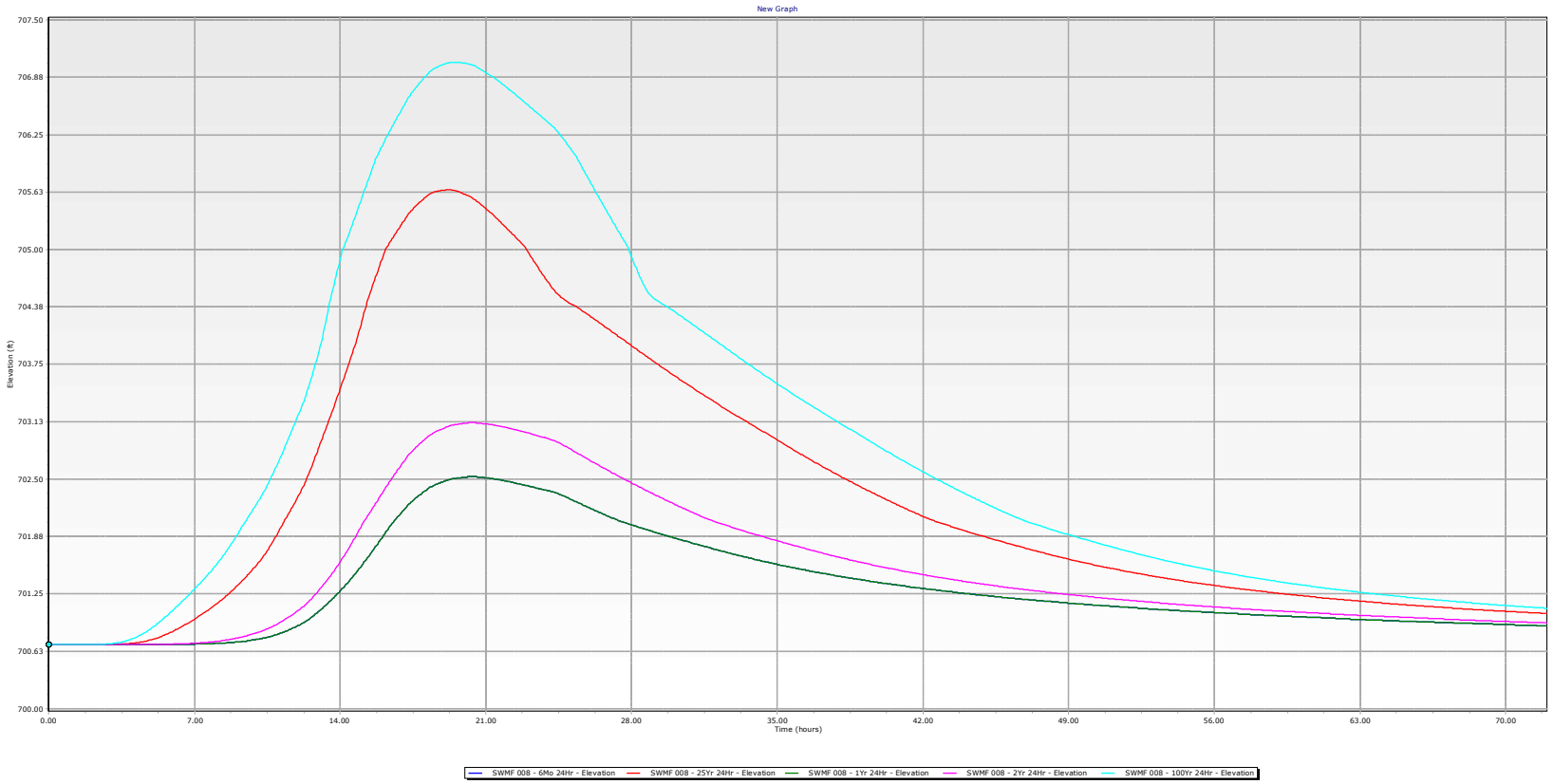

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Time (hours)
SWMF 003C - 6Mo 24Hr - Elevation
SWMF 003C - 100Yr 24Hr - Elevation
SWMF 003C - 2Yr 24Hr - Elevation
SWMF 003C - 1Yr 24Hr - Elevation
SWMF 003C - 25Yr 24Hr - Elevation


New Graph
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Time (hours)
SWMF 004 - 6Mo 24Hr - Elevation
SWMF 004 - 25Yr 24Hr - Elevation
SWMF 004 - 1Yr 24Hr - Elevation
SWMF 004 - 2Yr 24Hr - Elevation
SWMF 004 - 100Yr 24Hr - Elevation


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Elevation (ft)
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35.00
42.00
49.00
56.00
63.00
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Time (hours)
SWMF 005 - 6Mo 24Hr - Elevation
SWMF 005 - 25Yr 24Hr - Elevation
SWMF 005 - 1Yr 24Hr - Elevation
SWMF 005 - 2Yr 24Hr - Elevation
SWMF 005 - 100Yr 24Hr - Elevation


New Graph
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24.00
30.00
36.00
42.00
48.00
54.00
60.00
66.00
72.00
Time (hours)
SWMF 006 - 6Mo 24Hr - Elevation
SWMF 006 - 1Yr 24Hr - Elevation
SWMF 006 - 25Yr 24Hr - Elevation
SWMF 006 - 2Yr 24Hr - Elevation
SWMF 006 - 100Yr 24Hr - Elevation


New Graph
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720.50
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719.50
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718.50
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18.00
24.00
30.00
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72.00
Time (hours)
SWMF 007 - 6Mo 24Hr - Elevation
SWMF 007 - 25Yr 24Hr - Elevation
SWMF 007 - 1Yr 24Hr - Elevation
SWMF 007 - 2Yr 24Hr - Elevation
SWMF 007 - 100Yr 24Hr - Elevation


New Graph
707.50
706.88
706.25
705.63
705.00
704.38
703.75
703.13
702.50
701.88
701.25
700.63
700.00
Elevation (ft)
0.00
7.00
14.00
21.00
28.00
35.00
42.00
49.00
56.00
63.00
70.00
Time (hours)
SWMF 008 - 6Mo 24Hr - Elevation
SWMF 008 - 25Yr 24Hr - Elevation
SWMF 008 - 1Yr 24Hr - Elevation
SWMF 008 - 2Yr 24Hr - Elevation
SWMF 008 - 100Yr 24Hr - Elevation

Illinois Department of Natural Resources
JB Pritzker, Governor • Natalie Phelps Finnie, Director
One Natural Resources Way • Springfield, Illinois 62702-1271
www.dnr.illinois.gov

Lake County
Libertyville
Demolition and New Construction, Residential Development
610 Peterson Rd.

IEPA, SHPO Log #008102124

November 12, 2024

Ryan Martin
Kimley-Horn and Associates, Inc.
4201 Winfield Road #600
Warrenville, IL 60555

This letter is to inform you that we have reviewed the information provided concerning the referenced project.

Our review of the records indicates that no historic, architectural, or archaeological sites exist within the project area.

Please retain this letter in your files as evidence of compliance with Section 4 of the Illinois State Agency Historic Resources Preservation Act (20 ILCS 3420/1 et. seq.). This clearance remains in effect for two years from date of issuance. It does not pertain to any discovery during construction, nor is it a clearance for purposes of the Illinois Human Remains Protection Act (20 ILCS 3440).

If you have any further questions, please contact Steve Dasovich, Cultural Resources Manager, at 217/782-7441 or at Steve.Dasovich@illinois.gov.

Sincerely,

Carey L. Mayer

Carey L. Mayer, AIA
Deputy State Historic Preservation Officer

McHENRY-LAKE COUNTY SOIL & WATER CONSERVATION DISTRICT

NATURAL RESOURCES INFORMATION REPORT

25-001-4662

January 29, 2025

This report has been prepared for:
Pulte Home Company, LLC

Contact Person:
Nicholas Andriano

PREPARED BY:
McHENRY-LAKE COUNTY SOIL & WATER CONSERVATION DISTRICT
1648 S. EASTWOOD DR.
WOODSTOCK, IL 60098
PHONE: (815) 338-0444
www.mchenryswcd.org

The McHenry-Lake County Soil & Water Conservation District is an equal opportunity provider and employer.

EXECUTIVE SUMMARY OF NRI REPORT #25-001-4662

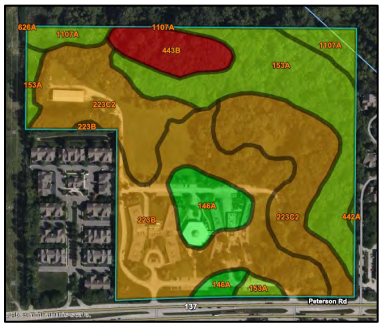
It is the opinion of the McHenry-Lake County Soil and Water Conservation District Board of Directors that this report as summarized on this page is pertinent to the requested zoning change.





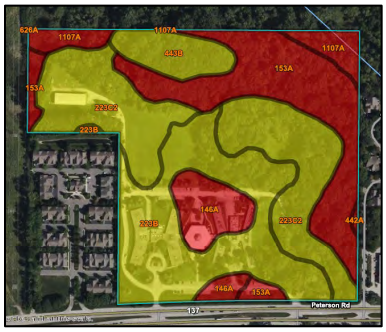
Picture of site (looking northeast)

Groundwater Contamination Potential:



Nitrate Leaching Potential: The Natural Resources Conservation Service Soil Survey indicates 2.5 acres or 6.0% of the parcel has a high leaching potential (identified in red) for nitrate-nitrogen to be transmitted through the soil profile below the root zone by percolating water under nonirrigated conditions. Leaching nitrates have the potential to contaminate shallow and deep aquifers used for drinking water.

Soil Limitations (This evaluates the parcel from the surface down to approximately 5 feet.):



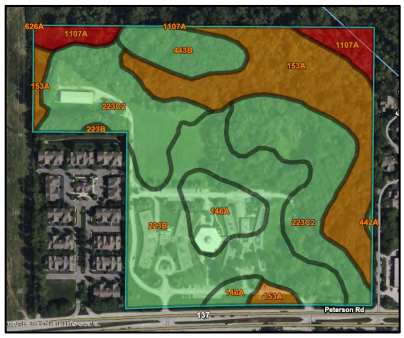
Dwellings with Basements

The Applicant indicated the intent to construct commercial buildings on the parcel. The Natural Resources Conservation Service Soil Survey indicates 15.3 acres or 36.4% of the parcel as very limited for dwellings with basements (identified in red).

Erosion Ratings
The NRCS Soils Survey indicates 12.5 acres or 29.9% of the parcel contains highly erodible soils. Highly erodible soils are especially prone to erosion and require special planning to prevent the loss of soil and subsequent sedimentation of downstream waterways. These soils need to be adequately considered in the soil erosion and sediment control (SESC) plan. It is very important that the reasons for the limitations are understood and incorporated into the site development plan. In order to specifically identify the location and extent of these and/or other soil limitations, a soil boring and analysis is highly recommended.



Prime Farmland Soils
The Natural Resources Conservation Service (NRCS) Soil Survey indicates that approximately 29.9 acres or 71.3% of the parcel is composed of prime farmland soils and 10.0 acres or 23.8% of the parcel is composed of prime farmland when drained soils (identified in green and blue).



Hydric Soils
The NRCS Soil Survey indicates 12.1 acres or 28.7% of the parcel is comprised of hydric soils (identified in orange and red).

*The Preliminary Plat of Subdivision, prepared by Kimley Horn, dated January 8, 2025, indicate lots 11-26 will be partially or fully located within hydric soils. In general, the District does not recommend building on hydric soils because of the unfavorable properties they exhibit and because of their long term, negative effects on the structures built.

Floodplain/Drainage Information:

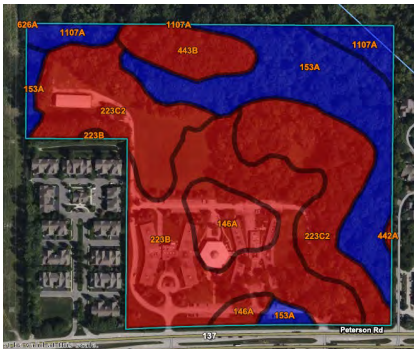

Zone AE
698.6
684
684
684



U.S. Geological Survey (USGS) Flood of Record Map (Hydrologic Atlas)
The Flood of Record Map for this area indicates previous flooding during the 1960 flood of record on 2.12 acres of the parcel (identified in blue).



Flooding Frequency
The Natural Resources Conservation Service (NRCS) Soil Survey indicates 2.1 acres pr 4.9% of the parcel frequently floods (identified in blue). "Frequent" means that flooding is likely to occur often under normal weather conditions. The chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year.



Ponding Frequency
The Natural Resources Conservation Service (NRCS) Soil Survey indicates that approximately 12.1 acres or 28.7% of the parcel is comprised of soils with frequent ponding (identified in blue). Ponding occurs, on the average more than once in 2 years. The chance of ponding is more than 50 percent in any year.

*The Preliminary Plat of Subdivision, prepared by Kimley Horn, dated January 8, 2025, indicate lots 11-26 will be partially or fully located within these frequently ponded soils.

Wetland Information:

USDA-NRCS Wetland Inventory
The NRCS Wetlands Inventory identifies 0 acres of farmed wetlands on the parcel.



ADID Wetland Inventory
The ADID Wetland Study indicates the 14.6 acres of High Quality ADID wetlands on the parcel (identified in green).



Lake County Wetland Inventory
The Lake County Wetland Inventory indicates there are 14.6 acres of wetlands on the parcel (identified in green).

*The Wetland Assessment Report, prepared by Bollinger Environmental Inc. and DK Environmental Services, Inc., dated October 8, 2024, indicate three wetland areas, one in the northwest corner and two within the northeast portion of the parcel. The Preliminary Plat of Subdivision, prepared by Kimley Horn, dated January 8, 2025, indicate lots 21 and 22 will be partially located within a wetland. The Petitioner is strongly urged to incorporate sufficient buffers around this wetland to guard against their degradation. Wetland buffers are exceedingly important to reduce the negative impacts of development on a wetland.

Drainage Tile and Drainage Districts:
A review of maps identifying known field tile locations in Lake County did not indicate the presence of drainage tiles on the parcel. However, as these maps are known to contain errors and omissions, there is still the possibility that field tiles may be present. A field tile survey is recommended for the parcel if this has not already been done, since the area is currently under agricultural row crop production and contains hydric soils. Undetected field tiles can cause flooding and other hydrologic problems in the future.

A list of active Drainage Districts and individuals to call for drainage problems is located in the appendix of this report.



Retention Systems:
The Natural Resources Conservation Service (NRCS) Soil Survey indicates that 2.1 acre or 4.9% of the parcel is very limited for retention systems (identified in red), which indicates that the soil has one or more features that are unfavorable for the specified system. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Cultural Resources: None identified

Woodlands: The parcel contains mature trees throughout the northern 1/3 and the eastern ½ of the parcel. Existing mature trees should be preserved whenever possible. Woodlands provide a large number of benefits such as wildlife habitat, erosion control, air and water quality improvements, as well as aesthetic values. Construction activities can indirectly destroy trees. Oak trees are particularly susceptible to long term, permanent damage caused by construction activities and require special consideration. It is also recommended that invasive non-native species be removed whenever possible. The petitioner is advised to consult the County or Municipal tree ordinance regarding the specific requirements for tree removal and planting.

McHENRY-LAKE COUNTY SOIL AND WATER CONSERVATION DISTRICT
NATURAL RESOURCE INFORMATION REPORT (NRI)

NRI Report Number	25-001-4662
Applicant's Name	Pulte Home Company, LLC
Size of Parcel	42.105 acres
Zoning Change	IB to R-7
Parcel Index Number(s)	11-08-100-012, 11-08-100-014, 11-08-100-035, 11-08-100-036, 11-08-200-001
Common Location	610 Peterson Rd., Libertyville, IL
Contact Person	Nicholas Andriano

Copies of this report or notification of the proposed land-use change were provided to:	***yes***	***no***
The Applicant	x	
The Applicant's Legal Representation/Consultant		x

Report Prepared By: *Spring M. Duffey* Position: *Executive Director*

Contents *Page*

PURPOSE & INTENT…… 3

PARCEL LOCATION…… 4

ARCHAEOLOGIC/CULTURAL RESOURCES INFORMATION…….. 5

BIOLOGICAL RESOURCE INFORMATION…..…… 6

WOODLANDS/TREE PRESERVATION.…… 12

NITRATE LEACHING MAP…… 14

SOILS INFORMATION..…… 21

SOILS INTERPRETATIONS/LIMITATIONS……..…… 23
DWELLINGS WITH BASEMENTS…….…….. 24

SOIL EROSION & SEDIMENT CONTROL..…… 29
PRIME FAMLAND SOILS……. 31
HYDRIC SOILS…….. 33
FIELD TILE MAP

DRAINAGE, RUNOFF AND FLOOD INFORMATION……..…… 36
FLOOD OF RECORD MAP
TOPOGRAPHIC MAP
FLOOD INSURANCE RATE MAP
FLOODING FREQUENCY
PONDING FREQUENCY

WATERSHED AND SUBWATERSHED INFORMATION……. 44

WETLAND INFORMATION…… 46
USDA-NRCS WETLAND INVENTORY
LAKE COUNTY WETLAND INVENTORY
LAKE COUNTY ADID WETLAND INVENTORY
RETENTION SYSTEMS……. 51

WETLAND AND FLOODPLAIN REGULATIONS…… 58
THREATENED & ENDANGERED SPECIES..…… 59

GLOSSARY…… 60

CONTACT LIST……. 62

REFERENCES…… 63

APPENDIX…….. 64

PURPOSE AND INTENT

The purpose of this report is to inform officials of the local governing body and other decision-makers with natural resource information. This information may be useful when undertaking land use decisions concerning variations, amendments or relief of local zoning ordinances, proposed subdivision of vacant or agricultural lands and the subsequent development of these lands. This report is a requirement under Section 22.02a of the Illinois Soil and Water Conservation Districts Act.

The intent of this report is to present the most current natural resource information available in a readily understandable manner. It contains a description of the present site conditions, the present resources, and the potential impacts that the proposed change may have on the site and its resources. The natural resource information was gathered from standardized data, on-site investigations and information furnished by the petitioner. This report must be read in its entirety so that the relationship between the natural resource factors and the proposed land use change can be fully understood.

Due to the limitations of scale encountered with the various resource maps, the property boundaries depicted in the various exhibits in this report provide a generalized representation of the property location and may not precisely reflect the legal description of the PIQ (Parcel in Question).

This report, when used properly, will provide the basis for proper land use change decisions and development while protecting the natural resource base of the county. It should not be used in place of detailed environmental and/or engineering studies that are warranted under most circumstances, but in conjunction with those studies.

The conclusions of this report in no way indicate that a certain land use is not possible, but it should alert the reader to possible problems that may occur if the capabilities of the land are ignored. Any questions on the technical data supplied in this report or if anyone feels that they would like to see more additional specific information to make the report more effective, please contact:

McHenry-Lake County Soil & Water Conservation District
1648 S. Eastwood Dr.
Woodstock, IL 60098
Phone: (815) 338-0099 ext. 3
www.mchenryswcd.org
E-mail: Spring.Duffey@il.nacdnet.net

PARCEL LOCATION

Location Map for Natural Resources Information Report # 25-001-4662

In the Northwest and Northeast Quarters of Section 8, Township 44 North, Range 11 East on 42.105 acres. This parcel is located at 610 Peterson Road, Libertyville, IL.



ARCHAEOLOGIC/CULTURAL RESOURCES

Simply stated, cultural resources are all the past activities and accomplishments of people. They include the following: buildings; objects made or used by people; locations; and less tangible resources, such as stories, dance forms, and holiday traditions. The Soil and Water Conservation District most often encounters cultural resources as historical properties. These may be prehistoric or historical sites, buildings, structures, features, or objects. The most common type of historical property that the Soil and Water Conservation District may encounter is non-structural archaeological sites. These sites often extend below the soil surface, and must be protected against disruption by development or other earth moving activity if possible. Cultural resources are *non-renewable* because there is no way to "grow" a site to replace a disrupted site.

Those sites deemed to be significant and eligible for listing on the National Register of Historical Places are referred to as "historic properties." These may be prehistoric (before written history) or from the historic period, which in Illinois is after 1673. Anything older than 50 years needs to be evaluated for historic significance.

Landowners with historical properties on their land have ownership of that historical property. However, the State of Illinois owns all of the following: human remains, grave markers, burial mounds, and artifacts associated with graves and human remains over 100 years old.

Non-grave artifacts from archaeological sites and historical buildings are the property of the landowner. The landowner may choose to disturb a historical property, but may not receive federal or state assistance to do so. If an earth moving activity disturbs human remains, the landowner must contact the county coroner within 48 hours.

Historic Preservation Legislation: The National Historic Preservation Act of 1966 (NHPA Section 106) requires all Federal Agencies' "undertakings" to "take into account" their effect on historic properties. As of January 1, 1990, the State Agency Historic Resources Preservation Act (Public Act 86-707) requires the same for all private or public undertakings involving state agencies. An "undertaking" is defined to cover a wide range of Federal or State permitting, funding, and licensing activities. It is the responsibility of Federal/State Agencies to ensure the protection of historic resources and the State Historic Preservation Office (SHPO) regulates this effort.

The Applicant should contact the Archaeology Section, Preservation Services Division, Illinois Historic Preservation Agency, for information about compliance with Federal and State regulations at http://www.stae.il.us/hpa/.

The resource maps do not identify known cultural resources on the parcel.

ECOLOGICALLY SENSITIVE AREAS

What is Biological Diversity and Why Should it be Conserved?[1]

Biological diversity, or biodiversity, is the range of life on our planet. A more thorough definition is presented by botanist Peter H. Raven: "At the simplest level, biodiversity is the sum total of all the plants, animals, fungi and microorganisms in the world, or in a particular area; all of their individual variation; and all of the interactions between them. It is the set of living organisms that make up the fabric of the planet Earth and allow it to function as it does, by capturing energy from the sun and using it to drive all of life's processes; by forming communities of organisms that have, through the several billion years of life's history on Earth, altered the nature of the atmosphere, the soil and the water of our Planet; and by making possible the sustainability of our planet through their life activities now." (Raven 1994)

It is not known how many species occur on our planet. Presently, about 1.4 million species have been named. It has been estimated that there are perhaps 9 million more that have not been identified. What is known is that they are vanishing at an unprecedented rate. Reliable estimates show extinction occurring at a rate several orders of magnitude above "background" in some ecological systems. (Wilson 1992, Hoose 1981)

The reasons for protecting biological diversity are complex, but they fall into four major categories.

First, loss of diversity generally weakens entire natural systems. Healthy ecosystems tend to have many natural checks and balances. Every species plays a role in maintaining this system. When simplified by the loss of diversity, the system becomes more susceptible to natural and artificial perturbations. The chances of a system-wide collapse increase. In parts of the midwestem United States, for example, it was only the remnant areas of natural prairies that kept soil intact during the dust bowl years of the 1930s. (Roush 1982)

Simplified ecosystems are almost always expensive to maintain. For example, when synthetic chemicals are relied upon to control pests, the target species are not the only ones affected. Their predators are almost always killed or driven away, exasperating the pest problem. In the meantime, people are unintentionally breeding pesticide-resistant pests. A process has begun where people become perpetual guardians of the affected area, which requires the expenditure of financial resources and human ingenuity to keep the system going.

A second reason for protecting biological diversity is that it represents one of our greatest untapped resources. Great benefits can be reaped from a single species. About 20 species provide 90% of the world's food. Of these 20, just three, wheat, maize and rice-supply over one half of that food. American wheat farmers need new varieties every five to 15 years to compete with pests and diseases. Wild strains of wheat are critical genetic reservoirs for these new varieties.

Further, every species is a potential source of human medicine. In 1980, a published report identified the market value of prescription drugs from higher plants at over $3 billion. Organic alkaloids, a class of chemical compounds used in medicines, are found in an estimated 20% of plant species. Yet only 2% of plant species have been screened for these compounds. (Hoose 1981)

The third reason for protecting diversity is that humans benefit from natural areas and depend on healthy ecosystems. The natural

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[1]Taken from *The Conservation of Biological Diversity in the Great Lakes Ecosystem: Issues and Opportunities*, prepared by the Nature Conservancy Great Lakes Program 79W. Monroe Street, Suite 1309, Chicago, IL 60603, January 1994

world supplies our air, our water, our food and supports human economic activity. Further, humans are creatures that evolved in a diverse natural environment between forest and grasslands. People need to be reassured that such places remain. When people speak of “going to the country,” they generally mean more than getting out of town. For reasons of their own sanity and well being, they need a holistic, organic experience. Prolonged exposure to urban monotony produces neuroses, for which cultural and natural diversity cure.

Historically, the lack of attention to biological diversity, and the ecological processes it supports, has resulted in economic hardships for segments of the basin’s human population.

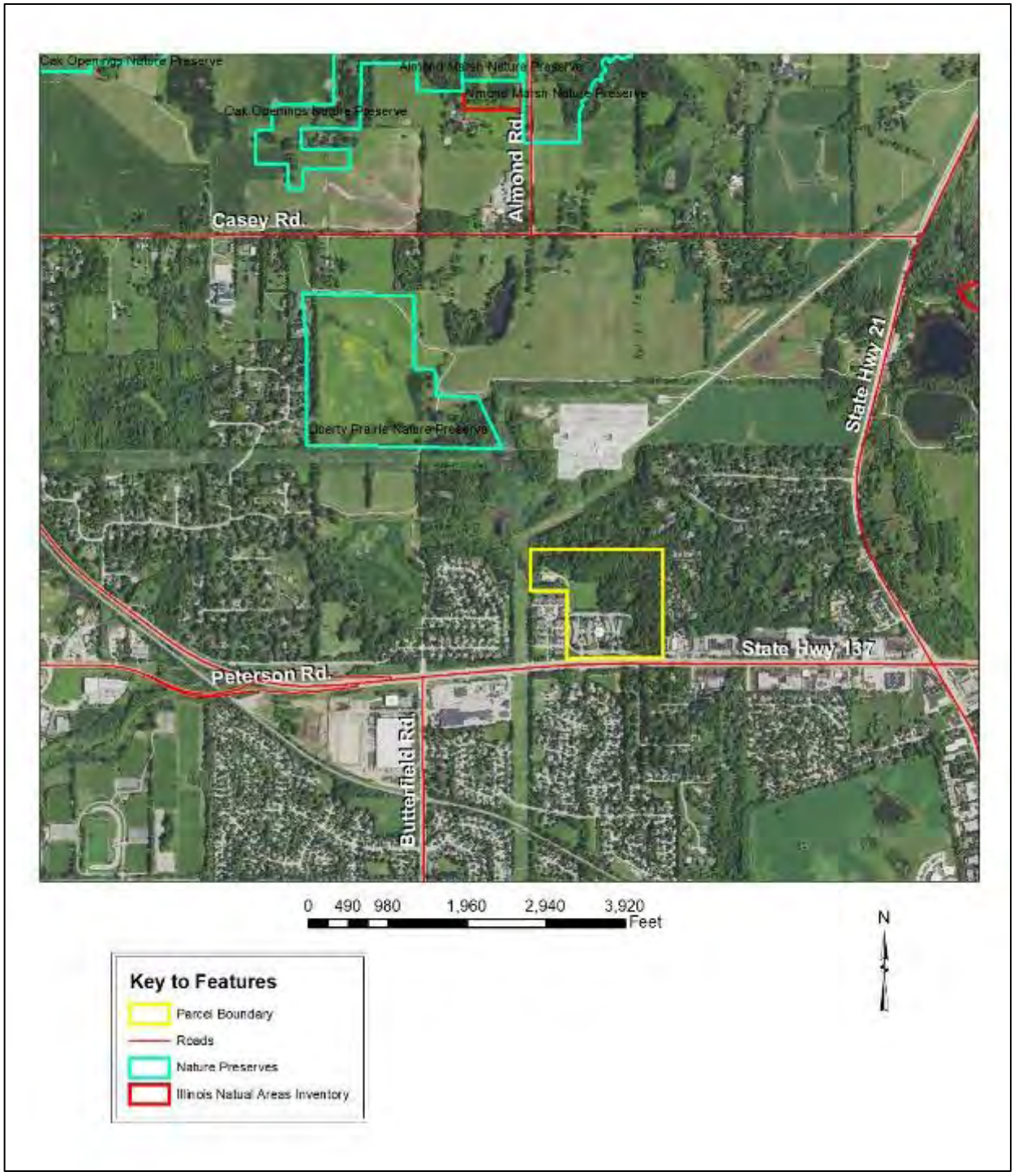
The final reason for protecting biological diversity is that species and natural systems are intrinsically valuable. The above reasons have focused on the benefits of the natural world to humans. All things possess intrinsic value simply because they exist.

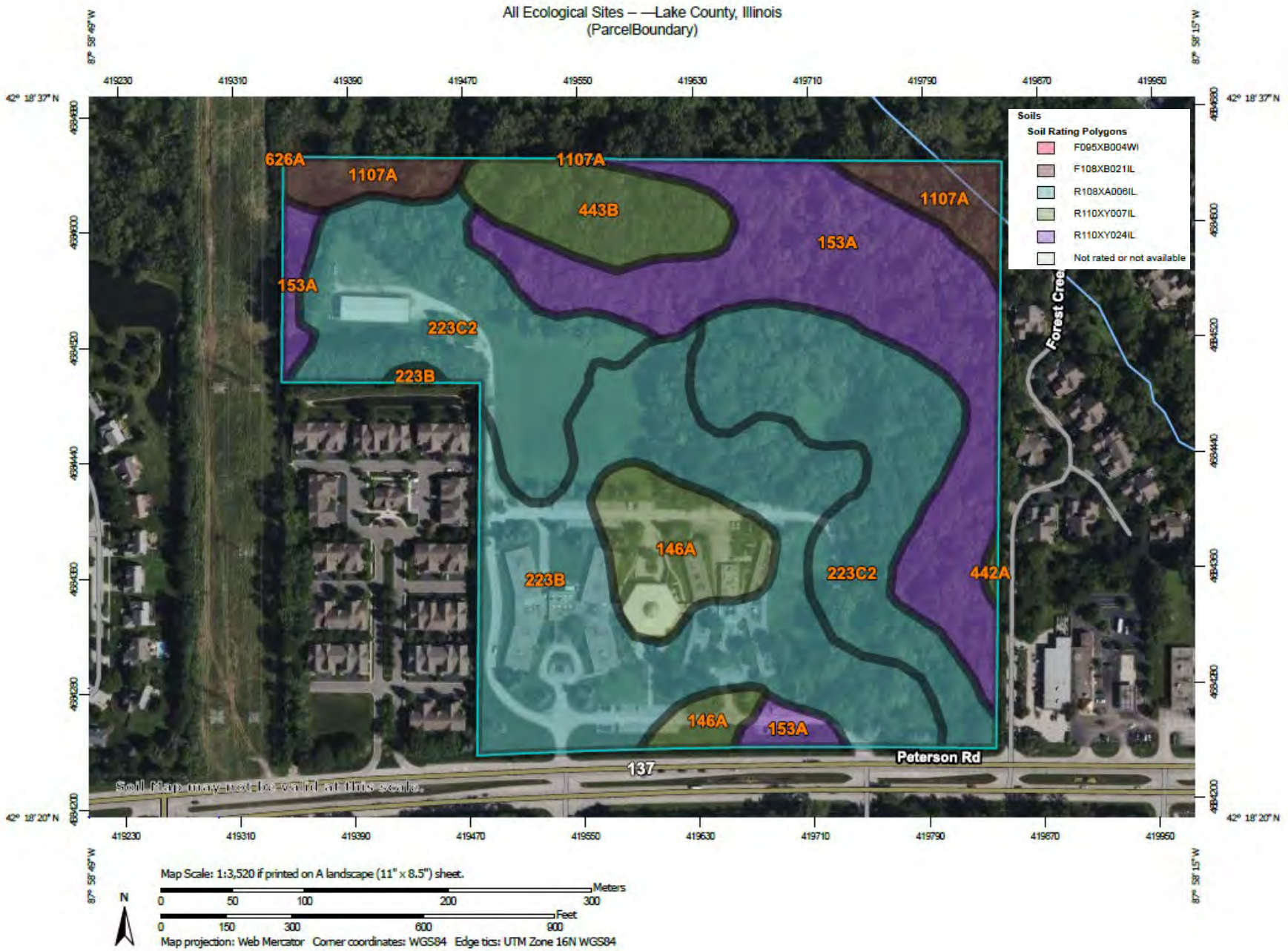
Biological Resources Concerning the Subject Parcel

As part of the Natural Resources Information Report, staff checks office maps to determine if any nature preserves are within 500 feet of the parcel in question. If there is a nature preserve in the area, then that resource will be identified as part of the report. The SWCD recommends that every effort be made to protect that resource. Such efforts should include, but are not limited to erosion control, sediment control, stormwater management, and groundwater monitoring.

Office Maps indicate Liberty Prairie Nature Preserve is northwest of the parcel.

Ecological Sites are based on the soil type and the landscape associated with its formation.


Oak Openings Nature Preserve
Almond Marsh Nature Preserve
Oak Openings Nature Preserve
Almond Marsh Nature Preserve
Almond Rd.
Casey Rd.
State Hwy 21
Liberty Prairie Nature Preserve
State Hwy 137
Peterson Rd.
Butterfield Rd.
0 490 980 1,960 2,940 3,920
Feet
N
Key to Features
Parcel Boundary
Roads
Nature Preserves
Illinois Natural Areas Inventory


All Ecological Sites – —Lake County, Illinois
(ParcelBoundary)
87° 58' 49" W
87° 58' 15" W
42° 18' 37" N
42° 18' 20" N
419230
419310
419390
419470
419550
419630
419710
419790
419870
419950
4384300
4384360
4384420
4384480
4384540
4384600
Soils
Soil Rating Polygons
F095XB004WI
F108XB021IL
R108XA006IL
R110XY007IL
R110XY024IL
Not rated or not available
626A
1107A
1107A
1107A
443B
153A
153A
223C2
223B
223B
146A
223C2
442A
146A
153A
Forest Cree
Peterson Rd
137
Soil Map may not be available at this scale.
Map Scale: 1:3,520 if printed on A landscape (11" x 8.5") sheet.
N
Meters
0
50
100
200
300
Feet
0
150
300
600
900
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

All Ecological Sites

Map unit symbol	Map unit name	Component name (percent)	Ecological site	Acres	Percent
146A	Elliott silt loam, 0 to 2 percent slopes	Elliott (94%)	R110XY007IL — Moist Glacial Drift Upland Prairie	3.1	7.5%
		Ashkum, drained (4%)	R110XY024IL — Ponded Depressional Sedge Meadow		
		Orthents, clayey (1%)	F095XB010WI — Loamy and Clayey Upland		
		Urban land (1%)			
153A	Pella silty clay loam, 0 to 2 percent slopes	Pella, drained (96%)	R110XY024IL — Ponded Depressional Sedge Meadow	10.0	23.8%
		Harpster, drained (3%)	R110XY025IL — Ponded Calcareous Sedge Meadow		
		Urban land (1%)			
223B	Varna silt loam, 2 to 4 percent slopes	Varna (90%)	R108XA006IL — Loess Upland Prairie	11.7	27.7%
			R110XY007IL — Moist Glacial Drift Upland Prairie		
		Ashkum, drained (4%)	R110XY024IL — Ponded Depressional Sedge Meadow		
		Orthents, clayey (3%)	F095XB010WI — Loamy and Clayey Upland		
		Urban land (3%)			
223C2	Varna silt loam, 4 to 6 percent slopes, eroded	Varna, eroded (90%)	R108XA006IL — Loess Upland Prairie	12.5	29.9%
			R110XY007IL — Moist Glacial Drift Upland Prairie		
		Ashkum, drained (6%)	R110XY024IL — Ponded Depressional Sedge Meadow		

Map unit symbol	Map unit name	Component name (percent)	Ecological site	Acres	Percent
		Orthents, clayey (2%)	F095XB010WI — Loamy and Clayey Upland		
		Urban land (2%)			
442A	Mundelein silt loam, 0 to 2 percent slopes	Mundelein (92%)	R110XY007IL — Moist Glacial Drift Upland Prairie	0.1	0.2%
		Drummer, drained (4%)	R108XA013IL — Wet Outwash Prairie		
			R110XY024IL — Ponded Depressional Sedge Meadow		
			R111XD020IN — Wet Outwash Mollisol		
		Pella (2%)	R110XY008IL — Wet Glacial Drift Upland Prairie		
		Orthents, loamy (1%)	F095XB010WI — Loamy and Clayey Upland		
		Urban land (1%)			
443B	Barrington silt loam, 2 to 4 percent slopes	Barrington (92%)	R110XY007IL — Moist Glacial Drift Upland Prairie	2.5	6.0%
		Drummer (4%)	R108XA013IL — Wet Outwash Prairie		
			R110XY008IL — Wet Glacial Drift Upland Prairie		
		Pella (2%)	R110XY008IL — Wet Glacial Drift Upland Prairie		
		Orthents, loamy (1%)	F095XB010WI — Loamy and Clayey Upland		
		Urban land (1%)			
626A	Kish loam, 0 to 2 percent slopes	Kish (90%)	F095XB004WI — Wet Loamy or Clayey Lowland	0.0	0.0%
		Pella (5%)	R110XY008IL — Wet Glacial Drift Upland Prairie		
		Selma (3%)	R110XY008IL — Wet Glacial Drift Upland Prairie		

Map unit symbol	Map unit name	Component name (percent)	Ecological site	Acres	Percent
		Lena (2%)	R108XA001IL — Organic Sedge Meadow		
			R110XY021IL — Ponded Organic Alkaline Peatland		
1107A	Sawmill silty clay loam, undrained, cool, 0 to 2 percent slopes, frequently flooded	Sawmill, frequently flooded, undrained, cool (95%)	F108XB021IL — Wet Loamy Floodplain Forest	2.1	4.9%
		Millington, frequently flooded, undrained (4%)	R108XA018IL — Ponded Floodplain Marsh		
		Houghton, undrained (1%)	F089XY002WI — Mucky Swamps		

WOODLANDS

Existing mature trees should be preserved whenever possible. Woodlands provide a large number of benefits such as wildlife habitat, erosion control, air and water quality improvements, as well as aesthetic values. Construction activities can indirectly destroy trees. Oak trees are particularly susceptible to long term, permanent damage caused by construction activities and require special consideration. It is also recommended that invasive non-native species be removed whenever possible. The petitioner is advised to consult the County or Municipal tree ordinance regarding the specific requirements for tree removal and planting.

Native woodlands are no longer a common occurrence throughout much of Lake County. Although forests originally covered nearly 40% of Illinois, today only about 12% of the state is forested, with most of this being secondary growth (Ill. Natural History Survey Reports, Nov/Dec 1993, No. 324). The composition of Illinois forests has changed markedly over the past three decades. 97% of the timberland is classified as hardwood forest. The forest acreage continues to increase from 4.2 million acres in 1985 to 4.3 million acres in 1998. (IL Forest Development Council News, IL DNR, Winter 2001/Volume 2, No. 1). Oak-hickory forests, which had made up half of the acreage, have declined by 14%, and make up 2.1 million acres. This decline is largely a result of wildfire suppression that allows maples to take over. Thus, the acres of maple-beech forest have risen more than 40-fold from 1962 to 1985, to one quarter of the total forest area, 696 thousand acres. Dutch elm disease and the conversion of forested bottomlands to agriculture have resulted in huge declines in the elm-ash-cottonwood forests, 906 thousand acres, falling from one third - one sixth of the Illinois forest area. Elm accounts for the greatest number of individual trees – 412 million. Other species groups with more than 100 million trees include hickory, red oak, sugar/black maple, ash, hackberry, and black cherry.

Woodlands provide many benefits such as wildlife habitat, erosion control, air and water quality improvements, and aesthetic values. Forests are responsible for much of the biological diversity in the state. Many species are dependent upon forests for food & shelter, including threatened/endangered species.

One of the most serious problems facing Illinois forests is the invasion of exotic plants and animals. Some of the most damaging plants includes European buckthorn, multiflora rose, honeysuckle, purple loosestrife, and garlic mustard.

Many trees, particularly hardwoods (especially oaks) are extremely sensitive to construction-induced disturbances. The area most susceptible to damage is within the "drip radius," the ground surface directly beneath the leafy canopy of the tree. Many trees have an extensive system of feeder roots, located within one foot of the surface, and supply the tree with the majority of its moisture and nutrient needs.

Construction activities can negatively impact trees in several different ways. Earth-moving activities that stockpile soil near trees can suffocate tree roots that, although buried, require oxygen. Vehicle traffic can compact the soil to a point where the roots no longer function effectively. Grading activities for road cuts and foundations can cause a localized drop in the water table, placing the trees under stress. The placement of pavement or stormwater management facilities near established trees can also radically change soil moisture. The removal of the accumulated organic materials normally present on a woodland floor, and the subsequent establishment of turf lawns, can drastically affect the soil temperature and nutrient balance. Injury to the bark of a tree can increase the chance of the tree being subjected to a potentially harmful disease.

If existing trees are to be maintained in a healthy state, the appropriate planning is necessary. Someone with a working knowledge of forestry should assess existing trees to determine which trees should be protected. Some tree species are not considered desirable due to their aggressive growth, behavior, and limited value to local wildlife. Proper management of woodlands and open space includes the selective elimination of such trees and replacement by more desirable species. **Trees that are to be saved should be marked and protected with snow fencing or similar material, installed around the drip radius, to prevent root damage,** and vehicle traffic should be minimized around the drip line. Contractors should be informed of the intention to preserve trees and be expected to conduct their work accordingly.

Tree damage resulting from construction activities may not be apparent for a number of years. While it is recognized that some tree loss is unavoidable, this should be minimized to the extent possible. It is highly recommended that trees lost to development activity be replaced by younger specimens of the native trees now found on the PIQ.

Nitrate Leaching Potential

This interpretation is designed to evaluate the potential for nitrate-nitrogen to be transmitted through the soil profile below the root zone by percolating water under nonirrigated conditions. Leaching nitrates have the potential to contaminate shallow and deep aquifers used for drinking water. The ratings are based on inherent soil and climate properties that affect nitrate leaching and do not account for management practices, such as crop rotation and rates and timing of nitrogen fertilizer applications.

The following soil and climate factors are used in the interpretation criteria:

1. Mean annual precipitation minus potential evapotranspiration - This factor provides an estimate of the amount of water that is available to move through the soil profile on an annual basis. Potential evaporation is estimated from mean annual air temperature using an algorithm (developed by the National Soil Survey Center) that employs the Hamon potential evapotranspiration method.

2. Water travel time through the entire soil profile - This factor uses the saturated hydraulic conductivity (Ksat) and thickness of each soil horizon to estimate the number of hours that would be required for a given volume of water to move through the entire soil profile. One advantage of this method for estimating the rate of water movement is that the properties and thickness of each soil horizon are accounted for instead of using an average saturated hydraulic conductivity for the entire profile. This method accounts for subtle differences between soils in texture, structure, horizon thickness, and depth to water-restricting layers.

3. Available water capacity - This factor accounts for the cumulative amount of water available to plants that the entire soil profile can hold at field capacity to a depth of 150 cm. The more water the soil profile can hold, the less water is available for deep leaching.

4. Depth to and duration of a water table - This factor uses a water table index based on the minimum average depth to a water table and the number of months that the water table is present during the period from April through October. The factor is used to account for the loss of nitrates to the atmosphere as nitrous oxide or nitrogen gas due to denitrification under anaerobic conditions caused by water saturation. The higher the water table and the longer its duration, the larger the quantity of nitrates that would potentially be lost to the atmosphere and therefore would not be available for deep leaching.

5. Slope gradient adjusted for hydrologic soil group - The steeper the slope gradient, the higher the potential for surface runoff and the lower the amount of water available to move through the soil profile. The following adjustments are made to the slope gradient by hydrologic group to account for differences in potential for surface runoff:

   Hydrologic group A-slope % x 0.75

   Hydrologic group B-slope % x 0.85

   Hydrologic group C-slope % x 0.95

   Hydrologic group D-no adjustment

The ratings are both verbal and numerical. The ratings for Nitrate Leaching Potential, Nonirrigated Areas, are calculated as follows:

1. The Mean Annual Precipitation minus Potential Evapotranspiration subrule is weighted by multiplying by 0.60.
2. The Water Travel Time subrule is weighted by multiplying by 0.25.
3. The Available Water Capacity subrule is weighted by multiplying by 0.15.
4. The sum of these three weighted subrules results in a value between 0.00 and 1.00.
5. Adjustments are then made for water table depth and duration and for slope gradient adjusted for hydrologic group. The sum of the values from these subrules is subtracted from the sum in step 4 above. The maximum reduction is
   0.50 for the water table index subrule and 0.30 for the slope gradient subrule.

The following rating classes for Nitrate Leaching Potential, Nonirrigated Areas, are assigned based on the final calculation from the factors above:

Low: 0.00 to 0.25

Moderate: 0.26 to 0.50

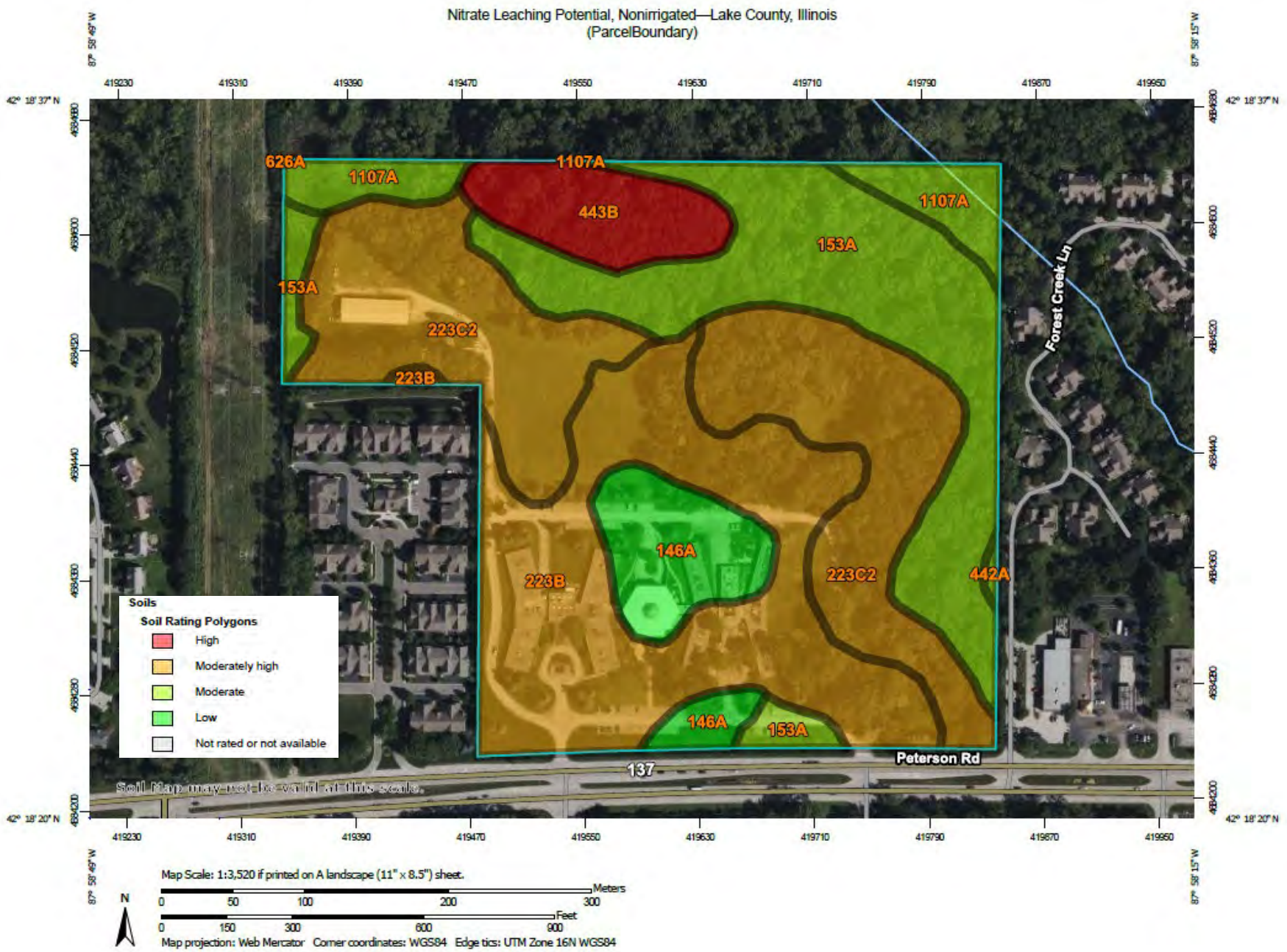
Moderately high: 0.51 to 0.75

High: 0.76 to 1.00

The ratings indicate the potential for nitrate leaching below the root zone, based on inherent soil and climate properties. A "low" rating indicates a low potential for leaching of nitrates below the root zone. A "high" rating indicates a high potential for leaching of nitrates below the root zone. The "moderate" and "moderately high" ratings indicate intermediate potential.

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.


Nitrate Leaching Potential, Nonirrigated—Lake County, Illinois
(ParcelBoundary)
626A
1107A
1107A
443B
1107A
153A
153A
223C2
223B
146A
223B
223C2
442A
146A
153A
Forest Creek Ln
Peterson Rd
137
Soils
Soil Rating Polygons
High
Moderately high
Moderate
Low
Not rated or not available
Map Scale: 1:3,520 if printed on A landscape (11" x 8.5") sheet.
Meters
Feet
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

Nitrate Leaching Potentials						
Map unit symbol	**Map unit name**	**Rating**	**Component name (percent)**	**Rating reasons (numeric values)**	**Acres**	**Percent**
146A	Elliott silt loam, 0 to 2 percent slopes	Low	Elliott (94%)	Water quantity available for leaching (0.99)	3.1	7.5%
				Water holding capacity (0.50)		
				Denitrification due to saturation (0.50)		
			Ashkum, drained (4%)	Water quantity available for leaching (0.99)		
				Denitrification due to saturation (0.50)		
				Water holding capacity (0.48)		
153A	Pella silty clay loam, 0 to 2 percent slopes	Moderate	Pella, drained (96%)	Water quantity available for leaching (1.00)	10.0	23.8%
				Water travel time (0.88)		
				Denitrification due to saturation (0.50)		
				Water holding capacity (0.07)		
			Harpster, drained (3%)	Water quantity available for leaching (1.00)		
				Water travel time (0.82)		
				Denitrification due to saturation (0.50)		
223B	Varna silt loam, 2 to 4 percent slopes	Moderately high	Varna (90%)	Water quantity available for leaching (1.00)	11.7	27.7%
				Water holding capacity (0.41)		

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres	Percent
			Orthents, clayey (3%)	Water quantity available for leaching (1.00)		
				Water holding capacity (0.75)		
223C2	Varna silt loam, 4 to 6 percent slopes, eroded	Moderately high	Varna, eroded (90%)	Water quantity available for leaching (1.00)	12.5	29.9%
				Water holding capacity (0.44)		
			Orthents, clayey (2%)	Water quantity available for leaching (1.00)		
				Water holding capacity (0.75)		
442A	Mundelein silt loam, 0 to 2 percent slopes	Moderate	Mundelein (92%)	Water quantity available for leaching (0.99)	0.1	0.2%
				Water travel time (0.89)		
				Denitrification due to saturation (0.50)		
			Drummer, drained (4%)	Water quantity available for leaching (0.99)		
				Water travel time (0.84)		
				Denitrification due to saturation (0.50)		
				Water holding capacity (0.08)		
			Pella (2%)	Water quantity available for leaching (0.99)		
				Water travel time (0.89)		
				Denitrification due to saturation (0.50)		
443B	Barrington silt loam, 2 to 4 percent slopes	High	Barrington (92%)	Water quantity available for leaching (0.99)	2.5	6.0%
				Water travel time (0.89)		

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres	Percent
626A	Kish loam, 0 to 2 percent slopes	Moderate	Kish (90%)	Water quantity available for leaching (0.99)	0.0	0.0%
				Water travel time (0.87)		
				Denitrification due to saturation (0.50)		
			Pella (5%)	Water quantity available for leaching (0.99)		
				Water travel time (0.89)		
				Denitrification due to saturation (0.50)		
			Selma (3%)	Water quantity available for leaching (0.99)		
				Water travel time (0.89)		
				Denitrification due to saturation (0.50)		
				Water holding capacity (0.01)		
			Lena (2%)	Water travel time (1.00)		
				Water quantity available for leaching (0.99)		
				Denitrification due to saturation (0.50)		
1107A	Sawmill silty clay loam, undrained, cool, 0 to 2 percent slopes, frequently flooded	Moderate	Sawmill, frequently flooded, undrained, cool (95%)	Water quantity available for leaching (1.00)	2.1	4.9%
				Water travel time (0.82)		
				Denitrification due to saturation (0.50)		
			Millington, frequently flooded,	Water quantity available for leaching (1.00)		

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres	Percent
			undrained (4%)	Water travel time (0.82)		
				Denitrification due to saturation (0.50)		
			Houghton, undrained (1%)	Water quantity available for leaching (1.00)		
				Water travel time (0.89)		
				Denitrification due to saturation (0.50)		

Rating	Acres	Percent
Moderately high	24.2	57.6%
Moderate	12.2	28.9%
Low	3.1	7.5%
High	2.5	6.0%

SOILS INFORMATION

Importance of Soils Information

Soils information comes from Natural Resources Conservation Service Soil Maps and Descriptions for Lake County. This information is important to all parties involved in determining the suitability of the proposed land use change.

Each soil polygon is given a number, which represents its soil type. The letter found after the soil type number indicates the soils slope class.

Each soil map unit has limitations for a variety of land uses such as septic systems, buildings with basements, and buildings without basements. It is important to remember that soils do not function independently of each other. The behavior of a soil depends upon the physical properties of adjacent soil types, the presence of artificial drainage, soil compaction, and its position in the local landscape.

The limitation categories (slight, moderate or severe) indicate the potential for difficulty in using that soil unit for the proposed activity and, thus, the degree of need for thorough soil borings and engineering studies. A limitation does not necessarily mean that the proposed activity cannot be done on that soil type. It does mean that the reasons for the limitation need to be thoroughly understood and dealt with in order to complete the proposed activity successfully. A severe limitation indicates that the proposed activity will be more difficult and costly to do on that soil type than on a soil type with a moderate or slight rating.

Soil survey interpretations are predictions of soil behavior for specified land uses and specified management practices. They are based on the soil properties that directly influence the specified use of the soil. Soil survey interpretations allow users of soil surveys to plan reasonable alternatives for the use and management of soils.

Soil interpretations do not eliminate the need for on-site study and testing of specific sites for the design and construction for specific uses. They can be used as a guide for planning more detailed investigations and for avoiding undesirable sites for an intended use. The scale of the maps and the range of error limit the use of the soil delineations.


Soil Map—Lake County, Illinois
(ParcelBoundary)
626A
1107A
1107A
443B
1107A
153A
153A
223C2
223B
Forest Creek Ln
146A
223B
223C2
442A
146A
153A
Peterson Rd
137
Soil Map may not be valid at this scale.
Map Scale: 1:3,520 if printed on A landscape (11" x 8.5") sheet.
Meters
0 50 100 200 300
Feet
0 150 300 600 900
N
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

Soil Map Unit Descriptions

Map Unit Symbol	Map Unit Name	Acres	Percent
146A	Elliott silt loam, 0 to 2 percent slopes	3.1	7.5%
153A	Pella silty clay loam, 0 to 2 percent slopes	10.0	23.8%
223B	Varna silt loam, 2 to 4 percent slopes	11.7	27.7%
223C2	Varna silt loam, 4 to 6 percent slopes, eroded	12.5	29.9%
442A	Mundelein silt loam, 0 to 2 percent slopes	0.1	0.2%
443B	Barrington silt loam, 2 to 4 percent slopes	2.5	6.0%
626A	Kish loam, 0 to 2 percent slopes	0.0	0.0%
1107A	Sawmill silty clay loam, undrained, cool, 0 to 2 percent slopes, frequently flooded	2.1	4.9%
Totals for Area of Interest		**42.0**	**100.0%**

Soil Interpretations Explanation

Nonagricultural

General

These interpretative ratings help engineers, planners, and others to understand how soil properties influence behavior when used for nonagricultural uses such as building site development or construction materials. This report gives ratings for proposed uses in terms of limitations and restrictive features. The tables list only the most restrictive features. Other features may need treatment to overcome soil limitations for a specific purpose.

Ratings come from the soil's "natural" state, that is, no unusual modification occurs other than that which is considered normal practice for the rated use. Even though soils may have limitations, an engineer may alter soil features or adjust building plans for a structure to compensate for most degrees of limitations. Most of these practices, however, are costly. The final decision in selecting a site for a particular use generally involves weighing the costs for site preparation and maintenance.

Soil properties influence development of building sites, including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. Soil limitation ratings of slight, moderate, and severe are given for the types of proposed improvements that are listed or inferred by the petitioner as entered on the report application and/or zoning petition. The most common types of building limitation that this report gives limitations ratings for is: septic systems. It is understood that engineering practices can overcome most limitations for buildings with and without basements, and small commercial buildings. Limitation ratings for these types of buildings are not commonly provided. Organic soils, when present on the parcel, are referenced in the hydric soils section of the report. This type of soil is considered to be unsuitable for all types of construction.

Limitations Ratings

1. ***Slight*** - This soil has favorable properties for the use. The degree of limitation is minor. The people involved can expect good performance and low maintenance.

2. ***Moderate*** - This soil has moderately favorable properties for the use. Special planning, design, or maintenance can overcome this degree of limitation. During some part of the year, the expected performance is less desirable than for soils rated slight.
3. ***Severe or Very Severe***- This soil has one or more properties that are unfavorable for the rated use. These may include the following: steep slopes, bedrock near the surface, flooding, high shrink-swell potential, a seasonal high water table, or low strength. This degree of limitation generally requires major soil reclamation, special design, or intensive maintenance, which in most situations is difficult and costly.

DWELLINGS WITH BASEMENTS

Dwellings are single-family houses of three stories or less. For dwellings with basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of about 7 feet.

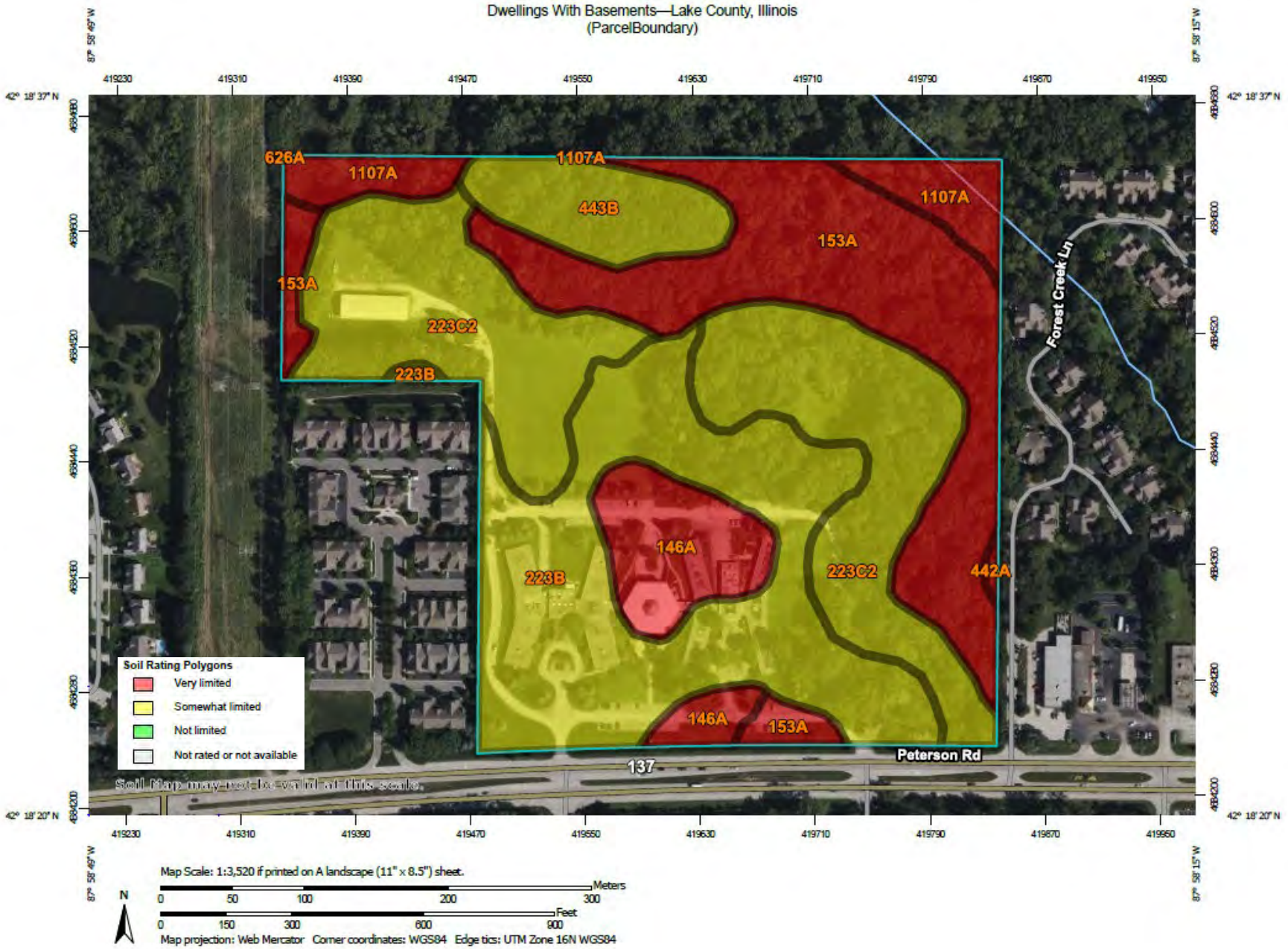
The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification of the soil. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the specified use. "Not limited" indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. "Somewhat limited" indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. "Very limited" indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.


Dwellings With Basements—Lake County, Illinois
(ParcelBoundary)
626A
1107A
1107A
1107A
443B
153A
153A
223C2
223B
146A
223B
223C2
442A
146A
153A
Forest Creek Ln
Peterson Rd
137
Soil Rating Polygons
Very limited
Somewhat limited
Not limited
Not rated or not available
Map Scale: 1:3,520 if printed on A landscape (11" x 8.5") sheet.
Meters
0 50 100 200 300
Feet
0 150 300 600 900
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84
N

Dwellings With Basements						
Map unit symbol	**Map unit name**	**Rating**	**Component name (percent)**	**Rating reasons (numeric values)**	**Acres**	**Percent**
146A	Elliott silt loam, 0 to 2 percent slopes	Very limited	Elliott (94%)	Depth to saturated zone (1.00)	3.1	7.5%
			Ashkum, drained (4%)	Ponding (1.00)		
				Depth to saturated zone (1.00)		
				Shrink-swell (0.98)		
			Orthents, clayey (1%)	Shrink-swell (1.00)		
				Depth to saturated zone (0.99)		
153A	Pella silty clay loam, 0 to 2 percent slopes	Very limited	Pella, drained (96%)	Ponding (1.00)	10.0	23.8%
				Depth to saturated zone (1.00)		
			Harpster, drained (3%)	Ponding (1.00)		
				Depth to saturated zone (1.00)		
				Shrink-swell (0.01)		
223B	Varna silt loam, 2 to 4 percent slopes	Somewhat limited	Varna (90%)	Depth to saturated zone (0.99)	11.7	27.7%
223C2	Varna silt loam, 4 to 6 percent slopes, eroded	Somewhat limited	Varna, eroded (90%)	Depth to saturated zone (0.99)	12.5	29.9%
442A	Mundelein silt loam, 0 to 2 percent slopes	Very limited	Mundelein (92%)	Depth to saturated zone (1.00)	0.1	0.2%
			Drummer, drained (4%)	Ponding (1.00)		
				Depth to saturated zone (1.00)		
				Shrink-swell (0.13)		
			Pella (2%)	Ponding (1.00)		
				Depth to saturated zone (1.00)		

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres	Percent
				Shrink-swell (0.00)		
443B	Barrington silt loam, 2 to 4 percent slopes	Somewhat limited	Barrington (92%)	Depth to saturated zone (0.99)	2.5	6.0%
			Orthents, loamy (1%)	Shrink-swell (0.50)		
				Depth to saturated zone (0.47)		
626A	Kish loam, 0 to 2 percent slopes	Very limited	Kish (90%)	Ponding (1.00)	0.0	0.0%
				Depth to saturated zone (1.00)		
				Shrink-swell (0.10)		
			Pella (5%)	Ponding (1.00)		
				Depth to saturated zone (1.00)		
				Shrink-swell (0.05)		
			Selma (3%)	Ponding (1.00)		
				Depth to saturated zone (1.00)		
				Shrink-swell (0.08)		
			Lena (2%)	Ponding (1.00)		
				Subsidence (1.00)		
				Depth to saturated zone (1.00)		
				Organic matter content (1.00)		
1107A	Sawmill silty clay loam, undrained, cool, 0 to 2 percent slopes, frequently flooded	Very limited	Sawmill, frequently flooded, undrained, cool (95%)	Ponding (1.00)	2.1	4.9%
				Flooding (1.00)		
				Depth to saturated zone (1.00)		
				Shrink-swell (0.58)		
			Millington, frequently flooded,	Ponding (1.00)		
				Flooding (1.00)		

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres	Percent
			undrained (4%)	Depth to saturated zone (1.00)		
				Shrink-swell (0.01)		
			Houghton, undrained (1%)	Ponding (1.00)		
				Depth to saturated zone (1.00)		
				Organic matter content (1.00)		
				Subsidence (1.00)		

Rating	Acres	Percent
Somewhat limited	26.7	63.6%
Very limited	15.3	36.4%

SOIL EROSION & SEDIMENT CONTROL

Erosion is the wearing away of the soil by water, wind, and other forces. Soil erosion threatens the Nation's soil productivity and contributes the most pollutants in our waterways. Water causes about two thirds of erosion on agricultural land. Four properties, mainly, determine a soil's erodibility:

1. Texture 2. Slope 3. Structure
4. Organic matter content

Slope has the most influence on soil erosion potential when the site is under construction. Erosivity and runoff increase as slope grade increases. The runoff then exerts more force on the particles, breaking their bonds more readily and carrying them farther before deposition. The longer water flows along a slope before reaching a major waterway, the greater the potential for erosion.

Soil erosion during and after this proposed construction can be a primary non-point source of water pollution. Eroded soil during the construction phase can create unsafe conditions on roadways, decrease the storage capacity of lakes, clog streams and drainage channels, cause deterioration of aquatic habitats, and increase water treatment costs. Soil erosion also increases the risk of flooding by choking culverts, ditches and storm sewers, and by reducing the capacity of natural and man-made detention facilities.

The general principles of erosion and sedimentation control measures include:

- reducing or diverting flow from exposed areas, storing flows or limiting runoff from exposed areas,
- staging construction in order to keep disturbed areas to a minimum,
- establishing or maintaining or temporary or permanent groundcover,
- retaining sediment on site and
- properly installing, inspecting and maintaining control measures.

<u>Erosion control practices are useful controls only if they are properly located, installed, inspected and maintained</u>.

Under the Watershed Development Ordinance of the Lake County Stormwater Management Commission, soil erosion and sedimentation control measures are required for any land disturbance. The following has to be met:

1. Any soil disturbance must be constructed in a way that will minimize any erosion.
2. Adjoining properties and channels need to be protected from erosion and sedimentation.
3. Soil erosion and sedimentation control measures need to be constructed prior to hydrologic disturbance.
4. The disturbed areas need to be protected with temporary (needs to be removed within 30 days after final site stabilization is achieved) or permanent measures within fourteen days following the end of hydrologic disturbance or redisturbance.
5. Land disturbance activities in streams need to be avoided.
6. Soil erosion and sedimentation control measures need to be appropriate in regard to the amount of tributary drainage areas.
7. All storm sewers that are functioning during construction need to be protected.
8. A stabilized construction entrance is required with the proper filter mat.
9. Embankments need to be constructed with side slopes no steeper than 3H:1V.
10. Stormwater conveyance channels and their outlets/pipes need to be designed and constructed (within 48 hours) to withstand the expected flow velocity from the 10-year frequency storm without erosion.
11. Temporary diversions need to be constructed to direct all runoff from the hydrologically disturbed areas to the appropriate sediment trap or basin.
12. Soil stockpiles shall not be located in a floodprone or buffer area, and should not erode.

This plan must go beyond the installation of silt fences. It should include provisions for soil stabilization and runoff control throughout the entire site and the entire construction process.

It has been shown that erosion on an active construction site is typically 20-200 times greater than that on a farm field. Sediment is one of the single largest pollutants facing waterways and

wetlands in the urban metropolitan area. Soil erosion and sediment deposition can adversely affect the existing natural drainageways, causing changes in the hydrologic flow and degradation of water quality in the area. For any development, it is imperative that a comprehensive SESC plan be developed and implemented properly. The wetland complex on-site and downstream may be at particular risk of degradation if a SESC plan is not in place.

Please refer to the SESC section located in the appendix of this report for site-specific recommendations and practices. Feel free to contact our office with any questions or for more specific guidance in this area.

Highly Erodible Soils (HEL)

Map Unit Symbol	HEL	Acres	Percent
146A	Elliott silt loam, 0 to 2 percent slopes - No	3.1	7.5%
153A	Pella silty clay loam, 0 to 2 percent slopes - No	10.0	23.8%
223B	Varna silt loam, 2 to 4 percent slopes - No	11.7	27.7%
223C2	Varna silt loam, 4 to 6 percent slopes, eroded - Yes	12.5	29.9%
442A	Mundelein silt loam, 0 to 2 percent slopes - No	0.1	0.2%
443B	Barrington silt loam, 2 to 4 percent slopes - No	2.5	6.0%
626A	Kish loam, 0 to 2 percent slopes - No	0.0	0.0%
1107A	Sawmill silty clay loam, undrained, cool, 0 to 2 percent slopes, frequently flooded - No	2.1	4.9%
Total Highly Erodible Soils (HEL)		**12.5**	**29.9%**

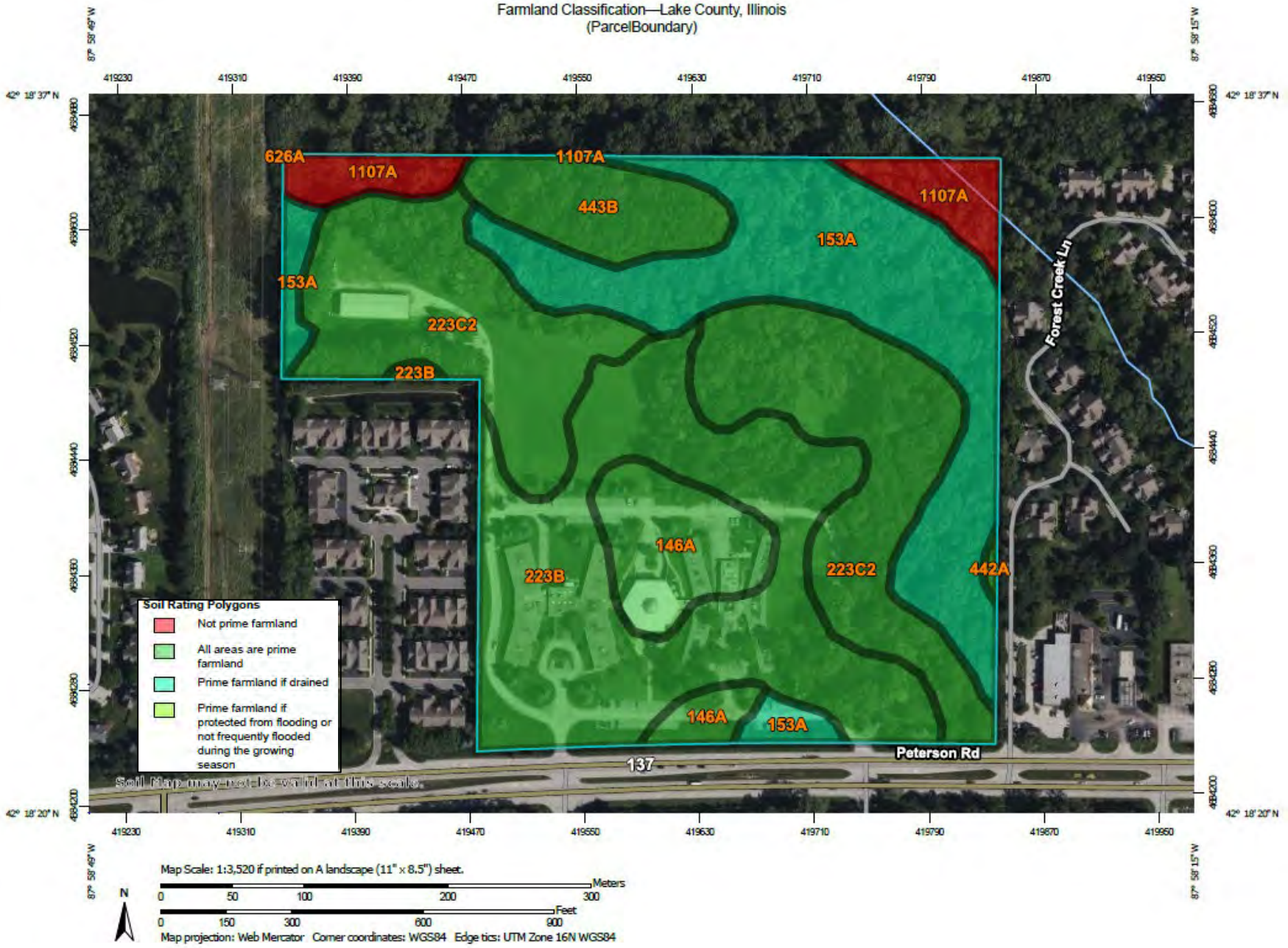
PRIME FARMLAND SOILS

Prime farmland soils are an important resource. Some of the most productive soils in the United States occur locally. Each soil map unit in the United States is assigned a prime or non-prime rating. Prime agricultural land does not need to be in the production of food & fiber.

Section 310 of the NRCS general manual states that urban or built-up land on prime farmland soils is not prime farmland. The percentages of soils map units on the parcel reflect the determination that urban or built up land on prime farmland soils is not prime farmland.

Farmland Classification

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
146A	Elliott silt loam, 0 to 2 percent slopes	All areas are prime farmland	3.1	7.5%
153A	Pella silty clay loam, 0 to 2 percent slopes	Prime farmland if drained	10.0	23.8%
223B	Varna silt loam, 2 to 4 percent slopes	All areas are prime farmland	11.7	27.7%
223C2	Varna silt loam, 4 to 6 percent slopes, eroded	All areas are prime farmland	12.5	29.9%
442A	Mundelein silt loam, 0 to 2 percent slopes	All areas are prime farmland	0.1	0.2%
443B	Barrington silt loam, 2 to 4 percent slopes	All areas are prime farmland	2.5	6.0%
626A	Kish loam, 0 to 2 percent slopes	Prime farmland if drained	0.0	0.0%
1107A	Sawmill silty clay loam, undrained, cool, 0 to 2 percent slopes, frequently flooded	Not prime farmland	2.1	4.9%
Totals for Area of Interest			**42.0**	**100.0%**


Farmland Classification—Lake County, Illinois
(ParcelBoundary)
626A
1107A
1107A
443B
1107A
153A
153A
223C2
223B
Forest Creek Ln
146A
223B
223C2
442A
146A
153A
Peterson Rd
137
Soil Rating Polygons
Not prime farmland
All areas are prime farmland
Prime farmland if drained
Prime farmland if protected from flooding or not frequently flooded during the growing season
Map Scale: 1:3,520 if printed on A landscape (11" x 8.5") sheet.
Meters
0 50 100 200 300
Feet
0 150 300 600 900
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84
N

Hydric Soils

This rating indicates the percentage of map units that meets the criteria for hydric soils. Map units are composed of one or more map unit components or soil types, each of which is rated as hydric soil or not hydric. Map units that are made up dominantly of hydric soils may have small areas of minor nonhydric components in the higher positions on the landform, and map units that are made up dominantly of nonhydric soils may have small areas of minor hydric components in the lower positions on the landform. Each map unit is rated based on its respective components and the percentage of each component within the map unit.

The thematic map is color coded based on the composition of hydric components. The five color classes are separated as 100 percent hydric components, 66 to 99 percent hydric components, 33 to 65 percent hydric components, 1 to 32 percent hydric components, and less than one percent hydric components.

In Web Soil Survey, the Summary by Map Unit table that is displayed below the map pane contains a column named 'Rating'. In this column the percentage of each map unit that is classified as hydric is displayed.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field.

These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

References:

Federal Register. July 13, 1994. Changes in hydric soils of the United States. Federal Register. September 18, 2002. Hydric soils of the United States.

Soils information gives another indication of flooding potential. The soils map on this page indicates the soil(s) on the parcel that the Natural Resources Conservation Service indicates as hydric. Hydric soils by definition have seasonal high water at or near the soil surface and/or have potential flooding or ponding problems. All hydric soils range from poorly suited to unsuitable for building. One group of the hydric soils, are the organic soils, which formed from dead organic material. Organic soils are unsuitable for building because of not only the high water table, but also their subsidence problems.

It is also important to add the possibility of hydric inclusions in a soil type. An inclusion is a soil polygon that is too small to appear on these maps. While relatively insignificant for agricultural use, hydric soil inclusions become more important to more intense uses such as a residential subdivision.
While considering hydric soils and hydric inclusions, it is noteworthy to mention that subsurface agriculture drainage tile occurs in almost all poorly drained and somewhat poorly drained soils. Drainage tile expedites drainage and facilitates farming. It is imperative that these drainage tiles remain undisturbed. A damaged subsurface drainage tile may return original hydrologic conditions to all of the areas that drained through the tile (ranging from less than one acre to many square miles.)

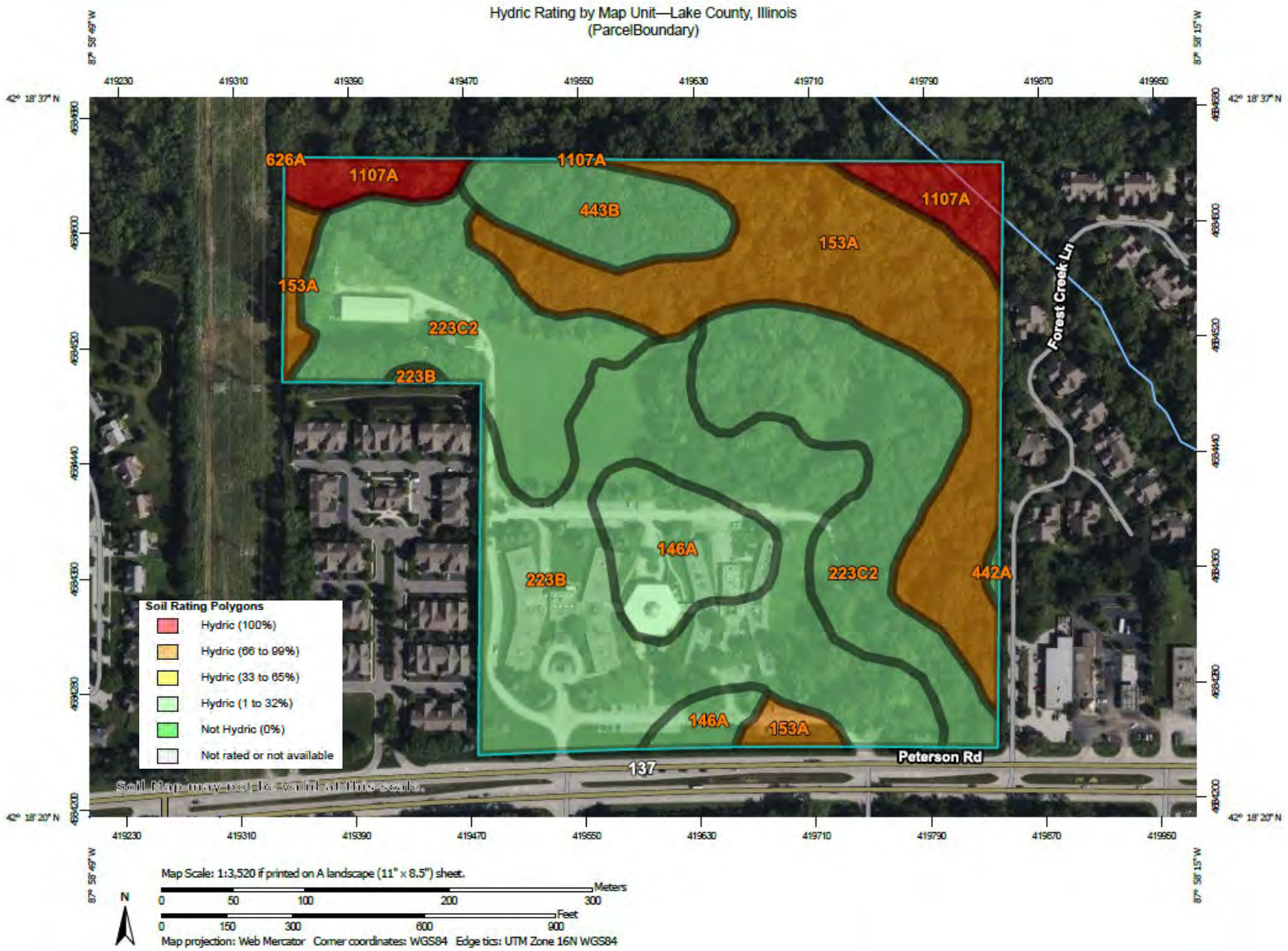
For an intense land use, such as a subdivision, the McHenry County SWCD recommends the following:

1. A topographical survey with 1 foot contour intervals to accurately define the flood area on the parcel.
2. An intensive soil survey to define most accurately the locations of the hydric soils and inclusions
3. A drainage tile survey on the area to locate the tiles that must be preserved.

In general, the District does not recommend building on hydric soils because of the unfavorable properties they exhibit and because of their long term, negative effects on the structures built.

Hydric Rating by Map Unit

Map unit symbol	Map unit name	Rating	Acres	Percent
146A	Elliott silt loam, 0 to 2 percent slopes	4	3.1	7.5%
153A	Pella silty clay loam, 0 to 2 percent slopes	99 - Hydric	10.0	23.8%
223B	Varna silt loam, 2 to 4 percent slopes	4	11.7	27.7%
223C2	Varna silt loam, 4 to 6 percent slopes, eroded	6	12.5	29.9%
442A	Mundelein silt loam, 0 to 2 percent slopes	6	0.1	0.2%
443B	Barrington silt loam, 2 to 4 percent slopes	6	2.5	6.0%
626A	Kish loam, 0 to 2 percent slopes	100 - Hydric	0.0	0.0%
1107A	Sawmill silty clay loam, undrained, cool, 0 to 2 percent slopes, frequently flooded	100 - Hydric	2.1	4.9%
Total Hydric Soils			**12.1**	**28.7%**


Hydric Rating by Map Unit—Lake County, Illinois
(ParcelBoundary)
626A
1107A
1107A
1107A
443B
153A
153A
223C2
223B
146A
223B
223C2
442A
146A
153A
Forest Creek Ln
Peterson Rd
137
Soil Rating Polygons
Hydric (100%)
Hydric (66 to 99%)
Hydric (33 to 65%)
Hydric (1 to 32%)
Not Hydric (0%)
Not rated or not available
Map Scale: 1:3,520 if printed on A landscape (11" x 8.5") sheet.
Meters
0 50 100 200 300
Feet
0 150 300 600 900
N
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

Field Tile Map: A check of the map of known field tiles did not identify drainage tiles on the parcel.

DRAINAGE, RUNOFF AND FLOOD INFORMATION

Importance of Flood Information

A floodplain is defined as land adjoining a watercourse (riverine) or an inland depression (non-riverine) that is subject to periodic inundation by high water. Floodplains are important areas demanding protection since they have water storage and conveyance functions which affect upstream and down stream flows, water quality and quantity, and suitability of the land for human activity. Since floodplains play distinct and vital roles in the hydrologic cycle, development that interferes with their hydrologic and biologic functions should be carefully considered.

Flooding is both dangerous to people and destructive to their properties. The following maps, when combined with wetland and topographic information, can help developers and future homeowners to "sidestep" potential flooding or ponding problems.

FIRM is the acronym for the Flood Insurance Rate Map, produced by the Federal Emergency Management Agency. These maps define flood elevation adjacent to tributaries and major bodies of water, and superimpose that onto a simplified USGS topographic map. The scale of the FIRM maps is generally dependent on the size and density of parcels in that area. (This is to correctly determine the parcel location and flood plain location.) The FIRM map has three (3) zones. A is the zone of 100 year flood, zone B is the 100 to 500 year flood, and zone C is outside the flood plain.

The Hydrologic Atlas (H.A.) Series of the Flood of Record Map is also used for the topographic information. This map is different from the FIRM map mainly because it will show isolated, or pocketed flooded areas. The Flood of Record maps, show the areas of flood for various years. Both of these maps stress that the recurrence of flooding is merely statistical. That is to say a 100-year flood may occur twice in one year, or twice in one week, for that matter.

It should be noted that greater floods than those shown on the two maps are possible. The flood boundaries indicated provide a historic record only until the map publication date. Additionally, these flood boundaries are a function of the watershed conditions existing when the maps were produced. Cumulative changes in runoff characteristics caused by urbanization can result in an increase in flood height of future flood episodes.

Floodplains play a vital role in reducing the flood damage potential associated with an urbanizing area and, when left in an undisturbed state, also provide valuable wildlife habitat benefits. If it is the petitioner's intent to conduct floodplain filling or modification activities, the petitioner and the Unit of Government responsible need to consider the potentially adverse effects this type of action could have on adjacent properties. The change or loss of natural floodplain storage often increases the frequency and severity of flooding on adjacent property.

It is the policy of the Board to recommend against any construction within/neighboring a floodplain in the interest of preserving natural floodplain capacity and to insure that flooding problems are not magnified in Lake County.

If the available maps indicate the presence of a floodplain on the PIQ, the petitioner should contact the IDOT-DWR and FEMA to delineate a floodplain elevation for the parcel. If a portion of the property is indeed floodplain, applicable state, county and local regulations will need to be reflected in the site plans.

Another indication of flooding potential can be found in the soils information. Hydric soils indicate the presence of drainageways, areas subject to ponding, or a naturally occurring high water table. These need to be considered along with the floodplain information when developing the site plan and the stormwater management plan. If the site does include these hydric soils

and development occurs, thus raising the concerns of the loss of water storage in these soils and the potential for increased flooding in the area.



USGS Flood of Record Map
This parcel is located on relatively flat topography (slopes 0 to 6%) involving high and low areas (elevation ranges from 682’ above sea level to 717’ above sea level).
During construction, temporary vegetation can decrease erosion on the slopes if the area is to be mass graded.
Also, the flood of record for this area indicates 2.12 acres of the parcel has previous flooded.


42.308 -87.975 Degrees
Lake County, Illinois GIS/Mapping Division



Federal Emergency Management Agency: Flood Insurance Rate Map Panel 17097C0162K

The map identifies 0.78 acres of Zone AE, 100-year floodplain with a base flood elevation of 698’ and 1.55 acres of Zone AE with a base flood elevation of 684’ on the parcel.

FLOODING FREQUENCY

Flooding is the temporary inundation of an area caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent.

"None" means that flooding is not probable. The chance of flooding is nearly 0 percent in any year. Flooding occurs less than once in 500 years.

"Very rare" means that flooding is very unlikely but possible under extremely unusual weather conditions. The chance of flooding is less than 1 percent in any year.

"Rare" means that flooding is unlikely but possible under unusual weather conditions. The chance of flooding is 1 to 5 percent in any year.

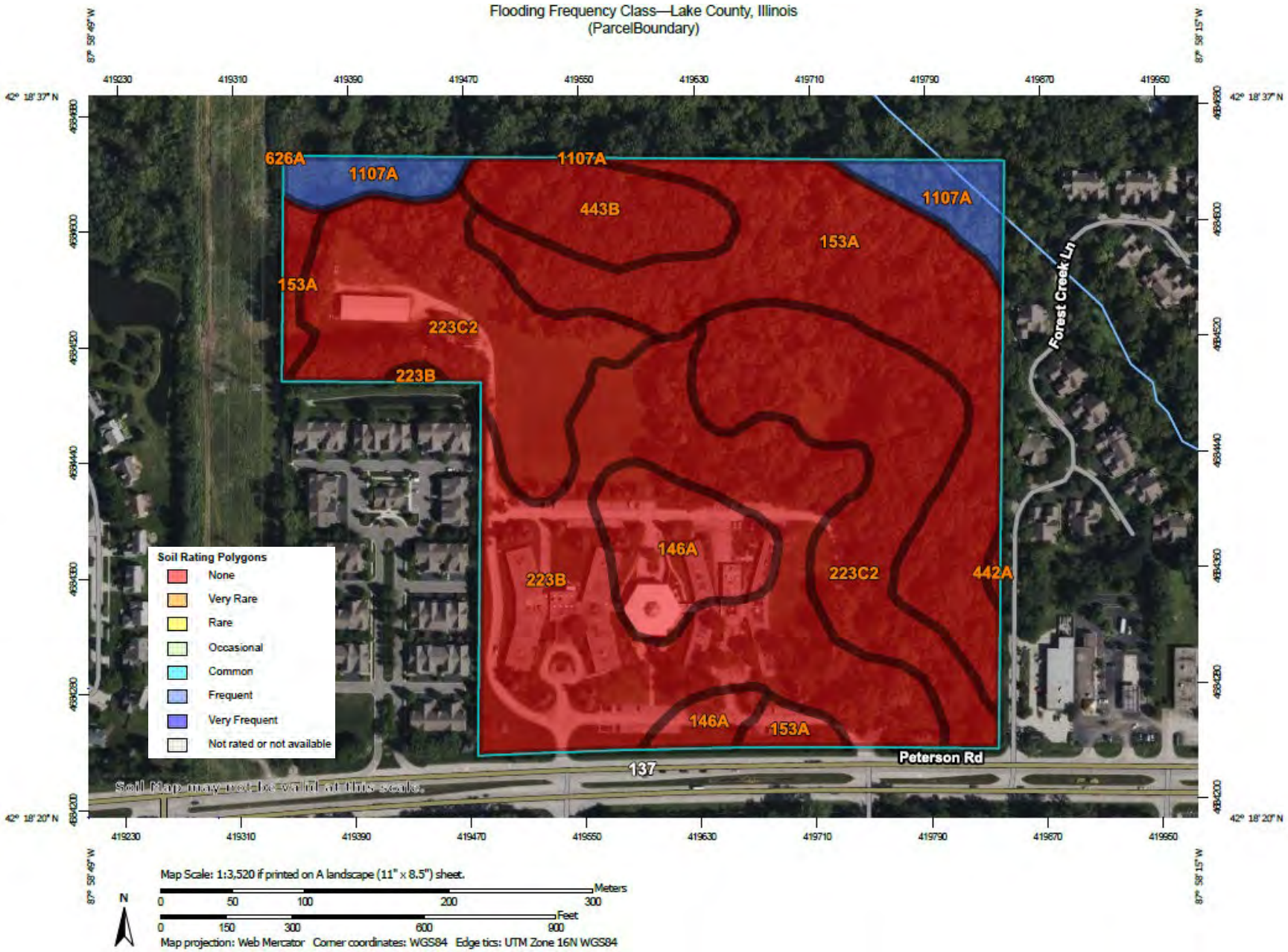
"Occasional" means that flooding occurs infrequently under normal weather conditions. The chance of flooding is 5 to 50 percent in any year.

"Frequent" means that flooding is likely to occur often under normal weather conditions. The chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year.

"Very frequent" means that flooding is likely to occur very often under normal weather conditions. The chance of flooding is more than 50 percent in all months of any year.

Flooding Frequency Class

Map unit symbol	Map unit name	Rating	Acres	Percent
146A	Elliott silt loam, 0 to 2 percent slopes	None	3.1	7.5%
153A	Pella silty clay loam, 0 to 2 percent slopes	None	10.0	23.8%
223B	Varna silt loam, 2 to 4 percent slopes	None	11.7	27.7%
223C2	Varna silt loam, 4 to 6 percent slopes, eroded	None	12.5	29.9%
442A	Mundelein silt loam, 0 to 2 percent slopes	None	0.1	0.2%
443B	Barrington silt loam, 2 to 4 percent slopes	None	2.5	6.0%
626A	Kish loam, 0 to 2 percent slopes	None	0.0	0.0%
1107A	Sawmill silty clay loam, undrained, cool, 0 to 2 percent slopes, frequently flooded	Frequent	2.1	4.9%
Total Frequent Flooding			**2.1**	**4.9%**


Flooding Frequency Class—Lake County, Illinois
(ParcelBoundary)
626A
1107A
1107A
1107A
443B
153A
153A
223C2
223B
146A
223B
223C2
442A
146A
153A
Forest Creek Ln
Peterson Rd
137
Soil Rating Polygons
None
Very Rare
Rare
Occasional
Common
Frequent
Very Frequent
Not rated or not available
Soil Map may not be valid at this scale.
Map Scale: 1:3,520 if printed on A landscape (11" x 8.5") sheet.
Meters
0 50 100 200 300
Feet
0 150 300 600 900
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84
N

PONDING FREQUENCY

Ponding is standing water in a closed depression. The water is removed only by deep percolation, transpiration, or evaporation or by a combination of these processes. Ponding frequency classes are based on the number of times that ponding occurs over a given period. Frequency is expressed as none, rare, occasional, and frequent.

"None" means that ponding is not probable. The chance of ponding is nearly 0 percent in any year.

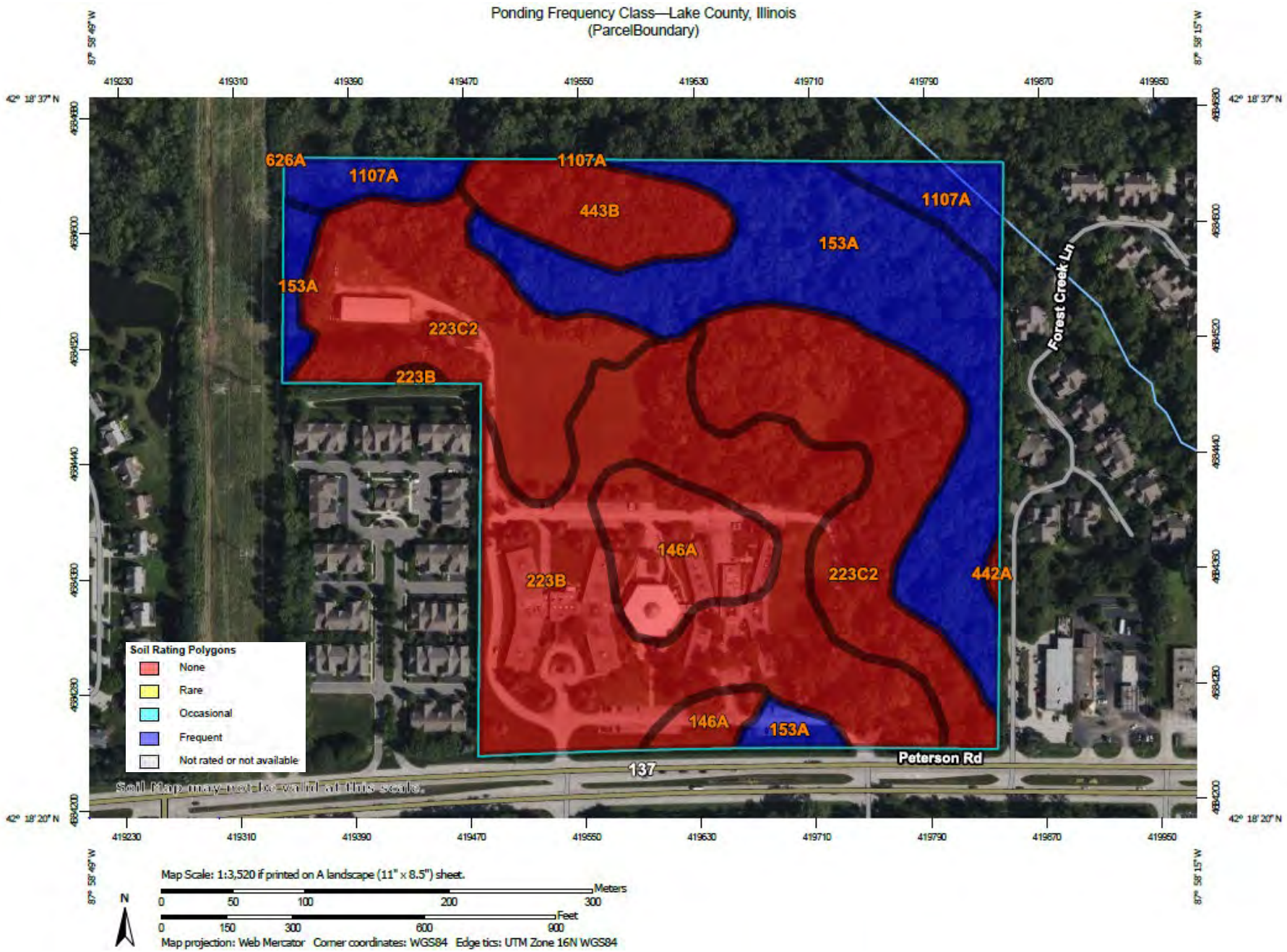
"Rare" means that ponding is unlikely but possible under unusual weather conditions. The chance of ponding is nearly 0 percent to 5 percent in any year.

"Occasional" means that ponding occurs, on the average, once or less in 2 years. The chance of ponding is 5 to 50 percent in any year.

"Frequent" means that ponding occurs, on the average, more than once in 2 years. The chance of ponding is more than 50 percent in any year.

Ponding Frequency Class

Map unit symbol	Map unit name	Rating	Acres	Percent
146A	Elliott silt loam, 0 to 2 percent slopes	None	3.1	7.5%
153A	Pella silty clay loam, 0 to 2 percent slopes	Frequent	10.0	23.8%
223B	Varna silt loam, 2 to 4 percent slopes	None	11.7	27.7%
223C2	Varna silt loam, 4 to 6 percent slopes, eroded	None	12.5	29.9%
442A	Mundelein silt loam, 0 to 2 percent slopes	None	0.1	0.2%
443B	Barrington silt loam, 2 to 4 percent slopes	None	2.5	6.0%
626A	Kish loam, 0 to 2 percent slopes	Frequent	0.0	0.0%
1107A	Sawmill silty clay loam, undrained, cool, 0 to 2 percent slopes, frequently flooded	Frequent	2.1	4.9%
Total Frequent			**12.1**	**28.7%**


Ponding Frequency Class—Lake County, Illinois
(ParcelBoundary)
626A
1107A
1107A
443B
1107A
153A
153A
223C2
223B
Forest Creek Ln
146A
223B
223C2
442A
146A
153A
Peterson Rd
137
Soil Rating Polygons
None
Rare
Occasional
Frequent
Not rated or not available
Map Scale: 1:3,520 if printed on A landscape (11" x 8.5") sheet.
Meters
0 50 100 200 300
Feet
0 150 300 600 900
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84
N

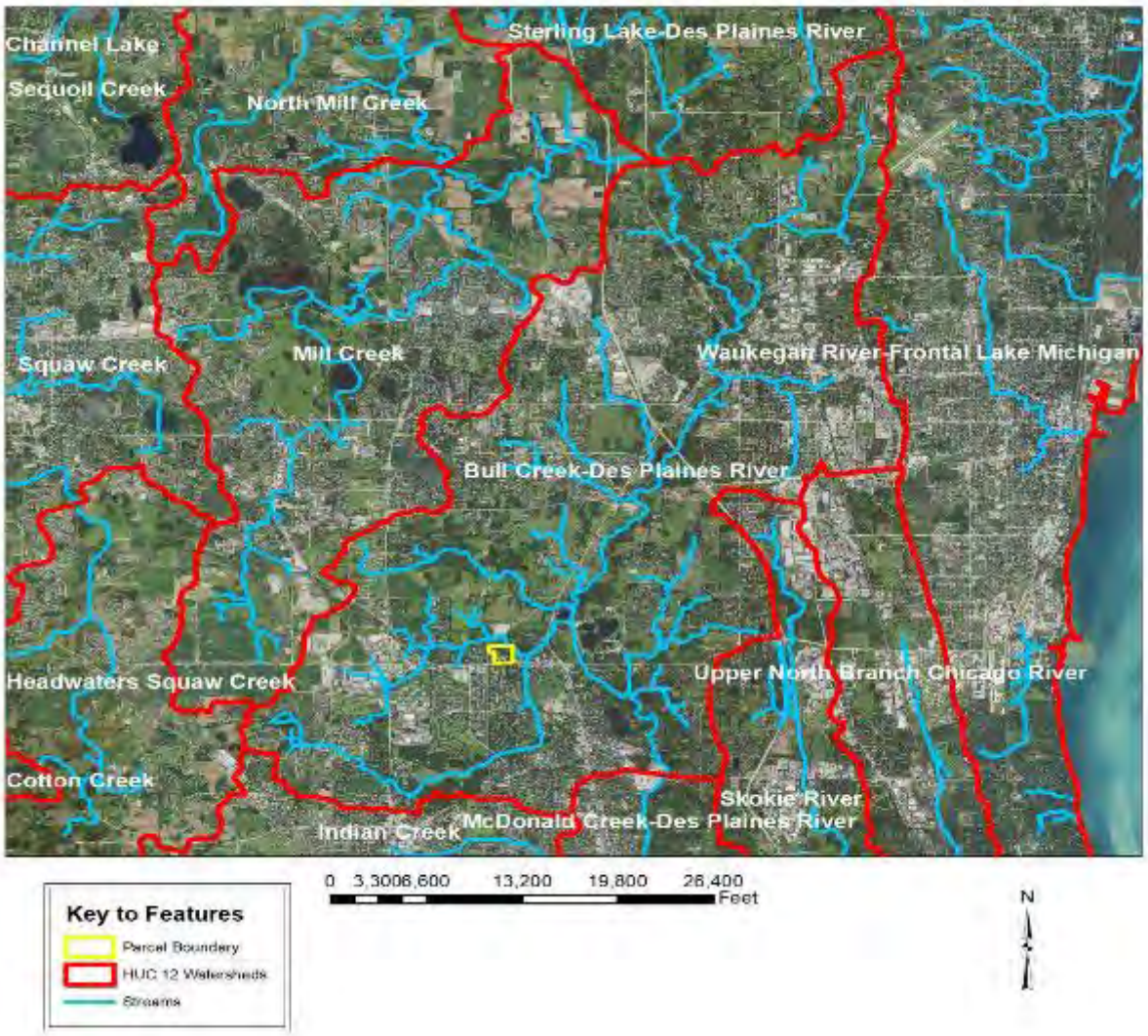
WATERSHED PLANS

What is a watershed?

No matter where you live, you live in a watershed. A watershed is the area of land that contributes/drains water to a certain point/ to a single body of water, based on the topography of the surrounding area, such as a stream, lake, wetland, or estuary. Natural events and human activities affect the watershed it lies within and even surrounding watershed areas. There are many activities that impact watersheds: recreation & tourism, water uses and transfers, forestry, agriculture, waste disposal, transportation, power generation, industrial discharges, urbanization, and resource extraction. There are many resulting threats from these impacts, such as, habitat loss and degradation, water quality and flow modification, chemical pollutants, nutrients, sediments, pathogens, invasive species, and thermal modification. In Lake County, there is a 10 to >25 percent of waters threatened within watersheds, divided by the total number of water miles in those watersheds. This information above was gathered from the U.S. Environmental Protection Agency's "Protecting and Restoring America's Watersheds" Document. For detailed information about current subwatershed management plans and studies please contact the Lake County Stormwater Management Commission (847) 918-5260. The parcel is within the Bull Creek Subwatershed of the Des Plaines River (HUC 12- 071200040503).

The watersheds plans can be found at these links:

https://www.lakecountyil.gov/2437/Watershed-Management-Plans


Channel Lake
Sequoit Creek
North Mill Creek
Sterling Lake-Des Plaines River
Squaw Creek
Mill Creek
Waukegan River-Frontal Lake Michigan
Bull Creek-Des Plaines River
Headwaters Squaw Creek
Upper North Branch Chicago River
Cotton Creek
Skokie River
Indian Creek
McDonald Creek-Des Plaines River
Key to Features
Parcel Boundary
HUC 12 Watersheds
Streams
0 3,3006,600 13,200 19,800 26,400
Feet
N

WETLAND INFORMATION

These maps are not intended to be used as an absolute delineation of jurisdictional wetland boundaries. Rather, they are planning tools that can serve to identify the likely presence of wetlands in a given area. A wetland delineation can only be made by a field investigator whose work is recognized by the U.S. Army Corps of Engineers (COE). Jurisdictional wetlands/Waters of the U.S. are subject to the regulatory authority of the COE under Section 404 of the Clean Water Act, and isolated wetlands are subject to the regulatory authority of the Lake County Stormwater Management Commission (SMC) under the Watershed Development Ordinance (for corporated communities) and the Lake County Planning & Zoning Department under the Unified Development Ordinance (for unincorporated areas). A wetland delineation has to be performed to determine jurisdictional authority.

It is the policy of the District to strongly recommend against the destruction or major modification of wetlands by filling, dredging or by other non-direct impacts such as water pollution or damage due to sedimentation.

Importance of Wetland Information

Wetlands function in many ways to provide numerous benefits to society. They control flooding by offering a slow release of excess water downstream or through the soil. They cleanse water by filtering out sediment and some pollutants, and can function as rechargers of our valuable groundwater. They also are essential breeding, rearing, and feeding grounds for many species of wildlife.

These benefits are particularly valuable in urbanizing areas as development activity typically adversely affects water quality, increases the volume of stormwater runoff, and increases the demand for groundwater. In an area where many individual homes rely on shallow groundwater wells for domestic water supplies, activities that threaten potential groundwater recharge areas are contrary to the public good. The conversion of wetlands, with their sediment trapping and nutrient absorbing vegetation, to biologically barren stormwater detention ponds can cause additional degradation of water quality in downstream or adjacent areas.

It has been estimated that over 95% of the wetlands that were historically present in Illinois have been destroyed while only recently has the true environmental significance of wetlands been fully recognized. America is losing 100,000 acres of wetland a year, and has saved 5 million acres total (since 1934). One acre of wetland can filter 7.3 million gallons of water a year. These are reasons why our wetlands are high quality and important.

USDA-NRCS Wetland Inventory

This section contains the NRCS (Natural Resources Conservation Service) Wetlands Inventory. The NRCS Wetlands Inventory is reproduced from an aerial photo at a scale of 1" equals 660 feet. The NRCS developed these maps in cooperation with U.S. EPA (Environmental Protection Agency,) and the U.S. Fish and Wildlife Service, using the National Food Security Act Manual, 3rd Edition. The main purpose of these maps is to determine wetland areas on agricultural fields and areas that may be wetlands but are in a non-agriculture setting.

The NRCS Wetlands Inventory in no way gives an exact delineation of the wetlands, but merely an outline, or the determination that there is a wetland within the outline. For the final, most accurate wetland **determination** of a specific wetland, a wetland ***delineation*** must be certified by NRCS staff using the National Food Security Act Manual (on agricultural land.)



Natural Resources Conservation Service: Wetland Inventory Map.

The map does not identify farmed wetlands on the parcel.

LAKE COUNTY WETLAND INVENTORY



The map identifies 14.68 acres of wetlands on the parcel.

ADID (ADVANCED IDENTIFICATION OF AQUATIC RESOURCES)

Wetlands are some of the most productive and diverse ecological systems on Earth. The unique characteristics of plants, soils, and water distinguish these systems. Marshes, wet meadows, fens and bogs are some of the common wetland types found within McHenry County. There are also various streams scattered throughout the county, including several that rank among the highest quality in Illinois.

These wetlands, lakes and streams provide needed habitat and food for fish and wildlife. Diverse plants both common and rare are can be found in wetlands, and over 40 percent of Illinois' threatened and endangered plant and animal species rely on wetlands.

Wetlands have many other roles. They are critical to the control of flooding by storing vast quantities of runoff water during floods, and releasing it slowly to rivers and srteams as the floodwater recedes. This in turn helps to prevent erosion in downstream channels, aids in groundwater recharge, and stabilizes the baseflow in streams and rivers. Wetlands are also crucial in protecting water quality. Wetlands that border lakes and streams prevent erosion by holding soil in place and deflecting erosive flows and waves. They also remove sediment, nutrients, and toxic chemicals from runoff water.

Other benefits include groundwater recharge, discharge of clean water, recreation, enhancement of natural aesthetics and serve as buffers between adjacent developments.

This program designed by the EPA (Environmental Protection Agency), is intended to improve awareness of the functions and values of wetlands and other U.S. waters. It is also intended to inform landowners and developers that high quality sites may not be unsuitable for the disposal of dredged or fill material. These ADID projects can also provide guidance on the long-term protection and management of aquatic resources.

The wetland boundaries shown are not jurisdictional delineations. Any proposed drainage work in wet areas requires a certified wetland determination.

The ADID study indicates 14.68 acres of high quality wetlands on the parcel in question.


0 75 150 300 450 600
Feet
N
Key to Features
Parcel Boundary
ADID Wetlands

RETENTION SYSTEMS, UNLINED

Unlined retention systems are stormwater management practices that are placed 3 to 5 feet in the ground, depending on the application. These systems include retention basins and intermittent wetlands. They slow the movement of stormwater to surface waters and also filter a significant portion of pollutants from the stormwater. The fundamental function of these systems is to hold the runoff generated by an area, such as a parking lot, from the first 1 inch of rainfall during a 24-hour storm preceded by 48 hours of no measurable precipitation. Water should not be at the surface continuously, but a water table within the depth of the system is needed to allow the growth of hydrophytic vegetation. . Only that part of the soil between depths of 24 and 80 inches is evaluated.

The ratings are based on the soil properties that affect infiltration of the stormwater, construction and maintenance of the system, and public safety and health. Saturated hydraulic conductivity (Ksat), depth to a water table, ponding, depth to bedrock or a cemented pan, and flooding affect the transmission of rainwater. Stones and boulders, ice, and bedrock or a cemented pan interfere with installation. Subsidence interferes with installation and maintenance.

Excessive slope may cause lateral seepage and surfacing of the water in downslope areas. Some slopes may become unstable and move upon addition of water.

Soils underlain by loose sand and gravel or fractured bedrock at a depth of less than 4 feet below the bottom of the system may adversely affect water quality and public health. In these soils the unlined retention system may not adequately filter the stormwater, particularly if the adsorptive capacity of the soil below the system is low. As a result, the ground water may become contaminated. In areas underlain by limestone, solution channels and subsequent subsidence may damage adjacent infrastructure. . Also, areas underlain by limestone may be subject to ground-water contamination.

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the specified system. "Not limited" indicates that the soil has features that are very favorable for the specified system. Good performance and very low maintenance can be expected. "Somewhat limited" indicates that the soil has features that are moderately favorable for the specified system. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. "Very limited" indicates that the soil has one or more features that are unfavorable for the specified system. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the specified system (1.00) and the point at which the soil feature is not a limitation (0.00).

The accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer lists the map unit components. These components are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as the one listed for the map unit. The percent composition of each component in a particular map unit is shown to help the user better understand the percentage of each map unit that has the rating indicated. Other components with different ratings may occur in each map unit.

The complete ratings list for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

Retention Systems, Unlined

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres	Percent
146A	Elliott silt loam, 0 to 2 percent slopes	Somewhat limited	Elliott (94%)	etness interferes with installation (0.25)	3.1	7.5%
				ater movement (0.14)		
				egetation establishment (0.00)		
			Ashkum, drained (4%)	egetation establishment (0.41)		
				etness interferes with installation (0.25)		
			Orthents, clayey (1%)	egetation establishment (0.50)		
				etness interferes with installation (0.12)		
				sufficient groundwater (0.08)		
153A	Pella silty clay loam, 0 to 2 percent slopes	Somewhat limited	Pella, drained (96%)	etness interferes with installation (0.25)	10.0	23.8%
				ater movement (0.14)		
				egetation establishment (0.05)		
			Harpster, drained (3%)	egetation establishment (0.40)		
				etness interferes with installation (0.25)		
				ater movement (0.14)		

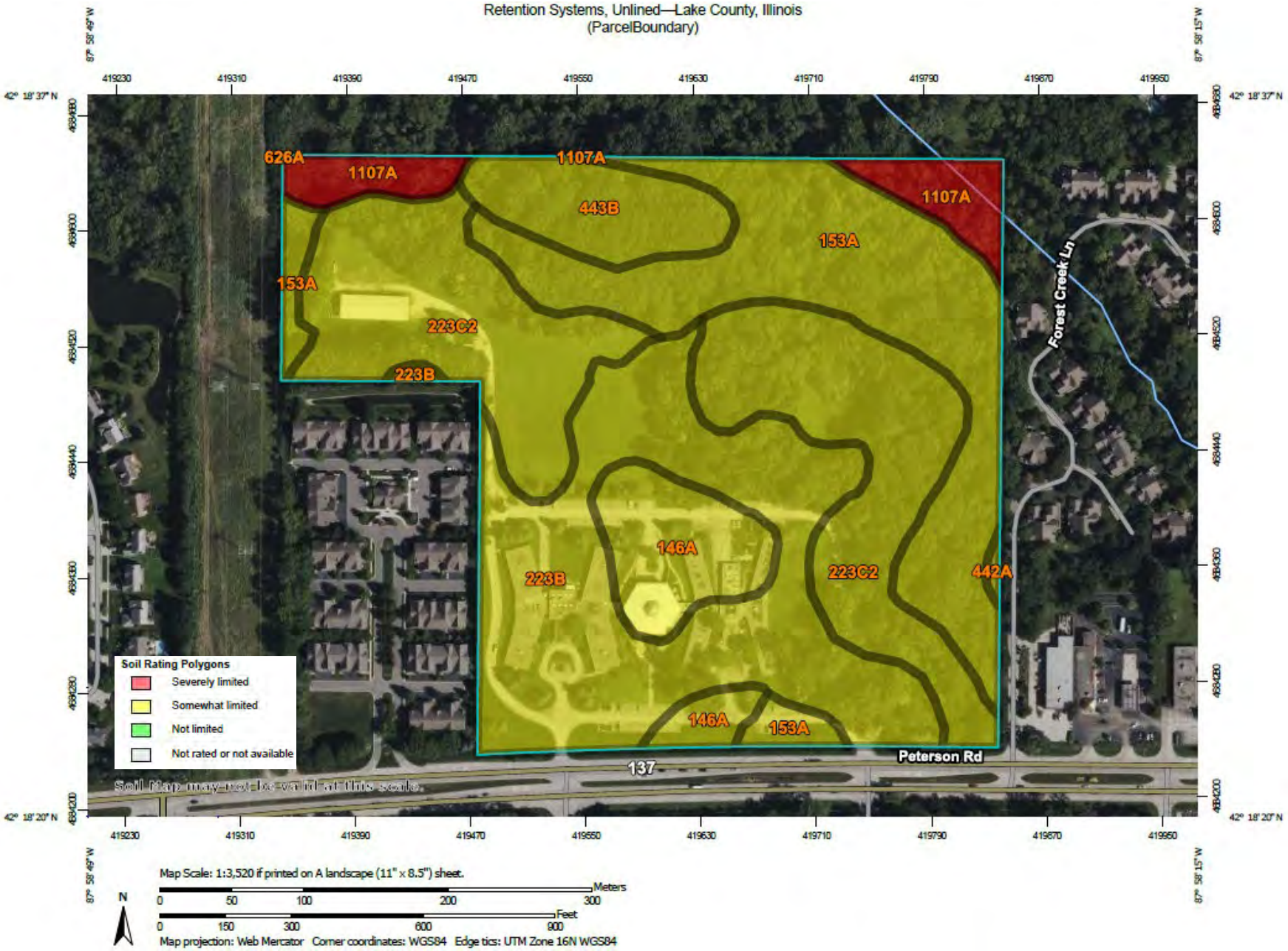
Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres	Percent
223B	Varna silt loam, 2 to 4 percent slopes	Somewhat limited	Varna (90%)	etness interferes with installation (0.12)	11.7	27.7%
				sufficient groundwater (0.08)		
				egetation establishment (0.00)		
			Ashkum, drained (4%)	egetation establishment (0.41)		
				etness interferes with installation (0.25)		
			Orthents, clayey (3%)	egetation establishment (0.50)		
				etness interferes with installation (0.12)		
				sufficient groundwater (0.08)		
223C2	Varna silt loam, 4 to 6 percent slopes, eroded	Somewhat limited	Varna, eroded (90%)	Slope (0.12)	12.5	29.9%
				etness interferes with installation (0.12)		
				sufficient groundwater (0.08)		
				egetation establishment (0.00)		
			Ashkum, drained (6%)	egetation establishment (0.41)		
				etness interferes with installation (0.25)		
			Orthents, clayey (2%)	egetation establishment (0.50)		

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres	Percent
				etness interferes with installation (0.12)		
				sufficient groundwater (0.08)		
442A	Mundelein silt loam, 0 to 2 percent slopes	Somewhat limited	Mundelein (92%)	etness interferes with installation (0.25)	0.1	0.2%
				ater movement (0.14)		
				getation establishment (0.05)		
			Drummer, drained (4%)	etness interferes with installation (0.25)		
				ater movement (0.14)		
				getation establishment (0.01)		
			Pella (2%)	etness interferes with installation (0.25)		
				ater movement (0.14)		
				getation establishment (0.05)		
			Orthents, loamy (1%)	sufficient groundwater (0.65)		
				getation establishment (0.31)		
				Slope (0.02)		
				etness interferes with installation (0.01)		
443B	Barrington silt loam, 2 to 4 percent slopes	Somewhat limited	Barrington (92%)	ater movement (0.14)	2.5	6.0%

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres	Percent
				etness interferes with installation (0.12)		
				sufficient groundwater (0.08)		
				egetation establishment (0.05)		
			Drummer (4%)	etness interferes with installation (0.25)		
				ater movement (0.14)		
				egetation establishment (0.01)		
			Pella (2%)	etness interferes with installation (0.25)		
				ater movement (0.14)		
				egetation establishment (0.05)		
			Orthents, loamy (1%)	sufficient groundwater (0.65)		
				egetation establishment (0.15)		
				Slope (0.02)		
				etness interferes with installation (0.01)		
626A	Kish loam, 0 to 2 percent slopes	Somewhat limited	Kish (90%)	egetation establishment (0.26)	0.0	0.0%
				etness interferes with installation (0.25)		
				ater movement (0.14)		

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres	Percent
			Pella (5%)	etness interferes with installation (0.25)		
				ater movement (0.14)		
				egetation establishment (0.05)		
			Selma (3%)	etness interferes with installation (0.25)		
				ater movement (0.14)		
				egetation establishment (0.03)		
			Lena (2%)	egetation establishment (0.50)		
				etness interferes with installation (0.33)		
				ater movement (0.25)		
1107A	Sawmill silty clay loam, undrained, cool, 0 to 2 percent slopes, frequently flooded	Severely limited	Sawmill, frequently flooded, undrained, cool (95%)	Flooding (1.00)	2.1	4.9%
				etness interferes with installation (0.33)		
				ater movement (0.14)		
				egetation establishment (0.05)		
			Millington, frequently flooded, undrained (4%)	Flooding (1.00)		
				egetation establishment (0.33)		
				etness interferes with installation (0.33)		
				ater movement (0.14)		

Rating	Acres in AOI	Percent of AOI
Somewhat limited	39.9	95.1%
Severely limited	2.1	4.9%


Retention Systems, Unlined—Lake County, Illinois
(ParcelBoundary)
626A
1107A
1107A
1107A
443B
153A
153A
223C2
223B
146A
223B
223C2
442A
146A
153A
Forest Creek Ln
Peterson Rd
137
Soil Rating Polygons
Severely limited
Somewhat limited
Not limited
Not rated or not available
Map Scale: 1:3,520 if printed on A landscape (11" x 8.5") sheet.
Meters
0 50 100 200 300
Feet
0 150 300 600 900
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84
N
42° 18' 37" N
42° 18' 20" N
87° 58' 49" W
87° 58' 15" W
419230
419310
419390
419470
419550
419630
419710
419790
419870
419950
4594600
4594560
4594520
4594480
4594440
4594400
4594360
4594320
4594280
4594240
4594200

WETLAND AND FLOODPLAIN REGULATIONS

PLEASE READ THE FOLLOWING IF YOU ARE PLANNING TO DO ANY WORK NEAR A STREAM (THIS INCLUDES SMALL UNNAMED STREAMS), LAKE, WETLAND OR FLOODWAY.

The laws of the United States and the State of Illinois assign certain agencies specific and different regulatory roles to protect the waters within the State's boundaries. These roles, when considered together, include protection of navigation channels and harbors, protection against flood way encroachments, maintenance and enhancement of water quality, protection of fish and wildlife habitat and recreational resources, and, in general, the protection of total public interest. Unregulated use of the waters within the State of Illinois could permanently destroy or alter the character of these valuable resources and adversely impact the public. Therefore, please contact the proper regulatory authorities when planning any work associated with Illinois waters so that proper consideration and approval can be obtained.

WHO MUST APPLY

Anyone proposing to dredge, fill, rip rap, or otherwise alter the banks or beds of, or construct, operate, or maintain any dock, pier, wharf, sluice, dam, piling, wall, fence, utility, flood plain or flood way subject to State of Federal regulatory jurisdiction should apply for agency approvals.

REGULATORY AGENCIES:

- **Wetlands or U.S. Waters: U.S. Army Corps of Engineers**, Chicago District,
  231 S. LaSalle St., Suite 1500
  Chicago, IL 60604
  Phone: (312) 846-5330
- **Lake County Department of Building & Zoning (UDO):** (847) 360-6330
- **Lake County Stormwater Management Commission:** (847) 918-5260
- **Flood plains: Illinois Department of Natural Resources \ Office of Water Resources**, 201 W. Center Court, Schaumburg, IL 60196-1096, phone (708)705-4341
- **Water Quality \ Erosion Control: Illinois Environmental Protection Agency**, Division of Water Pollution Control, Permit Section, Watershed Unit, 2200 Churchill Road, Springfield, IL 62706, phone (217)782-0610.

COORDINATION

We recommend early coordination with the regulatory agencies BEFORE finalizing work plans. This allows the agencies to recommend measures to mitigate or compensate for adverse impacts. Also, the agency can make possible environmental enhancement provisions early in the project planning stages. This could reduce time required to process necessary approvals.

CAUTION: Contact with the United States Army Corps of Engineers is strongly advised before commencement of any work in or near a water of the United States. This could save considerable time and expense. Persons responsible for willful and direct violation of Section 10 of the River And Harbor Act of 1899 or Section 404 of the Federal Water Pollution Control Act are subject to fines ranging up to $27,500 per day of violation and imprisonment for up to one year or both.

THREATENED & ENDANGERED SPECIES

The State of Illinois provides habitat for 500 threatened and endangered species, including 356 plants and 144 animals. Twelve counties in Illinois have 50 or more endangered species, 5 of which are in northeastern Illinois. Lake County has the greatest known number of records of any county in the state at almost 300 ("Endangered Species of Illinois," by the U.S. Fish & Wildlife Service, IDOC Division of Natural Heritage & Endangered Species Protection Board).

Approximately 40% of the state's listed species depend on wetlands for survival. Thus, it is not surprising that Lake County has so many endangered species on record since it still has approximately 10% of its land area in natural shallow water wetland. This compares to a statewide figure of 2.6%. Thus, Lake County has a unique and valuable resource that needs to be protected and managed properly.

The two main causes for species decline are the loss of habitat and the degradation of habitat. While habitat loss is the primary reason species become endangered, the effects of habitat change are not always seen overnight. It is seldom simply a case of individual animals or plants being killed. More often, habitat loss and the resulting species declines are indirectly caused and are the result of cumulative impacts over a period of time.

It is because of this slow encroachment of habitat degradation, fragmentation and loss that wildlife habitat must be looked at on a greater scale than just the site. Cumulative impacts occur because a small amount of damage is being done over here and little over there and no one is looking at the whole picture. Thus, the villages and county are strongly encouraged to look at habitat management on a regional scale.

THERE IS A POSSIBILITY FOR ENDANGERED SPECIES ON THE SITE. IF A REQUEST HAS NOT ALREADY BEEN SUBMITTED, THE PETITIONER SHOULD ASK THE ILLINOIS DEPARTMENT OF NATURAL RESOURCES TO CHECK THIS PARCEL FOR THE PRESENCE OF THREATENED OR ENDANGERED SPECIES. SHOULD ANY SUCH SPECIES BE IDENTIFIED AS UTILIZING THIS PARCEL, THE PETITIONER WILL BE NOTIFIED ACCORDINGLY. FOR MORE INFORMATION ON HOW TO REQUEST AN ENDANGERED SPECIES CHECK ON THIS PARCEL, PLEASE VISIT
www.dnrecocat.state.il.us/ecopublic.

GLOSSARY

AGRICULTURAL PROTECTION AREAS (AG AREAS) - Allowed by P.A. 81-1173. An AG AREA consists of a minimum of 350 acres of farmland, as contiguous and compact as possible. Petitioned by landowners, AG AREAS protect for a period of ten years initially, then reviewed every eight years thereafter. AG AREA establishment exempts landowners from local nuisance ordinances directed at farming operations, and designated land can not receive special tax assessments on public improvements that do not benefit the land, e.g. water and sewer lines.

AGRICULTURE - The growing, harvesting and storing of crops including legumes, hay, grain, fruit and truck or vegetable including dairying, poultry, swine, sheep, beef cattle, pony and horse production, fur farms, and fish and wildlife farms; farm buildings used for growing, harvesting and preparing crop products for market, or for use on the farm; roadside stands, farm buildings for storing and protecting farm machinery and equipment from the elements, for housing livestock or poultry and for preparing livestock or poultry products for market; farm dwellings occupied by farm owners, operators, tenants or seasonal or year around hired farm workers.

B.G. - Below Grade. Under the surface of the Earth.

BEDROCK - Indicates depth at which bedrock occurs. Also lists hardness as rippable or hard.

FLOODING - Indicates frequency, duration, and period during year when floods are likely to occur.

HIGH LEVEL MANAGEMENT - The application of effective practices adapted to different crops, soils, and climatic conditions. Such practices include providing for adequate soil drainage, protection from flooding, erosion and runoff control, near optimum tillage, and planting the correct kind and amount of high quality seed. Weeds, diseases, and harmful insects are controlled. Favorable soil reaction and near optimum levels of available nitrogen, phosphorus, and potassium for individual crops are maintained. Efficient use is made of available crop residues, barnyard manure, and/or green manure crops. All operations, when combined efficiently and timely, can create favorable growing conditions and reduce harvesting losses -- within limits imposed by weather.

HIGH WATER TABLE - A seasonal high water table is a zone of saturation at the highest average depth during the wettest part of the year. May be apparent, perched, or artesian kinds of water tables.

Water Table, Apparent - A thick zone of free water in the soil. An apparent water table is indicated by the level at which water stands in an uncased borehole after adequate time is allowed for adjustment in the surrounding soil.

Water Table, Artesian - A water table under hydrostatic head, generally beneath an impermeable layer. When this layer is penetrated, the water level rises in an uncased borehole.

Water Table, Perched - A water table standing above an unsaturated zone. In places an upper, or perched, water table is separated from a lower one by a dry zone.

DELINEATION - For Wetlands: A series of orange flags placed on the ground by a certified professional that outlines the wetland boundary on a parcel.

DETERMINATION - A polygon drawn on a map using map information that gives an outline of a wetland.

HYDRIC SOIL - This type of soil is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part (USDA Natural Resources Conservation Service 1987)

INTENSIVE SOIL MAPPING - Mapping done on a smaller more intensive scale than a modern soil survey to determine soil properties of a specific site, e.g. mapping for septic suitability.

LAND EVALUATION AND SITE ASSESSMENT (L.E.S.A.) - LESA is a systematic approach for evaluating a parcel of land and to determine a numerical value for the parcel for farmland preservation purposes.

MODERN SOIL SURVEY - A soil survey is a field investigation of the soils of a specific area, supported by information from other sources. The kinds of soil in the survey area are identified and their extent shown on a map, and an accompanying report describes, defines, classifies, and interprets the soils. Interpretations predict the behavior of the soils under different used and the soils' response to management. Predictions are made for areas of soil at specific places. Soils information collected in a soil survey is useful in developing land-use plans and alternatives involving soil management systems and in evaluating and predicting the effects of land use.

PALUSTRINE - Name given to inland fresh water wetlands

PERMEABILITY - Values listed estimate the range (in rate and time) it takes for downward movement of water in the major soil layers when saturated, but allowed to drain freely. The estimates are based on soil texture, soil structure, available data on permeability and infiltration tests, and observation of water movement through soils or other geologic materials.

POTENTIAL FROST ACTION - Damage that may occur to structures and roads due to ice lens formation causing upward and lateral soil movement. Based primarily on soil texture and wetness.

PRIME FARMLAND - Prime farmland soils are lands that are best suited to food, feed, forage, fiber and oilseed crops. It may be cropland, pasture, woodland, or other land, but it is not urban and built up land or water areas. It either is used for food or fiber or is available for those uses. The soil qualities, growing season, and moisture supply are those needed for a well managed soil economically to produce a sustained high yield of crops. Prime farmland produces in highest yields with minimum inputs of energy and economic resources, and farming the land results in the least damage to the environment.
Prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation. The temperature and growing season are favorable. The level of acidity or alkalinity is acceptable. Prime farmland has few or no rocks and is permeable to water and air. It is not excessively erodible or saturated with water for long periods and is not frequently flooded during the growing season. The slope ranges mainly from 0 to 5 percent. (Source USDA Natural Resources Conservation Service)

PRODUCTIVITY INDEXES - Productivity indexes for grain crops express the estimated yields of the major grain crops grown in Illinois as a single percentage of the average yields obtained under basic management from several of the more productive soils in the state. This group of soils is composed of the Muscatine, Ipava, Sable, Lisbon, Drummer, Flanagan, Littleton, Elburn and Joy soils. Each of the 425 soils found in Illinois are found in Circular 1156 from the Illinois Cooperative Extension Service.
SEASONAL - When used in reference to wetlands indicates that the area is flooded only during a portion of the year.

SHRINK-SWELL POTENTIAL - Indicates volume changes to be expected for the specific soil material with changes in moisture content.

SOIL MAPPING UNIT - A map unit is a collection of soil areas of miscellaneous areas delineated in mapping. A map unit is generally an aggregate of the delineations of many different bodies of a kind of soil or miscellaneous area but may consist of only one delineated body. Taxonomic class names and accompanying phase terms are used to name soil map units. They are described in terms of ranges of soil properties within the limits defined for taxa and in terms of ranges of taxadjuncts and inclusions.

SOIL SERIES - A group of soils, formed from a particular type of parent material, having horizons that, except for texture of the A or surface horizon, are similar in all profile characteristics and in arrangement in the soil profile. Among these characteristics are color, texture, structure, reaction, consistence, and mineralogical and chemical composition.

SUBSIDENCE - Applies mainly to organic soils after drainage. Soil material subsides due to shrinkage and oxidation.

TERRAIN - The area or surface over which a particular rock or group of rocks is prevalent.

TOPSOIL - That portion of the soil profile where higher concentrations of organic material, fertility, bacterial activity and plant growth take place. Depths of topsoil vary between soil types.

WATERSHED - An area of land that drains to an associated water resource such as a wetland, river or lake. Depending on the size and topography, watersheds can contain numerous tributaries, such as streams and ditches, and ponding areas such as detention structures, natural ponds and wetlands.

WETLAND - An area that has a predominance of hydric soils and that is inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances does support, a prevalence of hydrophytic vegetation typically adapted for life in saturated soil conditions.

CONTACT LIST

U.S. Army Corps of Engineers
Chicago District
111 N. Canal St., 6th Floor
Chicago IL 60606-7206
312/353-6400

U.S. Environmental Protection Agency
Water Division
111 W. Jackson Blvd.
Chicago IL 60604
312/353-2147

Federal Emergency Management Agency
175 Jackson Blvd., 4th Floor
Chicago IL 60604
312/431-5501

Illinois Historic Preservation Agency
Old State Capitol
Springfield IL 62701
217/782-4836

U.S. Fish & Wildlife Service
Chicago Field Office
1250 South Grove Avenue., Suite 103
Barrington IL 60010
847/381-2253

Illinois Environmental Protection Agency
Division of Water Pollution Control
9511 West Harrison Road
Des Plaines IL 60016
847/294-4045

Illinois Department of Natural Resources
Division of Natural Heritage
600 N. Grand Ave. W.
Northwest Office Plaza, Suite 4
Springfield IL 62706
217/785-8774

Illinois Department of Agriculture
Bureau of Soil & Water
State Fairgrounds
P.O. Box 19281
Springfield IL 62794
217/782-6297

Illinois Department of Natural Resources
Private Lands Biologist
9511 W. Harrison St.
Des Plaines IL 60010
708/294-4129

Illinois State Geological Survey
Natural Resources Building
615 E. Peabody Dr.
Champaign IL 61820
217/333-4747

Illinois Department of Transportation
Division of Water Resources
201 W. Center Court, 3rd Floor East
Schaumburg IL 60196-1096
708/345-9780

USDA Natural Resources Conservation Service
1648 S. Eastwood Dr.
Woodstock IL 60098
815/338-0049 x3

Lake County Health Department
Division of Environmental Health
3010 Grand Ave.
Waukegan IL 60085
847/360-6700

Lake County Stormwater Management Commission
333-B Peterson Rd.
Libertyville IL 60048
847/918-5260

Chicago Metropolitan Agency for Planning
233 S. Wacker Drive, Ste. 800
Chicago IL 60606
312/454-0400

Lake County Forest Preserve District
2000 N. Milwaukee Ave.
Libertyville IL 60048
847/367-6640

Lake County Planning and Development
18 N. County St.
Waukegan IL 60085
847/360-6330

Lake County Planning, Building & Development
18 N. County St.
Waukegan IL 60048
847/360-6350

Lake County Department of Transportation
P.O. Box 220, Winchester Rd.
Libertyville IL 60048
847/362-3950

REFERENCES

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Appendix:

SOIL EROSION & SEDIMENT CONTROL

Development on this site must include the use of a Soil Erosion and Sedimentation Control (SESC) plan, under the Watershed Development Ordinance (WDO) of the Lake County Stormwater Management Commission. Soil erosion during and after this proposed construction can be a primary non-point source of water pollution. Eroded soil during the construction phase can create unsafe conditions on roadways, decrease the storage capacity of lakes, clog streams and drainage channels, cause deterioration of aquatic habitats, and increase water treatment costs. Soil erosion also increases the risk of flooding by choking culverts, ditches and storm sewers, and by reducing the capacity of natural and man-made detention facilities. It is important that a comprehensive SESC plan be developed for all phases of site development, that these practices are installed prior to any site disturbance, and rigorously maintained throughout all phases of the project.

The SESC plan for the proposed development must take into consideration the property's proximity to highly valued habitats and the potential for negatively impacting these areas. The plan needs to be comprehensive and properly implemented and maintained.

The general principles of erosion and sedimentation control measures include:

- reducing or diverting flow from exposed areas, storing flows or limiting runoff from exposed areas,
- staging construction in order to keep disturbed areas to a minimum,
- establishing or maintaining or temporary or permanent groundcover,
- retaining sediment on site and
- properly installing, inspecting and maintaining control measures.

Erosion control practices are useful controls only if they are properly located, installed, inspected and maintained.

The SESC plan for the proposed development must take into consideration the presence of highly erodible soils. The plan needs to be comprehensive and properly implemented and maintained.

For developments, the District recommends that the following erosion control measures be included in development plans, implemented and maintained throughout the life of projects. Each of these recommendations can be referenced by code number in the Illinois Urban Manual.

Silt Fencing (Code 920): Silt fences are very often installed improperly, overused, and not properly monitored or maintained. At all sites, silt fences should be trenched in (six inches) around any body of water and waterways. The silt fence should be used to handle sheet flow only, not concentrated flow such as in swales. The fence, which should be installed prior to any land disturbing activity, should be inspected weekly and after significant rain event.

Storm Sewer Inlet Protection: The use of straw bales for inlet protection is not recommended due to their lack of effectiveness and high maintenance requirements. Instead, any one of the 3 following practices will be much more effective:

a. Block and gravel system (Code 850)
b. Excavated drain (Code 855)
c. Fabric drop (Code 860) – this practice involves placing geotextile fabric under the grates. **This practice requires weekly inspections.**

Use of Detention Basins During Construction: The detention basin should be excavated prior to any other grading activities. The basin can be used as a sediment trap during construction if it is over-excavated or later cleaned out after construction has been completed. If the detention area will not be used as a sediment basin, a silt fence should be installed around the upslope perimeter of it to prevent it from filling in.

Rock Outlet Protection (Code 910): The outlet end of all culverts, conduits or channels should be stabilized with properly sized rip-rap placed over geotextile fabric. This will protect the outlet structure, prevent scour erosion and minimize downstream erosion by reducing the velocity and energy of concentrated stormwater flows at these points of high velocity flow.

Concentrated Flow Areas: The use of straw bales in areas of concentrated flow areas, such as swales, is not recommended. Their poor filtering ability and high maintenance requirements make them ineffective for soil erosion control. Alternatives to straw bales include:

a. Rock Check Dams (Code 905, Draft)
b. Silt fence in conjunction with a reinforcing wire fence with steel posts.
c. Silt dykes: These reusable, triangular fabric dykes can be used to control erosion in swales.

All swales should be protected with sod or erosion control blankets immediately after final grading.

Grading and Topsoil Activities: If the site will be mass graded, consideration must be given to protection of the site after topsoil removal and erosion prevention of the topsoil stockpile. To do this, the following concepts can be used:

a. Temporary seeding of graded area and topsoil stockpile (Code 965)
b. Mulching of graded area (Code 875)
c. Silt fencing around topsoil stockpile

Stabilized Construction Entrance: (Code 930) Special consideration should be given to the prevention of sediment being brought off-site. A stabilized pad of aggregate underlain with filter fabric should be located at any point where traffic will be entering or leaving the site to or from a public right-of-way during active construction.

Temporary Seeding: Per the County's Watershed Development Ordinance, all areas that will be exposed longer than 14 working days must be temporarily seeded or mulched. Appropriate seeding includes annual rye or oats.

For large drainage areas, temporary sediment basins should be installed (Code 960).

Porous Pavement (Code 890): A pavement consisting of strong materials having regularly interspersed void areas which are filled with pervious materials, such as sod, gravel or sand. The purpose of this practice is to reduce water pollution from low-volume traffic areas by providing a bearing surface having adequate strength to accommodate vehicles while allowing infiltration of surface water and filtration of pollutants. This practice is intended to achieve this purpose by:

1) Reducing volume and peak rate of runoff flow, thus reducing the likelihood of sewer overflows, flooding, and downstream erosion, and sediment pollution.
2) Reducing the loading and concentration of pollutants in the runoff.

Preventing the onset of erosion is much less expensive and much more effective than keeping erosion in check and conducting clean-up efforts when these efforts fail.

Detailed information on the most appropriate methods of controlling erosion and sedimentation in urbanizing areas may be found in the publication Procedures and Standards for Urban Soil Erosion and Sedimentation Control in Illinois (Greenbook) as well as the **Illinois Urban Manual**. These manuals and additional technical assistance may be obtained by contacting this office. A copy of the Lake County Stormwater Management Commission Technical Reference Manual can be obtained by calling 847-918-5260. The Northeastern Illinois Planning Commission (NIPC) has published the Suggested Soil Erosion and Sedimentation Control Ordinance: Guide for Local Officials. This can be ordered by calling 312-454-0400.

Our office is available for consultation on soil erosion and sediment control concerns. We also periodically sponsor workshops on this topic.

OPEN SPACE MANAGEMENT

Open space is an important resource, especially in an urban area as it provides recreational opportunities, valuable wildlife habitat and resource protection.

A common misconception regarding open space is that by merely protecting a natural area from direct or indirect impacts, its long-term survival has been insured. Open space must be properly managed. This can include the removal of undesirable (non-native or invasive) vegetation and the restoration of native plant communities to enhance habitat for local species of wildlife.

Woodland, wetland and native grassland areas are complex ecosystems that must be perpetually managed to insure their continued biological diversity. A typical landowner may not have knowledge of this type of management, possess the means by which to do it, or have the desire to perform the management, and may even undertake activities which adversely affect these areas.

Open space areas may be owned in a variety of ways. The most common technique is a property owners association in which each person owns a fractional share of the open land and has a legal responsibility to contribute to its maintenance and upkeep. The use of the land is restricted by deed restrictions. Trail systems can be developed to allow all residents of the subdivision to utilize these areas for passive recreation. A second option is private ownership (lot owners or the developer) with deed restrictions.

Tax responsibility can be a consideration. Open space in a development is taxable land, though the deed restrictions lower the value of the open space. This is offset, however, by the increased value of homes adjoining the open space.

Since homeowners' associations may not have the technical and financial resources to adequately manage such areas, and the area is still potentially subject to future land use change requests, transferring ownership to a conservancy group, park district, forest preserve district or other such resource-oriented organization is a better option. Trained personnel whose primary goal is to maintain the area into perpetuity can conduct management activities on an area-wide basis.

Minimally, an open space management plan needs to be developed and implemented which includes a funding mechanism to insure long-term management.

DRAINAGE DISTRICTS AND WHO TO CALL FOR DRAINAGE PROBLEMS

Active Drainage Districts in Lake County, Illinois:

East Skokie – (847) 831-2371 (includes areas in Highland Park, Lake Forest, Highwood, Lake Bluff, North Chicago, & Waukegan).
West Skokie – (312) 782-4780 (includes areas in Libertyville, Shields, West Deerfield, and Vernon Townships).
Union – (847) 945-0600 (includes areas in the communities of West Deerfield, Lake County and North Field, Cook County).
Slocum – (847) 526-1355 (includes areas in Cuba and primarily Wauconda Townships).
Squaw Creek – (847) 582-2255 (includes areas in Avon, Grant and primarily Fremont Townships).
Grubb School – (847) 395-5787 (includes areas in Antioch).
Avon-Fremont – (847) 223-2037 (includes areas in Avon and Fremont Townships).
Beach Park – (847) 336-2985 (includes areas in Beach Park, Park City, North Chicago, and Waukegan).

FOR MORE INFORMATION ON DRAINAGE DISTRICTS, PLEASE CALL THE LAKE COUNTY STORMWATER MANAGEMENT COMMISSION AT (847) 918-5260.

DRAINAGE PROBLEMS - WHO TO CALL IN LAKE COUNTY, IL

REFER TO:	WHEN THE CALL RELATES TO:	ADDITIONAL INFORMATION:
LAKE COUNTY STORMWATER MANAGEMENT COMMISSION (847) 918-5260 WWW.CO.LAKE.IL.US/SMC	1. Neighborhood, watershed or regional scale problems 2. Interjurisdictional issues 3. Involves a violation of the Lake County Watershed Development Ordinance [related to new development and in non-certified communities]	Relies on other governmental units to respond to smaller scale problems; has field staff to investigate drainage complaints in non-certified communities; funding available for repair or maintenance of drainage facilities and drainage problems; compiles drainage data for watershed planning and should be notified by Certified Communities of major problems.
LAKE COUNTY PLANNING, BUILDING, & DEVELOPMENT DEPARTMENT, ENGINEERING AND ENVIRONMENTAL SERVICES DIVISION (E&ES) (847) 377-2600	1. Complaint is on a parcel located in an unincorporated area. 2. Drainage complaints, erosion control, Site Development Permits 3. Individual, neighborhood, watershed scale problems 4. Involves a violation of the Lake County Unified Development Ordinance (related to older or new development).	Has field staff to inspect and respond to drainage complaints in unincorporated areas; can require remedial activity if in violation of the Lake County Unified Development Ordinance; funding available for repair or maintenance of drainage facilities; provides notification to SMC of regional scale problems.
LOCAL MUNICIPALITIES	1. Lot and Neighborhood level drainage concerns 2. Emergency response: sandbags, evacuation procedures	Usually have staff or budget through public works to handle common problems; have authority to enter lands to remove blockages even outside own boundaries.
TOWNSHIP HIGHWAY DEPARTMENTS	1. Drainage concerns are within the right-of-way of a township road.	Sometimes staff is able to reduce local flooding problems by improvements along ROW but is not common; policies vary from Township to Township; not able to assist in areas outside its own ROW.
LAKE CO. DIV. OF TRANSPORTATION (LCDOT) (847) 362-3950	1. Bridges, culverts, ditches, within the right-of-way (county roads)	Maintains all bridges, culverts and ditches within the ROW of county highway signs signified by blue and gold route markers saying Lake County.
LAKE COUNTY HEALTH DEPARTMENT (LCHD), DIVISION OF ENVIRONMENTAL HEALTH (847) 360-6740	1. Contamination of an individual well. 2. Failure of individual septic.	Primary concern for water quality specifically public beaches, indiv. wells & septics; required to respond within 14 days but can only assist if flooding problems results in failure of septic or contamination of well.
LAKE COUNTY SOIL AND WATER CONSERVATION DISTRICT (SWCD) (847) 223-1056 U.S. DEPT. OF AGRICULTURE (NRCS)	1. Agricultural drainage issues or drainage issues related to soil erosion.	Provides technical assistance and education; has some information on farm tiles; field staff makes site visits upon requests.
DRAINAGE DISTRICTS	1. Problem associated with drainage ditches and streams within a drainage district.	Provides information, technical assistance; field staff may be available for site visits in cases of severe drainage, soil erosion.
FOX WATERWAY AGENCY (847) 587-8540	1. Debris removal, shoreline protection, flood control, flood warning for Chain area.	Primarily responsible for dredging, debris removal, shoreline protection, flood control, flood warning for Chain O'Lakes area; has staff for site visits.
LAKE COUNTY EMERGENCY MANAGEMENT AGENCY (LCEMA) (SHERIFFS OFFICE) (847) 377-7100	1. Request for sandbags and evacuation procedures is coordinated by municipal EMA coordinators and township officials.	Primarily responsible for emergency services in a disaster; works closely with local ESDA coordinators during a disaster/flood event. Refer requests for sandbags and evacuation procedures to local municipality or to township; does not distribute insurance claims.
US GEOLOGICAL SURVEY - URBANA, IL (217) 344-0037	1. Provides real-time, unofficial river/stream stage information, rain totals (SMC rain/stream gages are the same as USGS gages)	Data available at: http://il.water.usgs.gov

STORMWATER MANAGEMENT AND WATER QUALITY IMPACTS

Development of a property results in compaction of soil and the addition of areas of impervious surfaces (rooftops, roadways, etc.) which will greatly increase the amount of stormwater runoff generated by the site.

The District strongly recommends the use of on-site stormwater management to reduce the potential for degrading water quality in the area. Runoff should be retained in on-site basins in order to provide sufficient opportunity to improve the water quality of the runoff to prevent degradation of the water quality in the area. Stormwater should be released at a rate that approximates natural, undisturbed runoff conditions. Insufficient stormwater management on the site could threaten the stormwater capacity of the surrounding drainageways or aggravate flooding conditions on surrounding properties or elsewhere in the watershed.

The District discourages allowing stormwater runoff produced by urban development to flow into natural flood control features such as floodplains and wetlands. On this site, these features are currently accepting and regulating the stormwater runoff that is generated by undeveloped land. If the runoff generated by impervious surfaces such as rooftops and roadways is loaded into these natural features, their flood control capabilities could be overburdened and flooding damage could result. In addition, pollutants association with stormwater runoff can degrade the water quality in the area.

The utilization of wet basin stormwater retention ponds is recommended by the District over the use of dry detention basins as wet basin designs tend to provide increased water retention times, allowing for greater water quality improvements to occur. Increased retention times allow more sediment to settle out of suspension. Because of this sediment-trapping tendency, suitable access needs to be provided to a wet basin to allow for periodic maintenance and sediment removal.

The basins should be installed in the first phase of the project as the basin or pond can serve as a sediment trap during the construction phase.

It is also encouraged to design the detention area to provide multiple benefits to the community. The incorporation of open space, constructed wetlands and recreational areas adds to the value of the detention facility as well as to its water quality improvement capabilities. In order to reduce the attraction of a resident Canada goose population, the retention pond should not be mowed down to the edge. Unmowed native plants are a natural deterrent to nuisance goose problems.

Numerous publications are available which provide guidance on planning stormwater management systems and incorporating multiple benefits. These include Stormwater Detention for Water Quality Benefits (NIPC, 1986), Stormwater Management (IDOT-DWR, 1983), the Lake County Technical Reference Manual (SMC, 1992), A Current Assessment of Urban Best Management Practices (Metropolitan Washington Council of Governments, 1992), Design of Stormwater Wetland Systems (Metropolitan Washington Council of Governments, 1992), The Use of Wetlands for Controlling Stormwater Pollution (Terrene Institute, 1992), and Urban Runoff Pollution Prevention and Control Planning (U.S. EPA Handbook, EPA/625/R-93/004, 1993).

NATIONAL POLLUTATN DISCHARGE ELIMINATION SYSTEM

Discharges of stormwater from construction sites that disturb 1 or more acres of land must be covered by an NPDES permit. Under the NPDES General Permits for Stormwater Discharges from Construction Sites, the EPA requires the development and implementation of a pollution prevention plan.

A pollution prevention plan for the construction is designed to reduce pollution at the construction site before it can cause environmental problems. Many of the practices and measures required for the

pollution prevention plan represent the standard operating procedure at many construction sites. Stormwater management controls, erosion and sediment controls, inspection and maintenance have all been used at a number of construction projects.

The General NPDES permit can be obtained through the Illinois Environmental Protection Agency, Division of Water Pollution Control, 2200 Churchill Road, P.O. Box 19276, Springfield, Illinois 62794-9276.

Bollinger Environmental, Inc.
P.O. Box 39
Downers Grove, Illinois 60515
630-968-1960

WETLAND ASSESSMENT REPORT
LIBERTYVILLE MANOR SITE

610 PETERSON ROAD/ROUTE 137
LIBERTYVILLE, ILLINOIS 60048

Updated for:

PULTEGROUP, LLC
1900 E. Golf Road, Suite 300
Schaumburg, IL 60173
Attn: Nicholas Andriano
Nicholas.Andriano@pultegroup.com

Prepared by:

BOLLINGER ENVIRONMENTAL, INC. / DK ENVIRONMENTAL SERVICES, INC.
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BEI Project No. 001-035-21/DKES-147-2024

May 2021
updated 10/8/2024

Bollinger Environmental, Inc.
P.O. Box 39
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630-968-1960

October 22, 2024

Nicholas Andriano **EMAIL**
Land Planning and Entitlements
Pulte Group, Inc.
Nicholas.andriano@pultegroup.com

Subject: Wetland Assessment of the Libertyville Manor Site
610 Peterson Road/Route 137
Libertyville, Lake County, Illinois 60048

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Dear Mr. Andriano:

On May 1, 2021, and October 8, 2024, Bollinger Environmental, Inc. (BEI) completed a wetland assessment of Libertyville Manor Site located at 610 Peterson Road/Route 137, Village of Lake Bluff, Lake County, Illinois, 60045. At the time of our field investigation, five (5) wetlands (i.e., Wetlands A through E) were identified, flagged and surveyed. Wetlands were re-flagged on October 8, 2024 for boundary verification by local regulatory agencies. Flag sequencing for Wetlands A through E is provided below.

Wetland A: Flags A1 to A7 (isolated depression, on-site)
Wetland B: Flags B1 to B9 (Bull Creek)
Wetland C: Flags C1 to C14 (isolated depression, on-site)
Wetland D: Flags D1 to D31 (Bull Creek complex)
Wetland E: Flags E1 to E27 (Bull Creek complex)

An approved Jurisdictional Determination (AJD) was completed by the U.S. Army Corps of Engineers – Chicago District. The subject project was assigned number LRC-2021-00516.
A letter issued by the Chicago District dated August 10, 2021 stated that the USACE determined that the subject property contains both "waters of the United States" and excluded water features.

- Wetlands B, D & E have been determined to be under the jurisdiction of the USACE and therefore, subject to Federal regulation.
- Wetlands A & C, and the Stormwater Detention Basin, have been determined to be excluded water features, and are therefore not subject to Federal regulation.
- The USACE office concurred with the submitted BEI wetland delineation and wetland boundaries (B, D, & E) under USACE jurisdiction at the subject site.

The Lake County Stormwater Management Commission (SMC) was copied on the August 10, 2021 (LRC-2021-00516) letter from the Chicago District. In response, Glenn Westman, Principal Wetland Specialist for Lake County SMC, stated by email:

"Please note that Wetlands A & C and Stormwater Detention Basin not identified as Waters of the U.S. (WOTUS) in the attached AJD letter are, by default, Isolated Waters of Lake County (IWLC), which are subject to regulation by the SMC under the Lake County watershed Development Ordinance (WDO). If proposed development activities at the property will require impacts to the IWLC, SMC's written approval will be required prior to the Village's issuance of a Watershed Development Permit."

BEI recommends that any impacts to the onsite wetlands should be coordinated first with the Lake County Stormwater Management Commission (SMC), and/or the U.S. Army Corps of Engineers (USACE), depending on the jurisdiction summarized above. Even if no impacts are proposed, buffers between 30 and 100 feet from the edge of wetland/waters may be required in the development design by the Village of Libertyville Enforcement Officer (EO) under the Lake County Watershed Development Ordinance (WDO).

Any proposed impacts to these buffers, including buffer averaging allowed by ordinance must be coordinated with the Village. This delineation has been updated on October 8, 2024 to confirm isolated wetland boundaries A & C with the SMC, and to verify that the stormwater Detention Basin is excluded under the Lake County Watershed Development Ordinance (WDO).

U.S. Army Corps of Engineers – Chicago District
Regulatory Authority and Permitting Considerations

The U.S. Army Corps of Engineers (USACE) regulates the discharge of dredged or fill material into jurisdictional wetlands and "waters of the U.S." under Section 404 of the 1972 Clean Water Act (Act). Examples of jurisdictional areas covered by the Act are navigable waterways, tributaries to navigable waterways, and wetlands adjacent thereto. Isolated wetlands are exempt from federal regulations. However, isolated wetlands fall under the local jurisdiction of Lake County and are regulated by the Stormwater Management Commission (SMC) under the Watershed Development Ordinance (WDO).

On May 25, 2023, the Supreme Court ruled in Sackett v. EPA, delineating the appropriate standard to determine waters of the United States (WOTUS) under the federal Clean Water Act (CWA). The Supreme Court's opinion in Sackett establishes a new, stricter test for determining whether the Clean Water Act applies to a wetland.

To assert federal jurisdiction over an adjacent wetland under the CWA, a party must establish that the wetland:

(1) is adjacent to a WOTUS, and
(2) has a continuous surface connection with the WOTUS

The decision clarifies that wetlands are only protected under the Clean Water Act when adjacent to a relatively permanent geographical water feature such as a lake, stream, ocean, or river that connects to a traditional interstate navigable water, and the wetland has a continuous surface connection with the adjacent water.

Under current USACE regulations, to prevent net loss of wetland, any disturbance of a wetland/WOTUS area requires a permit application. Filling or impacting 0.10 acre or more of jurisdictional wetland/WOTUS on a single residential lot requires a permit with mitigation at a 1.5:1 replacement ratio. The mitigation ratio increases if an area is considered a High-Quality Aquatic Resource (HQAR). Impacts resulting in less than 0.10 acre of impact to wetland/WOTUS also require a permit. However, mitigation may or may not be required depending on USACE discretion. This discretionary judgment is determined by the overall quality of the wetland, the impact that the wetland loss would have on the local area and its relative importance in the watershed.

USACE regulations require an upland buffer of native plants adjacent to all created, restored, enhanced, and preserved wetlands 0.10 acre or larger.

Buffer width requirements are as follows:

- For a linear body of water (e.g., river, stream, creek, etc.), the buffer shall be a minimum of 50 feet from the Ordinary High-Water Mark (OHWM) on both sides of the linear water body.
- For any other "waters of the U.S.", including wetlands from 0.25 acres up to 0.50 acres, the buffer shall be a minimum of 30 feet.
- For any "waters of the U.S.", including wetland over 0.50 acres, the buffer shall be minimum of 50 feet.
- For any area determined to be a HQAR, the buffer shall be 100 feet wide (80 foot minimum).

Regulatory waters/wetlands under USACE jurisdiction include:

Waters of the United States (WOUS) – Generally, this includes all waters, impoundments of waters, or tributaries of waters, such as lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, or natural ponds. This term is defined in 33 CFR 328.3.

Wetlands are a subset of WOUS – Those areas that are inundated or saturated by surface or ground water 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. Wetlands generally include swamps, marshes, bogs, and similar areas as defined in 33 CFR 328.3(b).

A Jurisdictional Determination (JD) is a tool used by the U.S. Army Corps of Engineers to help implement Section 404 of the Clean Water Act and Sections 9 and 10 of the Rivers and Harbors

Act of 1899. JDs are used to determine which areas are jurisdictional and/or non-jurisdictional hydrologic features on a specific geographical location (e.g. the development site).
Any proposed project or other activity should be designed to avoid and minimize any disturbance to the wetland, stream, or other aquatic area, as much as is practicable before applying for a permit.

Avoidance and minimization of impacts to aquatic areas and resources can include locating any activity away from low areas, establishing buffer zones, and protecting the quality of the water that may be discharged into these areas. If impacts to jurisdictional wetlands or any other water of the United States are proposed a permit is required from the USACE.

Typical Wetland Exclusions (USACE)

Wetland exclusions and exemptions may apply to some water features identified on the subject property. Examples include:

1. Stormwater Detention/Retention Basins / Ponds:

- Stormwater management control features constructed or excavated in upland, non-hydric NRCS mapped soil areas (or in a non-jurisdictional waters) to convey, treat, infiltrate, or store stormwater runoff may be excluded from wetland regulation, if not historically or currently connected to traditionally navigable waters or their tributaries under USACE regulation;
- Wetlands created by excavation or by other unfinished development activities in upland areas (e.g., due to incidental construction activities);
- Wetlands created by artificial hydrology including, but not limited to, irrigation or detention facility outlets which would revert to upland areas if irrigation was to cease;
- Wetlands created by the construction of stormwater facilities in upland areas, Provided that the facility was not created for the purpose of wetland mitigation;
- Wetlands created by the construction of ponds in upland areas;

2. Roadside ditches:

- Wetlands in roadside ditches created by excavation in upland areas;
- Excavated drainage ditches along the roadsides that are not connected to regulated waters of the US or traditionally navigable waters;

Lake County Regulations (Lake County SMC)
Regulatory Authority and Permitting Considerations

(Village of Libertyville - Certified Community w/o Independent IWLC Review)

Permitting note: Certified Communities have been delegated authority by SMC under the Lake County Watershed Development Ordinance (WDO) to administer all, or portions of, the WDO within their community limits. The Village of Libertyville is a partially certified community for Standard engineering review, and the village enforcement officer (EO) reviews wetland buffers.

Isolated Waters of Lake County (as defined in WDO Appendix A) include: "All waters such as lakes, ponds, streams (including intermittent streams), farmed wetlands, and wetlands that are not under U. S. Army Corps of Engineers jurisdiction. The four categories of wetland type regulated under the Lake County Watershed Development Ordinance (WDO) are as follows:

A) Category-I: Wetland impacts less than or equal to 1 acre and does not impact high quality aquatic resources;
B) Category-II: Wetland impacts greater than 1 acre and less than 2 acres and does not impact high quality aquatic resources;
C) Category-III: Wetland impacts greater than or equal to 2 acres or impacts high aquatic resources; and
D) Category-IV: Wetland impacts for the restoration, creation, and enhancement of wetlands provided that there are net gains in aquatic resource function.

The WDO requires mitigation for wetland impacts greater than or equal to 0.10 acres of Isolated Waters of Lake County (IWLC). Mitigation shall provide replacement of the wetland environment lost to development at the following proportional rates (i.e., creation acreage to wetland impact acreage):

1) A minimum of 1.5:1 for wetland impacts under Categories I, II and III that are not high-quality aquatic resources, except 1:1 for approved and fully certified wetland mitigation bank credits;
2) A minimum of 3:1 for wetland impacts that are high quality aquatic resources;
3) A minimum of 6:1 for wetland impacts that are forested wetlands.

Mitigation credit may also be obtained for enhancement. For example, the enhancement of farmed wetlands meeting the size criteria of the WDO may be used for up to 80% of the mitigation requirement. Enhancement of existing non-farmed wetlands may be credited up to 25% of the enhanced wetland acreage completed, provided the wetland impacted acreage created on-site is a minimum 1:1 ratio. Buffer width requirements for water bodies are as follows:

- Total surface area greater than 1/3 acre and less than one acre; the minimum buffer width shall be 30 feet.
- Total surface area is greater than one acre and less than 2 ½ acres, the buffer shall be a minimum of 40 feet.

- Total surface area is greater than 2 ½ acres, the buffer shall be a minimum of 50 feet.
- For non-linear high-quality aquatic resources, the minimum buffer shall be 100 feet.

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

- 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;
- When the channel has a watershed greater than one square mile, the minimum buffer shall be 30 feet on each side of the channel; and
- 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.

The following are excluded from Isolated Waters of Lake County:

1. Excavations and impoundments (including stormwater detention basins) that have received a permit from the appropriate jurisdictional authority;
2. Excavations and impoundments (including stormwater detention basins) permitted by right, prior to being a regulated activity, within 40% or more non-hydric soil;
3. Wetlands created incidental to construction grading on development sites;
4. Roadside ditches;

Generally, the following three steps must be taken before a permit authorization is issued:

(1) Avoid wetland and "waters of the U.S.";
(2) Minimize wetland and "waters of the U.S." fill; and
(3) Provide compensatory mitigation for unavoidable wetland impacts.

The attached report describes the identified wetlands and provides the methodology and reference material used to assist in the wetland assessment. This assessment is based on field conditions at the time of the DKES site visit and our understanding of current federal, state and local regulations. An evaluation of historic site conditions was not performed.

Please contact our office should you have any additional questions or if we can be of further assistance.

Sincerely,



Daniel J. Krill CWS #002, CPESC
Principal
Bollinger Environmental, Inc.
DK Environmental Services, Inc.



Paul Bollinger, PWS, CWS #047
President/Ecologist
Bollinger Environmental, Inc.

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WETLAND ASSESSMENT REPORT
LIBERTYVILLE MANOR SITE

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610 PETERSON ROAD/ROUTE 137
LIBERTYVILLE, ILLINOIS 60048

INTRODUCTION

Dear Mr. Andriano:

On May 1, 2021, and October 8, 2024, Bollinger Environmental, Inc. (BEI) completed a wetland assessment of Libertyville Manor Site located at 610 Peterson Road/Route 137, Village of Lake Bluff, Lake County, Illinois, 60045. At the time of our field investigation, five (5) wetlands (i.e., Wetlands A through E) were identified, flagged and surveyed. Wetlands were re-flagged on October 8, 2024 for boundary verification by local regulatory agencies. Flag sequencing for Wetlands A through E is provided below.

Wetland A: Flags A1 to A7 (isolated depression, on-site)
Wetland B: Flags B1 to B9 (Bull Creek)
Wetland C: Flags C1 to C14 (isolated depression, on-site)
Wetland D: Flags D1 to D31 (Bull Creek complex)
Wetland E: Flags E1 to E27 (Bull Creek complex)

This report was prepared to document our findings under Section 404 of the Clean Water Act and/or the Lake County Watershed Development Ordinance (WDO). Wetland boundaries were delineated in accordance with methodology established by the USACE. The approximate wetland boundaries are shown in Appendix A, Exhibit 8. Appendices illustrate the following:

A) Exhibits
   1) Location Map
   2) National Wetland Inventory (NWI) Map
   3) USDA Soil Survey
   4) Lake County Wetland Map
   5) FEMA Flood Insurance Rate Map (FIRM)
   6) USGS Topographic Map
   7) Lake County Topographic Map
   8) Surveyed Wetland Boundaries and Data Point Locations
B) Site Photographs
C) USACE Data Forms
D) Floristic Quality Assessments

The ±27-acre project study area known as the "Libertyville Manor Site" is located at 610 Peterson Road/Route 137 in the Village of Libertyville, Lake County, Illinois, 60048, see Appendix A, Exhibit 1 for locations. Geographically, the study area is found in the northwestern ¼ of Section 8 of T44N, R11E, East of the Third Principal Meridian. The site lies within the Bull Creek drainage and is a tributary to the greater Des Plaines River Watershed (HUC 07120004). The central portion of the study area is located approximately at 42.308524° North Latitude and -87.974591° West Longitude.

The study area includes undeveloped land that contains the delineated wetlands/waters, with the remainder of the site primarily consisting of upland woodland dominated by deciduous hardwoods. The woodland upper canopy tree species included silver maple (*Acer saccharinum*), ash-leaf maple (*Acer negundo*), red oak (*Quercus rubra*), hackberry (*Celtis occidentalis*), and black cherry (*Prunus serotina*). The middle canopy shrub layer included European buckthorn (*Rhamnus cathartica*), and Amur honeysuckle (*Lonicera maackii*). The herbaceous ground layer included garlic mustard (*Alliaria petiolata*), meadow garlic (*Allium canadense*), hooded blue violet (*Viola sororia*), Kentucky blue grass (*Poa pratensis*), Dame's rocket (*Hesperis matronalis*), Jack-in-the-pulpit (*Arisaema triphyllum*), and ground ivy (*Glechoma hederacea*).

A non-wetland constructed stormwater detention basin, excavated in 100% upland soils and excluded from wetland regulation, located in the eastern central portion of the study area roadside was also observed and documented.

The five wetlands (i.e., Wetlands A - E) identified during this investigation and are summarized below:

WETLAND	NATIVE MEAN C	NATIVE FQAI	DOMINANT VEGETATION	WETLAND TYPE
Wetland A	2.17	5.31	eastern cottonwood (*Populus deltoides*) & silver maple	Wooded
Wetland B (includes Waters of the U.S./Bull Creek)	n/a	n/a	*unvegetated waters & unvegetated flats due to prolonged flooding*	open water or bare soil (< 5% cover) [Lake County ADID #94]
Wetland C	2.63	13.66	ash-leaf maple, Eastern cottonwood, & European buckthorn	Wooded
Wetland D	3.18	13.10	Eastern cottonwood & silver maple	Forested [Lake County ADID #94]
Wetland E	3.63	14.50	ash-leaf maple, European buckthorn, reed canary grass (*Phalaris arundinacea*), fowl manna grass (*Glyceria striata*), & spotted touch-me-not (*Impatiens capensis*)	Forested [Lake County ADID #94]

METHODOLOGY

Our methodology followed *The Corps of Engineers Wetland Delineation Manual*, dated January 1987 as well as the *Regional supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region*, dated August 2010. Both identify the mandatory technical criteria for wetland identification. The three essential characteristics of a jurisdictional wetland are hydrophytic vegetation, hydric soils and wetland hydrology as described below:

I) Hydrophytic Vegetation: Hydrophytic vegetation is defined as the community of macrophytes that occurs in areas where inundation or soil saturation is either permanent or of sufficient frequency and duration to exert a controlling influence on the plant species present. Hydrophytic vegetation is present when the plant community is dominated by species that can tolerate prolonged inundation or soil saturation during the growing season. Wetland indicator status is the estimated probability a plant species occurs in a wetland area. Lichvar (2020) designated indicator statuses for the U.S. Fish and Wildlife Service, Region 3, which are based on separating plants into five basic groups:

(1) OBL (Obligate Wetland) almost always occur (estimated probability >99%) in wetlands under natural conditions;

(2) FACW (Facultative Wetland) usually occur in wetlands (estimated probability 67-99%), but occasionally are found in nonwetlands;

(3) FAC (Facultative) are equally likely to occur in wetlands or nonwetlands (estimated probability 34-66%);

(4) FACU (Facultative Upland) usually occur in nonwetlands (estimated probability 67-99%), but occasionally are found in wetlands (estimated probability 1-33%); and

(5) UPL (Upland) almost always occur (estimated probability >99%) in nonwetlands under natural conditions.

If greater than 50% of the plants present are FAC, FACW, or OBL the subject area is considered jurisdictional in terms of vegetation. Indicator statuses were assigned to plants based on observations on their behavior throughout the region. However, some have been modified to best describe the plants in the Chicago region.

Vegetation was sampled within plots to quantitatively characterize wetland and/or upland plant communities within a given area. Within each plot visual estimates of percent cover of each plant species was made for each stratum (trees, saplings and shrubs, herbaceous plants, and woody vines). The Dominance Test is then calculated by applying the 50/20 rule. If a plant community passes the Dominance Test, then the vegetation is hydrophytic and no further vegetative analysis is required.

However, if the plant community fails the dominance test, and indicators of hydric soil and/or wetland hydrology are present then the Prevalence Index is applied. The Prevalence Index is a weighted average of wetland indicator status of all plant species within a sample plot. If the plant community satisfies the Prevalence Index, then the vegetation is hydrophytic. If the plant community fails Prevalence Index, then it must meet the test Morphological Adaptations to be considered hydrophytic. If this last test fails, then the vegetation is considered non-hydrophytic. Results of vegetative sampling are illustrated on the attached U.S. Army Corps of Engineers Data Forms.

A vegetative inventory was compiled for the wetland community. The inventory was then entered into the US Army Corps of Engineers (2017) *Chicago Region FQA (Floristic Quality Assessment) Calculator*. Each native plant species has been given a coefficient of Conservatism value (*C*-value), ranging from 0-10. Conservatism describes plants displaying varying degrees of tolerance to disturbance, as well as varying degrees of fidelity to specific habitat integrity.

A rating of 0 represents common species or species not likely to be found only in natural areas and a rating of 10 represents rare species or species most likely to be found only in natural areas. The Floristic Quality Assessment Index (FQAI) was developed to evaluate the level of intrinsic biodiversity from areas with similar *C*-values, but otherwise differ significantly.

This is accomplished by the following equation:

$$\text{FQAI} = \text{mean } C\text{-value } \sqrt{N}$$

According to Swink and Wilhelm (1994) and Wilhelm and Rericha (2017), if an area has an average *C*-value of 3.5 or higher or a FQAI of 35 or more, the site has sufficient floristic quality to be at least of marginal natural area quality. If the average *C*-value is 4.5 or higher or has a FQAI of 45 or more, then the remnant has natural area potential. According the USACE, Chicago District, Regional Permit Program (2007), one of the ways a wetland can be considered a "high quality aquatic resource" if the average *C*-value is 3.5 or greater or if the areas has a FQAI is 20 or greater.

II) Hydric Soils: According to the National Technical Committee for Hydric Soils a hydric soil is a soil that formed under conditions of saturation, flooding or ponding long enough during the growing season to develop anaerobic conditions in the upper part (USDA Soil Conservation Service 1994). Repeated periods of saturation or inundation combined with microbial activity causes morphological changes within the soil.

This promotes biogeochemical processes, such as the accumulation of organic matter and the reduction, translocation, or accumulation of iron and other reducible elements. The result of these processes is useful in identifying hydric soils during both wet and dry periods (USDA Natural Resources Conservation Service 2014). There are 20 hydric soil indicators in the Land Resource Region (LRR) M per the *Field Indicators of Hydric Soils in the United States* (Ver. 8.2, 2018) and if one is present, it is considered a hydric soil. The hydric soil indicators include:

- A1. Histisol
- A2. Histic Epipedon
- A3. Black Histic
- A4. Hydrogen Sulfide
- A5. Stratified Layers
- A10. 2 cm Muck
- A11. Depleted Below A Dark Surface
- A12. Thick Dark Surface

- S1. Sandy Mucky Mineral
- S2. 5 cm Mucky Peat or Peat
- S4. Sandy Gleyed Matrix
- S5. Sandy Redox
- S6. Stripped Matrix
- S7. Dark Surface

- F1. Loamy Mucky Mineral
- F2. Loamy Gleyed Matrix
- F3. Depleted Matrix
- F6. Redox Dark Surface
- F7. Depleted Dark Surface
- F8. Redox Depressions

III) A soil pit is excavated to the appropriate depth to describe the soils profile. Color of the soil matrix and redox, mottling, and gleying within the profile are described using the Munsell Soil Color Charts (Gretagmacbeth 2009). Generally, a hydric soil is present when there is an organic soil, histic epipedon, sulfidic material, aquic or peraquic moisture regime, reducing soils conditions, soil colors gleyed, bright mottles and/or low matrix chroma, soil listed on the hydric soil list, and iron and manganese. Results of soil sampling and if they meet one of the indicators are illustrated on the attached U.S. Army Corps of Engineers Data Forms.

III) Wetland Hydrology: Wetland hydrology indicators are used in combination with indicators of hydric soil and hydrophytic vegetation. These other indicators reflect a sites history of past episodes of inundation or soil saturation and if it was repeated over a period of time. Areas that have hydrophytic vegetation and hydric soils generally have wetland hydrology (National Research Council 1995).

Hydrologic indicators are the most challenging and dynamic of all wetland indicators as occur from recent or long-term meteorological conditions. Typically, the presence of water for a week or more during the growing season creates anaerobic conditions. Anaerobic conditions lead to the prevalence of wetland plants.

To meet the hydrology requirement, an area sampled must meet one or more of the primary wetland hydrology indicators, which include: surface water, high water table, saturation, water marks, sediment deposits, drift deposits, algal mat or crust, iron deposits, inundation visible on aerial imagery, sparsely vegetated concave surface, water-stained leaves, aquatic fauna, true aquatic plants, hydrogen sulfide odor, oxidized rhizopheres on living roots, presence of reduced iron, recent iron reduction in tilled soils, thin muck surface, and gauge or well data.

A sampled area may also meet two or more of the secondary indicators, which include: surface soil cracks, dry-season water table, crayfish burrows, saturation visible on aerial imagery, stunted or stressed plants, geomorphic position, and the FAC-Neutral test. Results of hydrology are illustrated on the attached USACE Data Forms.

RESULTS

The following is a brief description of the wetland area identified on-site with a list of the dominant plant species, positive wetland hydrology and soils observed. Detailed information regarding the on-site wetland is found on the attached USACE Data Forms (Appendix C) including a plant inventory and the results of the 2017 *Chicago Region FQA (Floristic Quality Assessment) Calculator* illustrating the wetlands Native C-value and Native FQAI (Appendix D).

WETLANDS / WATER FEATURES

Wetland A

Wetland A is an isolated, wooded wetland located in the southeastern portions of the study area (Appendix A, Exhibit 8). The wetland possessed a Native Mean C-value of 2.17 and a Native FQAI of 5.31 (Appendix D), indicative of low floristic quality. The wetland was dominated by eastern cottonwood (*Populus deltoides*) and silver maple at Data Point 1A.
Positive wetland hydrology was indicated by the presence of water marks, sparsely vegetated concave surface, geomorphic position, and a positive FAC-neutral test.
Soils were mapped as Pella silty clay loam, 0 to 2% slopes (153A). This soil unit series is included on the *National Hydric Soils List* by the Natural Resources Conservation Service (NRCS). Field sampled soil profiles revealed a low chroma matrix color with redoximorphic features (i.e., mottles) within the soil matrix, yielding a depleted matrix, which is indicative of hydric soils.

Wetland B (Waters of the U.S, Bull Creek)

Wetland B located in the northeastern corner of the study area includes a Waters of the U.S. (i.e., Bull Creek) and is a seasonally flooded, unvegetated (<5% vegetative cover) stream characterized at Data Point 2A in Appendix A, Exhibit 8. Flow is from NW to SE. The channel was 10' to 12' wide and possessed 1" to 4" of clear (non-silty) inundation. Pools and riffles were observed. Steep banks (90 degrees) from 1' to 3' high bordered the channel.

European buckthorn and amur honeysuckle dominated the upper channel slopes. It should be noted that this wetland area is included within a larger encompassing ADID wetland identified by Lake County (ID# 94, Liberty Prairie) as being an INAI site that possesses high-quality plant communities and endangered/threatened species. Therefore, the area would also qualify as a HQAR by the USACE (Chicago District).

Positive wetland hydrology was indicated by the presence of surface water (4” inundation), an unvegetated concave surface, drainage patterns, and geomorphic position.
Soils were mapped as Sawmill silty clay loam, undrained, 0 to 2% slopes, frequently flooded (1107A). This soil unit series is included on the *National Hydric Soils List* by the NRCS. Field sampled soil profiles revealed heavy soil layer stratification alluding to the cyclic stormwater flow and fine material deposition typical of hydric soils in seasonal hydrologic regimes.

Wetland C

Wetland C is an isolated, depressional, wooded wetland centrally located along the northern study area boundary (Appendix A, Exhibit 8). The wetland possessed a Native Mean C-value of 2.63 and a Native FQAI of 13.66 (Appendix D), indicative of moderate floristic quality. The wetland was dominated by ash-leaf maple, Eastern cottonwood, and European buckthorn at Data Point 4A.
Positive wetland hydrology was indicated by the presence water marks on trees, sparsely vegetated concave surface, and geomorphic position.
Soils were mapped as Pella silty clay loam, 0 to 2% slopes (153A). This soil unit series is included on the *National Hydric Soils List* by the NRCS. Field sampled soil profiles revealed a low chroma matrix color with redoximorphic features (i.e., mottles) within the soil matrix, yielding a depleted matrix, which is indicative of hydric soils.

Wetland D

Wetland D is a forested wetland located mostly off-site connecting with Wetland E to the north (Appendix A, Exhibit 8). The wetland possessed a Native Mean C-value of 3.18 and a Native FQAI of 13.10 (Appendix D), indicative of moderate quality. It should be noted that this wetland area is included within a larger encompassing ADID wetland identified by Lake County (ID# 94, Liberty Prairie) as being an INAI site that possesses high-quality plant communities and endangered/threatened species. Therefore, the area would also qualify as a HQAR by the USACE (Chicago District). The wetland was dominated by Eastern cottonwood and silver maple at Data Point 5A.
Positive wetland hydrology was indicated by the presence of saturation within the upper 12 inches of the soil profile, water marks on trees, algal mats, sparsely vegetated concave surface, drainage patterns, geomorphic position, and a positive FAC-neutral test.
Soils were mapped as Pella silty clay loam, 0 to 2% slopes (153A). This soil unit series is included on the *National Hydric Soils List* by the NRCS. Field sampled soil profiles revealed a low chroma matrix color with redoximorphic features (i.e., mottles) within the soil matrix which is indicative of hydric soils.

Wetland E

Wetland E is a forested wetland located in the northwestern corner of the study area (Appendix A, Exhibit 8) and extending off-site to connect with Wetland D to the north. The wetland possessed a Native Mean C-value of 3.63 and a Native FQAI of 14.50 (Appendix D), indicative of high floristic quality (i.e., considered ADID wetland due to high floristic quality & wetland type (i.e., forested wetland components). It should be noted that this wetland area is included within a larger encompassing ADID wetland identified by Lake County (ID# 94, Liberty Prairie) as being an INAI site that possesses high-quality plant communities and endangered/threatened species. Therefore, the area would also qualify as a HQAR by the USACE (Chicago District).
The wetland was dominated by ash-leaf maple, European buckthorn, reed canary grass (*Phalaris arundinacea*), fowl manna grass (*Glyceria striata*), and spotted touch-me-not (*Impatiens capensis*) at Data Point 6A.

Positive wetland hydrology was indicated by the presence of saturation within the upper 12 inches of the soil profile (observed at 2 inches), geomorphic position, and a positive FAC-neutral test. Soils were mapped as Kish loam, 0 to 2% slopes (626A). This soil unit series is included on the *National Hydric Soils List* by the NRCS. Field sampled soil profiles revealed a low chroma matrix color with redoximorphic features (i.e., mottles) within the soil pore linings which is indicative of hydric soils.

OTHER ARES INVESTIGATED

Stormwater Detention Basin

A constructed stormwater detention basin is located in the eastern central portion of the study area and outlets toward Bull Creek via a pipe heading northeast from the basin towards the creek (Appendix A, Exhibit 8). The basin was dominated by sandbar willow (*Salix interior*), Eastern cottonwood, and narrow-leaf cattail (*Typha angustifolia*) (see Appendix B, Photo Point 1). The basin was historically excavated in UPLAND soils and is therefore excluded from wetland regulation under the Lake County Watershed Development Ordinance.

REFERENCE MATERIALS

The following reference materials were reviewed and used to assist in the wetland field reconnaissance. Exhibits are included in Appendix A.

LOCATION

The ±27-acre project study area known as the "Libertyville Manor Site" is located at 610 Peterson Road/Route 137 in the Village of Libertyville, Lake County, Illinois, 60048, see Appendix A, Exhibit 1 for locations. Geographically, the study area is found in the northwestern ¼ of Section 8 of T44N, R11E, East of the Third Principal Meridian. The site lies within the Bull Creek drainage and is a tributary to the greater Des Plaines River Watershed (HUC 07120004). The central portion of the study area is located approximately at 42.308524° North Latitude and -87.974591° West Longitude.

NATIONAL WETLAND INVENTORY

The National Wetlands Inventory map (NWI) indicates a forested wetland is located within the northeastern portions study area and corresponds with delineated Wetland B. This wetland extends off-site to the east and north following Bull Creek and its associated floodplain. NWI serves only as a large-scale guide and actual wetland locations and types often vary from that mapped.

Code	Description
PFO1C	Palustrine, Forested, Broad-leaved Deciduous, Seasonally Flooded

SOIL SURVEY

The Soil Survey of Lake County, Illinois (Calsyn 2005) was reviewed to determine the location of hydric soils within the study area (Exhibit 3). Mapped hydric soil can be indicative of wetland conditions. The following six (6) soil unit series were identified within the limits of the study area and all are included on the *National Hydric Soils List*.

Code	Description	National Hydric List?
153A	Pella silty clay loam, 0 to 2% slopes	Yes
223C2	Varna silt loam, 4 to 6% slopes, eroded	Yes
442A	Mundelein silt loam, 0 to 2% slopes	Yes
443B	Barrington silt loam, 2 to 4% slopes	Yes
626A	Kish loam, 0 to 2% slopes	Yes
1107A	Sawmill silty clay loam, undrained, 0 to 2% slopes, frequently flooded	Yes

LAKE COUNTY WETLAND MAP

The Lake County Wetland Map and Advanced Identification (ADID) Wetland indicates that the majority of undeveloped property within the study area is mapped as a High-Quality ADID wetland (ID# 94, Liberty Prairie). ADID Wetland #94 is identified as being an INAI site that possesses high-quality plant communities and endangered/threatened species. Thus, the area would also qualify as a HQAR by the USACE (Chicago District).

A detention basin is also identified in the eastern central portion of the study area and is documented by Photo Point 1 (Appendix B). The Lake County ADID Wetland Map serves only as a large-scale guide and actual wetland locations and types often vary from that mapped.

FLOOD INSURANCE RATE MAP

The Flood Insurance Rate Map (FIRM; Panel# 17097C0161K, 9/18/2013) for Lake County, Illinois and Incorporated Areas, (Exhibit 5) were reviewed to determine the presence of floodplain, which can be indicative of wetland hydrology. The FIRM indicates that regulatory floodplain (*Zone AE*, 100-year floodplain) is located within the northeastern and northwestern portions of the study area.

In addition, regulatory floodway is also mapped within the northeastern corner of the study area and corresponds with Bull Creek. The remainder of the site lies within *Zone X* (*Area of Minimal Flood Hazard*).

TOPOGRAPHIC MAPS

A USGS Topographic Map (Exhibit 6) and Lake County Topographic Map (Exhibit 7) were reviewed to evaluate the areas topography and general drainage pattern on and off-site. The USGS map is in 10-ft contours while the Lake County map is shown in 1-ft contour intervals over the landscape.

Both maps show that the highest elevations on-site are in the south-central portion of the property near the existing on-site development interface. The site possesses approximately 29 feet of relief (713’ to 684’ elev.) with general drainage patterns flowing in an northeasterly direction.

LITERATURE CITED

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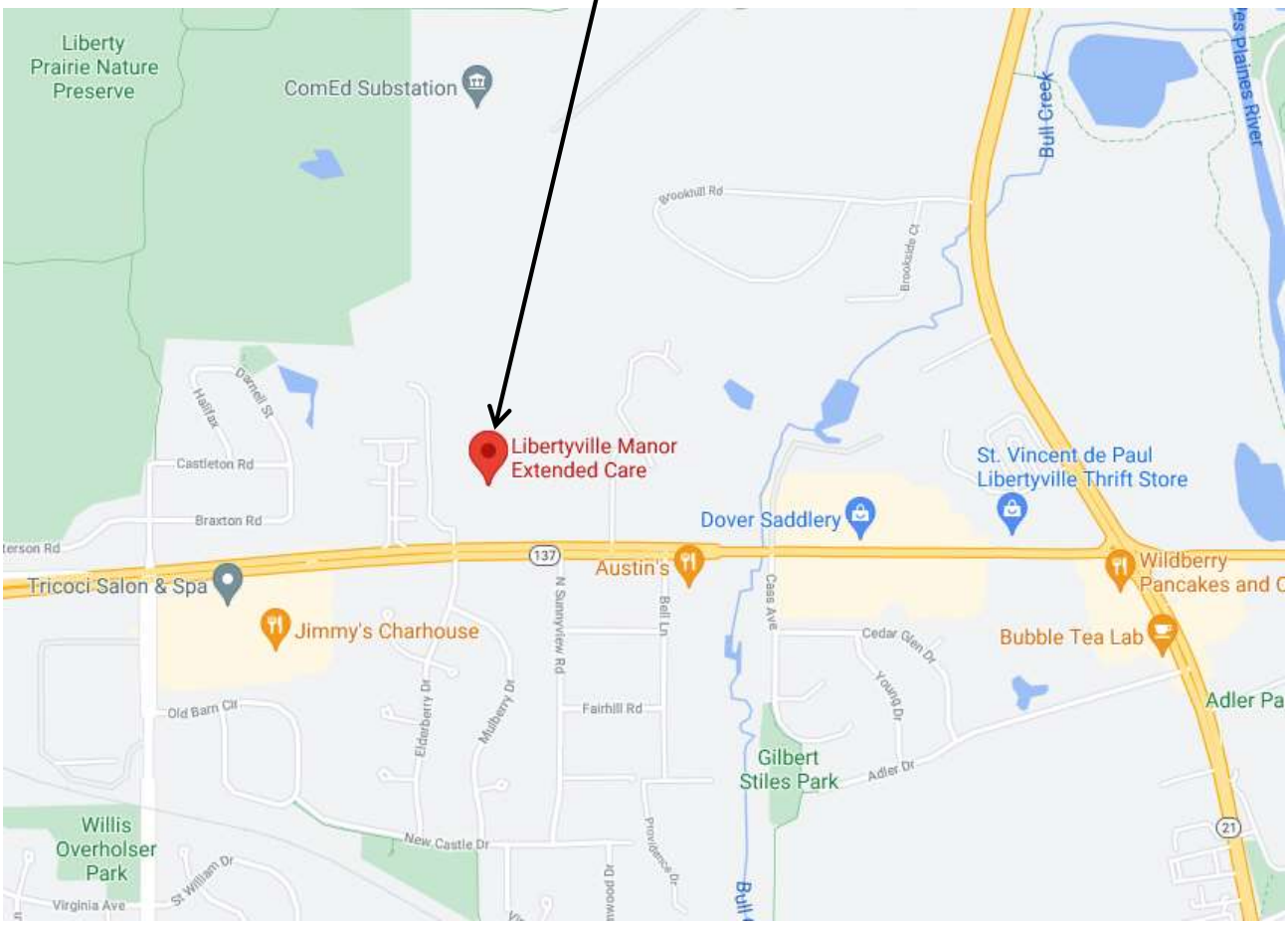
Wilhelm, Gerould & Laura Rericha. 2017. Flora of the Chicago Region: A Floristic and Ecological Synthesis. Indiana Academy of Science. Indianapolis. IN.

APPENDIX A

EXHIBITS

N

Project Location



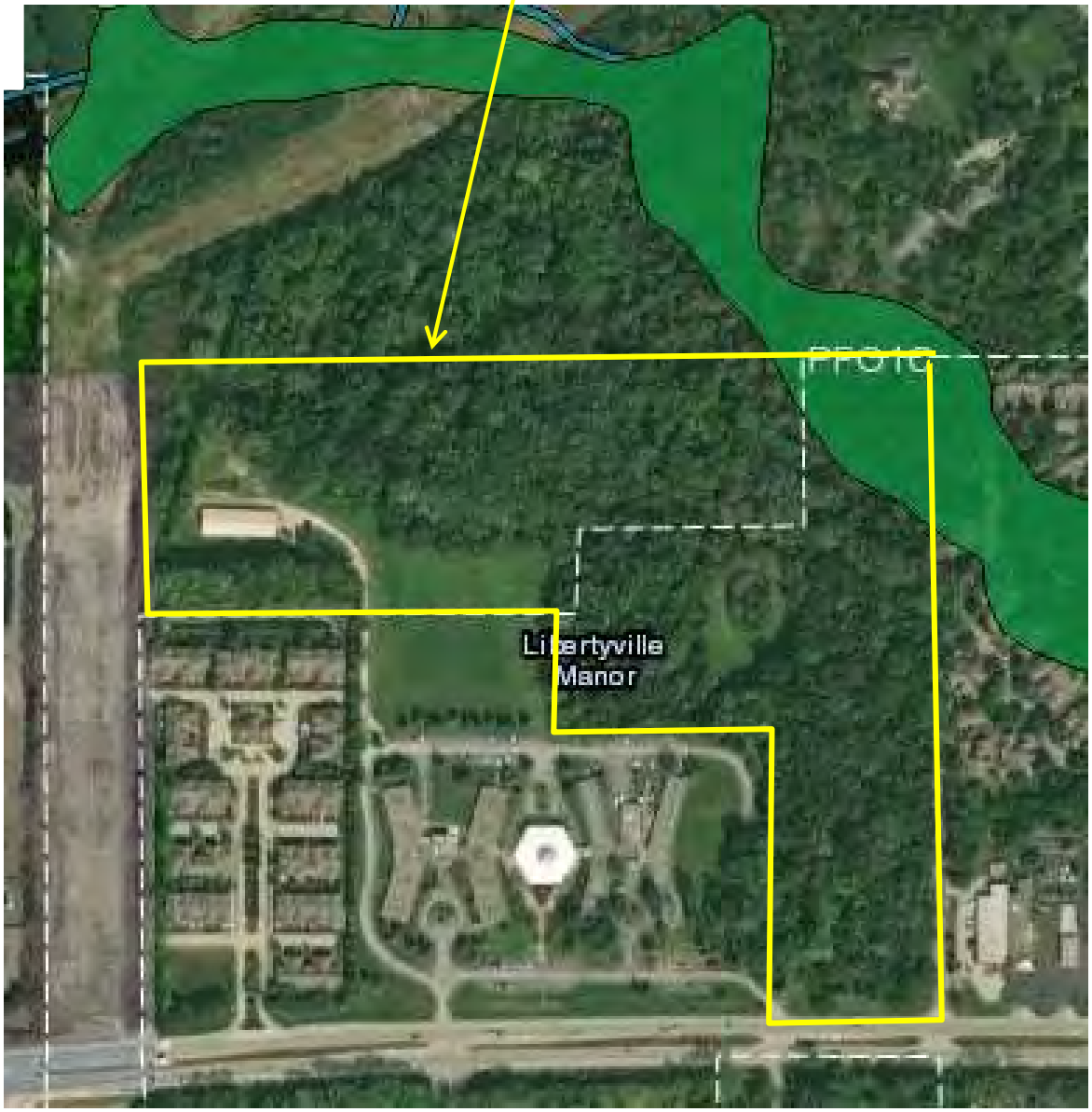
Source: Google Maps

BEI

Title: Location Map
Project Number: 001-035-21
Site: Libertyville Manor
Client: Bleck Engineering
Exhibit: 1

N

Project Location



Wetlands

- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

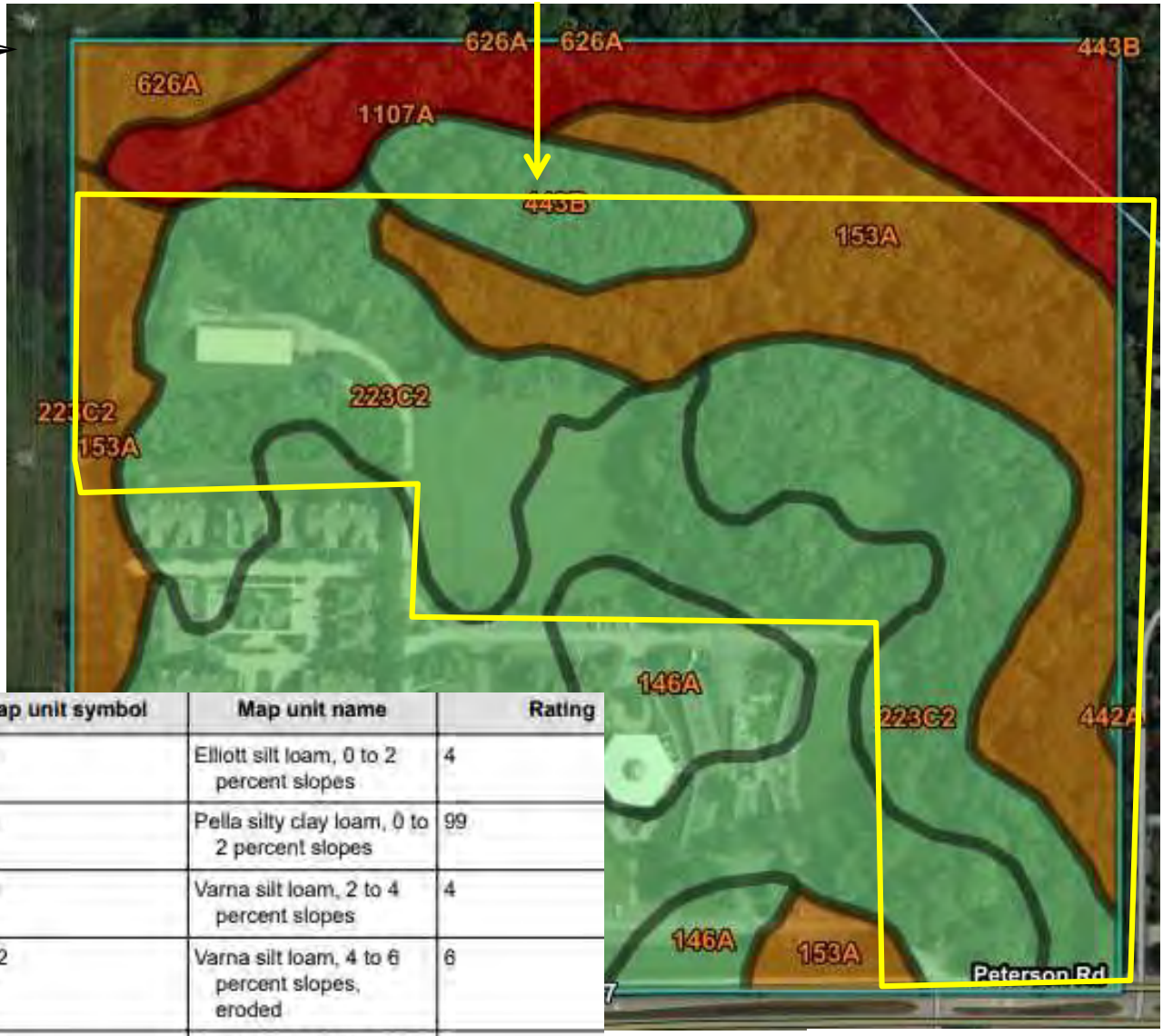
Source: USFWS National Wetland Mapper

BEI

Title: National Wetland Inventory
Project Number:001-035-21
Site: Libertyville Manor
Client: Bleck Engineering
Exhibit: 2

N

Project Location



Map unit symbol	Map unit name	Rating
146A	Elliott silt loam, 0 to 2 percent slopes	4
153A	Pella silty clay loam, 0 to 2 percent slopes	99
223B	Varna silt loam, 2 to 4 percent slopes	4
223C2	Varna silt loam, 4 to 6 percent slopes, eroded	6
442A	Mundelein silt loam, 0 to 2 percent slopes	6
443B	Barrington silt loam, 2 to 4 percent slopes	6
626A	Kish loam, 0 to 2 percent slopes	90
1107A	Sawmill silty clay loam, undrained, cool, 0 to 2 percent slopes, frequently flooded	100

Source: Websoilsurvey.com

Soil Rating Polygons

- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

BEI

Title: USDA Soil Survey
Project Number:001-035-21
Site: Libertyville Manor
Client: Bleck Engineering.
Exhibit: 3

N

PROJECT SITE



Source: Lake County GIS

BEI

Title: Lake County Wetland Map/ADID Map
Project Number:001-035-21
Site: Libertyville Manor
Client: Bleck Engineering.
Exhibit: 3

N

Project Location



Source: Lake County GIS

Panel #17097C0161K
Effective Date: 8/19/2013

BEI

Title: FEMA Map
Project Number:001-035-21
Site: Libertyville Manor
Client: Bleck Engineering
Exhibit: 5



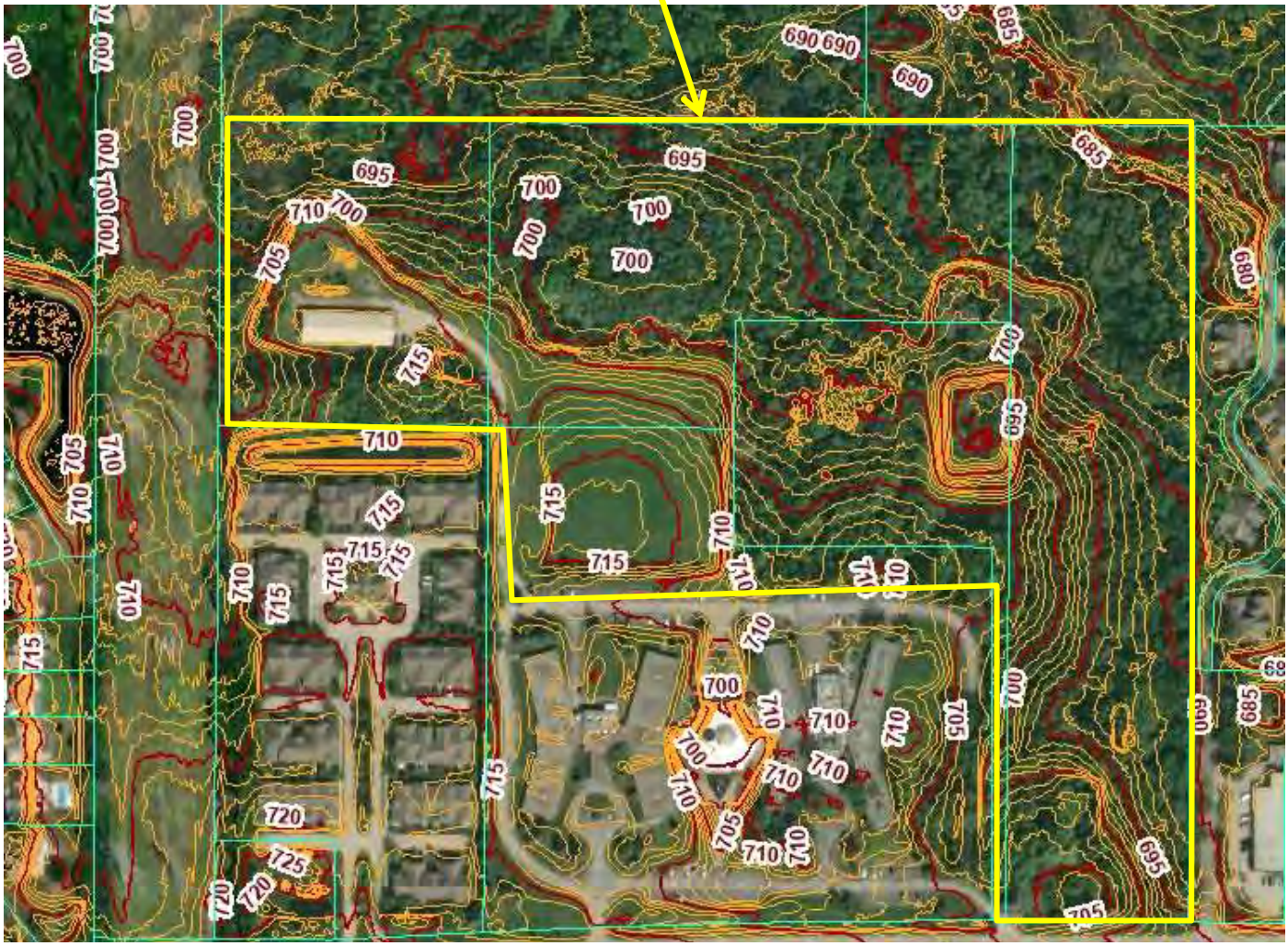
Source: USGS.gov
Libertyvilleville Quadrangle, 2018

BEI

Title: USGS Topographic Map
Project Number:001-035-21
Site: Libertyville Manor
Client: Bleck Engineering
Exhibit: 6

Project Location

N



Source: Lake County GIS

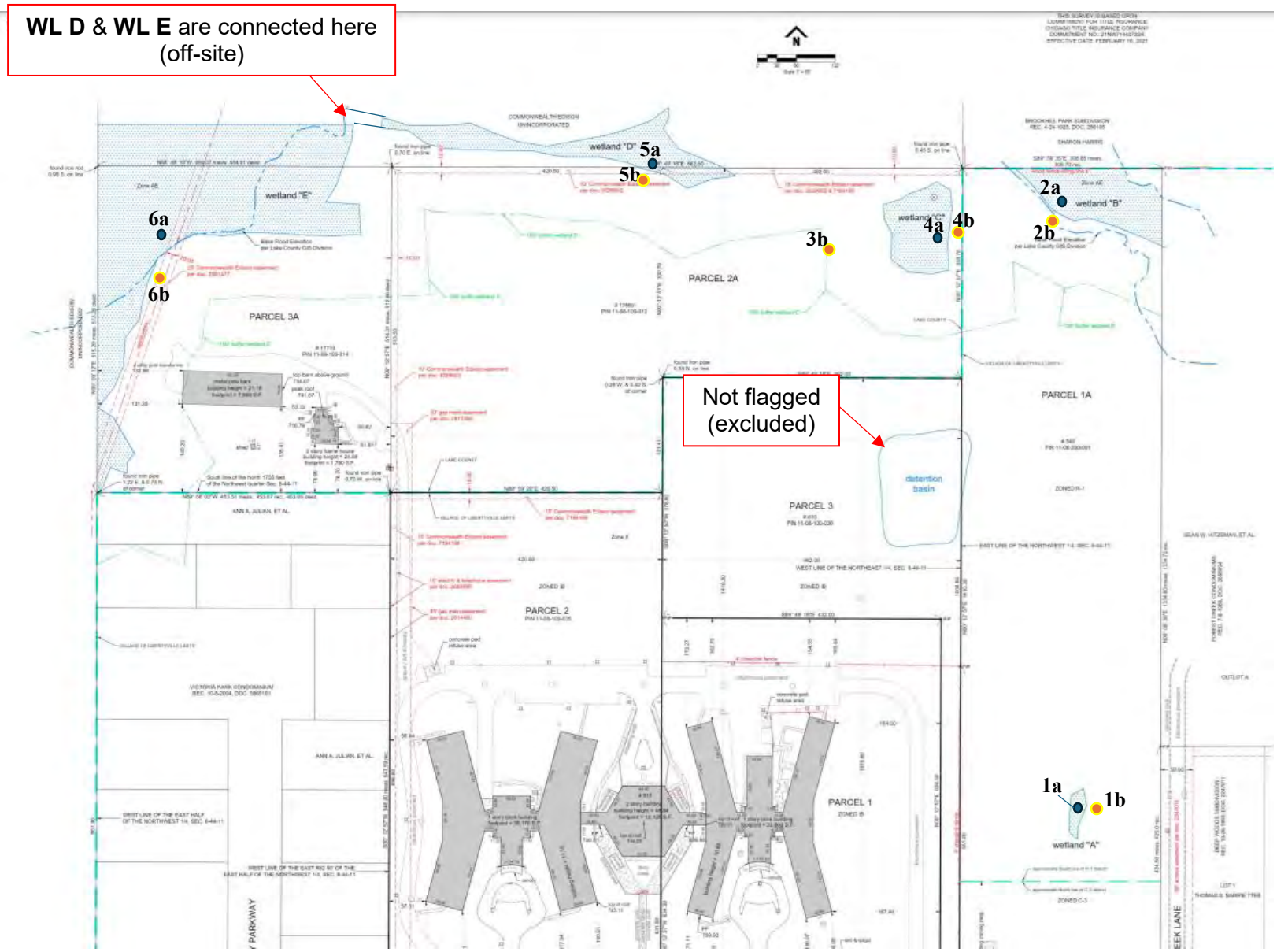
BEI

Title: Lake County Topographic Map
Project Number:001-035-21
Site: Libertyville Manor
Client: Bleck Engineering
Exhibit: 7

BEI

DKES INC

Wetland Boundaries & Data Point Locations – Field Reconnaissance 10.8.2024 (UPD)



SUMMARY/NOTES:

- Wetland **A** through **E** re-flagged on 10.8.2024 (5 wetland areas total)
- Wetlands **A** and **C** are isolated wetlands wholly on-site under Lake County SMC jurisdiction
- Detention Basin not flagged (excluded from wetland regulation)
- USACE jurisdictional Wetlands **B**, **D,** and **E** extend off-site to the north and are part of the Bull Creek ADID wetland complex #94 (Liberty Prairie)

APPENDIX B

SITE PHOTOGRAPHS



Data Point 1A (**Wetland A**) facing northwest, May 1, 2021.



Data Point 1B (**Upland**) facing east, May 1, 2021.



Data Point 2A (**Wetland B, Waters of the U.S., Bull Creek**) facing southeast, May 1, 2021.



Data Point 2B (**Upland**) facing southwest, May 1, 2021.



Data Point 3B (**Upland**) facing east, May 1, 2021.



Data Point 4A (**Wetland C**) facing southwest, May 1, 2021.



Data Point 4B (**Upland**) facing northeast, May 1, 2021.



Photo Point 1 (**P1**) facing north and showing a detention basin dominated by sandbar willow (*Salix interior*), Eastern cottonwood (*Populus deltoides*), and narrow-leaf cattail (*Typha angustifolia*), May 1, 2021.



Data Point 5A (**Wetland D**) facing west, May 1, 2021.



Data Point 5B (**Upland**) facing south, May 1, 2021.



Photo Point 2 (**P2**) facing east and showing an upland woodland with a herbaceous layer dominated by Dame's rocket (Hesperis matronalis), ground ivy (Glechoma hederacea), garlic mustard (Alliaria petiolata), May 1, 2021. The shrub layer was dominated by European buckthorn (Rhamnus cathartica) with black cherry (Prunus serotina) and ash-leaf maple (Acer negundo) trees dominating the canopy.



Data Point 6A (**Wetland C**) facing northeast, May 1, 2021.



Data Point 6B (**Upland**) facing southwest, May 1, 2021.

APPENDIX C

U.S. ARMY CORPS DATA FORMS

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Libertyville Manor Site | City/County: Libertyville / Lake | Sampling Date: 5/1/2021

Applicant/Owner: Bleck Engineering | State: IL | Sampling Point: 1A (Wetland A)

Investigator(s): Paul Bollinger, Dan Krill (BEI) | Section, Township, Range: NW1/4 Sec. 8, T44N, R11E, & east of the Third P.M.

Landform (hillside, terrace, etc.): flat | Local relief (concave, convex, none): concave

Slope (%): 0 - 1 | Lat: 42.307252 | Long: -87.973250 | Datum: Lake County ADID #94

Soil Map Unit Name: Pella silty clay loam, 0 to 2% slopes (153A) | NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)

Are Vegetation____, Soil____, or Hydrology____ significantly disturbed? Are "Normal Circumstances" present? Yes x No ____

Are Vegetation____, Soil____, or Hydrology____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus deltoides*	65	Yes	FAC
2. *Acer saccharinum*	30	Yes	FACW
3.			
4.			
5.			
	95	=Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
		=Total Cover	
Herb Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		=Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	30	x 2 =	60
FAC species	65	x 3 =	195
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	95 (A)		255 (B)

Prevalence Index = B/A = 2.68

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- X 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: A (Wetland A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 6	10YR 2/1	100					Loamy/Clayey	silty clay loam
6 - 20	10YR 5/2	80	10YR 4/6	20	C	M	Loamy/Clayey	Prominent redox concentrations
								clay

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- X Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- X Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): ___
Water Table Present?	Yes ___	No X	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Libertyville Manor Site | City/County: Libertyville / Lake | Sampling Date: 5/1/2021

Applicant/Owner: Bleck Engineering | State: IL | Sampling Point: 1B (Upland)

Investigator(s): Paul Bollinger, Dan Krill (BEI) | Section, Township, Range: NW1/4 Sec. 8, T44N, R11E, & east of the Third P.M.

Landform (hillside, terrace, etc.): flat | Local relief (concave, convex, none): none

Slope (%): 0 - 1 | Lat: 42.307254 | Long: -87.973165 | Datum: n/a

Soil Map Unit Name: Pella silty clay loam, 0 to 2% slopes (153A) | NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)

Are Vegetation____, Soil____, or Hydrology____ significantly disturbed? Are "Normal Circumstances" present? Yes x No ____

Are Vegetation____, Soil____, or Hydrology____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	20	Yes	FACW
2.			
3.			
4.			
5.			
	20	=Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1. *Rhamnus cathartica*	70	Yes	FAC
2.			
3.			
4.			
5.			
	70	=Total Cover	
Herb Stratum (Plot size: ____)			
1. *Arisaema triphyllum*	5	Yes	FACW
2. *Rhamnus cathartica*	5	Yes	FAC
3. *Ribes cynosbati*	5	Yes	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	15	=Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	25	x 2 =	50
FAC species	80	x 3 =	240
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	105 (A)		290 (B)

Prevalence Index = B/A = 2.76

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 1B (Upland)

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 16	10YR 3/2	100					Loamy/Clayey	silty clay loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

___ Coast Prairie Redox (A16)
___ Iron-Manganese Masses (F12)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (F22)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Libertyville Manor Site City/County: Libertyville / Lake Sampling Date: 5/1/2021

Applicant/Owner: Bleck Engineering State: IL Sampling Point: 2A (Wetland B)

Investigator(s): Paul Bollinger, Dan Krill (BEI) Section, Township, Range: NW1/4 Sec. 8, T44N, R11E, & east of the Third P.M.

Landform (hillside, terrace, etc.): stream channel & flats Local relief (concave, convex, none): concave

Slope (%): 0 - 1 Lat: 42.309720 Long: -87.972879 Datum: Lake County ADID #94

Soil Map Unit Name: Sawmill silty clay loam, undrained, 0 to 2% slopes, frequently flooded (1107A) NWI classification: PFO1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No _____ (If no, explain in Remarks.)

Are Vegetation_____, Soil_____, or Hydrology_____ significantly disturbed? Are "Normal Circumstances" present? Yes x No _____

Are Vegetation_____, Soil_____, or Hydrology_____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes X	No _____	

Remarks:
Wetland B includes Bull Creek. Flow is from NW to SE. The channel was 10' to 12' wide and possessed 1" to 4" of clear (non-silty) inundation. Pools and riffles were observed. Steep banks (90 degrees) from 1' to 3' high bordered the channel.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	_____ =Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ =Total Cover		
Herb Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	_____ =Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ =Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: (Include photo numbers here or on a separate sheet.)
The channel was unvegetated (<5% cover) but European buckthorn and Amur honeysuckle dominated the upper slopes.

SOIL

Sampling Point: A (Wetland B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 2	10YR 2/1	100					Loamy/Clayey	silty clay loam
2 - 4	10YR 5/1	100					Sandy	silty sand w/ rocks
4 - 6	10YR 4/2	100					Loamy/Clayey	silty clay w/ cobbles
6 - 16	10YR 5/3	100					Loamy/Clayey	silty clay w/ pebbles

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- X Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

In addition to a depeted matrix, the observed depositional soil layering alludes to the cyclic seasonal flooding and deposition typical of wetland/waters.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- X Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ___	Depth (inches): 4
Water Table Present?	Yes ___	No X	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Libertyville Manor Site | City/County: Libertyville / Lake | Sampling Date: 5/1/2021

Applicant/Owner: Bleck Engineering | State: IL | Sampling Point: 2B (Upland)

Investigator(s): Paul Bollinger, Dan Krill (BEI) | Section, Township, Range: NW1/4 Sec. 8, T44N, R11E, & east of the Third P.M.

Landform (hillside, terrace, etc.): slight hillslope | Local relief (concave, convex, none): convex

Slope (%): 2 - 4 | Lat: 42.309610 | Long: -87.972730 | Datum: n/a

Soil Map Unit Name: Sawmill silty clay loam, undrained, 0 to 2% slopes, frequently flooded (1107A) | NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)

Are Vegetation____, Soil____, or Hydrology____ significantly disturbed? Are "Normal Circumstances" present? Yes x No ____

Are Vegetation____, Soil____, or Hydrology____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus rubra*	30	Yes	FACU
2. *Celtis occidentalis*	30	Yes	FAC
3.			
4.			
5.			
	60	=Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1. *Lonicera maackii*	60	Yes	UPL
2. *Rhamnus cathartica*	15	Yes	FAC
3.			
4.			
5.			
	75	=Total Cover	
Herb Stratum (Plot size: ____)			
1. *Allium canadense*	15	Yes	FACU
2. *Lonicera maackii*	15	Yes	UPL
3. *Arisaema triphyllum*	5	No	FACW
4. *Rosa multiflora*	5	No	FACU
5. *Parthenocissus inserta*	3	No	FACU
6.			
7.			
8.			
9.			
10.			
	43	=Total Cover	
Woody Vine Stratum (Plot size: ____)			
1. *Celastrus orbiculatus*	7	Yes	UPL
2.			
	7	=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 28.6% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	5	x 2 =	10
FAC species	45	x 3 =	135
FACU species	53	x 4 =	212
UPL species	82	x 5 =	410
Column Totals:	185 (A)		767 (B)

Prevalence Index = B/A = 4.15

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 2B (Upland)

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 16	10Yr 3/1	100					Loamy/Clayey	silty clay loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

___ Coast Prairie Redox (A16)
___ Iron-Manganese Masses (F12)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (F22)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Libertyville Manor Site | City/County: Libertyville / Lake | Sampling Date: 5/1/2021

Applicant/Owner: Bleck Engineering | State: IL | Sampling Point: 3B (Upland)

Investigator(s): Paul Bollinger, Dan Krill (BEI) | Section, Township, Range: NW1/4 Sec. 8, T44N, R11E, & east of the Third P.M.

Landform (hillside, terrace, etc.): flat | Local relief (concave, convex, none): none

Slope (%): 0 - 1 | Lat: 42.309657 | Long: -87.974315 | Datum: n/a

Soil Map Unit Name: Pella silty clay loam, 0 to 2% slopes (153A) | NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)

Are Vegetation____, Soil____, or Hydrology____ significantly disturbed? Are "Normal Circumstances" present? Yes x No ____

Are Vegetation____, Soil____, or Hydrology____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	50	Yes	FAC
2.			
3.			
4.			
5.			
	50	=Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
		=Total Cover	
Herb Stratum (Plot size: ____)			
1. *Poa pratensis*	80	Yes	FAC
2. *Glechoma hederacea*	30	Yes	FACU
3. *Potentilla indica*	30	Yes	FACU
4. *Persicaria virginiana*	10	No	FAC
5. *Equisetum arvense*	5	No	FAC
6. *Arisaema triphyllum*	5	No	FACW
7.			
8.			
9.			
10.			
	160	=Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	5	x 2 =	10
FAC species	145	x 3 =	435
FACU species	60	x 4 =	240
UPL species	0	x 5 =	0
Column Totals:	210 (A)		685 (B)

Prevalence Index = B/A = 3.26

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 3B (Upland)

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 20	10YR 2/1	100					Loamy/Clayey	silty clay loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

___ Coast Prairie Redox (A16)
___ Iron-Manganese Masses (F12)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (F22)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches): ____

Water Table Present? Yes ____ No X Depth (inches): ____

Saturation Present? (includes capillary fringe) Yes ____ No X Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Libertyville Manor Site | City/County: Libertyville / Lake | Sampling Date: 5/1/2021

Applicant/Owner: Bleck Engineering | State: IL | Sampling Point: 4A (Wetland C)

Investigator(s): Paul Bollinger, Dan Krill (BEI) | Section, Township, Range: NW1/4 Sec. 8, T44N, R11E, & east of the Third P.M.

Landform (hillside, terrace, etc.): depressional area | Local relief (concave, convex, none): concave

Slope (%): 0 - 1 | Lat: 42.309800 | Long: -87.973941 | Datum: Lake County ADID #94

Soil Map Unit Name: Pella silty clay loam, 0 to 2% slopes (153A) | NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)

Are Vegetation____, Soil____, or Hydrology____ significantly disturbed? Are "Normal Circumstances" present? Yes x No ____

Are Vegetation____, Soil____, or Hydrology____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** X **No** ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	40	Yes	FAC
2. *Populus deltoides*	40	Yes	FAC
3.			
4.			
5.			
	80	=Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1. *Rhamnus cathartica*	30	Yes	FAC
2. *Ribes missouriense*	2	No	UPL
3.			
4.			
5.			
	32	=Total Cover	
Herb Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		=Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	110	x 3 =	330
FACU species	0	x 4 =	0
UPL species	2	x 5 =	10
Column Totals:	112 (A)		340 (B)
Prevalence Index = B/A =			3.04

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks: (Include photo numbers here or on a separate sheet.)
Bare ground observed due to prolonged flooding (inundation).

SOIL

Sampling Point: A (Wetland C

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 6	10YR 2/1	100					Loamy/Clayey	silty clay loam
6 - 16	5Y 4/2	75	2.5Y 6/6	25	C	M	Loamy/Clayey	Prominent redox concentrations
								clay

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- X Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- X Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): ___
Water Table Present?	Yes ___	No X	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Libertyville Manor Site | City/County: Libertyville / Lake | Sampling Date: 5/1/2021

Applicant/Owner: Bleck Engineering | State: IL | Sampling Point: 4B (Upland)

Investigator(s): Paul Bollinger, Dan Krill (BEI) | Section, Township, Range: NW1/4 Sec. 8, T44N, R11E, & east of the Third P.M.

Landform (hillside, terrace, etc.): flat | Local relief (concave, convex, none): none

Slope (%): 0 - 1 | Lat: 42.309853 | Long: -87.973855 | Datum: n/a

Soil Map Unit Name: Pella silty clay loam, 0 to 2% slopes (153A) | NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)

Are Vegetation____, Soil____, or Hydrology____ significantly disturbed? Are "Normal Circumstances" present? Yes x No ____

Are Vegetation____, Soil____, or Hydrology____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	75	Yes	FAC
2.			
3.			
4.			
5.			
	75	=Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1. *Rhamnus cathartica*	70	Yes	FAC
2.			
3.			
4.			
5.			
	70	=Total Cover	
Herb Stratum (Plot size: ____)			
1. *Rhamnus cathartica*	10	Yes	FAC
2. *Arisaema triphyllum*	10	Yes	FACW
3. *Allium canadense*	10	Yes	FACU
4. *Rosa multiflora*	5	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
	35	=Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	155	x 3 =	465
FACU species	15	x 4 =	60
UPL species	0	x 5 =	0
Column Totals:	180 (A)		545 (B)

Prevalence Index = B/A = 3.03

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 4B (Upland)

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 16	10YR 2/1	100					Sandy	silty clay loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Libertyville Manor Site | City/County: Libertyville / Lake | Sampling Date: 5/1/2021

Applicant/Owner: Bleck Engineering | State: IL | Sampling Point: 5A (Wetland D)

Investigator(s): Paul Bollinger, Dan Krill (BEI) | Section, Township, Range: NW1/4 Sec. 8, T44N, R11E, & east of the Third P.M.

Landform (hillside, terrace, etc.): depression | Local relief (concave, convex, none): concave

Slope (%): 1 - 3 | Lat: 42.309970 | Long: -87.975633 | Datum: Lake County ADID #94

Soil Map Unit Name: Pella silty clay loam, 0 to 2% slopes (153A) | NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)

Are Vegetation____, Soil____, or Hydrology____ significantly disturbed? Are "Normal Circumstances" present? Yes x No ____

Are Vegetation____, Soil____, or Hydrology____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** X **No** ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus deltoides*	50	Yes	FAC
2. *Acer saccharinum*	20	Yes	FACW
3.			
4.			
5.			
	70	=Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
		=Total Cover	
Herb Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		=Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	20	x 2 =	40
FAC species	50	x 3 =	150
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	70 (A)		190 (B)

Prevalence Index = B/A = 2.71

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- X 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks: (Include photo numbers here or on a separate sheet.)
Bare soil due to prolonged flooding (inundation).

SOIL

Sampling Point: A (Wetland D

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 20	10YR 2/1	93	2.5Y 5/4	7	C	M	Loamy/Clayey	Prominent redox concentrations
								silty clay loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
X Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
X Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

___ Coast Prairie Redox (A16)
___ Iron-Manganese Masses (F12)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (F22)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** ____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
X Saturation (A3)
X Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
X Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
X Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
X Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
X Geomorphic Position (D2)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches): ____

Water Table Present? Yes ____ No X Depth (inches): ____

Saturation Present? Yes X No ____ Depth (inches): 0

(includes capillary fringe)

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Libertyville Manor Site | City/County: Libertyville / Lake | Sampling Date: 5/1/2021

Applicant/Owner: Bleck Engineering | State: IL | Sampling Point: 5B (Upland)

Investigator(s): Paul Bollinger, Dan Krill (BEI) | Section, Township, Range: NW1/4 Sec. 8, T44N, R11E, & east of the Third P.M.

Landform (hillside, terrace, etc.): flat | Local relief (concave, convex, none): none

Slope (%): 0 - 1 | Lat: 42.309789 | Long: -87.975674 | Datum: n/a

Soil Map Unit Name: Barrington silt loam, 2 to 4% slopes (443B) | NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)

Are Vegetation____, Soil____, or Hydrology____ significantly disturbed? Are "Normal Circumstances" present? Yes x No ____

Are Vegetation____, Soil____, or Hydrology____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	65	Yes	FAC
2.			
3.			
4.			
5.			
	65	=Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1. *Rhamnus cathartica*	65	Yes	FAC
2.			
3.			
4.			
5.			
	65	=Total Cover	
Herb Stratum (Plot size: ____)			
1. *Alliaria petiolata*	10	Yes	FAC
2. *Arisaema triphyllum*	3	No	FACW
3. *Sanicula odorata*	3	No	FAC
4. *Circaea canadensis*	3	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
	19	=Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	3	x 2 =	6
FAC species	143	x 3 =	429
FACU species	3	x 4 =	12
UPL species	0	x 5 =	0
Column Totals:	149 (A)		447 (B)

Prevalence Index = B/A = 3.00

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 5B (Upland)

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 20	10Yr 2/1	100					Loamy/Clayey	silty clay loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

___ Coast Prairie Redox (A16)
___ Iron-Manganese Masses (F12)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (F22)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches): ____

Water Table Present? Yes ____ No X Depth (inches): ____

Saturation Present? Yes ____ No X Depth (inches): ____
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Libertyville Manor Site | City/County: Libertyville / Lake | Sampling Date: 5/1/2021

Applicant/Owner: Bleck Engineering | State: IL | Sampling Point: 6A (Wetland E)

Investigator(s): Paul Bollinger, Dan Krill (BEI) | Section, Township, Range: NW1/4 Sec. 8, T44N, R11E, & east of the Third P.M.

Landform (hillside, terrace, etc.): slight hillslope | Local relief (concave, convex, none): concave

Slope (%): 2 - 4 | Lat: 42.309888 | Long: -87.978258 | Datum: Lake County ADID #94

Soil Map Unit Name: Kish loam, 0 to 2% slopes (626A) | NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)

Are Vegetation____, Soil____, or Hydrology____ significantly disturbed? Are "Normal Circumstances" present? Yes x No ____

Are Vegetation____, Soil____, or Hydrology____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	30	Yes	FAC
2.			
3.			
4.			
5.			
	30	=Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1. *Rhamnus cathartica*	30	Yes	FAC
2.			
3.			
4.			
5.			
	30	=Total Cover	
Herb Stratum (Plot size: ____)			
1. *Phalaris arundinacea*	30	Yes	FACW
2. *Glyceria striata*	30	Yes	OBL
3. *Impatiens capensis*	30	Yes	FACW
4. *Caltha palustris*	5	No	OBL
5.			
6.			
7.			
8.			
9.			
10.			
	95	=Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	35	x 1 =	35
FACW species	60	x 2 =	120
FAC species	60	x 3 =	180
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	155 (A)		335 (B)

Prevalence Index = B/A = 2.16

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- X 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: A (Wetland E

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 16	10YR 3/1	85	2.5YR 3/3	15	C	PL	Loamy/Clayey	Prominent redox concentrations
								silty clay loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
X Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
X Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

___ Coast Prairie Redox (A16)
___ Iron-Manganese Masses (F12)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (F22)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
X Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
X Geomorphic Position (D2)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? Yes X No ___ Depth (inches): 2

(includes capillary fringe)

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Libertyville Manor Site | City/County: Libertyville / Lake | Sampling Date: 5/1/2021

Applicant/Owner: Bleck Engineering | State: IL | Sampling Point: 6B (Upland)

Investigator(s): Paul Bollinger, Dan Krill (BEI) | Section, Township, Range: NW1/4 Sec. 8, T44N, R11E, & east of the Third P.M.

Landform (hillside, terrace, etc.): flat | Local relief (concave, convex, none): none

Slope (%): 0 - 1 | Lat: 42.309741 | Long: -87.978024 | Datum: n/a

Soil Map Unit Name: Sawmill silty clay loam, undrained, 0 to 2% slopes, frequently flooded (1107A) | NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)

Are Vegetation____, Soil____, or Hydrology____ significantly disturbed? Are "Normal Circumstances" present? Yes x No ____

Are Vegetation____, Soil____, or Hydrology____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	40	Yes	FAC
2. *Prunus serotina*	40	Yes	FACU
3.			
4.			
5.			
	80	=Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1. *Rhamnus cathartica*	30	Yes	FAC
2. *Lonicera maackii*			UPL
3.			
4.			
5.			
	30	=Total Cover	
Herb Stratum (Plot size: ____)			
1. *Alliaria petiolata*	70	Yes	FAC
2. *Viola sororia*	15	No	FAC
3. *Hesperis matronalis*	15	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100	=Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	155	x 3 =	465
FACU species	55	x 4 =	220
UPL species	0	x 5 =	0
Column Totals:	210 (A)		685 (B)

Prevalence Index = B/A = 3.26

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 6B (Upland)

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 20	10YR 3/3	100					Loamy/Clayey	silty clay loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

___ Coast Prairie Redox (A16)
___ Iron-Manganese Masses (F12)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (F22)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

APPENDIX D

FLORISTIC QUALITY ASSESSMENTS

SITE: Libertyville Manor Site
LOCALE: Wetland A
BY: Paul Bollinger, Dan Krill (BEI)
NOTES: 5/1/2021

CONSERVATISM-BASED METRICS		ADDITIONAL METRICS	
MEAN C (NATIVE SPECIES)	2.17	SPECIES RICHNESS (ALL)	8
MEAN C (ALL SPECIES)	1.63	SPECIES RICHNESS (NATIVE)	6
MEAN C (NATIVE TREES)	1.67	% NON-NATIVE	0.25
MEAN C (NATIVE SHRUBS)	n/a	WET INDICATOR (ALL)	-0.13
MEAN C (NATIVE HERBACEOUS)	2.67	WET INDICATOR (NATIVE)	-0.33
FQAI (NATIVE SPECIES)	5.31	% HYDROPHYTE (MIDWEST)	0.75
FQAI (ALL SPECIES)	4.60	% NATIVE PERENNIAL	0.63
ADJUSTED FQAI	18.76	% NATIVE ANNUAL	0.13
% C VALUE 0	0.50	% ANNUAL	0.13
% C VALUE 1-3	0.25	% PERENNIAL	0.75
% C VALUE 4-6	0.25		
% C VALUE 7-10	0.00		

SPECIES ACRONYM	SPECIES NAME (NWPL/ MOHLENBROCK)	SPECIES (SYNONYM)	COMMON NAME	C VALUE	MIDWEST WET INDICATOR	NC-NE WET INDICATOR	WET INDICATOR (NUMERIC)	HABIT	DURATION	NATIVITY
acesai	Acer saccharinum	Acer saccharinum	Silver Maple	1	FACW	FACW	-1	Tree	Perennial	Native
allpet	Alliaria petiolata	ALLIARIA PETIOLATA	Garlic-Mustard	0	FAC	FACU	0	Forb	Biennial	Adventive
aritri	Arisaema triphyllum	Arisaema triphyllum ssp. pusillum; Arisaema triphyllum ssp. stewardsonii	Jack-In-The-Pulpit	5	FACW	FAC	-1	Forb	Perennial	Native
frapen	Fraxinus pennsylvanica	Fraxinus pennsylvanica subintegerrima; Fraxinus lanceolata	Green Ash	4	FACW	FACW	-1	Tree	Perennial	Native
galapa	Galium aparine	Galium spurium	Sticky-Willy	0	FACU	FACU	1	Forb	Annual	Native
glehed	Glechoma hederacea	GLECHOMA HEDERACEA	Groundivy	0	FACU	FACU	1	Forb	Perennial	Adventive
popdel	Populus deltoides	Populus deltoides	Eastern Cottonwood	0	FAC	FAC	0	Tree	Perennial	Native
viosor	Viola sororia	Viola priceana	Hooded Blue Violet	3	FAC	FAC	0	Forb	Perennial	Native

SITE: Libertyville Manor Site
LOCALE: Wetland C
BY: Paul Bollinger, Dan Krill (BEI)
NOTES: 5/1/2021

CONSERVATISM-BASED METRICS		ADDITIONAL METRICS	
MEAN C (NATIVE SPECIES)	2.63	SPECIES RICHNESS (ALL)	36
MEAN C (ALL SPECIES)	1.97	SPECIES RICHNESS (NATIVE)	27
MEAN C (NATIVE TREES)	1.60	% NON-NATIVE	0.25
MEAN C (NATIVE SHRUBS)	2.33	WET INDICATOR (ALL)	-0.28
MEAN C (NATIVE HERBACEOUS)	3.06	WET INDICATOR (NATIVE)	-0.41
FQAI (NATIVE SPECIES)	13.66	% HYDROPHYTE (MIDWEST)	0.78
FQAI (ALL SPECIES)	11.83	% NATIVE PERENNIAL	0.69
ADJUSTED FQAI	22.77	% NATIVE ANNUAL	0.06
% C VALUE 0	0.36	% ANNUAL	0.06
% C VALUE 1-3	0.39	% PERENNIAL	0.94
% C VALUE 4-6	0.19		
% C VALUE 7-10	0.06		

SPECIES ACRONYM	SPECIES NAME (NWPL/ MOHLENBROCK)	SPECIES (SYNONYM)	COMMON NAME	C VALUE	MIDWEST WET INDICATOR	NC-NE WET INDICATOR	WET INDICATOR (NUMERIC)	HABIT	DURATION	NATIVITY
aceneg	Acer negundo	Acer negundo var. violaceum	Ash-Leaf Maple	0	FAC	FAC	0	Tree	Perennial	Native
acesai	Acer saccharinum	Acer saccharinum	Silver Maple	1	FACW	FACW	-1	Tree	Perennial	Native
agrgry	Agrimonia gryposepala	Agrimonia gryposepala	Tall Hairy Grooveburr	2	FACU	FACU	1	Forb	Perennial	Native
agrgig	Agrostis gigantea	AGROSTIS ALBA	Black Bent	0	FACW	FACW	-1	Grass	Perennial	Adventive
aritri	Arisaema triphyllum	Arisaema triphyllum ssp. pusillum; Arisaema triphyllum ssp. stewardsonii	Jack-In-The-Pulpit	5	FACW	FAC	-1	Forb	Perennial	Native
cxblan	Carex blanda	Carex blanda	Eastern Woodland Sedge	1	FAC	FAC	0	Sedge	Perennial	Native
cxproj	Carex projecta	Carex projecta	Necklace Sedge	10	FACW	FACW	-1	Sedge	Perennial	Native
cxvulp	Carex vulpinoidea	Carex vulpinoidea	Common Fox Sedge	2	FACW	OBL	-1	Sedge	Perennial	Native
corrac	Cornus racemosa	Cornus racemosa	Gray Dogwood	1	FAC	FAC	0	Shrub	Perennial	Native
crycan	Cryptotaenia canadensis	Cryptotaenia canadensis	Canadian Honewort	4	FAC	FAC	0	Forb	Perennial	Native
epicol	Epilobium coloratum	Epilobium coloratum	Purple-Leaf Willowherb	3	OBL	OBL	-2	Forb	Perennial	Native
equarv	Equisetum arvense	Equisetum arvense	Field Horsetail	0	FAC	FAC	0	Fern	Perennial	Native
fravir	Fragaria virginiana	Fragaria virginiana	Virginia Strawberry	0	FACU	FACU	1	Forb	Perennial	Native
fraaln	Frangula alnus	RHAMNUS FRANGULA	Glossy False Buckthorn	0	FACW	FAC	-1	Shrub	Perennial	Adventive
frapen	Fraxinus pennsylvanica	Fraxinus pennsylvanica subintegerrima; Fraxinus lanceolata	Green Ash	4	FACW	FACW	-1	Tree	Perennial	Native
geucan	Geum canadense	Geum canadense	White Avens	1	FAC	FAC	0	Forb	Perennial	Native
glehed	Glechoma hederacea	GLECHOMA HEDERACEA	Groundivy	0	FACU	FACU	1	Forb	Perennial	Adventive
glystr	Glyceria striata	Glyceria striata var. stricta	Fowl Manna Grass	4	OBL	OBL	-2	Grass	Perennial	Native
impcap	Impatiens capensis	Impatiens capensis	Spotted Touch-Me-Not	3	FACW	FACW	-1	Forb	Annual	Native
pervir	Persicaria virginiana	Polygonum virginianum	Jumpseed	4	FAC	FAC	0	Forb	Perennial	Native
phaaru	Phalaris arundinacea	PHALARIS ARUNDINACEA	Reed Canary Grass	0	FACW	FACW	-1	Grass	Perennial	Adventive
popdel	Populus deltoides	Populus deltoides	Eastern Cottonwood	0	FAC	FAC	0	Tree	Perennial	Native
potind	Potentilla indica	DUCHESNEA INDICA	Indian-Strawberry	0	FACU	FACU	1	Forb	Perennial	Adventive
ranabo	Ranunculus abortivus	Ranunculus abortivus	Kidney-Leaf Buttercup	1	FACW	FAC	-1	Forb	Annual	Native
rhacat	Rhamnus cathartica	RHAMNUS CATHARTICA	European Buckthorn	0	FAC	FAC	0	Shrub	Perennial	Adventive
ribmis	Ribes missouriense	Ribes missouriense	Missouri Gooseberry	2	UPL	UPL	2	Shrub	Perennial	Native
rosmul	Rosa multiflora	ROSA MULTIFLORA	Rambler Rose	0	FACU	FACU	1	Shrub	Perennial	Adventive
rumalt	Rumex altissimus	Rumex altissimus	Pale Dock	1	FACW	FACW	-1	Forb	Perennial	Native
samcan	Sambucus nigra ssp. canadensis	Sambucus canadensis	Black Elder	4	FAC	FACW	-1	Shrub	Perennial	Native
soldul	Solanum dulcamara	SOLANUM DULCAMARA	Climbing Nightshade	0	FAC	FAC	0	Vine	Perennial	Adventive
solgig	Solidago gigantea	Solidago gigantea	Late Goldenrod	4	FACW	FACW	-1	Forb	Perennial	Native
taroff	Taraxacum officinale	TARAXACUM OFFICINALE	Common Dandelion	0	FACU	FACU	1	Forb	Perennial	Adventive
thadio	Thalictrum dioicum	Thalictrum dioicum	Early Meadow-Rue	7	FACU	FACU	1	Forb	Perennial	Native
ulmame	Ulmus americana	Ulmus americana	American Elm	3	FACW	FACW	-1	Tree	Perennial	Native
viosor	Viola sororia	Viola priceana	Hooded Blue Violet	3	FAC	FAC	0	Forb	Perennial	Native
vitrip	Vitis riparia	Vitis riparia var. syrticola	River-Bank Grape	1	FACW	FAC	-1	Vine	Perennial	Native

SITE: Libertyville Manor Site
LOCALE: Wetland D
BY: Paul Bollinger, Dan Krill (BEI)
NOTES: 5/1/2021

CONSERVATISM-BASED METRICS		ADDITIONAL METRICS	
MEAN C (NATIVE SPECIES)	3.18	SPECIES RICHNESS (ALL)	27
MEAN C (ALL SPECIES)	2.00	SPECIES RICHNESS (NATIVE)	17
MEAN C (NATIVE TREES)	1.50	% NON-NATIVE	0.37
MEAN C (NATIVE SHRUBS)	0.00	WET INDICATOR (ALL)	-0.52
MEAN C (NATIVE HERBACEOUS)	3.92	WET INDICATOR (NATIVE)	-0.88
FQAI (NATIVE SPECIES)	13.10	% HYDROPHYTE (MIDWEST)	0.78
FQAI (ALL SPECIES)	10.39	% NATIVE PERENNIAL	0.56
ADJUSTED FQAI	25.21	% NATIVE ANNUAL	0.07
% C VALUE 0	0.44	% ANNUAL	0.07
% C VALUE 1-3	0.30	% PERENNIAL	0.89
% C VALUE 4-6	0.22		
% C VALUE 7-10	0.04		

SPECIES ACRONYM	SPECIES NAME (NWPL/ MOHLENBROCK)	SPECIES (SYNONYM)	COMMON NAME	C VALUE	MIDWEST WET INDICATOR	NC-NE WET INDICATOR	WET INDICATOR (NUMERIC)	HABIT	DURATION	NATIVITY
aceneg	Acer negundo	Acer negundo var. violaceum	Ash-Leaf Maple	0	FAC	FAC	0	Tree	Perennial	Native
acesai	Acer saccharinum	Acer saccharinum	Silver Maple	1	FACW	FACW	-1	Tree	Perennial	Native
agrgig	Agrostis gigantea	AGROSTIS ALBA	Black Bent	0	FACW	FACW	-1	Grass	Perennial	Adventive
allpet	Alliaria petiolata	ALLIARIA PETIOLATA	Garlic-Mustard	0	FAC	FACU	0	Forb	Biennial	Adventive
allcan	Allium canadense	Allium canadense	Meadow Garlic	3	FACU	FACU	1	Forb	Perennial	Native
aritri	Arisaema triphyllum	Arisaema triphyllum ssp. pusillum; Arisaema triphyllum ssp. stewardsonii	Jack-In-The-Pulpit	5	FACW	FAC	-1	Forb	Perennial	Native
calpal	Caltha palustris	Caltha palustris	Yellow Marsh-Marigold	8	OBL	OBL	-2	Forb	Perennial	Native
cxvulp	Carex vulpinoidea	Carex vulpinoidea	Common Fox Sedge	2	FACW	OBL	-1	Sedge	Perennial	Native
celorb	Celastrus orbiculatus	CELASTRUS ORBICULATUS	Asian Bittersweet	0	UPL	UPL	2	Vine	Perennial	Adventive
cicmac	Cicuta maculata	Cicuta maculata	Spotted Water-Hemlock	6	OBL	OBL	-2	Forb	Perennial	Native
circan	Circaea canadensis	Circaea lutetiana canadensis	Broad-Leaf Enchanter's-Nightshade	3	FACU	FACU	1	Forb	Perennial	Native
epicol	Epilobium coloratum	Epilobium coloratum	Purple-Leaf Willowherb	3	OBL	OBL	-2	Forb	Perennial	Native
glehed	Glechoma hederacea	GLECHOMA HEDERACEA	Groundivy	0	FACU	FACU	1	Forb	Perennial	Adventive
glystr	Glyceria striata	Glyceria striata var. stricta	Fowl Manna Grass	4	OBL	OBL	-2	Grass	Perennial	Native
impcap	Impatiens capensis	Impatiens capensis	Spotted Touch-Me-Not	3	FACW	FACW	-1	Forb	Annual	Native
nasoff	Nasturtium officinale	NASTURTIUM OFFICINALE	Watercress	0	OBL	OBL	-2	Forb	Perennial	Adventive
phaaru	Phalaris arundinacea	PHALARIS ARUNDINACEA	Reed Canary Grass	0	FACW	FACW	-1	Grass	Perennial	Adventive
popdel	Populus deltoides	Populus deltoides	Eastern Cottonwood	0	FAC	FAC	0	Tree	Perennial	Native
potind	Potentilla indica	DUCHESNEA INDICA	Indian-Strawberry	0	FACU	FACU	1	Forb	Perennial	Adventive
ranabo	Ranunculus abortivus	Ranunculus abortivus	Kidney-Leaf Buttercup	1	FACW	FAC	-1	Forb	Annual	Native
ransep	Ranunculus hispidus var. nitidus	Ranunculus septentrionalis	Bristly Buttercup	5	FAC	FAC	0	Forb	Perennial	Native
rhacat	Rhamnus cathartica	RHAMNUS CATHARTICA	European Buckthorn	0	FAC	FAC	0	Shrub	Perennial	Adventive
rosmul	Rosa multiflora	ROSA MULTIFLORA	Rambler Rose	0	FACU	FACU	1	Shrub	Perennial	Adventive
salnig	Salix nigra	Salix nigra	Black Willow	5	OBL	OBL	-2	Tree	Perennial	Native
soldul	Solanum dulcamara	SOLANUM DULCAMARA	Climbing Nightshade	0	FAC	FAC	0	Vine	Perennial	Adventive
solgig	Solidago gigantea	Solidago gigantea	Late Goldenrod	4	FACW	FACW	-1	Forb	Perennial	Native
vitrip	Vitis riparia	Vitis riparia var. syrticola	River-Bank Grape	1	FACW	FAC	-1	Vine	Perennial	Native

SITE: Libertyville Manor Site
LOCALE: Wetland E
BY: Paul Bollinger, Dan Krill (BEI)
NOTES: 5/1/2021

CONSERVATISM-BASED METRICS		ADDITIONAL METRICS	
MEAN C (NATIVE SPECIES)	3.63	SPECIES RICHNESS (ALL)	28
MEAN C (ALL SPECIES)	2.07	SPECIES RICHNESS (NATIVE)	16
MEAN C (NATIVE TREES)	0.00	% NON-NATIVE	0.43
MEAN C (NATIVE SHRUBS)	2.67	WET INDICATOR (ALL)	-0.46
MEAN C (NATIVE HERBACEOUS)	4.17	WET INDICATOR (NATIVE)	-0.63
FQAI (NATIVE SPECIES)	14.50	% HYDROPHYTE (MIDWEST)	0.79
FQAI (ALL SPECIES)	10.96	% NATIVE PERENNIAL	0.50
ADJUSTED FQAI	27.40	% NATIVE ANNUAL	0.07
% C VALUE 0	0.50	% ANNUAL	0.07
% C VALUE 1-3	0.21	% PERENNIAL	0.89
% C VALUE 4-6	0.21		
% C VALUE 7-10	0.07		

SPECIES ACRONYM	SPECIES NAME (NWPL/ MOHLENBROCK)	SPECIES (SYNONYM)	COMMON NAME	C VALUE	MIDWEST WET INDICATOR	NC-NE WET INDICATOR	WET INDICATOR (NUMERIC)	HABIT	DURATION	NATIVITY
aceneg	Acer negundo	Acer negundo var. violaceum	Ash-Leaf Maple	0	FAC	FAC	0	Tree	Perennial	Native
agrgig	Agrostis gigantea	AGROSTIS ALBA	Black Bent	0	FACW	FACW	-1	Grass	Perennial	Adventive
amahyb	Amaranthus hybridus	Amaranthus hybridus	Green Pigweed	0	UPL	UPL	2	Forb	Annual	Native
barvul	Barbarea vulgaris	BARBAREA VULGARIS	Garden Yellow-Rocket	0	FAC	FAC	0	Forb	Biennial	Adventive
calcan	Calamagrostis canadensis	Calamagrostis canadensis	Bluejoint	6	OBL	OBL	-2	Grass	Perennial	Native
calpal	Caltha palustris	Caltha palustris	Yellow Marsh-Marigold	8	OBL	OBL	-2	Forb	Perennial	Native
cxstri	Carex stricta	Carex stricta	Uptight Sedge	5	OBL	OBL	-2	Sedge	Perennial	Native
coralb	Cornus alba	Cornus stolonifera; Cornus baileyi; Cornus sericea	Red Osier	5	FACW	FACW	-1	Shrub	Perennial	Native
corrac	Cornus racemosa	Cornus racemosa	Gray Dogwood	1	FAC	FAC	0	Shrub	Perennial	Native
epicol	Epilobium coloratum	Epilobium coloratum	Purple-Leaf Willowherb	3	OBL	OBL	-2	Forb	Perennial	Native
geucan	Geum canadense	Geum canadense	White Avens	1	FAC	FAC	0	Forb	Perennial	Native
glystr	Glyceria striata	Glyceria striata var. stricta	Fowl Manna Grass	4	OBL	OBL	-2	Grass	Perennial	Native
hesmat	Hesperis matronalis	HESPERIS MATRONALIS	Mother-of-the-Evening	0	FACU	FACU	1	Forb	Perennial	Adventive
impcap	Impatiens capensis	Impatiens capensis	Spotted Touch-Me-Not	3	FACW	FACW	-1	Forb	Annual	Native
ligvul	Ligustrum vulgare	LIGUSTRUM VULGARE	European Privet	0	FACU	FACU	1	Shrub	Perennial	Adventive
lonmaa	Lonicera maackii	LONICERA MAACKII	Amur Honeysuckle	0	UPL	UPL	2	Shrub	Perennial	Adventive
lytsal	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adventive
nasoff	Nasturtium officinale	NASTURTIUM OFFICINALE	Watercress	0	OBL	OBL	-2	Forb	Perennial	Adventive
phaaru	Phalaris arundinacea	PHALARIS ARUNDINACEA	Reed Canary Grass	0	FACW	FACW	-1	Grass	Perennial	Adventive
ranhis	Ranunculus hispidus	Ranunculus hispidus	Bristly Buttercup	8	FAC	FAC	0	Forb	Perennial	Native
ransep	Ranunculus hispidus var. nitidus	Ranunculus septentrionalis	Bristly Buttercup	5	FAC	FAC	0	Forb	Perennial	Native
rhacat	Rhamnus cathartica	RHAMNUS CATHARTICA	European Buckthorn	0	FAC	FAC	0	Shrub	Perennial	Adventive
ribmis	Ribes missouriense	Ribes missouriense	Missouri Gooseberry	2	UPL	UPL	2	Shrub	Perennial	Native
rosmul	Rosa multiflora	ROSA MULTIFLORA	Rambler Rose	0	FACU	FACU	1	Shrub	Perennial	Adventive
sciatv	Scirpus atrovirens	Scirpus atrovirens	Dark-Green Bulrush	4	OBL	OBL	-2	Sedge	Perennial	Native
soldul	Solanum dulcamara	SOLANUM DULCAMARA	Climbing Nightshade	0	FAC	FAC	0	Vine	Perennial	Adventive
typang	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adventive
viosor	Viola sororia	Viola priceana	Hooded Blue Violet	3	FAC	FAC	0	Forb	Perennial	Native

STORMWATER MANAGEMENT COMMISSION

Revised October 2, 2024

Request for Preliminary Wetland Jurisdictional Determination (PJD) and/or Isolated Wetland Boundary Verification (BV)

Check item(s) requested and submit with supporting information to SMC online via the Self Service Portal: https://lakecountyil-energovpub.tylerhost.net/Apps/selfservice/LakeCountyILCSS_Prod#/home or via email ktraynoff@lakecountyil.gov. Upon receipt of a completed PJD request form and supporting information, SMC will provide an invoice for the requested review services based on the fees listed below. ***Payment for review fee(s) must be received before work can proceed.***

- ☐ **PRELIMINARY JD STANDARD** - $720.00 for 1st wetland/water + $180.00 for each additional wetland/waters.
- ☐ **PRELIMINARY JD STORMWATER - Sites with only stormwater features or ditches constructed in uplands -** $360.00 for 1st constructed feature + $180.00 for each additional constructed feature.
- ☑ **ISOLATED WETLAND-WATER BOUNDARY FIELD VERIFICATION[2] -** $480.00 for 1st wetland/waters + $180.00 for each additional wetland/water.

Date Requested:	10/8/20	**Project Name:**	Liberty Manor - Isolated Wetlands BV Request
Property Address (enclose map or air photo *clearly* indicating site boundaries, streets & municipality):	610 PETERSON ROAD, LIBERTYVILLE		
Pin(s):	11-08-100-012 and 11-08-100-036 and 11-08-200-001		
Lat. (dec):	42.308253	**Long (dec):**	-87.974090

Name & Address of Property Owner		**Name & Address of Requestor (if not owner)** [1]	
Contact Name:	Milan Stokovich & Debra Stokovich	**Name:**	Daniel J. Krill
Company Name:	SB Holdings & SB Reserve	**Company Name:**	BEI / DKES
Address:	Libertyville Manor Extended Care 610 Peterson Rd	**Address:**	110 Woodland Road
City/State/Zip:	Libertyville/IL/60048	**City/State/Zip:**	Libertyville, IL 60048
Phone:		**Phone:**	847.778.0993
Email Address:	milan@libertyvillemanor.com	**Email Address:**	DKenvserv@sbcglobal.net

Information on Party to be Invoiced (or specify which of the above)	
Name:	Pultegroup, LLC
Address:	1900 E Golf Road, Ste 300
City/State/Zip:	Schaumburg/IL/60173
Email Address:	nicholas.andriano@pultegroup.com

☐	**Preliminary JD Checklist (check items enclosed)**	☑	**Boundary Verification Checklist[2] (check items enclosed)**
☐	Air Photo with Wetland/Waters Boundaries ***(Required)***	☑	Flagged/Staked Wetland/Waters Boundaries ***(Required, except farmed wetlands shall not be flagged/staked)***
☐	For Agricultural Land[3] - Farmed Wetland Determination Report by CWS Using NRCS Procedures ***(Required)***	☐	For Agricultural Land[3] - Farmed Wetland Determination Report by CWS Using NRCS Procedures ***(Required)***
☐	Wetland Determination Report (Recommended)	☑	Air Photo with Wetland/Waters/Farmed Wetland Boundaries ***(Required)***
☐	Data Point Locations & Data Sheets (Recommended)	☑	Data Point Locations & Data Sheets ***(Required)***
☐	Plans, Permits, etc. for Constructed Features (Recommended)	☑	Wetland Determination Report (Recommended)
☐	Shapefiles of wetland/water boundaries (*.shp, *.kmz) *NAD83 / Illinois East (ftUS)* (Recommended)	☐	Shapefiles of wetland/water boundaries (*.shp, *.kmz) *NAD83 / Illinois East (ftUS)* (Recommended)

The undersigned hereby grants the Lake County SMC and their agent's right-of-access to the subject property for the purpose of performing the requested preliminary JD and/or boundary verification.

Milan Stokovich Debra Stokovich — Signature of Property Owner

10-21-2024 — Date

1 If requestor is not the property owner(s), provide affidavit from owner(s) authorizing requestor to seek this preliminary JD and/or isolated wetland boundary verification.

2 SMC can only verify *isolated* wetland/waters/farmed wetland boundaries. *Waters of the U.S.* boundaries must be verified by the U.S. Army Corps of Engineers (USACE).

3 "Agricultural Land" is land that has been farmed at least one year in the last five years.

DEPARTMENT OF THE ARMY
CHICAGO DISTRICT, CORPS OF ENGINEERS
231 SOUTH LASALLE STREET
CHICAGO, ILLINOIS 60604-1437

REPLY TO
ATTENTION OF:

August 10, 2021

Operations Division
Regulatory Branch
LRC-2021-00516

SUBJECT: Jurisdictional Determination for the Libertyville Manor Site in Libertyville, Lake County, Illinois (Latitude 42.308368, Longitude -87.974524)

John Fadden
SB Reserve Properties, Inc.
610 Peterson Road
Libertyville, Illinois 60048

Dear Mr. Fadden:

This is in response to your request that the U.S. Army Corps of Engineers complete a jurisdictional determination for the above-referenced site submitted on your behalf by Bollinger Environmental, Inc. The subject project has been assigned number LRC-2021-00516. Please reference this number in all future correspondence concerning this project.

Following a review of the information you submitted, this office has determined that the subject property contains "waters of the United States".

Wetlands B, D & E have been determined to be under the jurisdiction of this office and therefore, subject to Federal regulation.

Wetlands A & C, and the Stormwater Detention Basin, have been determined to be excluded water features, and therefore not subject to Federal regulation. Please be informed that this office does not concur with the boundaries of waters not under the jurisdiction of this office.

This office concurs with the submitted wetland delineation and wetland boundaries at the subject site. In the event an application is submitted for work within jurisdictional areas, a survey of the wetland boundary(s) stamped by a professional surveyor shall accompany the approved wetland delineation.

For a detailed description of our determination please refer to the enclosed decision document. This determination covers only your project as depicted in the Wetland Assessment Report dated May 2021, prepared by Bollinger Environmental, Inc.

This determination is valid for a period of five (5) years from the date of the letter, unless new information warrants revision of the determination before the expiration date or a District Commander has identified, after public notice and comment, that specific geographic areas with rapidly changing environmental conditions merit re-verification on a more frequent basis.

This letter is considered an approved jurisdictional determination for your subject site. If you object to this determination, you may appeal, according to 33 CFR Part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and a Request for Appeal (RFA) form. If you request to appeal the above determination, you must submit a completed RFA form to the Great Lakes/Ohio River Division Office at the following address:

Jacob Siegrist
Regulatory Appeals Review Officer
US Army Corps of Engineers
Great Lakes and Ohio River Division
550 Main Street, Room 10-714
Cincinnati, Ohio 45202-3222
Phone: (513) 684-2699 Fax: (513) 684-2460

In order to be accepted, your RFA must be complete, meet the criteria for appeal and be received by the Division Office within sixty (60) days of the date of the NAP. If you concur with the determination in this letter, submittal of the RFA form to the Division office is not necessary.

This determination has been conducted to identify the limits of the Corps Clean Water Act jurisdiction for the particular site identified in this request. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985, as amended. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service prior to starting work.

It is your responsibility to obtain any required state, county, or local approvals for impacts to wetland areas not under the Department of the Army jurisdiction. For projects in unincorporated areas of Lake County, please contact Lake County Planning, Building and Development at (847) 377-2600. For projects in incorporated areas of Lake County, please contact the Lake County Stormwater Management Commission at (847) 377-7700.

Pursuant to Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers regulates the discharge of dredged or fill material into waters of the United States, including wetlands. A Department of the Army permit is required for any proposed work involving the discharge of dredged or fill material within the jurisdiction of this office. To initiate the permit process, please submit a joint permit application form along with detailed plans of the proposed work. Information concerning our program, including the application form and an application checklist, can be found at and downloaded from our website:
http://www.lrc.usace.army.mil/Missions/Regulatory.aspx

If you have any questions, please contact Mr. Michael J. Machalek of my staff by telephone at (312) 846-5534 or email at Mike.J.Machalek@usace.army.mil.

Sincerely,

Diedra L. Mclaurin

Diedra L. McLaurin
Team Lead
Regulatory Branch

Enclosures

Copy Furnished w/out Enclosures

Lake County Stormwater Management Commission (Brian Frank)
Lake County Planning, Building and Development Department (Eric Steffen)
Bollinger Environmental, Inc. (Paul Bollinger)

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: John Fadden, SB Reserve Properties, Inc.	File Number: LRC-2021-00516	Date: August 10, 2021

Attached is:		See Section below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of Permission)	A
	PROFFERED PERMIT (Standard Permit or Letter of Permission)	B
	PERMIT DENIAL	C
X	APPROVED JURISDICTIONAL DETERMINATION	D
	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://www.usace.army.mil/CECW/Pages/reg_materials.aspx or Corps regulations at 33 CFR Part 331.

A. INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- ACCEPT: If you received a Standard Permit or a Letter of Permission (LOP), you may sign the permit document and return it to the district commander for final authorization. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district commander. Your objections must be received by the district commander within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district commander will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district commander will send you a proffered permit for your reconsideration, as indicated in Section B below.

B. PROFFERED PERMIT: You may accept or appeal the permit

- ACCEPT: If you received a Standard Permit or a Letter of Permission (LOP), you may sign the permit document and return it to the district commander for final authorization. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division commander. This form must be received by the division commander within 60 days of the date of this notice.

C. PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division commander. This form must be received by the division commander within 60 days of the date of this notice.

D. APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division commander. This form must be received by the division commander within 60 days of the date of this notice.

E. PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:

Regulatory Branch
Chicago District Corps of Engineers
231 South LaSalle Street, Suite 1500
Chicago, IL 60604-1437
Phone: (312) 846-5530
Fax: (312) 353-4110

If you only have questions regarding the appeal process you may also contact:

Jacob Siegrist
Regulatory Appeals Review Officer
US Army Corps of Engineers
Great Lakes and Ohio River Division
550 Main Street, Room 10524
Cincinnati, Ohio 45202-3222
Phone: (513) 684-2699 Fax: (513) 684-2460

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Commanders personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15-day notice of any site investigation, and will have the opportunity to participate in all site investigations.

	Date:	Telephone number:
_____ Signature of appellant or agent.		

Three. Those portions of the Community Area which are not part of a Lot shall be conveyed to the Association free of mortgages no later than sixty (60) days after the Turnover Date or sixty (60) days after such Community Area becomes subject to the terms hereof, whichever is later, subject to the rights of Owners from time to time of Lots to use and enjoy the Community Area as provided herein.

2.14 REAL ESTATE TAXES FOR COMMUNITY AREA: If a tax bill is issued with respect to Community Area which is made subject to this Declaration in the middle of a tax year (regardless of when it is conveyed to the Association), then the tax bill shall be prorated so that the Declarant shall be responsible for the payment of that portion of the tax bill from January 1st of the tax year to the date that such Community Area is made subject to this Declaration, and the Association shall be responsible for the balance of the tax bill for such year, and any tax bills for subsequent years. Each Owner of a Lot shall be responsible for the payment of real estate taxes levied with respect to the Owner's Lot (including that portion of the Owner's Lot which is designated as Community Area hereunder).

ARTICLE THREE
Community Area/Association Maintenance

3.01 IN GENERAL: The restrictions and limitations contained in this Article shall be subject to the rights of the Declarant set forth in Article Nine.

3.02 MAINTENANCE, REPAIR AND REPLACEMENT BY ASSOCIATION:

(a) The following maintenance, repairs and replacements shall be the responsibility of and furnished by the Association as a Community Expense:

(i) Added planting, replanting, care and maintenance of trees, shrubs, flowers, grass and all other landscaping on the Community Area and the Association Maintained Public Area;

(ii) Maintenance, repair and replacement of the entryway monuments, fences, seating area, and other improvements located on the Community Area;

(iii) Maintenance, repair and replacement of the common area walkways located on the Community Area (which maintenance shall only include snow removal at the Association's sole discretion);

(iv) Maintenance, repair and replacement of Stormwater Management Facility, detention, retention, storm water management areas located on the Community Area;

(v) Maintenance, repair and replacements of cluster mailboxes located in the Development, as needed, as provided in Section 8.17;

(vi) Maintenance, repair and replacement of fence located along the rear of 1 through 13 of the Plat;

(vii) Maintenance, repairs, replacements and other obligations pursuant to the Utility Agreement and the Cost Sharing Agreement;

(viii) Maintenance of the native vegetation within the naturalized Stormwater Management Facility (including the native emergent shelf plugs and native upland prairie) within and surrounding the native planted Stormwater Management Facility in accordance with the Long-Term Management; and

(ix) Maintenance of the native upland mesic prairie buffer surrounding the existing and preserved wetland located in the southeast portion of the Community Area. The Kildeer Crossings Long-Term Management Plan for the on-site BMP's and native buffer and stormwater management facility plantings dated June 1, 2021 is attached with this document.

(b) All maintenance, repair and replacement work required pursuant to this Declaration shall be promptly completed in a good and workmanlike manner consistent with any applicable governmental regulations or standards, or, if no such regulations or standards apply, then consistent with good engineering, forestry, or other similar professional standards so as to ensure the safe and effective condition of the portion of the Development subject to maintenance, repair or replacement. The cost of any maintenance, repairs and replacement furnished by the Association pursuant to this Section shall be Community Expenses. The Declarant reserves the right to add additional responsibilities to be furnished by the Association at such time as any Supplemental Declarations are Recorded from time to time.

(c) The Association shall maintain the Stormwater Management Facility, including all detention basins, in accordance with this Section and its maintenance plan, a copy of which shall be on file with the Association and which maintenance plan may be amended from time to time upon the agreement of a majority of the Managers.

(d) The Association shall maintain the grass, shrubs, trees, and flowers, if any, installed by the Declarant on the Community Area ("Initial Plantings") in accordance with the Declarant's Development Plan and with generally accepted landscape maintenance standards, including mowing, trimming, fertilization, pruning, re-mulching, applications of insect and disease control, as needed, and any other maintenance which will promote the health of the Initial Plantings. If the Association fails to maintain the Initial Plantings in accordance with generally acceptable landscape maintenance standards and Initial Plantings die or decline as a result of this failure, then, the Association shall be responsible for the replacement of the declining or dead Initial Plantings, including, but not limited to replacements required by the Municipality in connection with the Municipality's acceptance of the Initial Plantings. All expenses incurred under this subsection shall be Community Expenses.

(e) The Association shall not be required to provide maintenance to any Lot which is not yet Subject to Assessment hereunder.

3.03 MAINTENANCE BY OWNER:

(a) Except as otherwise specifically provided for in this Declaration each Owner of a Lot shall be responsible for the maintenance, repair and replacement of the Owner's Lot and the Home thereon.

(b) Except as provided in Section 3.02(c)(ii), each Owner shall be responsible for snow removal on the sidewalk located on the Lot or in the right of way adjacent to his Lot as required by the Municipality. Each Owner shall be responsible for the maintenance, repair and

THE FISCAL TAX REVENUES ASSOCIATED WITH THE PROPOSED GREENWAY CHASE DEVELOPMENT

To

PULTEGROUP, INC.

From

GRUEN GRUEN + ASSOCIATES
Urban Economists, Market Strategists & Land Use/Public Policy Analysts

January 2025

C1680

Gruen Gruen + Associates

THE FISCAL TAX REVENUES ASSOCIATED WITH THE PROPOSED GREENWAY CHASE DEVELOPMENT

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TABLE OF CONTENTS

Chapter		Page
I	INTRODUCTION AND KEY FINDINGS AND CONCLUSIONS	1
	INTRODUCTION	1
	KEY FINDINGS AND CONCLUSIONS	1
	Increased Housing Opportunities and Total Household Income	1
	Estimated Annual Property Tax Revenue	1
	Estimated Increase in Annual Property Tax Revenue Over Existing Land Use	2
	Estimated Total Annual Revenue to Village of Libertyville	2
	Village Revenue Resulting from Greenway Chase Development	2
	METHODOLOGICAL APPROACH	3
	2025 CONSTANT DOLLARS	3
II	BASELINE ASSUMPTIONS AND PROJECT CHARACTERISTICS	4
	INTRODUCTION	4
	DEMOGRAPHIC AND ECONOMIC PROFILE OF LIBERTYVILLE	4
	GREENWAY CHASE PROJECT CHARACTERISTICS AND ASSUMPTIONS	5
	Project Population	6
III	FORECAST OF VILLAGE REVENUE	7
	INTRODUCTION	7
	PROPERTY TAX REVENUE	9
	STATE INCOME AND USE TAX	10
	SALES TAX	10
	ELECTRIC UTILITY TAX	12
	CABLE FRANCHISE FEES	13

TABLE OF CONTENTS, Continued

Chapter **Page**

III

TELECOMMUNICATIONS TAX 14

MOTOR FUEL TAX 15

APPENDIX A: TOTAL ANNUAL PROPERTY TAX REVENUE FOR ALL TAXING ENTITIES 16

LIST OF TABLES

Table		Page
I-1	Estimated Annual Revenues Generated by the Proposed Greenway Chase Development at Build-out for Village of Libertyville	2
II-1	Baseline Demographic and Employment Estimates for the Village of Libertyville	4
II-2	Residential Development Assumptions and Characteristics	5
II-3	Projected Greenway Chase Population at Build-out	6
III-1	Estimated Annual Revenues Generated by Proposed Greenway Chase Development at Build-out for Village of Libertyville	8
III-2	Estimated Annual Property Tax Revenue at Build-out	9
III-3	Estimated Annual State Income and Use Tax Revenue Generated by Greenway Chase Development at Build-out	10
III-4	Estimated Annual Sales Tax Revenue Attributable to Households within the Greenway Chase Development at Build-out	11
III-5	Estimated Annual Electricity Tax Revenue Generated by Greenway Chase Development at Build-out	12
III-6	Estimated Annual Cable Franchise Fee Revenue Generated by Greenway Chase Development at Build-out	13
III-7	Estimated Annual Telecommunications Tax Revenue Generated by Greenway Chase Development at Build-out	14
III-8	Estimated Annual Motor Fuel Tax Fund Revenue Generated by Greenway Chase Development at Build-out	15
A-1	Total Annual Property Tax Revenue Estimate by Taxing District	16

CHAPTER I

INTRODUCTION AND KEY FINDINGS AND CONCLUSIONS

INTRODUCTION

This report summarizes the evaluation by Gruen Gruen + Associates ("GG+A") of the fiscal benefits of the proposed Greenway Chase development ("Greenway Chase") on the Village of Libertyville. Greenway Chase is proposed to include 64 for-sale detached single-family housing units and 70 age-restricted duplex housing units for a total of 134 housing units at 610 Peterson Road in Libertyville. An existing obsolete rehabilitation center - Libertyville Manor Rehabilitation and Healthcare Center- is in process of closing. The existing building improvements will be demolished.

A portion of the property not already within Libertyville's jurisdiction is anticipated to be annexed into the Village of Libertyville.

Because the fiscal impact analysis addresses long-term rather than short-term fiscal effects of the proposed development on the Village's General and other funds, the analysis excludes fee revenue associated with infrastructure or other capital items. Revenues collected on a cost-recovery basis and other fees-for-service (e.g., permit and plan checking fees, and inspection fees, etc.) are assumed to be set at rates that will adequately offset municipal costs.

To evaluate the fiscal benefits associated with Greenway Chase, GG+A estimated the annual revenue likely to be generated by the proposed development at build-out for the Village of Libertyville General Fund, Motor Fuel Tax Fund, and Capital Projects Funds.

KEY FINDINGS AND CONCLUSIONS

Increased Housing Opportunities and Total Household Income

In addition to providing expanded housing opportunities in Libertyville and replacing an obsolete land use that will be demolished the proposed Greenway Chase development will generate fiscal (tax revenues) benefits to the Village of Libertyville. The fiscal benefits associated with Greenway Chase are summarized below and described in more detail in the body of this report.

The occupants of the housing units are estimated to add total annual income to the household base of Libertyville of $23,128,400.

Estimated Annual Property Tax Revenue

At build-out, GG+A estimates the Greenway Chase development will generate annual property tax revenue of over $860,000 for the Libertyville School District #70; and approximately $768,400 of annual property tax revenue for the Community High School District #128. Appendix A of this report summarizes these estimates. The proposed

development is estimated to generate annual property tax revenue of $191,400 for the Village of Libertyville. As summarized in Appendix A, the proposed Greenway Chase development is estimated to generate total property tax revenue of approximately $2,225,000 for all taxing districts. The single-family units are estimated to account for approximately $1,024,000 of the total property tax revenue. The age-restricted duplex units are estimated to account for approximately $1,201,000 of the total property tax revenue.

Estimated Increase in Annual Property Tax Revenue Over Existing Land Use

The 2023 property taxes of the existing property were $160,510. According to the Lake County Assessor, 2024 total assessed value is $2,296,756 compared to a much higher assessed value of $27,624,400 for the proposed Greenway Chase development.

Estimated Total Annual Revenue to Village of Libertyville

As described more fully below, upon full build-out, Greenway Chase is forecast to generate approximately $389,300 of annual revenue for the Village of Libertyville. This equates to approximately $2,905 per housing unit.

Village Revenue Resulting from Greenway Chase Development

Table I-1 presents a summary of the annual revenues estimated to be generated by the proposed Greenway Chase development at build-out for the Village of Libertyville.

TABLE I-1

Estimated Annual Revenues Generated by the Proposed Greenway Chase Development at Build-Out for Village of Libertyville[1]

Revenue	$	% of Total
Property Tax	191,400	49.2
State Income and Use Tax	66,700	17.1
Sales Tax[2]	91,100	23.4
Electric Utility Tax	13,600	3.5
Cable Franchise Fees	5,800	1.5
Telecommunications Tax	7,000	1.8
Motor Fuel Tax[3]	13,700	3.5
TOTAL	**389,300**	**100.0**

[1]Figures have been rounded.
[2] Includes non-home rule sales tax revenue.
[3] Includes Transportation Renewal Fund distribution from State of Illinois.

Sources: Village of Libertyville; Gruen Gruen + Associates.

Upon full build-out, Greenway Chase is forecast to generate approximately $389,300 of annual revenue for the Village of Libertyville. This equates to approximately $2,905 per housing unit.

Estimated property tax revenue of $191,400 is expected to comprise approximately 49 percent of all revenue generated by the planned Greenway Chase development. Annual state income and use tax revenue of $66,700 is forecast to comprise an additional 17 percent of total revenue upon full build-out. Annual sales tax revenue of $91,100 is forecast to comprise over 23 percent of revenue upon full build-out. Other revenues totaling $40,100 include electric utility tax ($13,600), cable franchise fees ($5,800), telecommunication tax ($7,000), and motor fuel tax ($13,700) are forecast to comprise 10.3 percent of annual revenue.

METHODOLOGICAL APPROACH

This fiscal analysis is based on a review of the Village of Libertyville 2024-2025 fiscal year budget and information obtained from representatives of PulteGroup, Inc., and a review and analysis of secondary data sources. Property tax rate information was obtained from the Lake County Treasurer's and Lake County Clerk's website about current assessments, property tax rates, and existing allocations to taxing districts. This information was necessary to estimate future property tax revenue for the Village of Libertyville General Fund.

GG+A drew on the specific characteristics of the proposed development (e.g., property values) to estimate revenues such as property taxes and sales taxes which are affected by the development characteristics. The specific methodologies used to estimate each revenue item are discussed in the appropriate sections of this report. We have assumed the current tax and fee structures will remain constant. No estimates of the number of households new to Libertyville as opposed to relocating to the project from within Libertyville are available. The impacts presented in this report are made on a gross basis. To the extent households within Libertyville relocate to the development, this will free up housing at other locations in Libertyville which can be expected to be re-occupied given the limited inventory of available housing units in Libertyville.[1]

2025 CONSTANT DOLLARS

All cost and revenue projections in this report are expressed in constant 2025 dollars. That is, the possible effects of inflation or deflation on revenues in the future are not quantified.

[1] According to Zillow's website as of January 10, 2025, only 41 homes are for sale in Libertyville.

CHAPTER II

BASELINE ASSUMPTIONS AND PROJECT CHARACTERISTICS

INTRODUCTION

This chapter summarizes the baseline demographic assumptions for the Village of Libertyville upon which some revenue estimates are based. It also describes the anticipated characteristics of the proposed Greenway Chase development program, households attracted to occupy the housing units, household size, and per-unit market value estimates.

DEMOGRAPHIC AND ECONOMIC PROFILE OF LIBERTYVILLE

Table II-1 shows the baseline demographic and employment estimates for the Village of Libertyville upon which some revenue estimates are based.

TABLE II-1

Baseline Demographic and Employment Estimates for the Village of Libertyville

	2023[1] #
Total Population	20,493
Households	7,573
Average Household Size	2.64
Total Employment (Jobs Estimated for Non-resident Workers)	14,382
Total Resident Equivalents[2]	27,684

[1] Population and household estimates are from 2023 American Community Survey, 5-Year Estimates. Employment estimates are for 2022.
[2] Assumes two jobs located in the Village generate the same revenues as one resident.

Sources: U.S. Census Bureau; U.S. Census Bureau Longitudinal Employer- Household Dynamic, OnTheMap; Gruen Gruen + Associates.

According to the U.S. Census Bureau, the Village of Libertyville's population was estimated at about 20,493 in 2023. The number of occupied housing units, or households, is estimated at approximately 7,573. The average household size in the Village of Libertyville is estimated at 2.64 persons per household. According to data from the U.S. Census Bureau, the number of jobs in the Village of Libertyville held by workers which reside outside of the Village of Libertyville in 2022 (most recent year available) total approximately 14,382 jobs. To estimate a resident equivalent upon which some revenues are calculated, it is assumed that two jobs equal the equivalent of one resident. Total resident equivalents are estimated at 27,684 in the Village of Libertyville.

GREENWAY CHASE PROJECT CHARACTERISTICS AND ASSUMPTIONS

We have relied upon the information PulteGroup, Inc. provided about the project characteristics including number and type of units, and average sale price per unit. Table II-2 summarizes the anticipated characteristics of the planned residential units.

TABLE II-2

Residential Development Assumptions and Characteristics

DETACHED SINGLE-FAMILY RESIDENTIAL:	
Age-Restricted Duplexes	70
Single-Family Housing Units	64
Number of Total Units	134
Number of Two-Bedroom Units (Age-Restricted Duplexes)	70
Number of Three-Bedroom Units (Single-Family Housing Units)	64
Average Household Size (Persons) for Single-Family Housing Units[1]	2.987
Average Household Size (Persons) for Age-Restricted Duplexes	1.741
Average Sale Price Per Age-Restricted Duplex Unit	$674,990
Average Sale Price per Single Family Housing Unit	$620,000
Average Household Income[2]	$172,600

[1] Average household size from Pulte Group based on municipal code estimates of population per dwelling unit

[2] Weighted average household income of duplexes and single-family housing units based on assumptions: (a) 20% down payment, (b) 30-year mortgage at 7% annual interest, and (c) monthly mortgage payments equal to 24% of before-tax income.

Sources: PulteGroup, Inc.; Village of Libertyville; U.S. Census Bureau; Gruen Gruen + Associates.

The development is planned to include 64 for-sale detached single-family housing units consisting of three-bedroom units. The age-restricted duplex units are anticipated to consist of two bedrooms. The average household size for the single-family units is anticipated to be 2.987 and the average household size for the age-restricted duplexes is anticipated to be 1.741. According to PulteGroup, Inc., the average sales prices are expected to be $674,990 for age-restricted duplexes (which will include options for basements and an upstairs level with guest suite) and $599,990 to $639,990 for detached single-family housing units. The average sales price per single-family housing unit is estimated at $620,000.

As summarized in Table II-2, the average household income of project households is estimated at $172,600.[2] Empty-nesters 55 years and older are the anticipated primary type of buyers for the duplex homes. A move-up buyer wanting to be within the boundaries of the Libertyville Community High School District 128 is expected to comprise the primary demand segment for the detached single-family housing units.

Project Population

Based on the estimates of household size, Table II-3 summarizes the expected residential population upon full build-out.

TABLE II-3

Projected Greenway Chase Population at Build-out

	#
Number of Units	134
Average Household Size[1]	2.34 persons
Estimated Population of Greenway Chase at Build-out	313
[1]Weighted average household size of duplexes and single-family homes.	
Sources: PulteGroup, Inc.; Gruen Gruen + Associates.	

At full build-out, based on an average household size assumption of 2.34 persons per household, the proposed Greenway Chase project is expected to include a total population of 313 residents.

[2] According to the U.S. Census Bureau, average household income in 2023 for Libertyville residents is estimated at $214,676. S1901: Income in the Past 12 Months ... - Census Bureau Table

CHAPTER III

FORECAST OF VILLAGE REVENUE

INTRODUCTION

This chapter presents a forecast of Village of Libertyville revenue estimated to result from the development and occupancy of Greenway Chase. The following sources of revenue are estimated:

- Property tax - The assessed value of new development will generate property tax revenue for the General Fund;

- Income and use taxes – The State of Illinois redistributes income taxes and sales use taxes to municipalities on a per capita basis;

- Sales tax - The sale of taxable retail goods to households living in Greenway Chase will generate revenue for the General Fund through the one percent local sales tax rate shared by the State of Illinois. The Village of Libertyville also imposes a non-home rule sales tax of 1.5 percent to fund capital projects;

- Electric utility tax – The Village imposes taxes on the use of electricity (based on kilowatt usage);

- Cable franchise fees - The Village of Libertyville imposes a franchise tax on cable and gas service providers;

- Telecommunications tax – The Village imposes a 6.0 percent telecommunications tax on the use of telecommunications; and

- Motor fuel tax – The Village receives a share of the State-imposed tax on gasoline which is deposited into the Motor Fuel Tax Fund.

Table III-1 presents a summary of the annual revenues estimated to be generated by the proposed Greenway Chase development at build-out for the Village of Libertyville.

TABLE III-1

Estimated Annual Revenues Generated by the Proposed Greenway Chase Development at Build-Out for Village of Libertyville[1]

Revenue	$	% of Total
Property Tax	191,400	49.2
State Income and Use Tax	66,700	17.1
Sales Tax[2]	91,100	23.4
Electric Utility Tax	13,600	3.5
Cable Franchise Fees	5,800	1.5
Telecommunications Tax	7,000	1.8
Motor Fuel Tax[3]	13,700	3.5
TOTAL	**389,300**	**100.0**

[1]Figures have been rounded.
[2] Includes non-home rule sales tax revenue.
[3] Includes Transportation Renewal Fund distribution from State of Illinois.

Sources: Village of Libertyville; Gruen Gruen + Associates.

Upon full build-out, Greenway Chase is forecast to generate approximately $389,300 of annual revenue for the Village of Libertyville. This equates to $2,905 per housing unit.

Annual property tax revenue of $191,400 is expected to comprise approximately 48 percent of all revenue generated by the planned Greenway Chase development. Annual state income and use tax revenue of $66,700 percent is forecast to comprise an additional 17 percent of revenue upon full build-out. Annual sales tax revenue of $91,100 is forecast to comprise 23 percent of revenue upon full build-out. Other revenues totaling $40,100 include electric utility tax ($13,600), cable franchise fees ($5,800), telecommunication tax ($7,000), and motor fuel tax ($13,700) are forecast to comprise 10.3 percent of annual revenue.

PROPERTY TAX REVENUE

Table III-2 presents an estimate of annual property tax revenue at build-out of the planned Greenway Chase project for the Village of Libertyville.

TABLE III-2

Estimated Annual Property Tax Revenue at Build-out[1]

	Detached Single-Family $	Age-Restricted Duplexes $	Total $
Estimated Market Value[2]	39,680,000	47,249,300	86,929,300
Equalized Assessed Value[3]	12,714,700	14,909,800	27,624,500
Annual Property Tax Revenue @ Build-out[4]	**88,100**	**103,300**	**191,400**

[1] Figures are rounded.
[2] Detached single-family units based on an average sales price of $620,000 and age-restricted duplexes based on an average sales price of $674,990.
[3] Equalized assessed value is calculated at 33.33% of market value. Adjusted equalized assessed value factor of 1.0000. Net of homeowner's exemption of $8,000 per unit for all units and senior's exemption of $8,000 per unit for one-half of duplex units which are age-restricted to 55+ years. The senior's exemption of $8,000 in Lake County is only for residents who are 65+ years.
[4] Village of Libertyville 2023 property tax rate is $0.692776 per $100 of equalized assessed value.

Sources: PulteGroup, Inc.; Lake County Assessor; Village of Libertyville Fiscal Year 2024-2025 Budget; Gruen Gruen + Associates.

At build-out, the residential market value of the planned Greenway Chase development is estimated at $86,929,300. At build-out, the equalized assessed value (net of homeowner's exemption on all units and senior's exemption on a portion of the duplex units) of the residential development is estimated to total $27,64,500. Based on the 2023 property tax rate, annual property tax revenue for the Village of Libertyville General Fund at build-out is estimated to total $191,400.

STATE INCOME AND USE TAX

The State of Illinois redistributes income and use tax to municipalities on a per capita basis. As summarized in Table III-3, according to the Village Budget and the Illinois Municipal league, the redistribution is estimated at $171.00 per Village resident for income tax and $42.18 per Village resident for use tax.[3]

TABLE III-3

Estimated Annual State Income and Use Tax Revenue Generated by Greenway Chase Development at Build-out

	Annual
State Income and Use Tax Revenue Per Capita	$213.18[1]
Estimated Number of Greenway Chase Residents	313
Tax Revenue @ Build-out	**$66,725**

[1] Based on Illinois Municipal League revenue estimates for Municipal Fiscal Year 2025.

Sources : Village of Libertyville; Illinois Municipal League; Gruen Gruen + Associates.

At build-out, the proposed Greenway Chase development is estimated to include 313 residents. Annual state income and use tax revenue to the Village of Libertyville General Fund, then, is estimated to total approximately $66,700 ($213.18 tax revenue per capita multiplied by number of residents).

SALES TAX

The Village of Libertyville receives State of Illinois sales tax revenue equal to one percent of taxable purchases within the Village. The Village of Libertyville also imposes a 1.0 percent non-home rule sales tax and a 0.5 percent special non-home rule sales tax. The non-home rule sales tax is not charged on titled goods (i.e., cars and trailers), nor does it apply to most groceries and medicines.

[3] Illinois Municipal League, Revenue Estimates, State Shared Municipal Revenues, file.cfm (iml.org)

Table III-4 summarizes the estimate of sales tax revenue associated with households of the Greenway Chase development.

TABLE III-4

Estimated Annual Sales Tax Revenue
Attributable to Residents of the Greenway Chase Development at Build-out

	Annual
Sales Tax Revenue[1]	$8,058,101
Number of Libertyville Resident Equivalents	27,684
Tax Revenue Per Resident Equivalent	$291.07
Estimated Number of Greenway Chase Resident Equivalents (Residential Population)	313
Tax Revenue @ Build-out	**$91,106**

[1] Based on Village's FY 2024-2025 budget. Sales tax revenue estimate of $8,058,101 comprises $4,000,000 General Fund for non-automotive/agriculture/manufacturer retail categories and non-home rule sales tax revenue of $4,058,101.

Sources: Village of Libertyville; Gruen Gruen + Associates.

To estimate the sales tax revenue attributable to residents of the proposed Greenway Chase development, we used a per resident equivalent estimate by dividing the 2024-2025 budgeted sales tax revenue of $8,058,101 by the estimated 27,684 resident equivalents (residents and one-half of workers) in the Village of Libertyville. This results in an average resident equivalent sales tax revenue estimate of $291. The sales tax revenue estimate comprises $4,000,000 of General Fund sales tax revenue for non-automotive/agricultural/manufacturers categories (i.e., approximately 40 percent of the budgeted General Fund sales tax revenue of $10 million is for retail categories such as general merchandise, food, eating & drinking, apparel, furniture & household, lumber/building materials, and drugs and miscellaneous). Non-home rule sales tax revenue budgeted at $4,058,101 is also included in the $8,058,101 sales tax revenue estimate upon which a sales tax revenue per resident equivalent estimate is made.

Multiplying the per resident equivalent sales tax revenue estimate of $291 by the 313 resident equivalents (residential population) of the proposed Greenway Chase development at build-out results in annual sales tax revenue of approximately $91,100.

According to the Illinois Municipal League, Libertyville has estimated it would lose $750,000 to $800,000 from the elimination of the one percent grocery tax if Libertyville does not vote to extend the tax. A later article quoted the Mayor indicating the loss of annual revenue would total $850,000.[4] Using the higher figure the potential loss of grocery tax revenue equates to

[4] file.cfm Estimated Annual Financial Impact of the Proposed Elimination of the 1% Grocery Tax on Illinois' Municipalities; Mayors suggest grocery tax elimination was for 'good headline' in election year | WGIL 93.7 FM - 1400 AM.

$30.70 per resident equivalent. Given the estimated population of the Greenway Chase development of 313, the sales tax revenue attributable to the occupants of the proposed development could potentially be about $9,600 less than shown on Table III-4.

ELECTRIC UTILITY TAXES

The Village imposes an electric tax based on the kilowatt usage of electric. Table III-5 presents an estimate of the annual electric tax revenue generated by the residents of the proposed Greenway Chase development.

TABLE III-5

Estimated Annual Electric Utility Tax Revenue Generated by Greenway Chase Development at Build-out

	Annual
Electric Utility Tax Revenue[1]	$1,200,000
Number of Libertyville Resident Equivalents	27,684
Tax Revenue Per Resident Equivalent	$43.35
Estimated Number of Greenway Chase Resident Equivalents (Residential Population)	313
Tax Revenue @ Build-out	**$13,567**

[1] Based on Village's FY 2024-2025 budget.

Sources: Village of Libertyville; Gruen Gruen + Associates.

To estimate the electric utility tax revenue attributable to residents of the proposed Greenway Chase development, we used a per resident equivalent estimate by dividing the 2024-2025 budgeted electric utility tax revenue of $1,200,000 by the estimated 27,684 resident equivalents (residents and one-half of workers) in the Village of Libertyville. This results in an average resident equivalent utility tax revenue estimate of $43.35. Multiplying the per resident equivalent estimate by the 313 resident equivalents (residential population) of the proposed Greenway Chase development at build-out results in annual electric utility tax revenue of approximately $13.,600



CABLE FRANCHISE FEES

Table III-6 summarizes the forecast of cable franchise fee revenue generated by households of the Greenway Chase development.

TABLE III-6

**Estimated Annual Cable Franchise Fee Revenue
Generated by Greenway Chase Development at Build-out**

	Annual
Cable Franchise Fee Revenue[1]	$330,000
Number of Libertyville Households	7,573
Cable Franchise Fee Revenue Per Household	$43.58
Number of Greenway Chase Households @ Build-out	134
Tax Revenue @ Build-out	**$5,839**

[1] Based on Village's Fiscal Year 2024-2025 budget.

Sources: Village of Libertyville; Gruen Gruen + Associates.

Utilizing a per-household approach, we estimate the franchise cable franchise fee revenue associated with the development of Greenway Chase. We use budgeted cable franchise fee revenues budgeted for the 2024-2025 fiscal year which total $330,000. On a per household basis, this equates to $43.58 per household in the Village of Libertyville.

Multiplying the per household estimate by the anticipated 134 households of Greenway Chase produces an estimate of total annual cable franchise fee revenue at build-out of approximately $5,800.

TELECOMMUNICATIONS TAX

The Village imposes a telecommunications tax of 6.0 percent on the use of telecommunications. Table III-7 presents an estimate of the annual telecommunications tax revenue generated by the households of the proposed Greenway Chase development.

TABLE III-7

Estimated Annual Telecommunications Tax Revenue Generated by Greenway Chase Development at Build-out

	Annual
Telecommunications Tax Revenue	$396,000
Number of Libertyville Households	7,573
Telecommunications Tax Revenue Per Household	$52.29
Number of Greenway Chase Households @ Build-out	134
Tax Revenue @ Build-out	**$7,007**

Sources: Village of Libertyville; Gruen Gruen + Associates.

To estimate the telecommunications tax revenue attributable to households of the proposed Greenway Chase development, we derived a per household estimate by dividing the 2024-2025 budgeted telecommunications tax revenue of $396,000 by the estimated 7,573 households in the Village of Libertyville. This results in an average household telecommunications tax revenue estimate of $52.29. Multiplying the per household estimate by the 134 households of the proposed Greenway Chase development at build-out results in annual telecommunications tax revenue of approximately $7,000.

MOTOR FUEL TAX

The Village receives a share of the State-imposed tax on gasoline which is accounted for in the Village's Motor Fuel Tax Fund. In 2019, the State doubled the cost of motor fuel taxes which are placed in a Transportation Renewal Fund. Motor fuel taxes and Transportation Renewal Funds are distributed to municipalities on a per capita basis. The Illinois Municipal League estimates municipal distributions for municipal fiscal year 2025 of $22.53 per capita for motor fuel tax and $21.07 per capita for Transportation Renewal Fund.

Table III-8 presents an estimate of the annual motor fuel tax revenue (including Transportation Renewal Fund revenue) generated by the residential population of the proposed Greenway Chase development.

TABLE III-8

Estimated Annual Motor Fuel Tax Fund Revenue Generated by Greenway Chase Development at Build-out

	Annual
Motor Fuel Tax Fund Revenue Per Capita[1]	$43.60
Estimated Number of Greenway Chase Residents	313
Tax Revenue @ Build-out	**$13,647**

[1] Based on Illinois Municipal League revenue estimates for Municipal Fiscal Year 2025 of $22.53 per capita for motor fuel taxes and $21.07 per capita for Transportation Renewal Fund.

Sources: Village of Libertyville; Illinois Municipal League; Gruen Gruen + Associates.

At build-out, the proposed Greenway Chase development is estimated to include 313 residents. Annual motor fuel tax revenue (including Transportation Renewal Fund revenue) to the Village of Libertyville is estimated to total nearly $13,700.

APPENDIX A

TOTAL ANNUAL PROPERTY TAX REVENUE FOR ALL TAXING ENTITIES

Table A-1 presents the estimated total property tax r3evenue associated with the project at build-out and the property tax estimated to apply to the single-family housing units and the age-restricted duplex units.

TABLE A-1

Total Annual Property Tax Revenue Estimate by Taxing District

Taxing District	Single-Family Units $	Age-Restricted Duplex Units $	Total Development $
College Of Lake County	37,413	43,872	81,284
Community High School District 128	353,709	414,775	768,484
Cook Memorial Public Library District	36,346	42,621	78,966
County Of Lake	74,540	87,409	161,949
Forest Preserve	21,356	25,043	46,398
Libertyville School District #70	395,930	464,284	860,214
Road And Bridge Libertyville	7,863	9,221	17,084
Township Of Libertyville	8,733	10,240	18,973
Village of Libertyville	88,084	103,291	191,375
TOTAL PROPERTY TAXES[1]	1,023,973	1,200,755	2,224,728

[1]Based on 2023 property tax rate for Village of Libertyville and 2023 property tax rate for other taxing districts.

Sources: Lake County Treasurer; Gruen Gruen + Associates.

Total property taxes are estimated at nearly $2,225,000 from the development for all taxing entities. The single-family units are estimated to account for approximately $1,024,000 of the total property tax revenue. The age-restricted duplex units are estimated to account for approximately $1,201,000 of the total property tax revenue.

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APPLYING KNOWLEDGE, CREATING RESULTS, ADDING VALUE

Greenway Chase

Product & Elevations

March 2025



Greenway Chase Product Distribution

Spring Series
64 Single Family Homes



Landings Series
70 Duplex Homes

Greenway Chase Product Matrix

Spring Series – Single Family

	Square Footage	Bedrooms	Bathrooms	Garage
Harrison	1,678-1,827	3	2.5	2
Gordon	1,852 – 1,999	3-4	2.5 - 3.5	2
Nelson	2,104 – 2,244	3-4	2.5 - 3	2
Sienna	2,156 – 2,300	3	2.5	2
Rybrook	2,421 – 2,567	3-5	2.5-4	2

Landings Series – Duplex (55+)

	Square Footage	Bedrooms	Bathrooms	Garage
Provence	1,577 – 2,697	2 - 4	2 - 4	2

Example Only - Proprietary and Confidential

Landing Series

Landings Series – Provence



Front Elevation A – Base Plan

No Lofts

Front wall of garages includes two foot offset

0 2 4 8 16 FEET

Example Only - Proprietary and Confidential

Landings Series – Provence



Front Elevation A – Loft/Loft

Loft option on both sides

Front wall of garages includes two-foot offset

0 2 4 8 16 FEET

Example Only - Proprietary and Confidential

Landings Series – Provence



Front Elevation A – Base/Loft

Loft option on one side only

Front wall of garages includes two-foot offset

0 2 4 8 16 FEET

Example Only - Proprietary and Confidential

Landings Series – Provence



Left Elevation A – Base

0 2 4 8 16 FEET

Example Only - Proprietary and Confidential

Landings Series – Provence



Left Elevation A – Base Near Unit / Sunroom Option Far Unit

0 2 4 8 16 FEET

Example Only - Proprietary and Confidential

Landings Series – Provence



Right Elevation A – Sunroom + Café Bay Option

0 2 4 8 16 FEET

Example Only - Proprietary and Confidential

Landings Series – Provence



Right Elevation A – Sunroom + Café Bay + Loft Option

0 2 4 8 16 FEET

Example Only - Proprietary and Confidential

Landings Series – Provence



Rear Elevation A – Sunroom Option

0 2 4 8 16 FEET

Base Plan

Example Only - Proprietary and Confidential

Landings Series – Provence



SUNROOM EXTENSION

Rear Elevation A – Sunroom + Loft Option

0 2 4 8 16 FEET

Loft Option

Example Only - Proprietary and Confidential

Landings Series – Provence



Rear Elevation A – Sunroom + Loft Option

0 2 4 8 16 FEET

Base Plan

Example Only - Proprietary and Confidential

Landings Series – Provence



Front Elevation B – Base Plan

No Lofts

Front wall of garages includes two-foot offset

0 2 4 8 16 FEET

Example Only - Proprietary and Confidential

Landings Series – Provence



Front Elevation B – Loft/Loft

Loft option on both sides

Front wall of garages includes two foot offset

0 2 4 8 16 FEET

Example Only - Proprietary and Confidential

Landings Series – Provence



Front Elevation B – Base/Loft

Loft option on one side only

Front wall of garages includes two foot offset

0 2 4 8 16 FEET

Example Only - Proprietary and Confidential

Landings Series – Provence



Left Elevation B – Base Near Unit / Sunroom Option Far Unit

0 2 4 8 16 FEET

Example Only - Proprietary and Confidential

Landings Series – Provence



Right Elevation B – Sunroom + Café Bay Option

0 2 4 8 16 FEET

Example Only - Proprietary and Confidential

Landings Series – Provence



Right Elevation B – Sunroom + Café Bay + Loft Option

0 2 4 8 16 FEET

Example Only - Proprietary and Confidential

Landings Series – Provence



SUNROOM EXTENSION

Rear Elevation B – Sunroom Option

0 2 4 8 16 FEET

Base Plan

Example Only - Proprietary and Confidential

Landings Series – Provence



Rear Elevation B – Sunroom + Loft Option

0 2 4 8 16 FEET

Loft Option

Example Only - Proprietary and Confidential

Landings Series – Provence



Rear Elevation B – Sunroom + Loft Option

Base Plan

0 2 4 8 16 FEET

Example Only - Proprietary and Confidential

Landings Series – Provence



Front Elevation C – Base Plan

No Lofts

Front wall of garages includes two-foot offset

Example Only - Proprietary and Confidential

Landings Series – Provence



Front Elevation C – Loft/Loft

Loft option on both sides

Front wall of garages includes two foot offset

0 2 4 8 16 FEET

Example Only - Proprietary and Confidential

Landings Series – Provence



Front Elevation C – Base/Loft

Loft option on one side only

Front wall of garages includes two foot offset

0 2 4 8 16 FEET

Example Only - Proprietary and Confidential

Landings Series – Provence



Left Elevation C – Base Near Unit / Sunroom Option Far Unit

0 2 4 8 16 FEET

Example Only - Proprietary and Confidential

Landings Series – Provence



Right Elevation C – Sunroom + Café Bay Option

0 2 4 8 16 FEET

Example Only - Proprietary and Confidential

Landings Series – Provence



Right Elevation C – Sunroom + Café Bay + Loft Option

0 2 4 8 16 FEET

Example Only - Proprietary and Confidential

Landings Series – Provence



SUNROOM EXTENSION

Rear Elevation C – Sunroom Option

0 2 4 8 16 FEET

Base Plan

Example Only - Proprietary and Confidential

Landings Series – Provence



Rear Elevation C – Sunroom + Loft Option

0 2 4 8 16 FEET

Loft Option

Example Only - Proprietary and Confidential

Landings Series – Provence



Rear Elevation C – Sunroom + Loft Option

Base Plan

0 2 4 8 16 FEET

Example Only - Proprietary and Confidential

Landings Series – Provence



Front Elevation A – Base Plan

No Lofts

Front wall of garages includes two foot offset

0 2 4 8 16 FEET

Example Only - Proprietary and Confidential

Landings Series – Provence



Front Elevation A – Loft/Loft

Loft option on both sides

Front wall of garages includes two foot offset

0 2 4 8 16 FEET

Example Only - Proprietary and Confidential

Landings Series – Provence



Front Elevation A – Base/Loft

Loft option on one side only

Front wall of garages includes two-foot offset

0 2 4 8 16 FEET

Example Only - Proprietary and Confidential

Landings Series – Provence



Left Elevation A – Base Near Unit / Sunroom Option Far Unit

0 2 4 8 16 FEET

Example Only - Proprietary and Confidential

Landings Series – Provence



Right Elevation A – Sunroom + Café Bay Option

0 2 4 8 16 FEET

SMOOTH WOOD PANEL

CAFÉ BAY

OPT. WINDOW (TYP)

SUNROOM EXTENSION

Example Only - Proprietary and Confidential

Landings Series – Provence



Right Elevation A – Sunroom + Café Bay + Loft Option

0 2 4 8 16 FEET

Example Only - Proprietary and Confidential

Landings Series – Provence



SUNROOM EXTENSION

Rear Elevation A – Sunroom Option

0 2 4 8 16 FEET

Base Plan

Example Only - Proprietary and Confidential

Landings Series – Provence



Rear Elevation A – Sunroom + Loft Option

0 2 4 8 16 FEET

Loft Option

Example Only - Proprietary and Confidential

Landings Series – Provence



Rear Elevation A – Sunroom + Loft Option

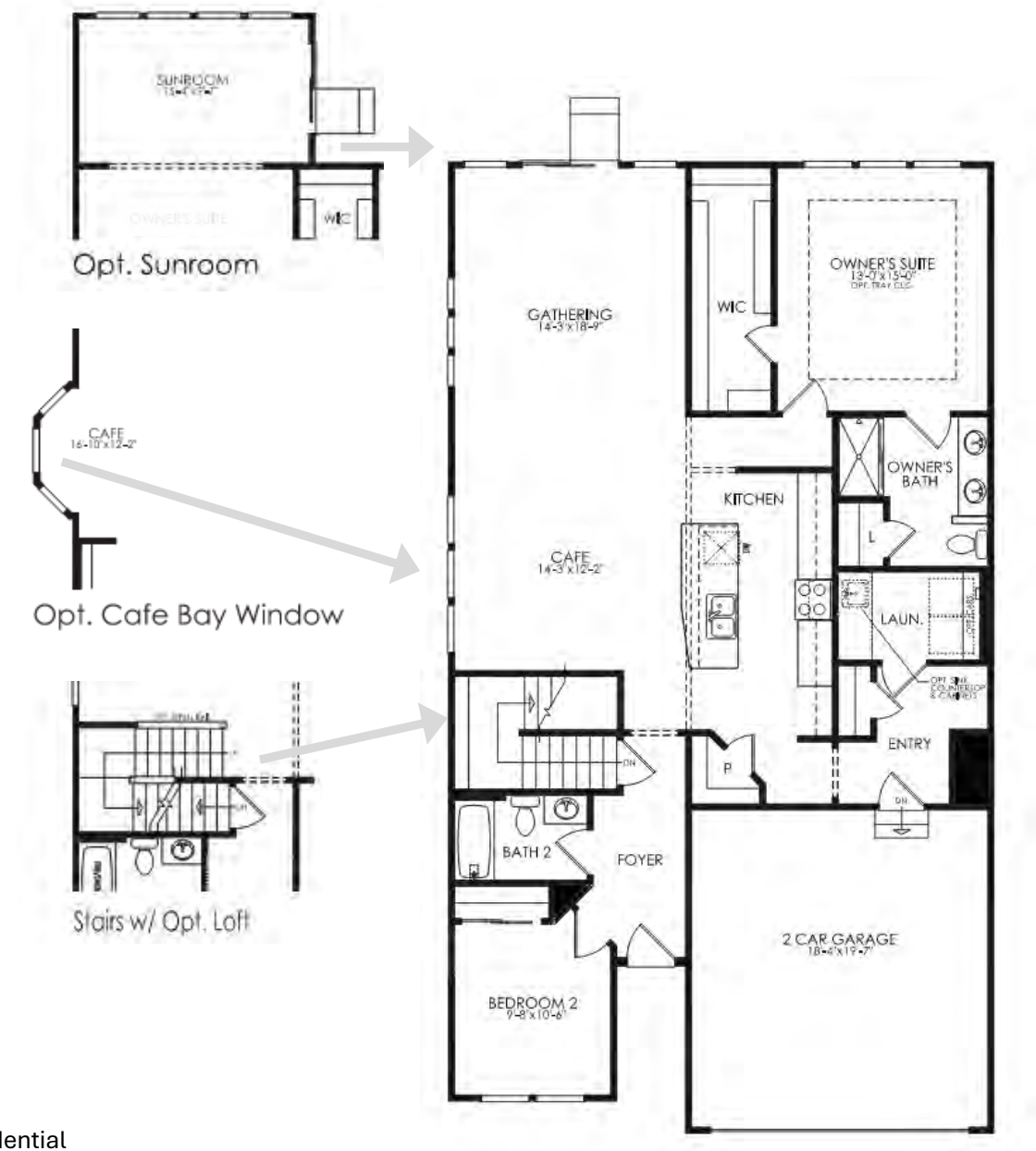
Base Plan

0 2 4 8 16 FEET

Example Only - Proprietary and Confidential

Provence

First Floor & Structural Options



Example Only - Proprietary and Confidential

Provence

Optional Loft



DORMER EXTENSION
@ ELEV. A ONLY



Opt. Loft with Bedroom and Bath

Example Only - Proprietary and Confidential

Provence

Color Packages

HW-110-W-M



HW-133-W-M
(Premium)



HW-111-W-M

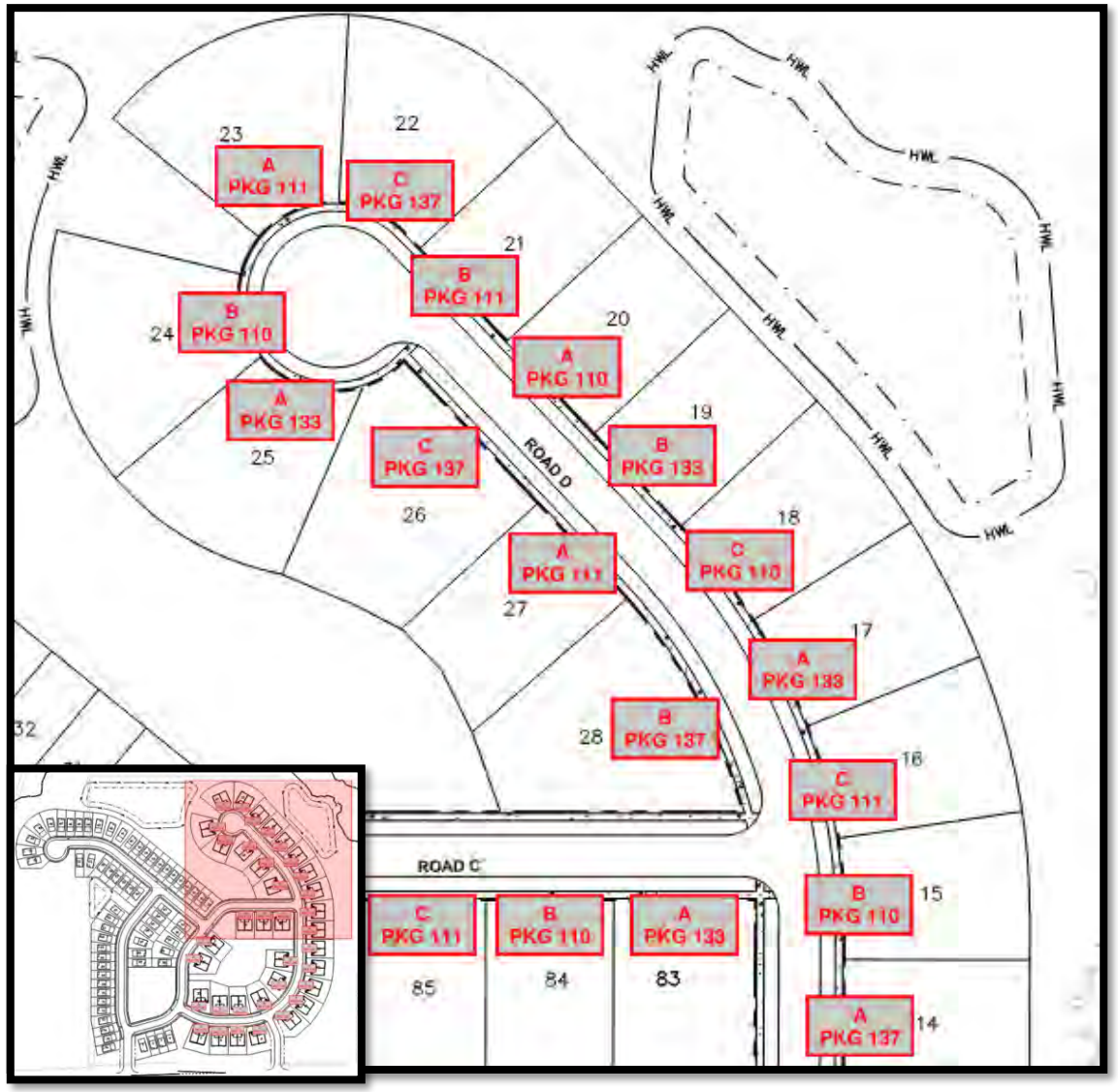


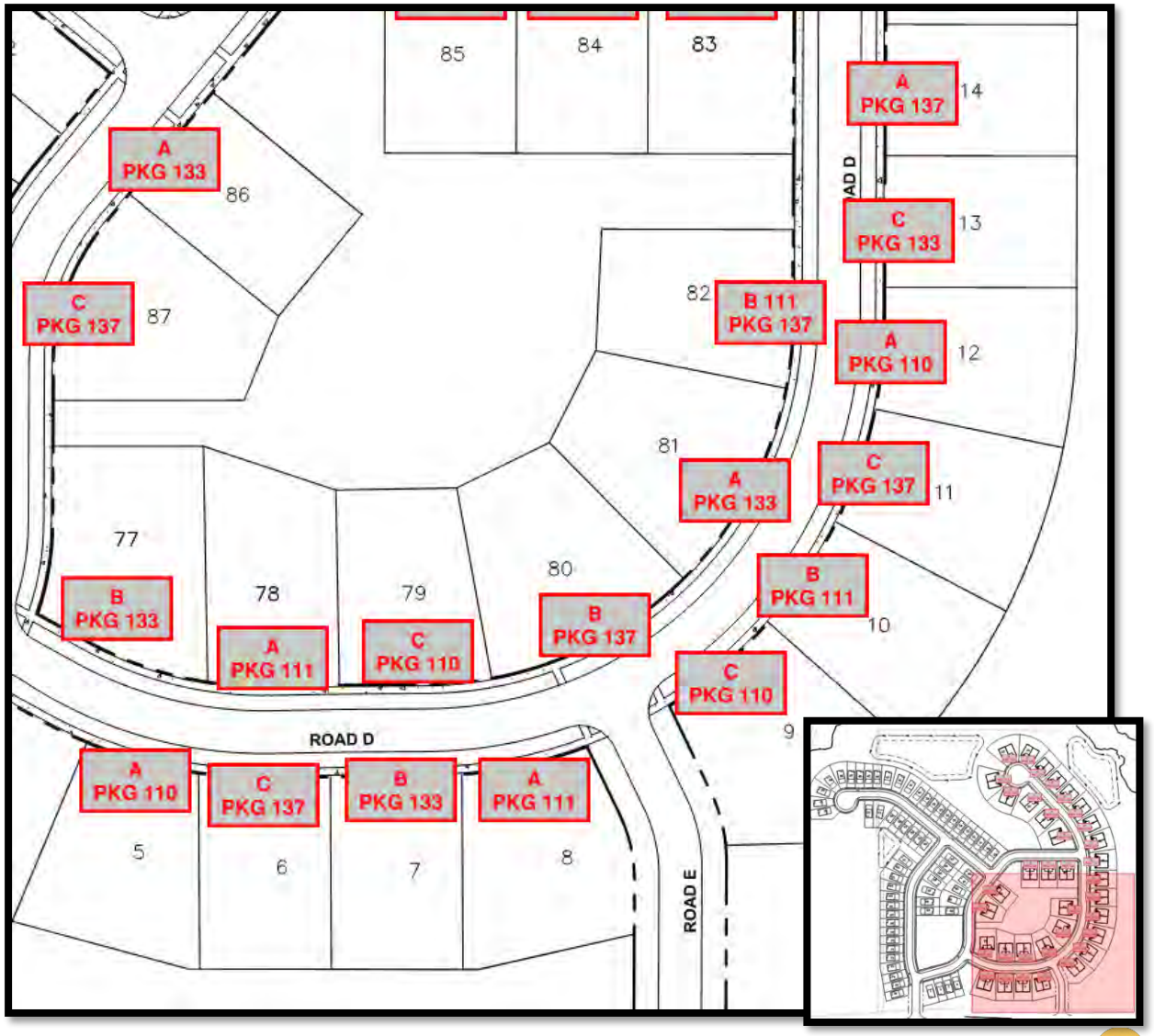
HW-137-W-M
(Premium)



Provence

Elevation and Color Package Assignments per Homesite





Example Only - Proprietary and Confidential

Spring Series

Spring Series – Harrison



Example Only - Proprietary and Confidential

The Harrison

Elevation Examples





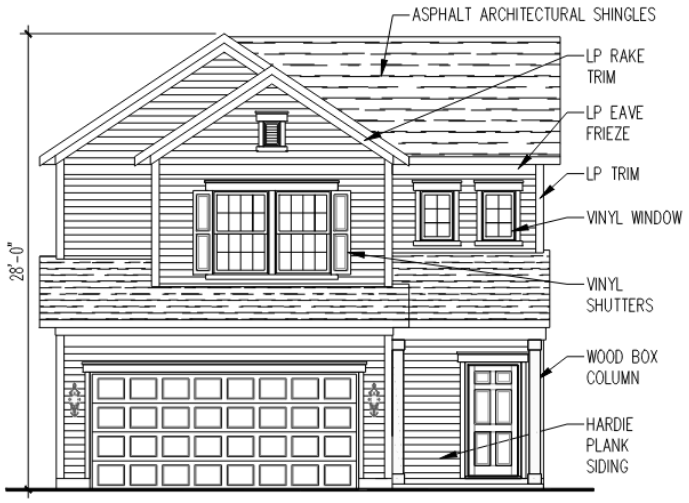




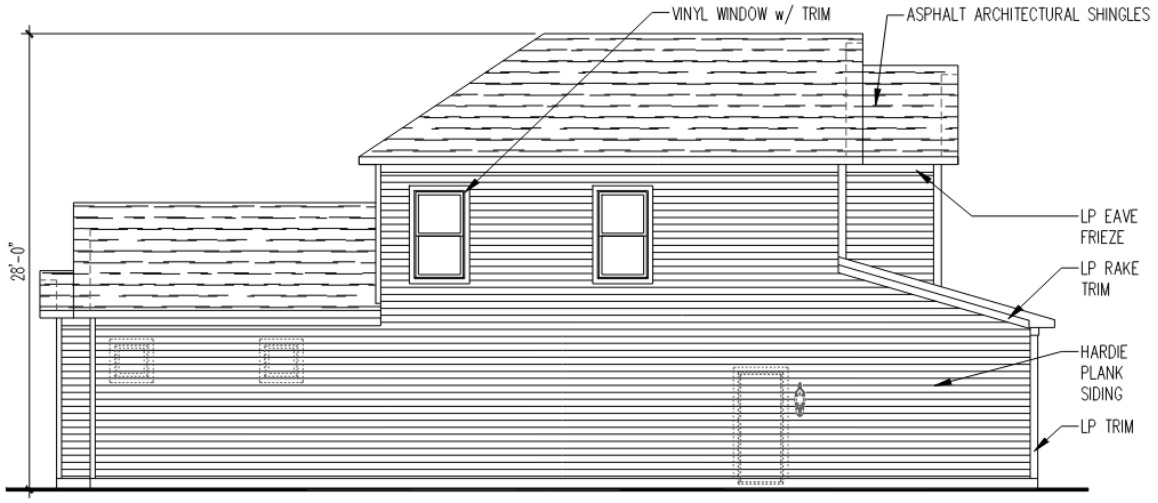
Example Only - Proprietary and Confidential

The Harrison

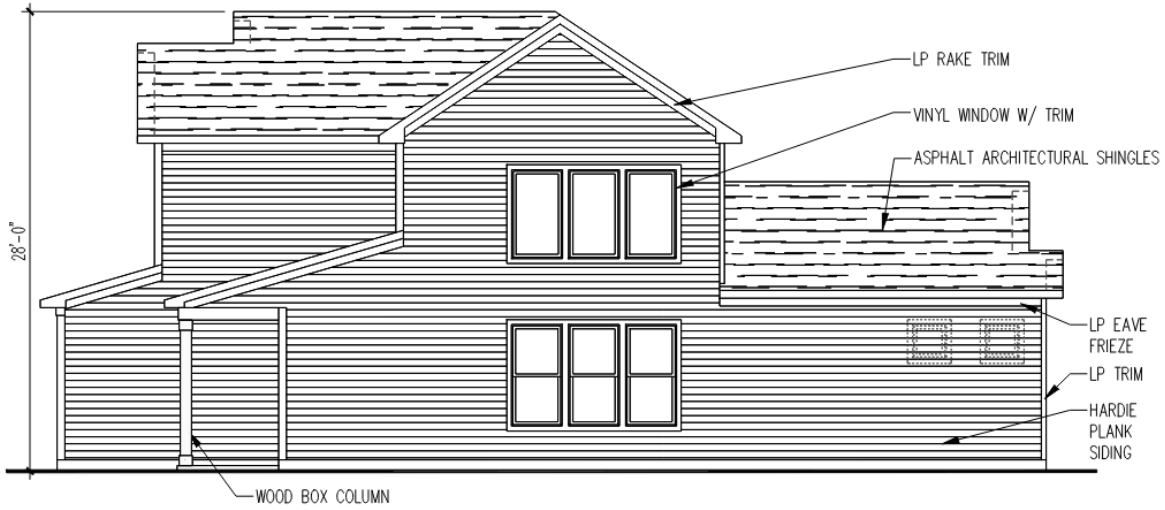
Base Elevations – HR201



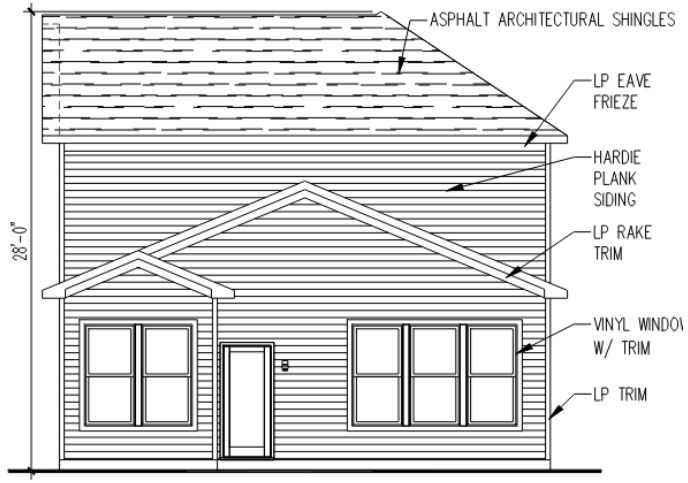
FRONT ELEVATION - HR201



LEFT ELEVATION



RIGHT ELEVATION

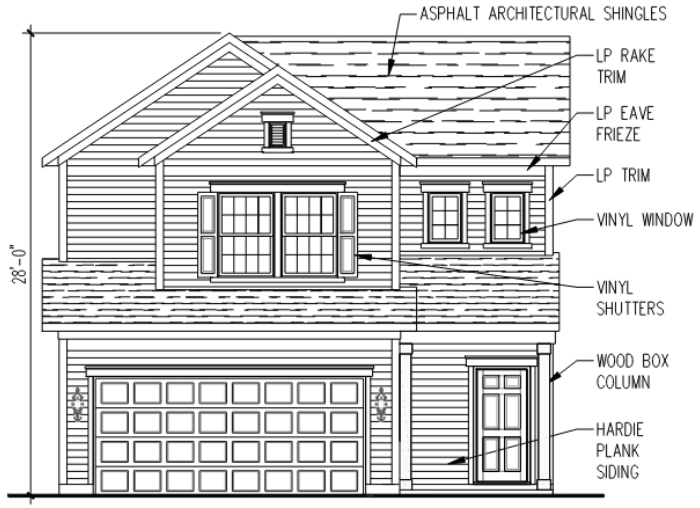


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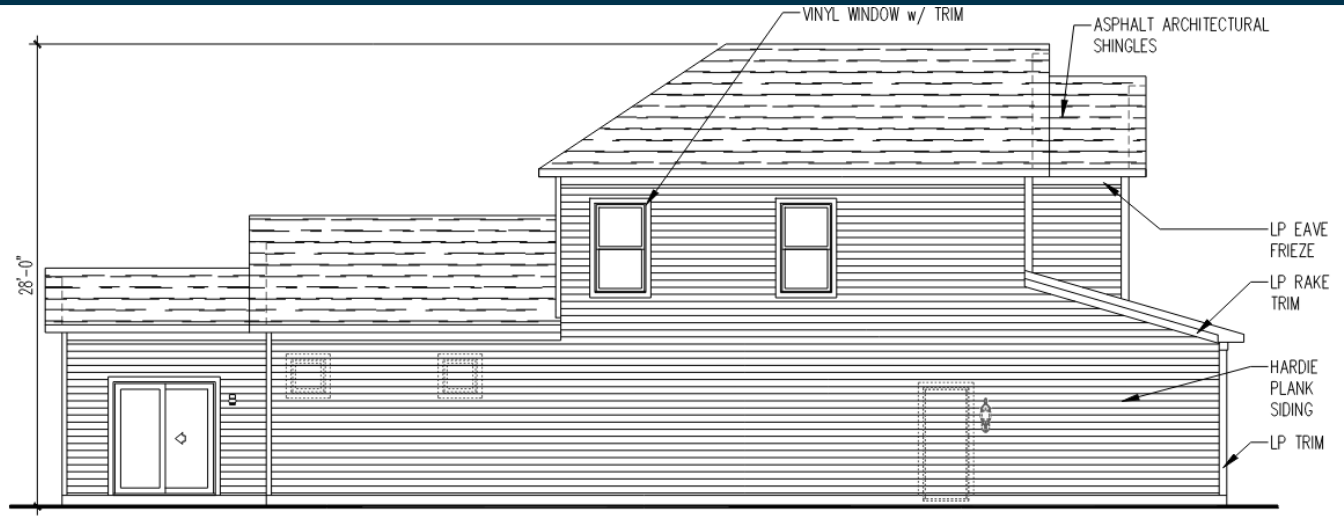
EXAMPLE ONLY
Proprietary and confidential

The Harrison

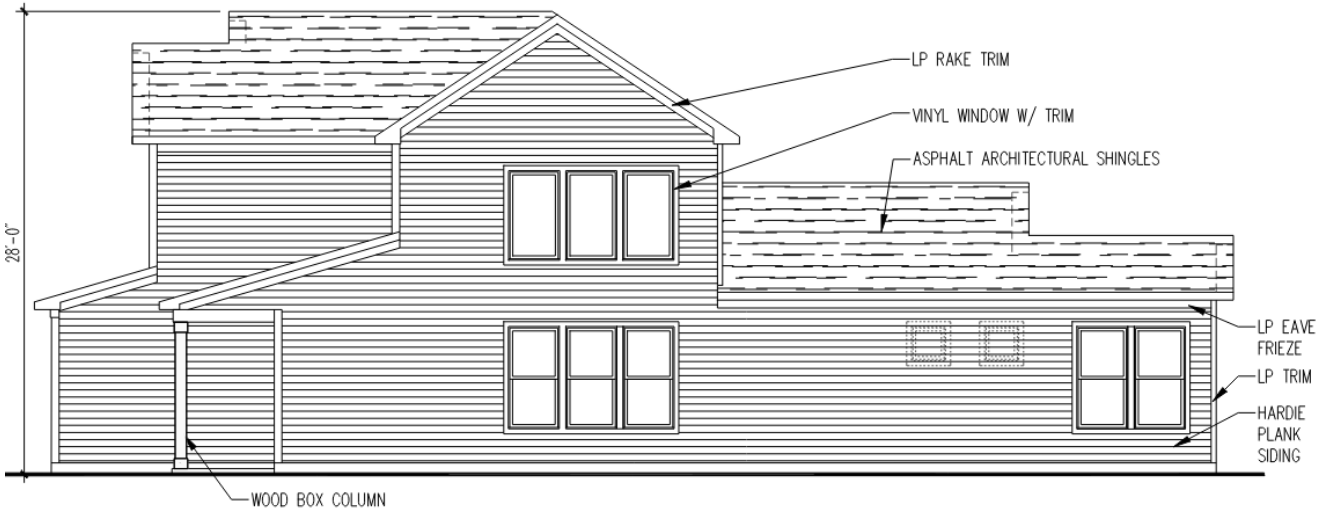
Elevations – HR201 with Sunroom



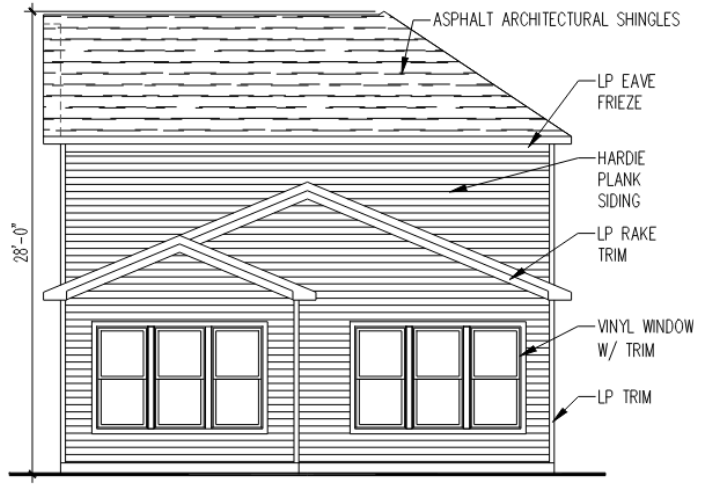
FRONT ELEVATION - HR201



LEFT ELEVATION



RIGHT ELEVATION

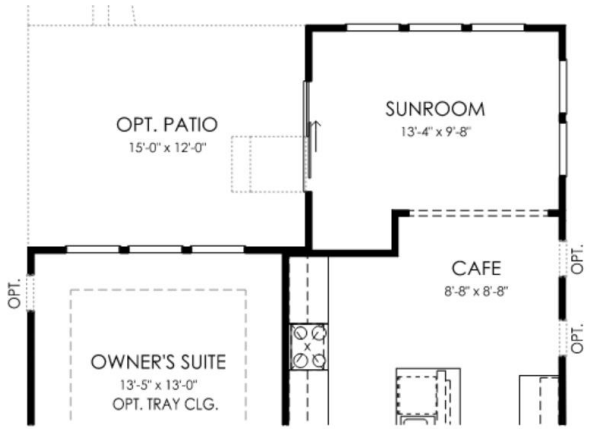


REAR ELEVATION

EXAMPLE ONLY
Proprietary and confidential

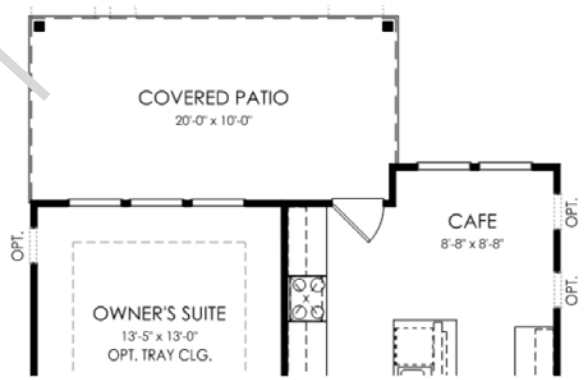
The Harrison

First Floor & Structural Options



Sunroom Option



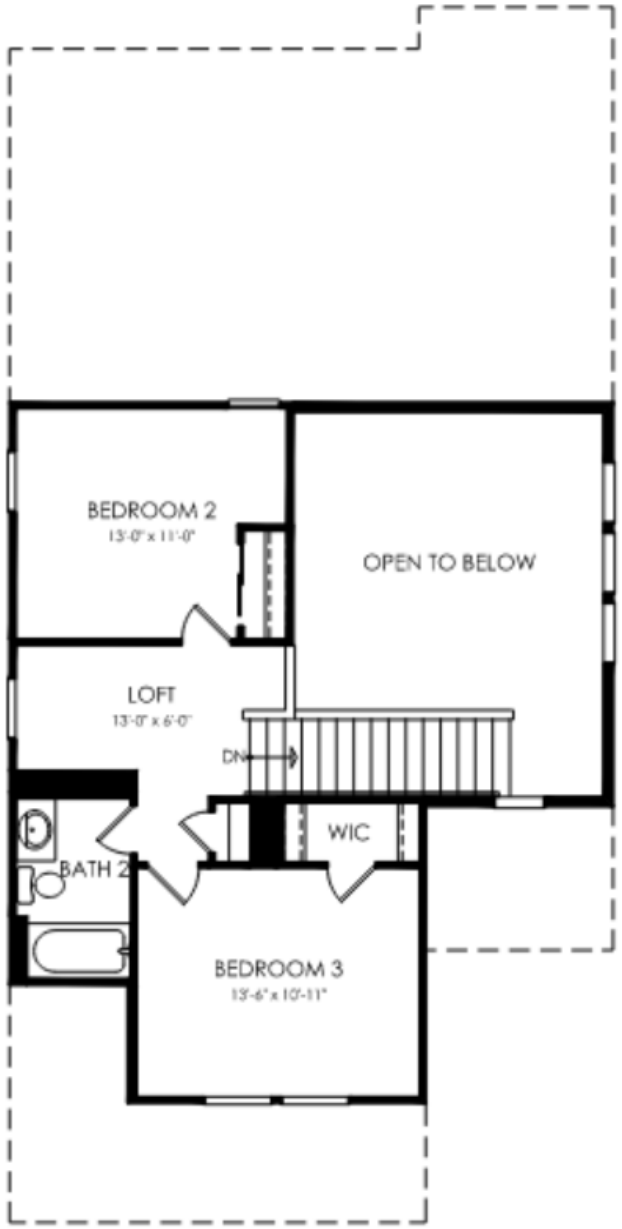


Covered Patio Option

Example Only - Proprietary and Confidential

The Harrison

Second Floor & Structural Options



Example Only - Proprietary and Confidential

Spring Series – The Gordon



Example Only - Proprietary and Confidential

The Gordon

Elevation Examples





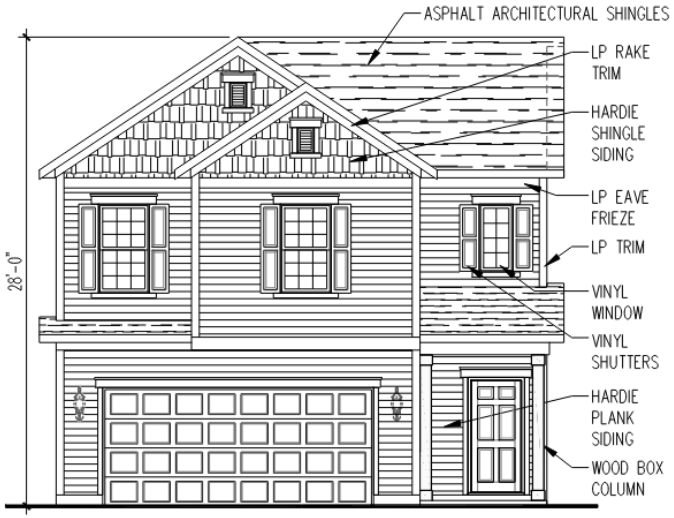




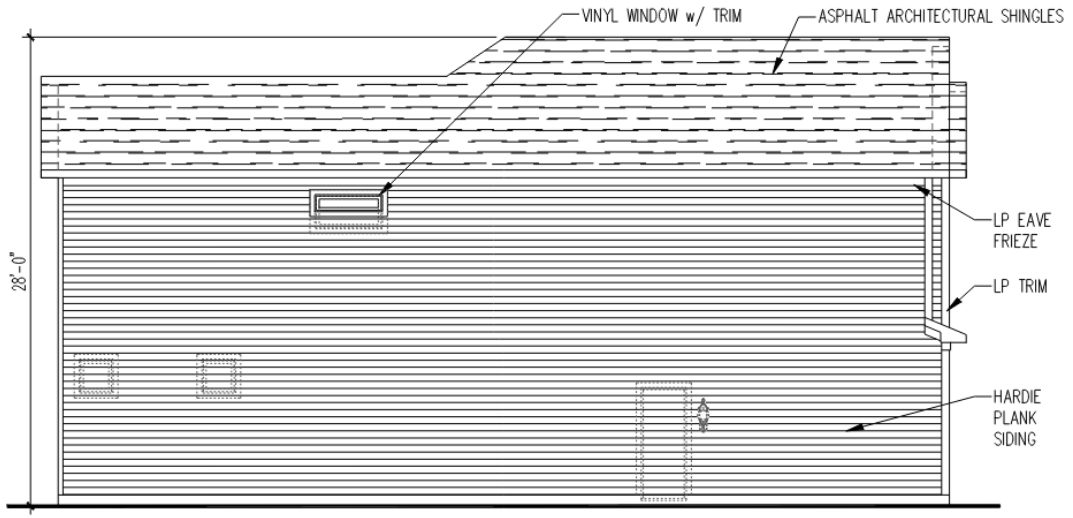
Example Only - Proprietary and Confidential

The Gordon

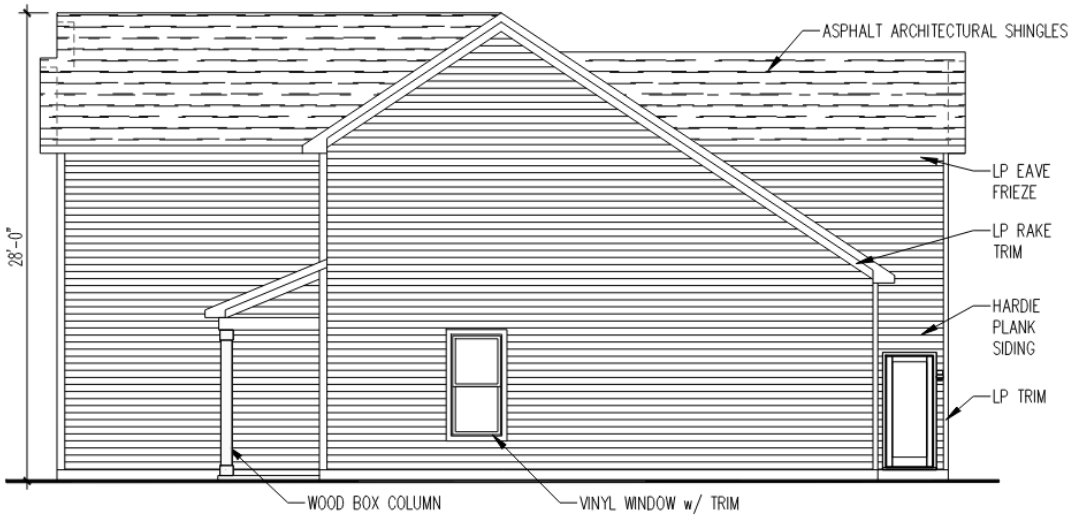
Base Elevations – HR201



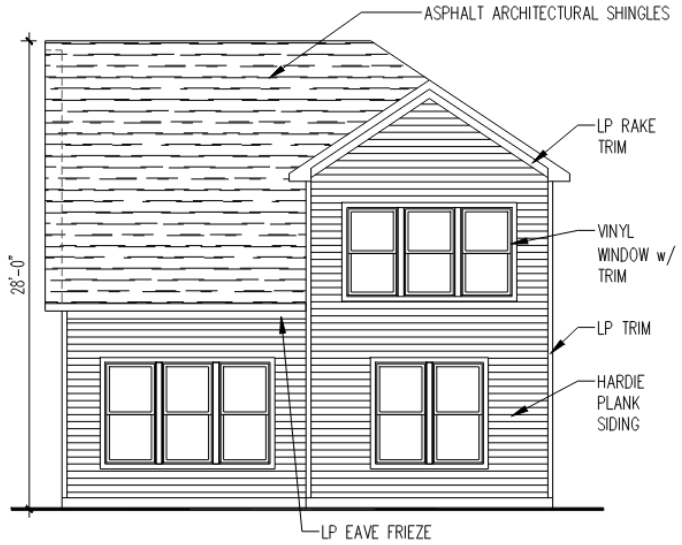
FRONT ELEVATION - HR201



LEFT ELEVATION



RIGHT ELEVATION

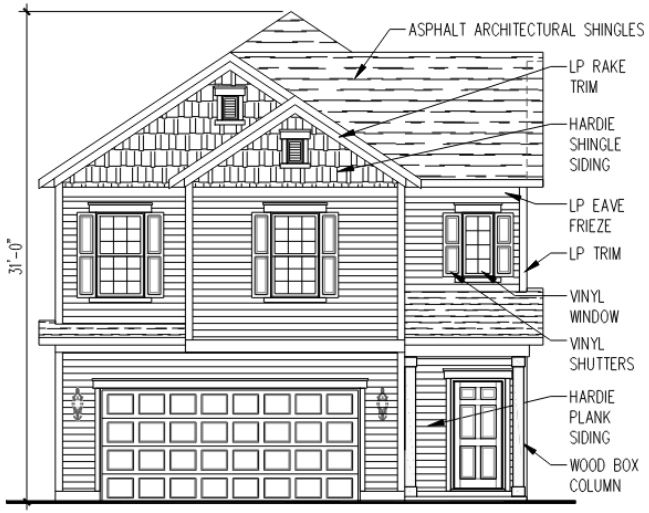


REAR ELEVATION

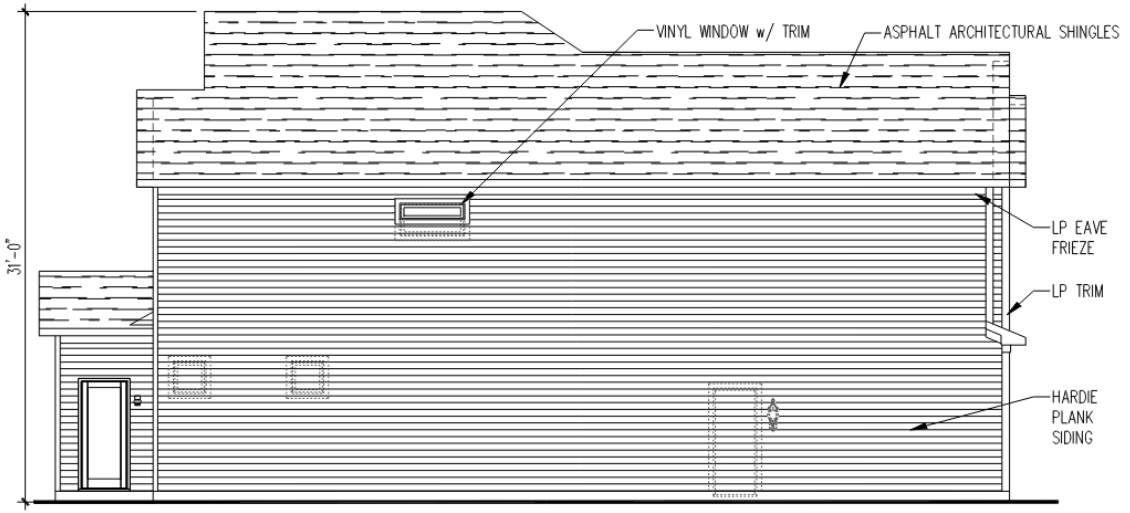
EXAMPLE ONLY
Proprietary and confidential

The Gordon

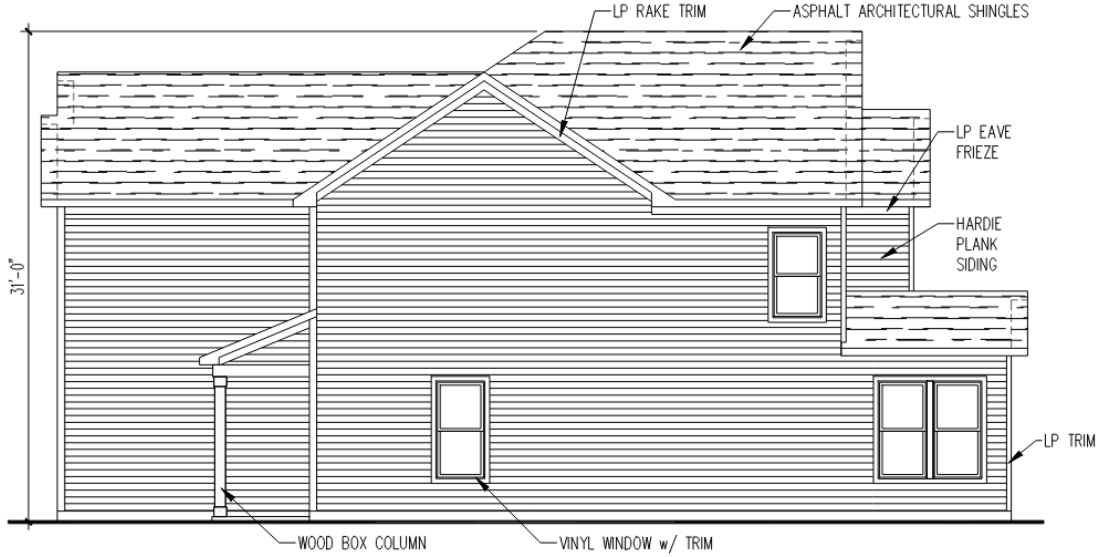
Elevations – HR201 with Sunroom & Bedroom 4



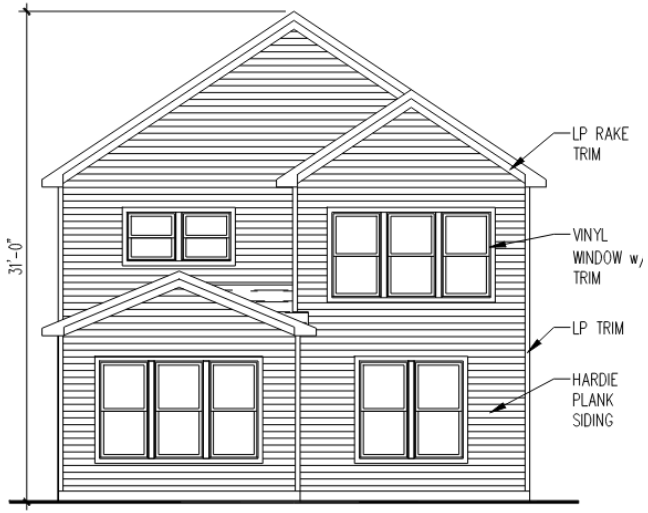
FRONT ELEVATION - HR201



LEFT ELEVATION



RIGHT ELEVATION

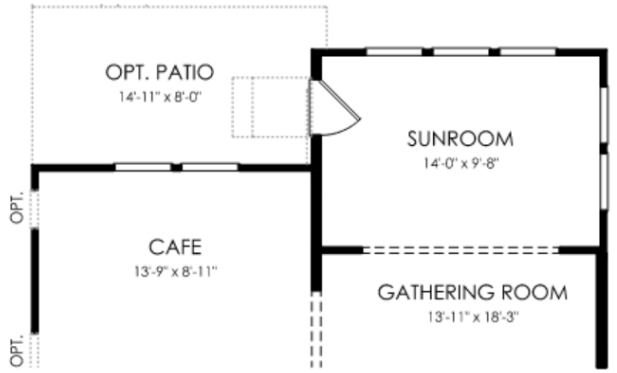


REAR ELEVATION

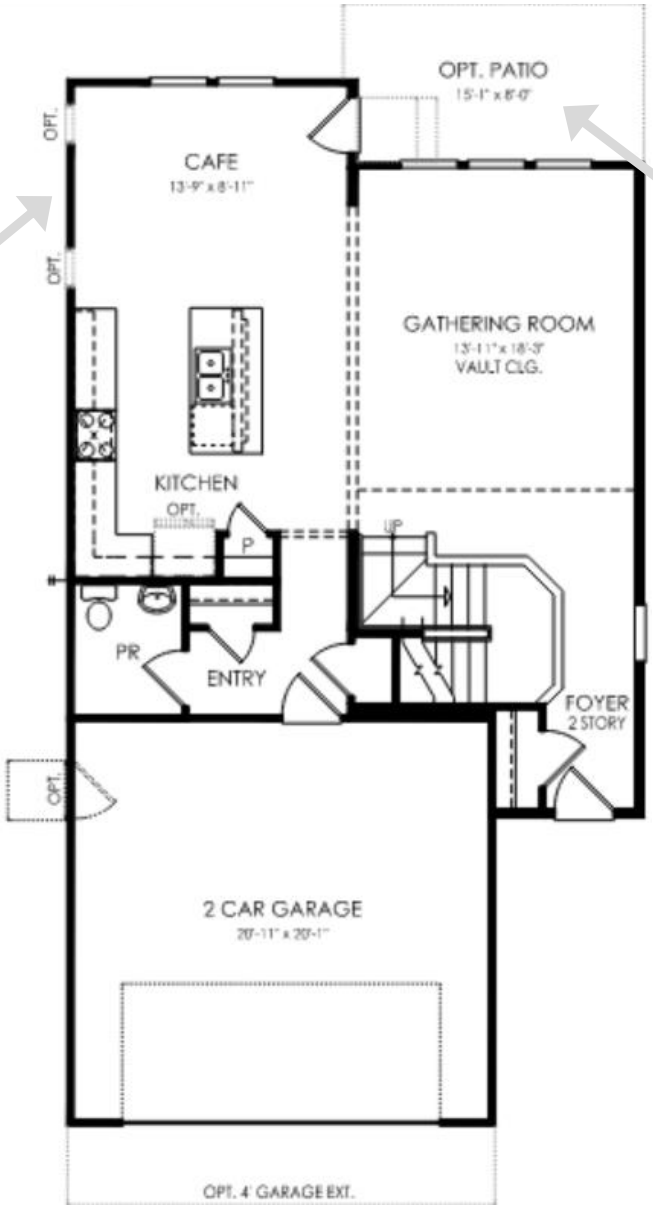
EXAMPLE ONLY
Proprietary and confidential

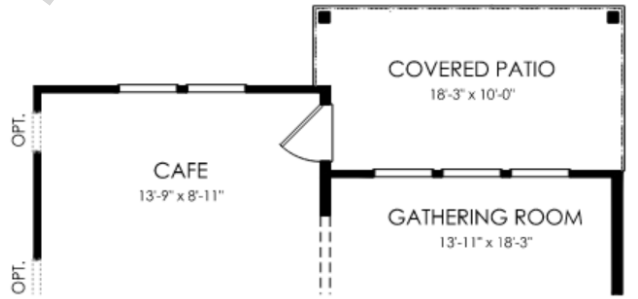
The Gordon

First Floor & Structural Options



Sunroom Option





Covered Patio Option

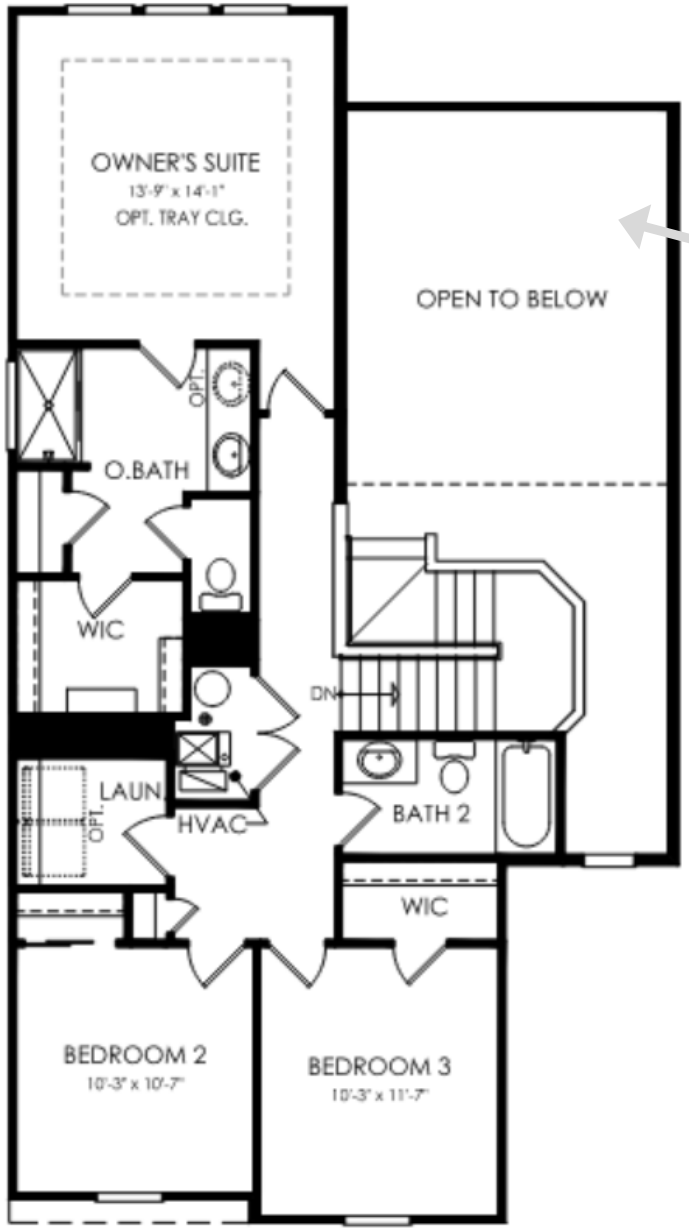
Example Only - Proprietary and Confidential

The Gordon

Second Floor & Structural Options



Game Room Option





Bedroom 4 w/ Bath 4 Option

Example Only - Proprietary and Confidential

Spring Series – The Nelson



Example Only - Proprietary and Confidential

The Nelson

Elevation Examples





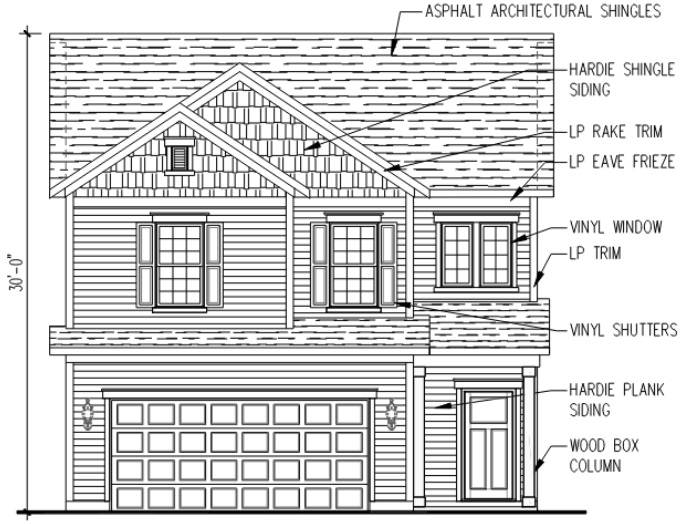




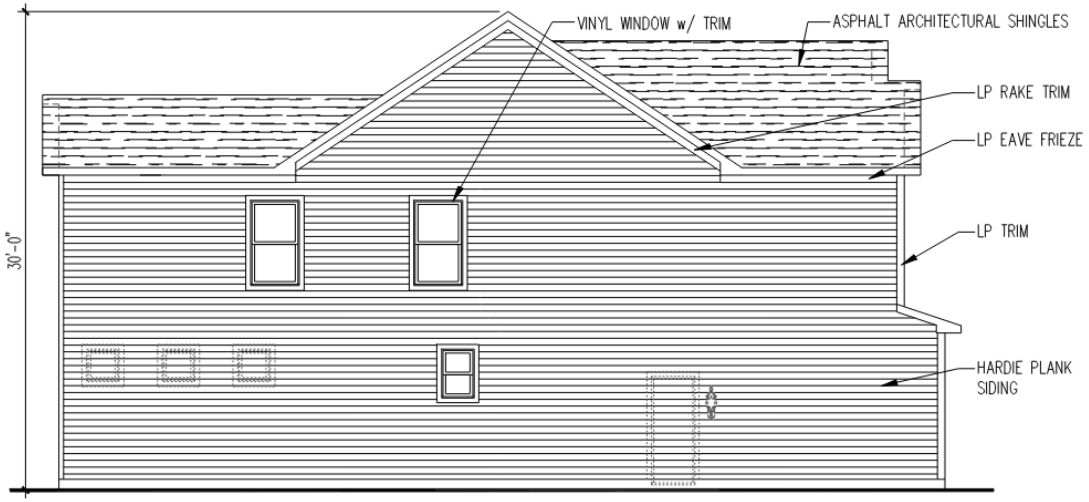
Example Only - Proprietary and Confidential

The Nelson

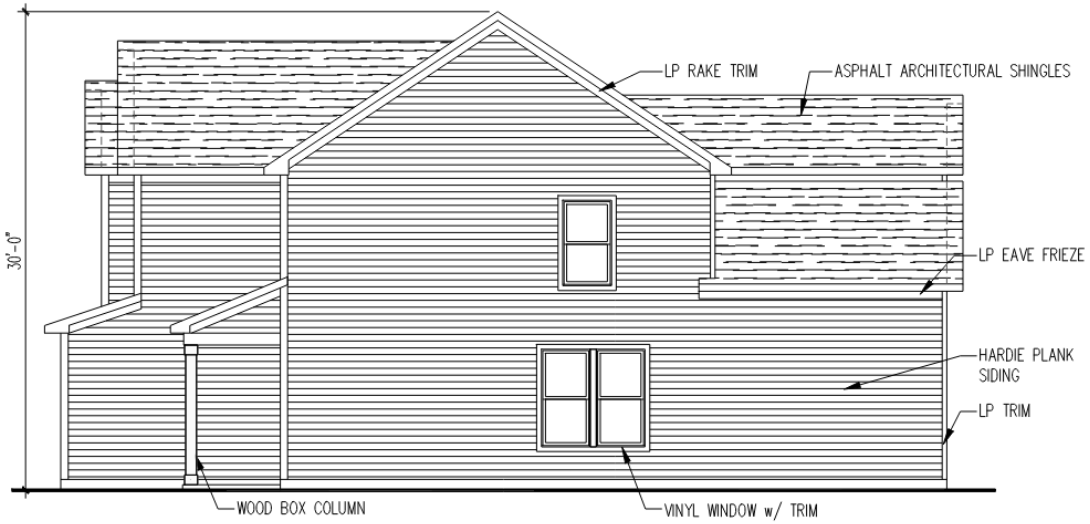
Base Elevations – HR201



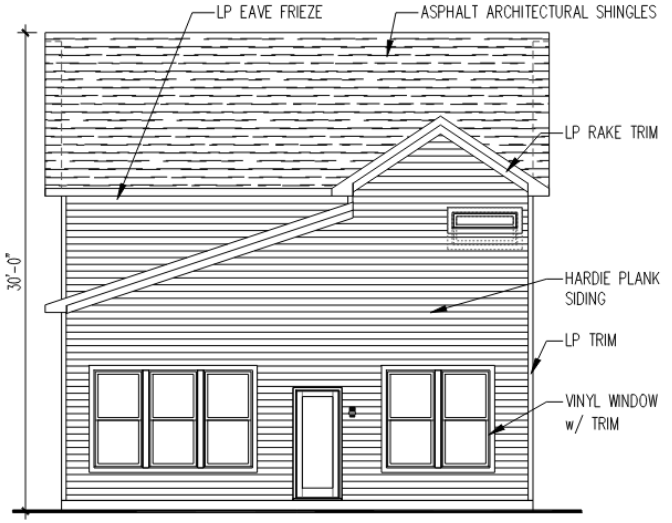
FRONT ELEVATION - HR201



LEFT ELEVATION



RIGHT ELEVATION

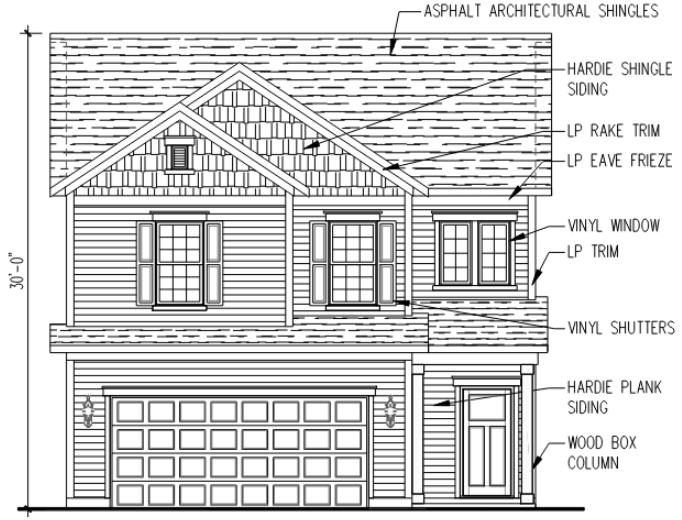


REAR ELEVATION

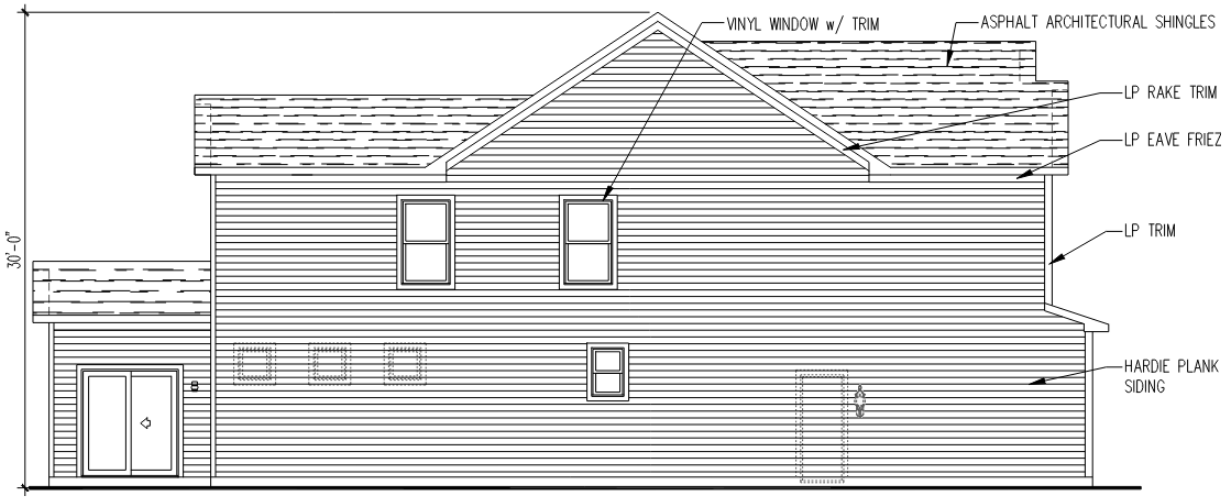
EXAMPLE ONLY
Proprietary and confidential

The Nelson

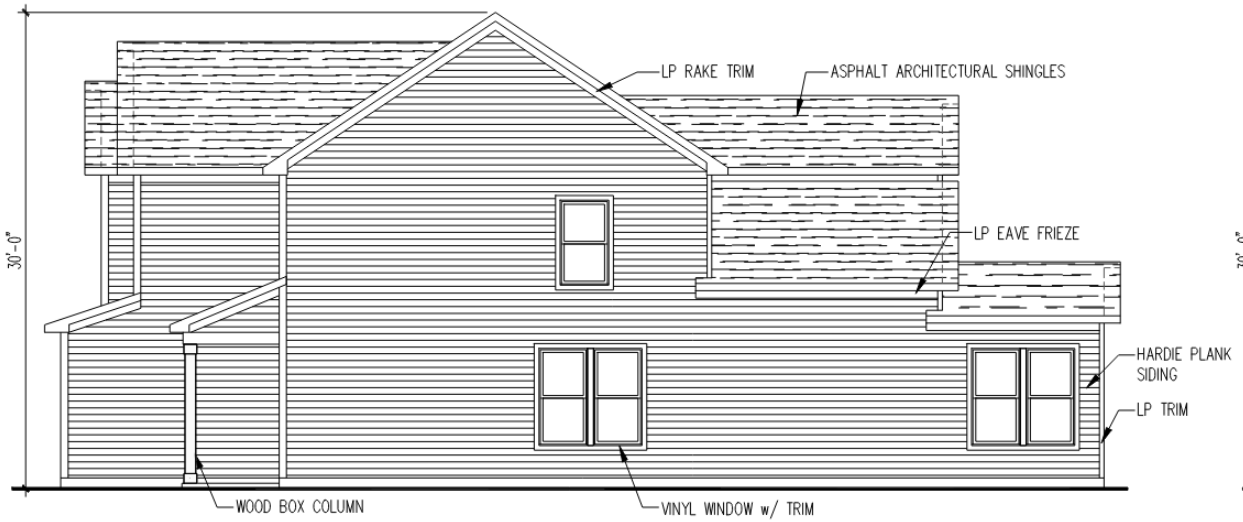
Elevations – HR201 with Sunroom



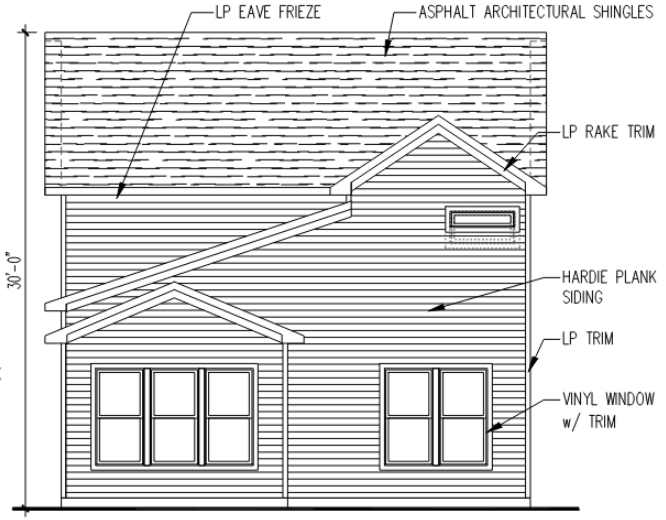
FRONT ELEVATION - HR201



LEFT ELEVATION



RIGHT ELEVATION

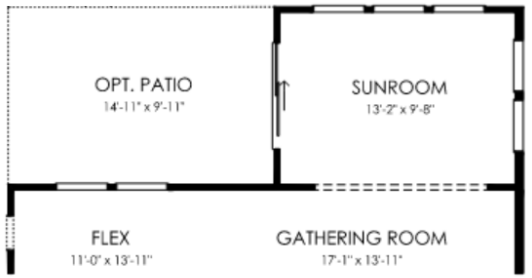


REAR ELEVATION

EXAMPLE ONLY
Proprietary and confidential

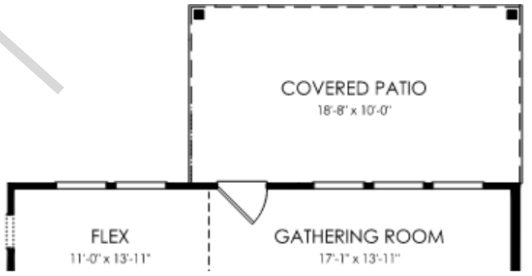
The Nelson

First Floor & Structural Options



Sunroom Option



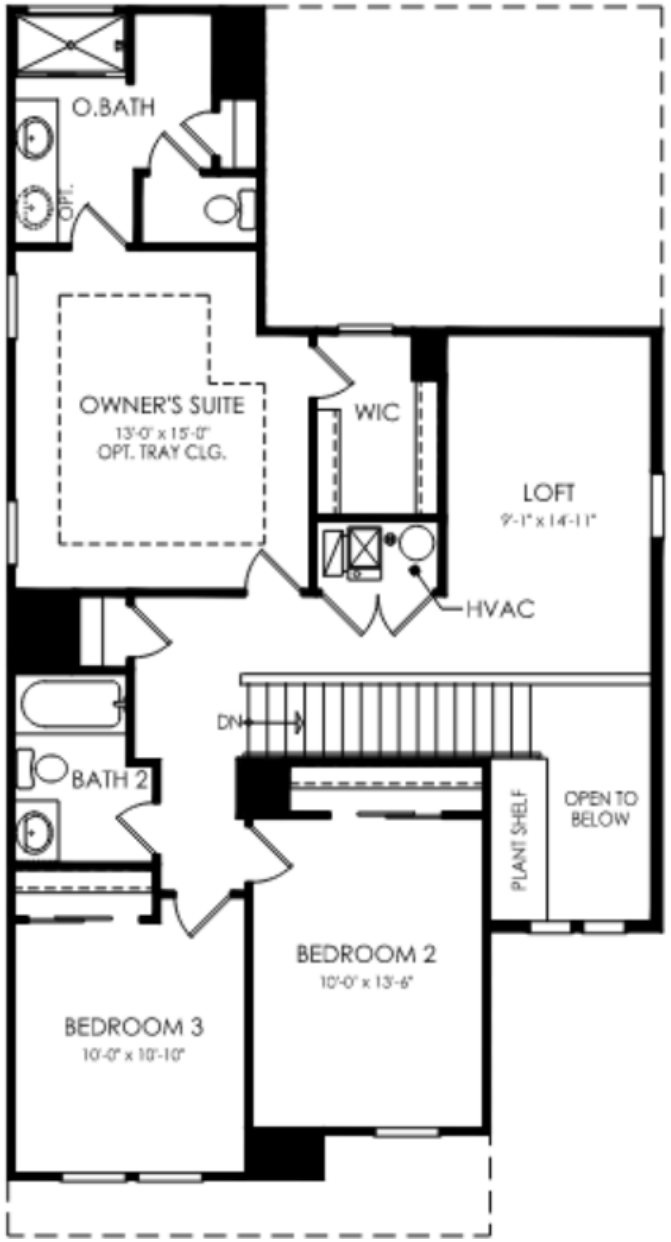


Covered Patio Option

Example Only - Proprietary and Confidential

The Nelson

Second Floor & Structural Options



Example Only - Proprietary and Confidential

Spring Series – The Sienna



Example Only - Proprietary and Confidential

The Sienna

Elevation Examples





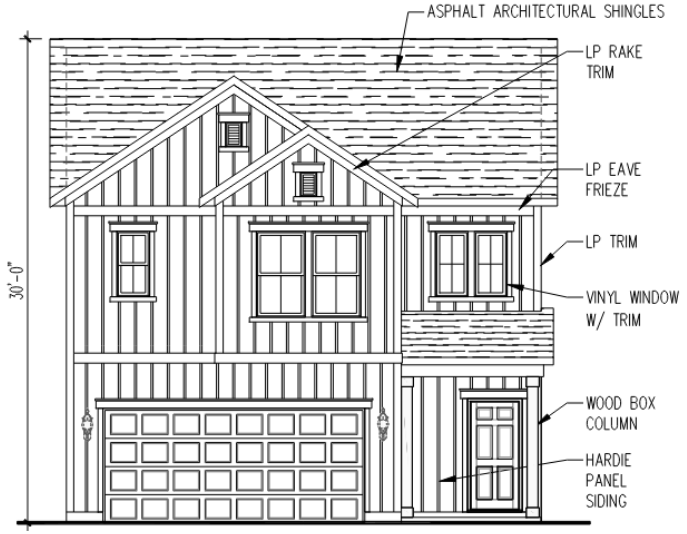




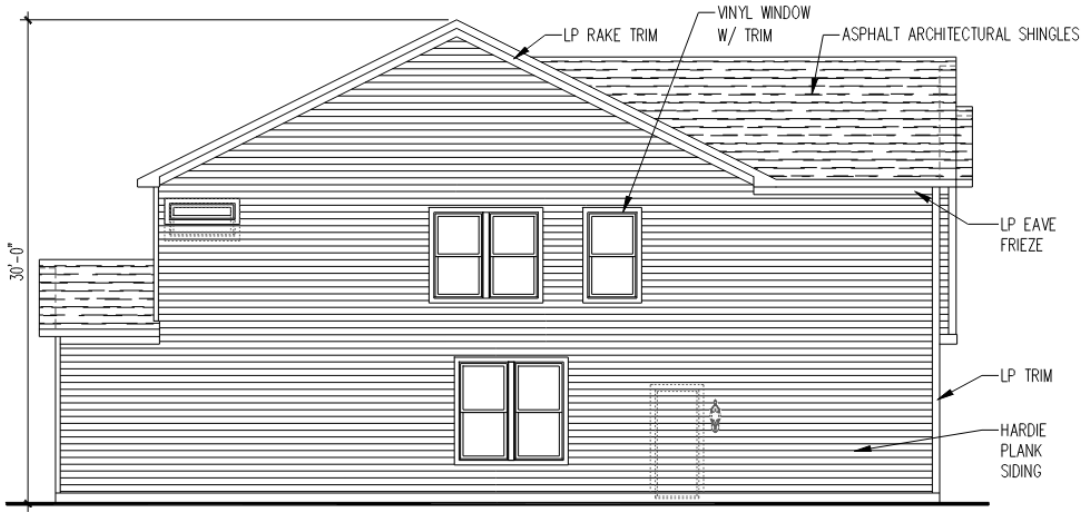
Example Only - Proprietary and Confidential

The Sienna

Base Elevations – FH201



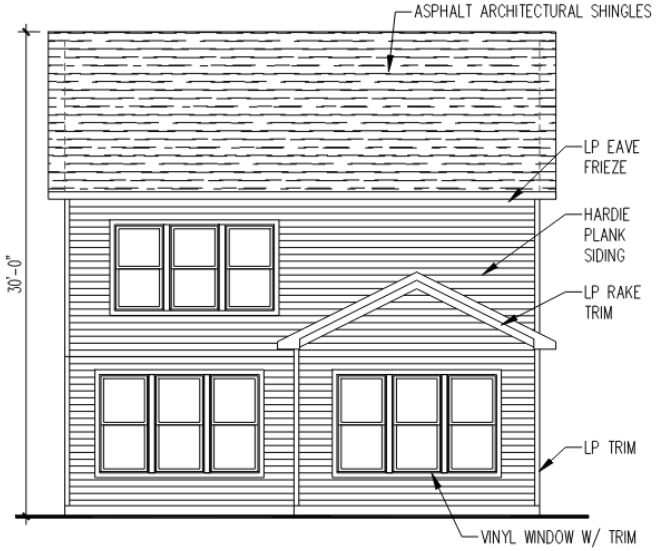
FRONT ELEVATION - FH201



LEFT ELEVATION



RIGHT ELEVATION

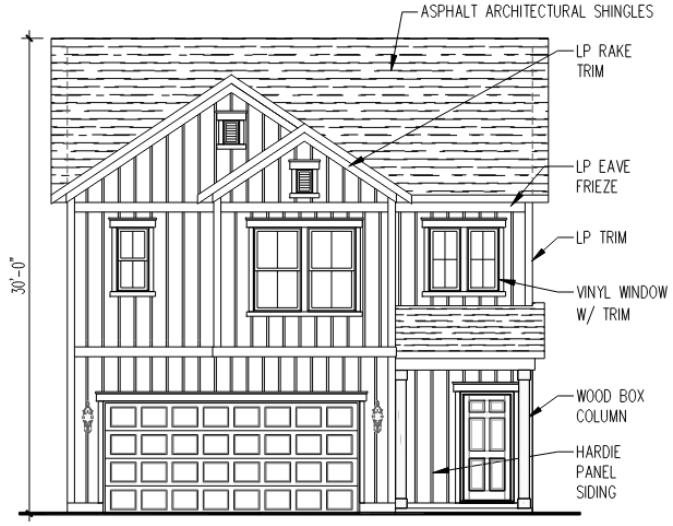


REAR ELEVATION

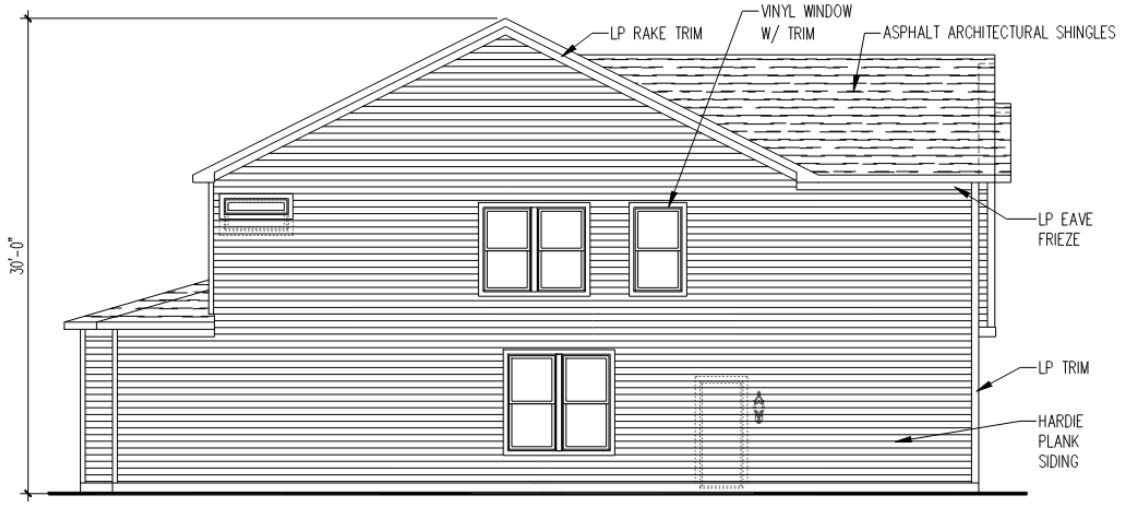
EXAMPLE ONLY
Proprietary and confidential

The Sienna

Elevations – FH201 with Sunroom



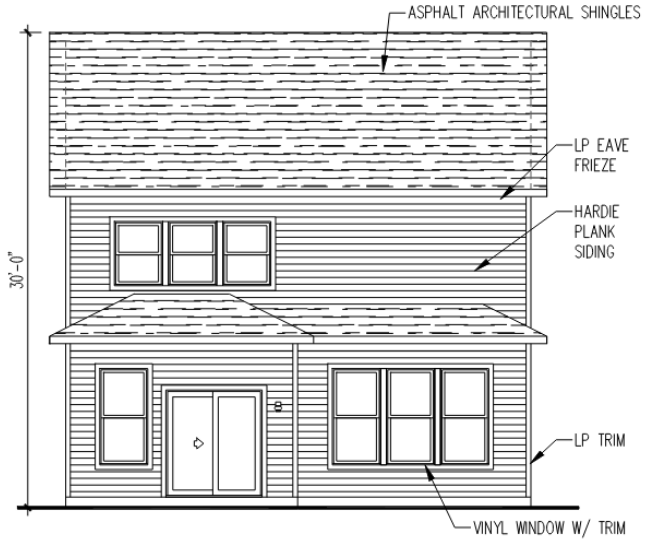
FRONT ELEVATION - FH201



LEFT ELEVATION



RIGHT ELEVATION

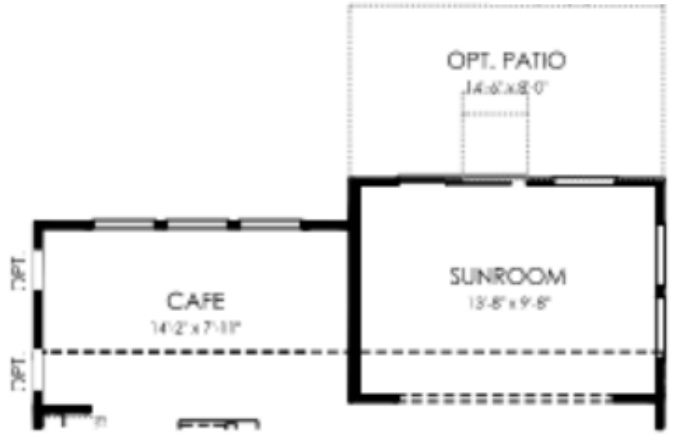


REAR ELEVATION

EXAMPLE ONLY
Proprietary and confidential

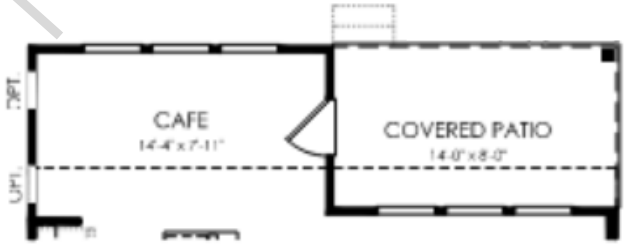
The Sienna

First Floor & Structural Options



Sunroom Option



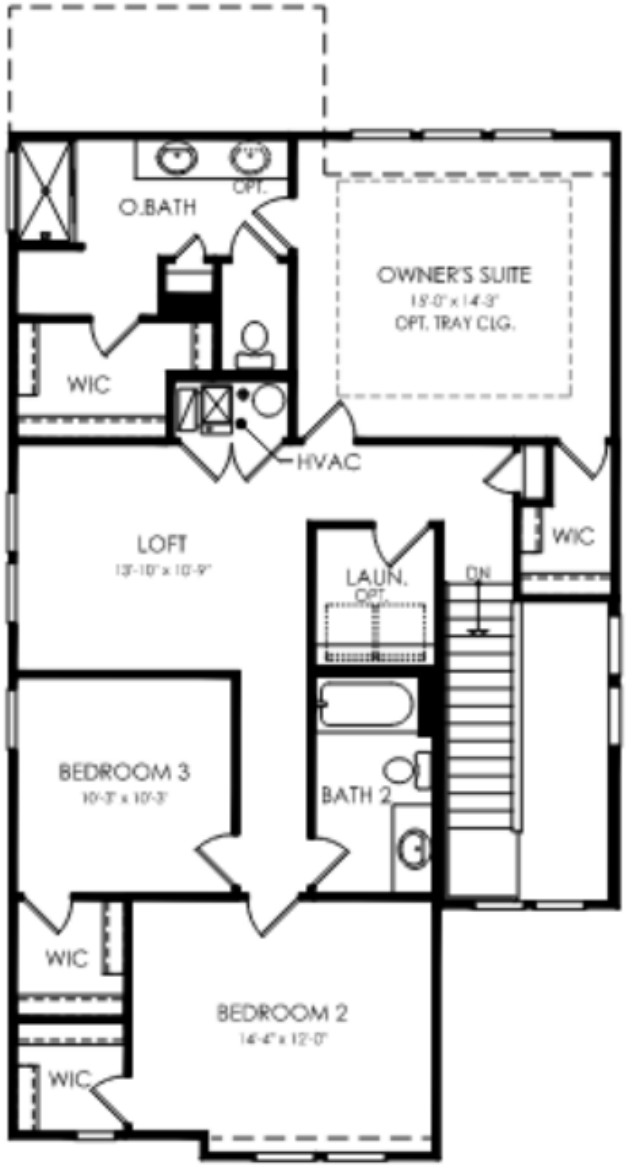


Covered Patio Option

Example Only - Proprietary and Confidential

The Sienna

Second Floor & Structural Options



Example Only - Proprietary and Confidential

Spring Series – The Rybrook



Example Only - Proprietary and Confidential

The Rybrook

Elevation Examples





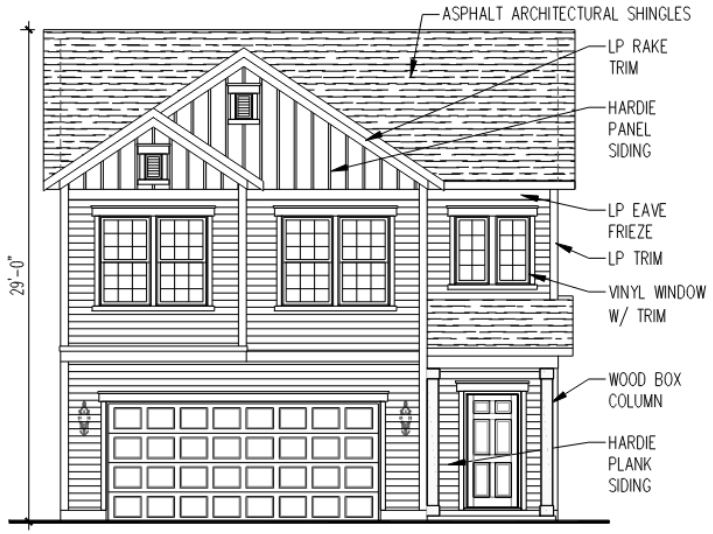




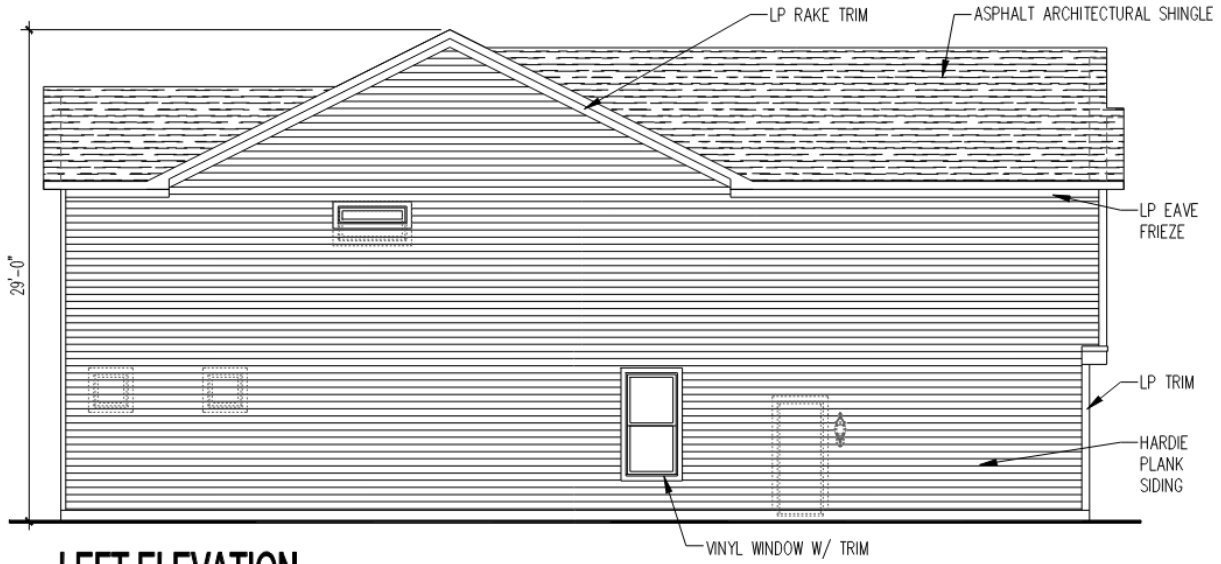
Example Only - Proprietary and Confidential

The Rybrook

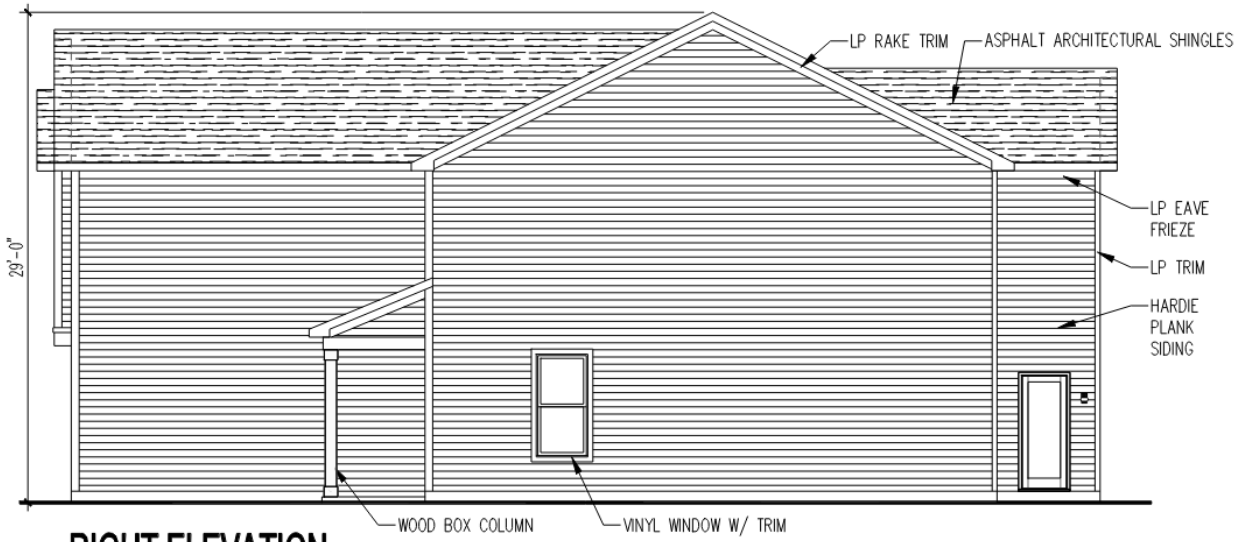
Base Elevations – HR201



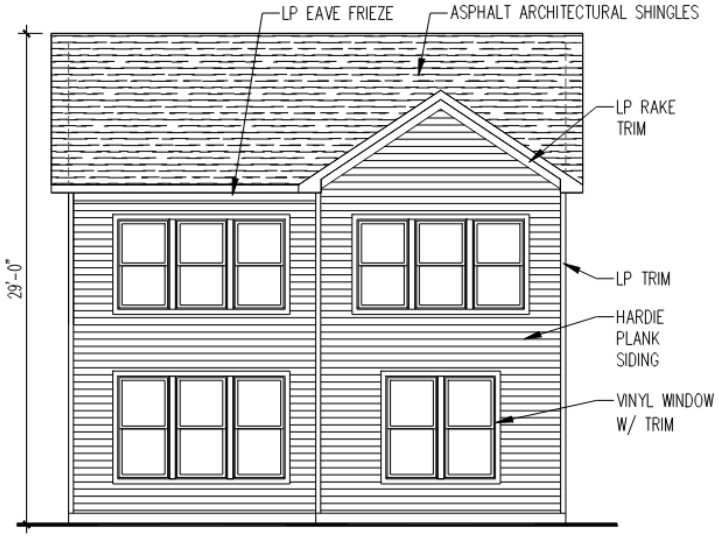
FRONT ELEVATION - HR201



LEFT ELEVATION



RIGHT ELEVATION

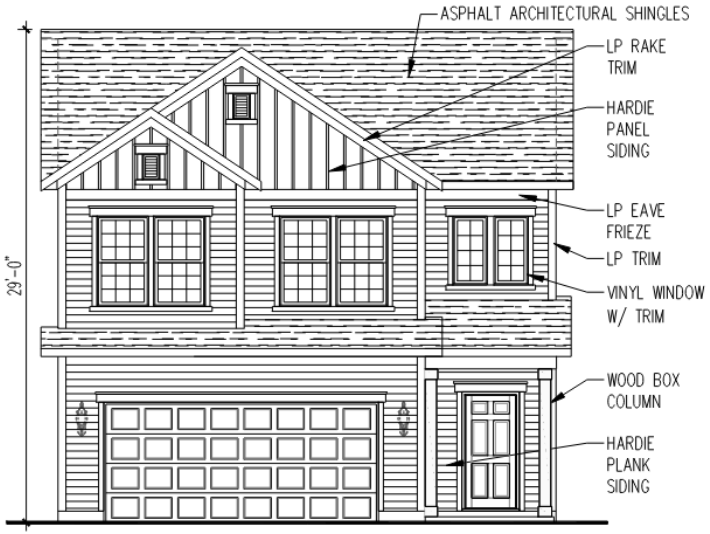


REAR ELEVATION

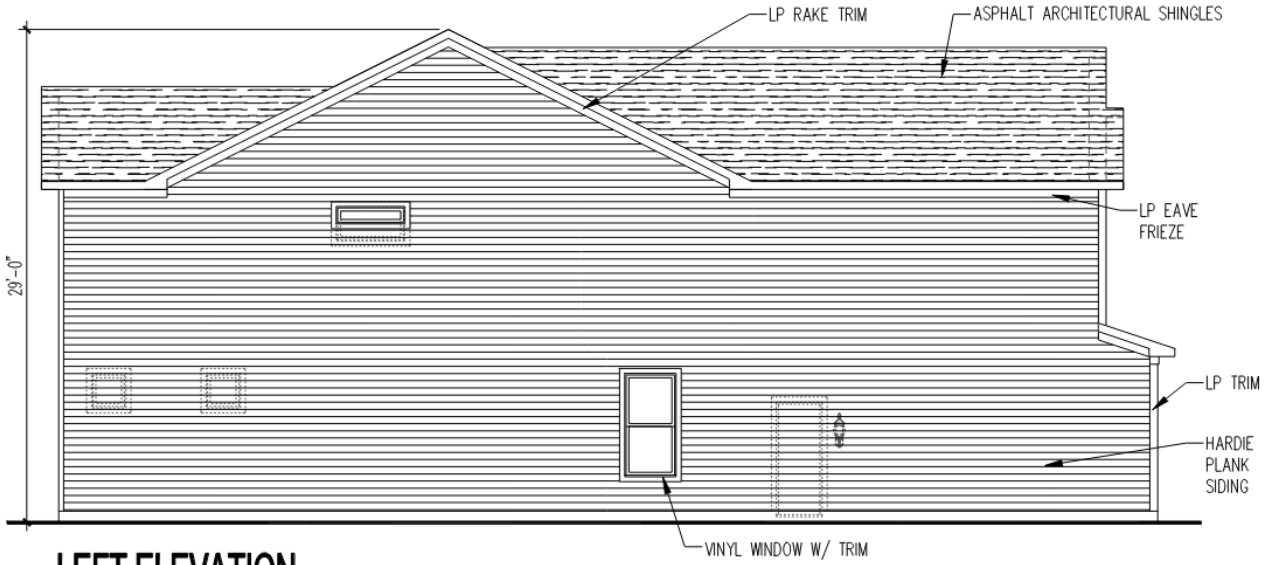
EXAMPLE ONLY
Proprietary and confidential

The Rybrook

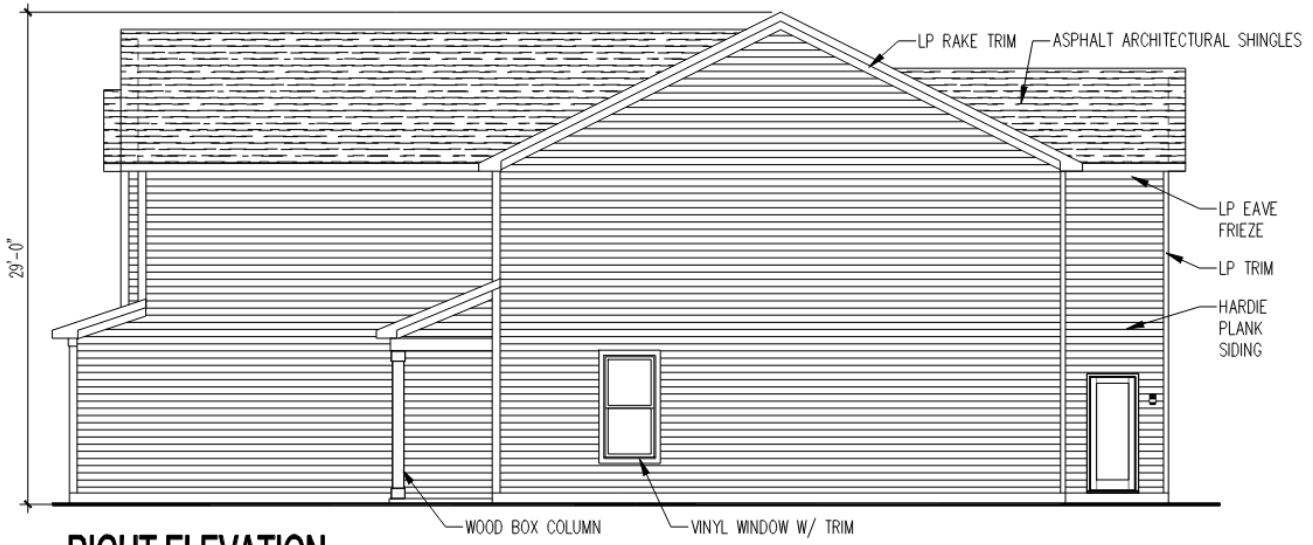
Elevations – HR201 with Sunroom



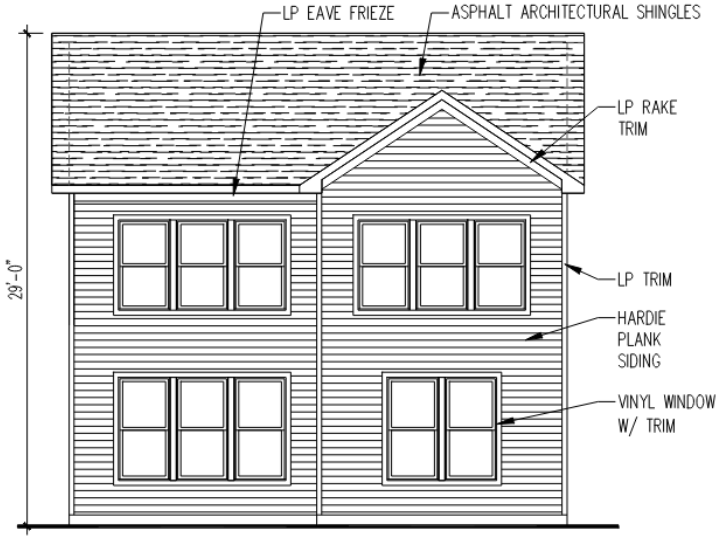
FRONT ELEVATION - HR201



LEFT ELEVATION



RIGHT ELEVATION

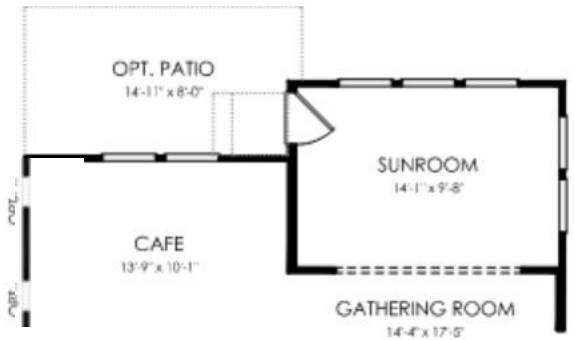


REAR ELEVATION

EXAMPLE ONLY
Proprietary and confidential

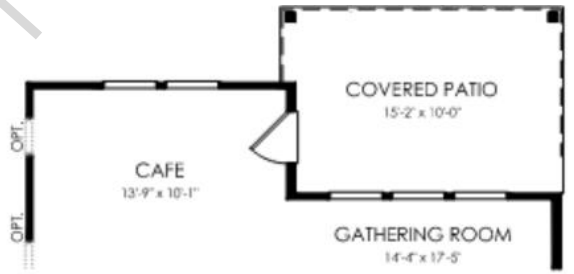
The Rybrook

First Floor & Structural Options



Sunroom Option





Covered Patio Option

Example Only - Proprietary and Confidential

The Rybrook

Second Floor & Structural Options





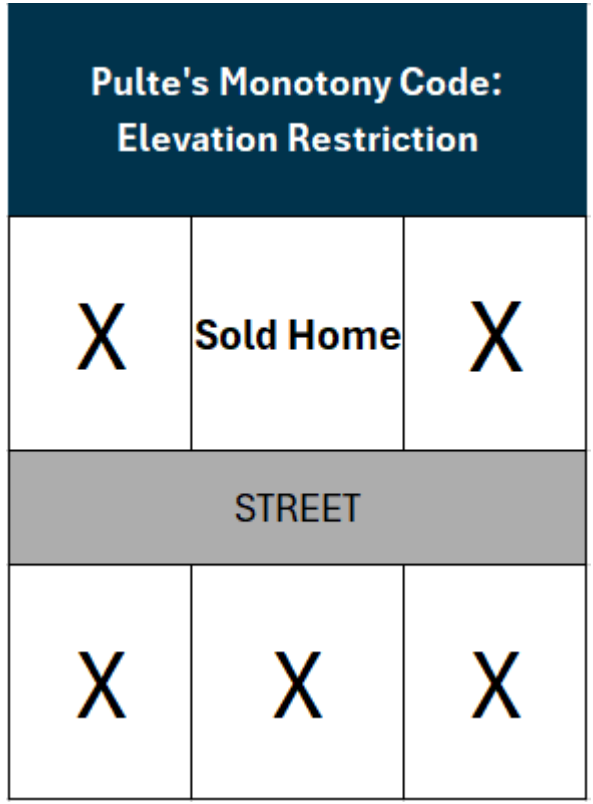
Bedroom 4 w/
Bath 4 Option

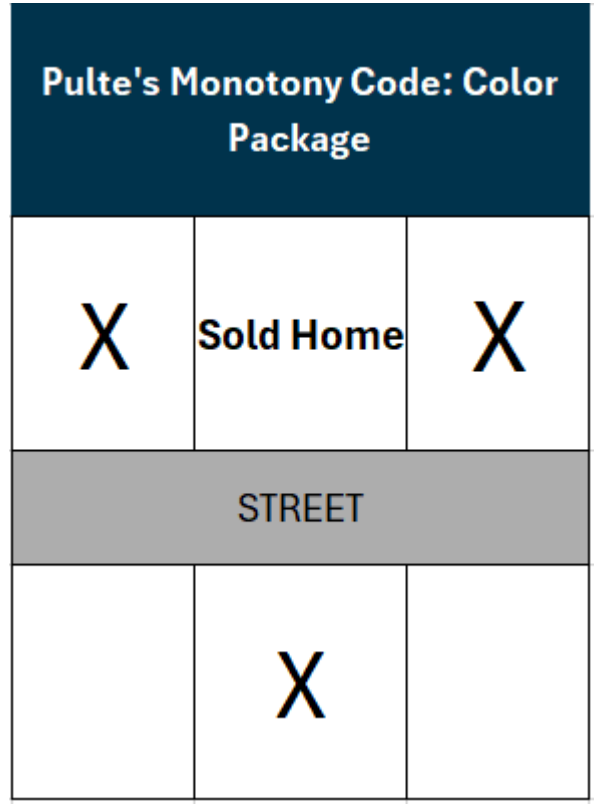
Example Only - Proprietary and Confidential

Pulte Monotony Code

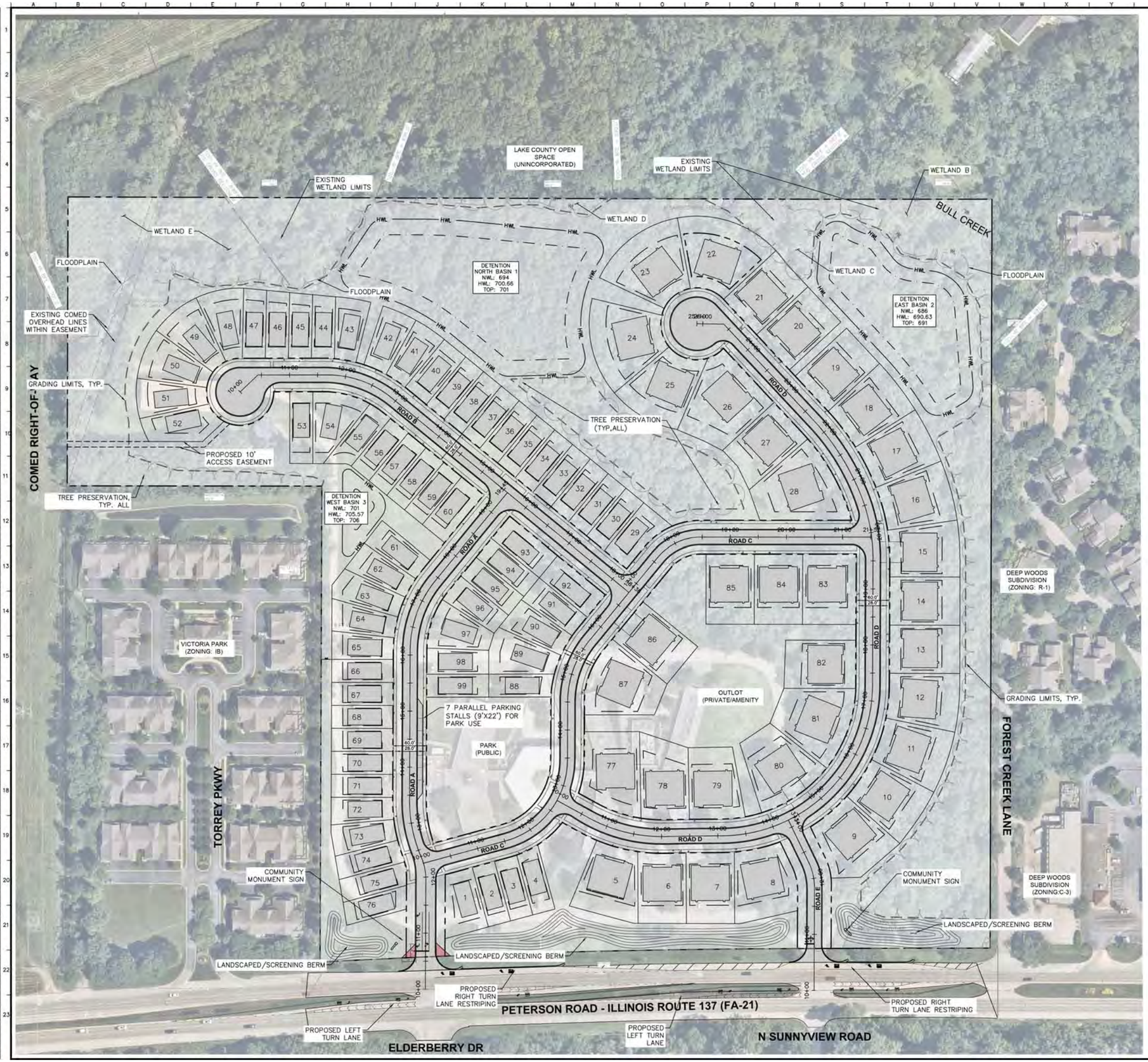
Elevation and Color Package Restrictions

1. Singe Family Detached Communities
   a. The following criteria apply to homes on straight or curved streets, cul-de-sacs, and corner lots.
      i. No house shall have the same configuration that is within one (1) house on either side or on any of the three houses most directly across the street from the subject house. Additionally, the house directly behind a corner subject house is included in these criteria.
      ii. No house shall have the same color package that is within one (1) house on either side or on any house across the street from the subject house. Additionally, the house directly behind a corner subject house is included in these criteria.
2. Definitions
   a. Configuration – a combination of product type, elevation, exterior materials (siding or masonry), or color package. Synonymous with “elevation”
   b. Color package – a combination of siding, masonry, trim/gutter, accents, and roof colors incorporated into the exterior finishes of a single house.





Example Only - Proprietary and Confidential



Call Before You Dig
JULIE
1-800-892-0123

GENERAL NOTES

1. ALL DIMENSIONS REFER TO THE BACK OF CURB UNLESS OTHERWISE NOTED.
2. BUILDING DIMENSIONS ARE TO THE OUTSIDE FACE OF BUILDING UNLESS OTHERWISE NOTED.
3. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS TO VERIFY ALL BUILDING DIMENSIONS.
4. REFER TO LANDSCAPE ARCHITECT PLANS FOR MONUMENT SIGN DETAILS.

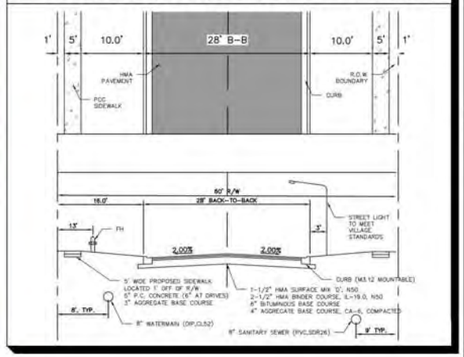
PROPERTY SUMMARY TABLE

SITE AREA	= 42.11	ACRES
R/W DEDICATION	= 6.55	ACRES
LOT AREA (CUMULATIVE)	= 17.69	ACRES
PARK DISTRICT DEDICATION	= 1.14	ACRES
PRIVATE AMENITY SPACE	= 1.41	ACRES
OPEN SPACE/DETENTION	= 2.92	ACRES
OPEN SPACE/UNDISTURBED AREA	= 12.40	ACRES
TOTAL LOTS PROVIDED	= 99	LOTS
UNIT COUNT	= 134	UNITS
ZONING SUMMARY:		
EXISTING ZONING DISTRICT	= MIXED (IB/R1/C3/UNINCORPORATED)	
PROPOSED ZONING DISTRICT	= R-7 PUD	
SINGLE FAMILY (41' X 110')	= 64	UNITS
GREENWAY CHASE SPRINGS		
FRONT YARD SETBACK	= 20	FEET
REAR YARD SETBACK	= 20	FEET
CORNER SIDE YARD SETBACK	= 15	FEET
SIDE YARD SETBACK	= 5	FEET*
*(MINIMUM 10 FT BUILDING SEPARATION)		
DUPLEXES (86' X 125')	= 70	UNITS
GREENWAY CHASE LANDINGS		
FRONT YARD SETBACK	= 20	FEET
REAR YARD SETBACK	= 30	FEET
CORNER SIDE YARD SETBACK	= 15	FEET
SIDE YARD SETBACK	= 6	FEET*
*(MINIMUM 12 FT BUILDING SEPARATION)		
MAXIMUM BUILDING COVERAGE SINGLE FAMILY	= 45%	
MAXIMUM IMPERVIOUS COVERAGE SINGLE FAMILY	= 50%	
MAXIMUM BUILDING COVERAGE DUPLEX	= 50%	
MAXIMUM IMPERVIOUS COVERAGE DUPLEX	= 55%	

FEMA NOTE

PER FLOOD INSURANCE RATE MAP PANEL NO. 17097C0161K EFFECTIVE DATE 9/19/2013, A PORTION OF THE SITE IS LOCATED IN ZONE 'AE' WITH A VARYING BASE FLOOD ELEVATION RANGING FROM 701.0 ON THE WEST SIDE TO 684.0 ON THE EAST SIDE, AS NOTED HEREIN. THE REMAINDER OF THE SITE IS LOCATED WITHIN ZONE 'X' (AREA OF MINIMAL FLOOD HAZARD).

TYPICAL ROADWAY CROSS-SECTION



No.	REVISIONS	DATE	BY
1	VILLAGE RESUBMITTAL	03/28/25	RNM
2	ARC RE-SUBMITTAL	03/07/25	DC

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
9 PARKWAY NORTH, SUITE 200
DEERFIELD, IL 60015
PHONE: (847) 572-4545
WWW.KIMLEY-HORN.COM

SCALE: AS NOTED
DESIGNED BY: INS
DRAWN BY: KTM
CHECKED BY: RNM

PULTE HOME COMPANY, LLC

OVERALL SITE PLAN

GREENWAY CHASE
610 PETERSON ROAD
LIBERTYVILLE, IL 60048

ORIGINAL ISSUE: 01/03/2025
KHA PROJECT NO. 168247001
SHEET NUMBER
C2.0

Drawing name: K:\CHS_LIBEV\168247001_Pulte_Libertyville_IL\2 Design\CAD\PlanSheets\C2.0 SITE PLAN.dwg C2.0 Mar 26, 2025 4:59pm by KlarisTR.Maller
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

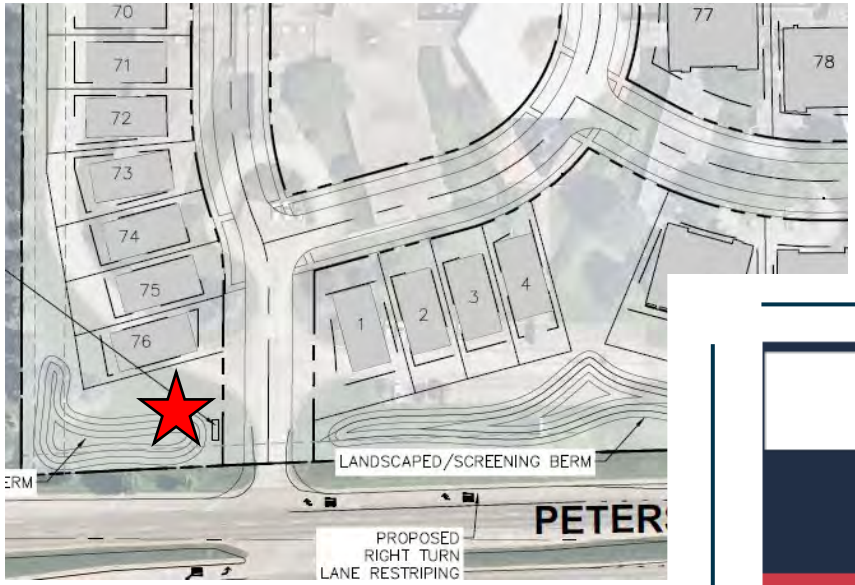
Greenway Chase - Libertyville

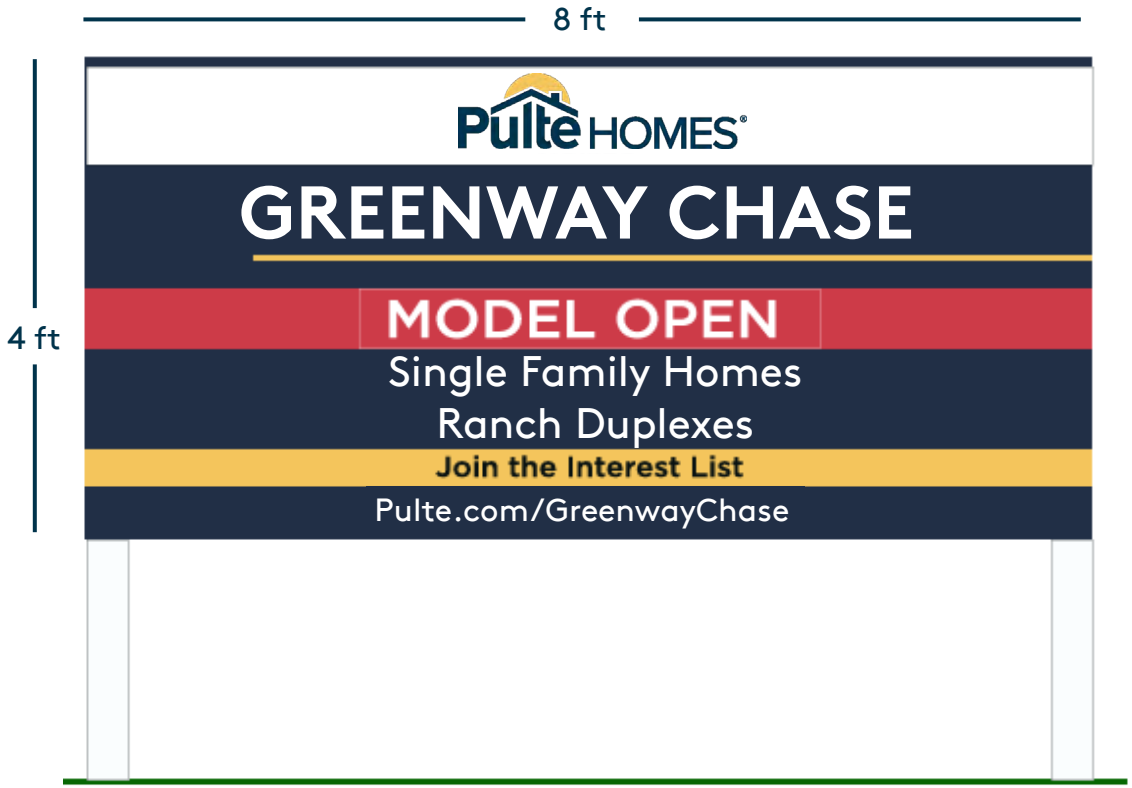
Proposed Signage Plan

December 13, 2024

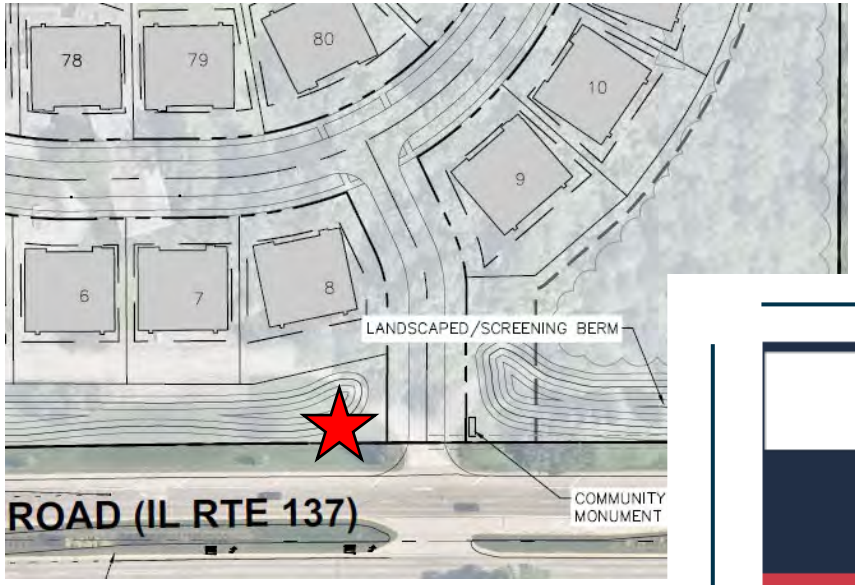
Confidential and Proprietary

Entrance Billboard on Peterson Road



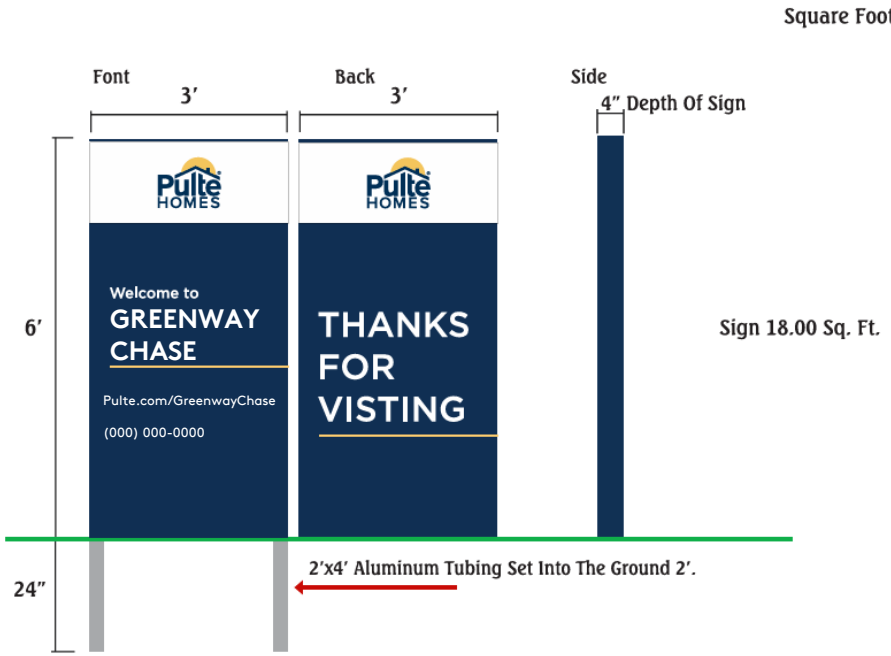


Entrance Billboard on Peterson Road



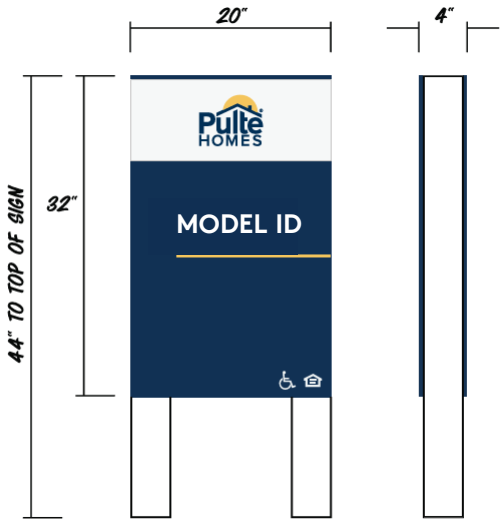


Model Signage – Homesite TBD



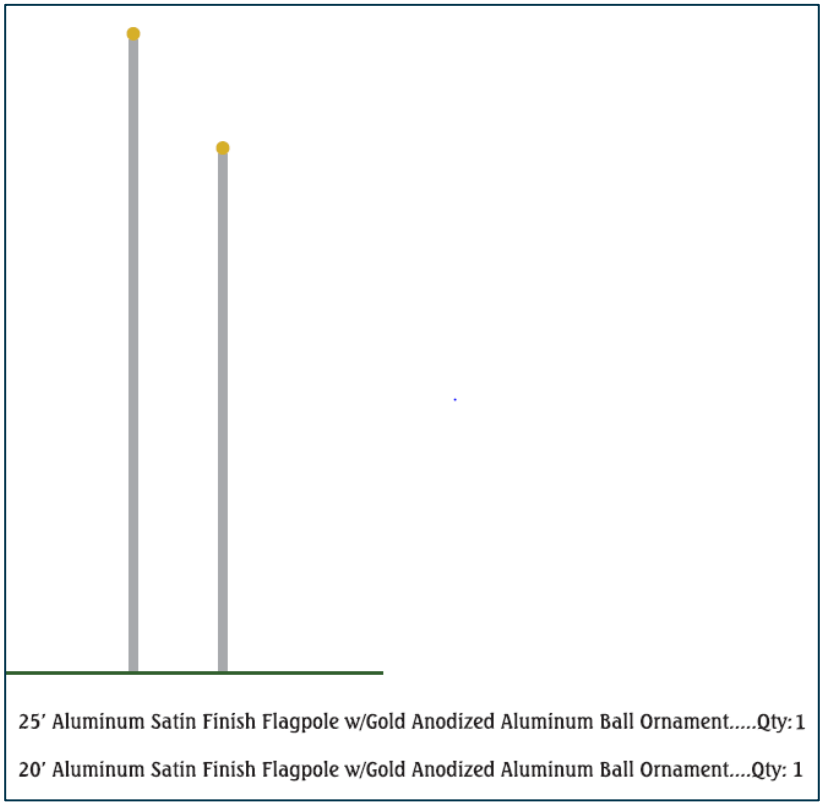
6'x3' Custom Made Aluminum Box Sign w/Aluminum Tubing Frame. Sign Is 4" Deep w/Front & Back Faces Made Out Of .063 Aluminum Painted PMS 540. White Vinyl & Digitally Printed Vinyl Logo Applied To The Front & Back Of The Sign.
Qty: 1

Welcome Sign to be placed on front lawn of model home



Model ID sign to be placed next to front stoop of model home

Model Signage – Homesite TBD (cont.)

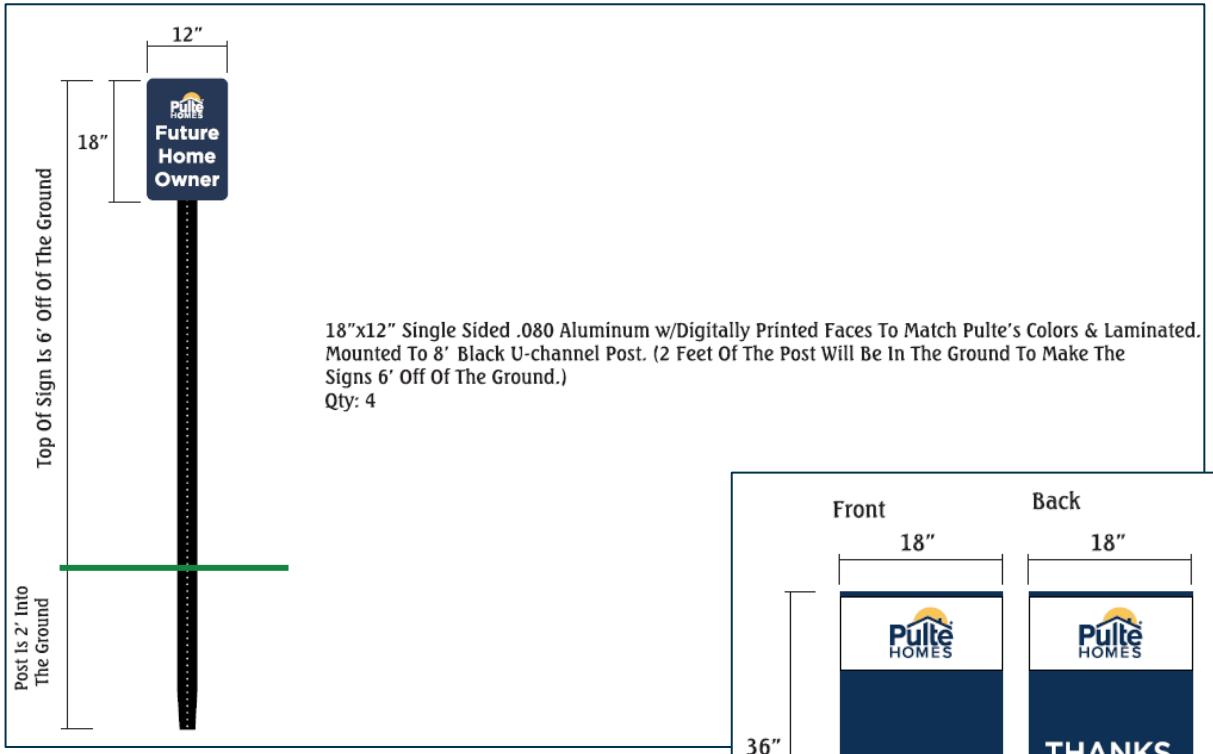


25' Aluminum Satin Finish Flagpole w/Gold Anodized Aluminum Ball Ornament.....Qty: 1

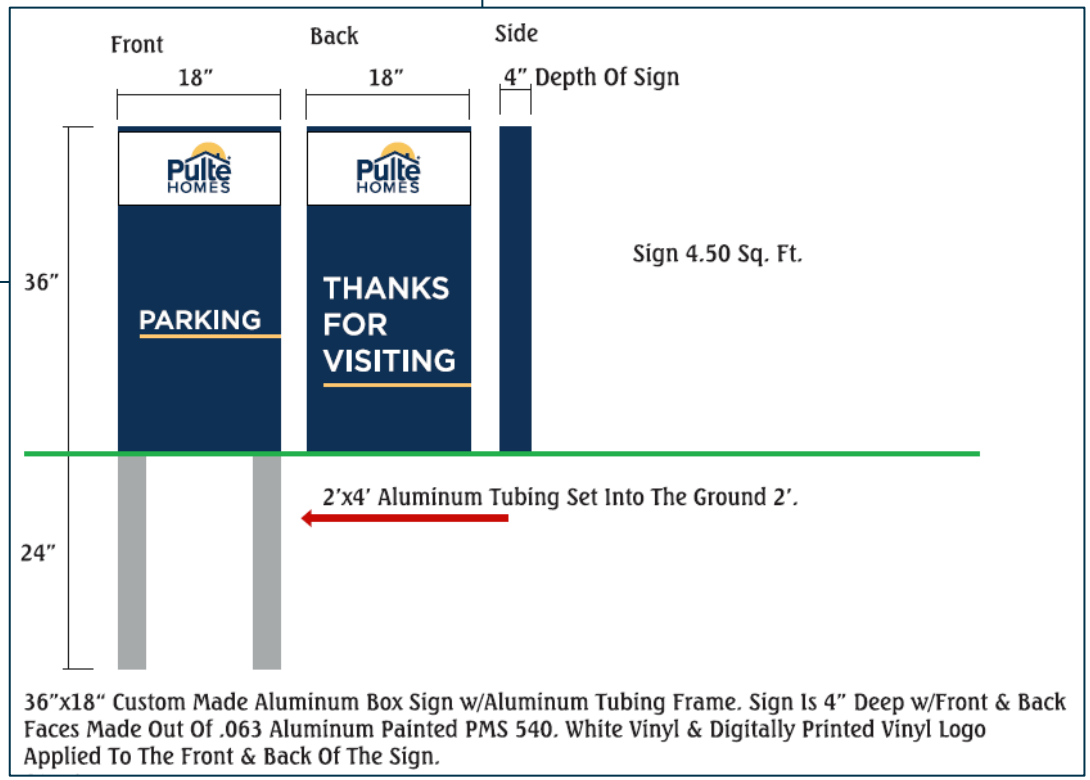
20' Aluminum Satin Finish Flagpole w/Gold Anodized Aluminum Ball Ornament....Qty: 1

Flagpoles to be placed behind the Welcome Sign in front of model. The 25' pole will fly the American flag while the 20' pole will fly the Pulte flag.

Parking Signage – Homesite TBD



Future Homeowner Parking signs to be placed in front of parking spots.



Parking Sign to be placed at entrance to parking lot/area.

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