AGENDA PACKET

VILLAGE OF LAKE ZURICH

Village Board of Trustees Meeting

November 3, 2025
07:00 pm

VILLAGE OF LAKE ZURICH
VILLAGE BOARD OF TRUSTEES MEETING

NOVEMBER 3, 2025
07:00 PM
AGENDA

1. **CALL TO ORDER**

2. **ROLL CALL**
   Mayor Thomas Poynton, Trustee Sujatha Bharadwaj, Trustee Jake Marx, Trustee William Riley, Trustee Marc Spacone, Trustee Roger Sugrue, Trustee Greg Weider.

3. **PLEDGE OF ALLEGIANCE**

4. **PUBLIC COMMENT**
   This is an opportunity for residents to comment briefly on matters included on the agenda and otherwise of interest to the Board of Trustees. Public Comment is limited to 30 minutes total and up to 5 minutes per speaker.

5. **PRESIDENT'S REPORT / COMMUNITY UPDATE**

6. **CONSENT AGENDA**
   These titles will be read by the Village Clerk and approved by a single Roll Call Vote. Any item may be pulled from the Consent Agenda for discussion by any Village Trustee.

   A. **Approval of Minutes from the Village Board Meeting of October 20, 2025**

   Attachment: 6a.pdf

   B. **Approval of Semi-Monthly Warrant Register Dated November 3, 2025 Totaling $5,482,385.20**

   Attachment: 6b.pdf

   C. **Agreement with Russo Power Equipment for Snow Removal Equipment in the Amount Not-to-Exceed $30,000**

   Summary: Public Works staff currently clear 21 miles of sidewalks during snow operations. With the Main Street Revitalization Project nearing completion, staff have determined that the purchase of new snow removal equipment is needed to remove snow without damaging the new brickwork. Staff requests the purchase of a Boss SR Mag through the Sourcewell Purchasing Cooperative from Russo Power Equipment in the amount not-to-exceed $30,000.

   Attachment: 6c.pdf

   D. **Ordinance Establishing the Procedure to Determine Eligibility Under the Public Safety Employee Benefits Act (Assign Ord. #2025-11-628)**

   Summary: Municipalities in Illinois are not explicitly required by state law to publish a defined process for applying for Public Safety Employee Benefits Act (PSEBA) benefits on their website. This ordinance and procedure amends and formalizes the process of the Village's obligations under state law to provide health insurance benefits to its public safety employees who qualify and are eligible to receive certain health insurance benefits.

   Attachment: 6d.pdf

7. **TRUTH-IN-TAXATION PUBLIC HEARING FOR 2025 PROPERTY TAX LEVY (Mayor Poynton)**

Summary: The total proposed increase to the Village of Lake Zurich property tax levy for 2025 represents an 5.10% increase over the

previous year, which brings the total tax levy to $11,365,497. In accordance with State statues, the Village is holding this Truth-in-Taxation Public Hearing in order for residents to have the opportunity to comment on the proposed levy.

The hearing notice was published on October 28, 2025 in the Daily Herald, as well as posted on the Village website and in the official Village newsletter Benchmarks.

Recommend Action #1: A motion to open the Truth-in-Taxation Public Hearing for the 2025 Property Tax Levy and receive into the record public comment.

Recommend Action #2: A motion to close the Truth-in-Taxation Public Hearing for the 2025 Property Tax Levy.

Attachment: Truth in Taxation Hearing 2025 Levy.pdf

8. NEW BUSINESS

A. Property Tax Levy Extension Ordinance and Three Abatement Ordinances Regarding Debt Services (Trustee Riley)

Summary: Each year, the Village board approves a tax levy ordinance to certify with the Lake County Clerk's Office in order to extend property taxes on real estate parcels within Lake Zurich municipal boundaries. The 2025 levy request is based upon the estimated equalized assessed value (EAV) of those properties, as determined by the Ela Township Assessor's Office and the Chief County Assessor's Office. The 2025 levy request is collected in fiscal year 2026.

Applying the rates authorized by the Property Tax Extension Limitation Law (PTELL), the Village is requesting a total levy of $11,878, 237 which represents an increase of 3.81% over the previous year. The tax levy request for 2025 includes $1,416,270 for debt service and $6,105,800 for the Police and Fire Pension Funds. The proposed levy also includes $400,000 for the Special Recreation Area, which provides funding for accessible improvements and services.

Three ordinances totaling $2,143,014 regarding debt service abatements are also presented to the Board for consideration. As sufficient funds are available from other revenue sources to pay scheduled debt service payments as they become due, the need to extend a property tax levy on these issues is not warranted. Therefore, the Village will notify the County Clerk to not extend property taxes on these abatement ordinances.

Recommended Action #1: A motion to approve Ordinance #2025-11-629 authorizing the 2025 Property Tax Levy Extension in the Amount of $11,878, 237.

Recommended Action #2: A motion to approve the following three abatement ordinances regarding debt service via a single roll-call vote:

a) Ordinance #2025-11-630 Abating Certain Taxes Levied for $11,775,000 General Obligation Refunding Bonds, Series 2015 A

b) Ordinance #2025-11-631 Abating Certain Taxes Levied for $7,100,000 General Obligation Refunding Bonds, Series 2016 A.

c) Ordinance #2025-11-632 Abating Certain Taxes Levied for $1,000,000 General Obligation Bonds (Waterworks and Sewerage System Alternate Revenue Source) Series 2016 B.

Attachment: 8a.pdf

B. Public Hearing for an Annexation Agreement, and Consideration of Annexation, Zoning, Development Concept and Final Plan Approval at 2500 North Rand Road (Trustee Marx)

Summary: Luxe Corsa, LLC requests consideration of an annexation agreement, annexation, zoning and concurrent development concept and final plan for the development of a 20-acre property on the north end of Lake Zurich with a new subdivision to be known as "Luxe Corsa Auto Suites." The property is currently located in unincorporated Lake County. Luxe Corsa proposes to develop the property with a high-end auto dealership with an attached coffee house to be located at the front of the property facing Rand Road and 121 condominium auto suites to be located in 11 separate buildings along with a Clubhouse for the condominium suite owners. Onsite stormwater management facilities will be provided in conformance with the Lake County Watershed Development Ordinance.

The Planning and Zoning Commission held a public hearing on August 20, 2025 to consider the application and voted 6-0 in favor of recommending approval of the project.

Recommended Action #1: A motion to Open the Public Hearing regarding the Annexation of the property at 2500 North Rand Road. *Roll Call*.

Recommended Action #2: A motion to Close the Public Hearing regarding the Annexation of the property at 2500 North Rand Road. *Roll Call*

Recommended Action #3: A motion to Approve a Resolution Approving and Authorizing the Execution and Attestation of an Annexation Agreement with Luxe Corsa, LLC, an Illinois Limited Liability Company (Assign Res. #2025-11-105). *Roll Call*

Recommended Action #4: A motion to Approve an Ordinance Annexing Certain Territory to the Village of Lake Zurich at 2500 North Rand Road (Assign Ord. #2025-11-633) *Roll Call*

Recommended Action #5: A motion to Approve an Ordinance Rezoning Newly Annexed Property Within a B-1 Local And Community Business District and I Industrial District, and Granting Approval of a Planned Unit Development, Development Concept and Final Plan and Modifications to the Zoning and Land Development Code for a Commercial Subdivision. (Assign Ord. #2025-11-634). *Roll Call*

Attachment: 8b.pdf

9. TRUSTEE REPORTS

10. VILLAGE STAFF REPORTS

11. EXECUTIVE SESSION called for the purpose of:

- 5 ILCS 120 / 2 (c) (21) review of executive session minutes
- 5 ILCS 120 / 2 (c) (5) purchase or lease of real estate

12. ADJOURNMENT

The next regularly scheduled Village Board meeting is on Monday, November 17, 2025.

UNAPPROVED MINUTES
VILLAGE OF LAKE ZURICH
Board of Trustees
70 East Main Street

Monday, October 20, 2025 7:00 p.m.

1. CALL TO ORDER by Mayor Thomas M. Poynton at 7.00pm.
2. ROLL CALL: Mayor Thomas Poynton, Trustee Sujatha Bharadwaj, Trustee Jake Marx, Trustee William Riley, Trustee Greg Weider. Trustee Marc Spacone and Trustee Roger Sugrue were absent and excused. Also in attendance: Village Manager Ray Keller, Asst. Village Manager Michael Duebner, Finance Dir. Rita Kruse, Village Atty. Scott Uhler, Deputy Police Chief Sieber.
3. PLEDGE OF ALLEGIANCE
4. PUBLIC COMMENT

Joanne Ullman, 315 Whitney Road, addressed the Board on her and her husband's concerns about Agenda Item 7A. Traffic concerns and the exit onto Whitney Road were major concerns.
Brad Ullman, 315 Whitney Rd, echoed his wife's concerns on traffic.
Ron Cohen, 325 Whitney Road, addressed the Board on the traffic lights intervals and suggested a speed bump on Whitney Road.
Matt Spiekhout, 306 Whitney Road, addressed the Board on the traffic problems.
Kevin Markech, 35 Lake Zurich Drive, addressed the Board on the traffic issues.

5. PRESIDENT'S REPORT / COMMUNITY UPDATE

Proclamation Recognizing Diwali, The Festival of Lights

6. CONSENT AGENDA

A Approval of Minutes from the Village Board Meeting of October 6, 2025

B. Approval of the Semi-Monthly Warrant Register Dated October 20, 2025 Totaling $1,677,351.78

C. Agreement with Bradford Kildeer LLC for Second Amendment to Utilities Services Easement and Development

Summary: In November 2023, the Village entered into an agreement to provide potable water and sanitary sewer services to Kildeer Ventures LLC for the development of a quick service restaurant within Kildeer Crossings Lot 1.

Bradford Kildeer LLC requests to enter into an agreement with the Village to provide similar potable water and sanitary sewer services for the development of Lot 2 of the 4-lot commercial subdivision in Kildeer Crossings.

As part of the agreement, Bradford would agree to the land use restrictions established by the Village of Lake Zurich, the 2015 intergovernmental agreement with the Village of Kildeer for a 50%50% sharing of sales and municipal property taxes, and the granted easement over Lake Zurich's utilities that extend along the periphery of their lot.

Staff recommends approval of the Second Amendment to the Utilities Services Easement & Development Agreement with Bradford Kildeer LLC.

Recommended Action: A motion was made by Trustee Weider, seconded by Trustee Riley, to approve the Consent Agenda as presented
AYES: 4 Trustee Bharadwaj, Marx, Riley, Weider.
NAYS: 0
ABSENT: 2 Trustees Spacone, Sugrue.
MOTION CARRIED.

7. NEW BUSINESS

A. **Courtesy Review for Proposed Drive-Through Coffee Shop at 520 W Route 22**

Summary: Ziggi's Coffee requests a Courtesy Review with the Village Board to consider a drive-through coffee shop restaurant at 520 W Route 22. The proposed 2,400 square foot restaurant is designed to operate as both a walk-up and a drive-through concept. The franchise-based restaurant has established over 100 locations across the nation.

The Patel family, father and son, gave a PowerPoint presentation of their proposal for a drive through coffee shop. The Board then asked their questions and voiced their concerns. Traffic, exits and pedestrian challenges were the main concerns and the Patels were advised to contact the neighbours and their concerns. Mayor Poynton asked about seating and Dipak Patel stated that there was none at the coffee shop but another tenant could have seating. Asst. Village Manager Duebner stated that there needed to be a conversation with the Patel family about another tenant.

Recommended Action: This is a non-voting item at this time. The developer and Village Staff seek to understand the Board's preferences towards the proposed use at this site.

B. **Ordinance Authorizing the Issuance of $1,385,500 Taxable General Obligation Limited Tax Bonds, Series 2026 ORD. #2025-10-627**

Summary: This agenda item authorizes the issuance of $1,385,500 Taxable General Obligation Refunding Bonds (Limited Tax), Series 2026. These one-year bonds are part of the Village's overall debt limit and fall within the Village's tax cap limit. This is the fifteenth year for this procedure, which is a component of the Village's repayment of the restructured General Obligation TIF Bonds that were issued between 2009 and 2016.

Recommended Action: A motion was made by Trustee Weider, seconded by Trustee Marx, to approve Ordinance #2025-10-627 authorizing the issuance of $1,385,500 Taxable General Obligation Limited Tax Bonds, Series 2026, of the Village of Lake Zurich, Lake County, Illinois, for the purpose of paying certain outstanding general obligation refunding bonds of said Village and paying the expenses incident thereto, providing for the levy and collection of a direct annual tax for the payment of the principal of and interest on said bonds, and authorizing the sale of said bonds to the purchaser thereof.
AYES: 4 Trustee Bharadwaj, Marx, Riley, Weider.
NAYS: 0
ABSENT: 2 Trustees Spacone, Sugrue.
MOTION CARRIED.

C. **Police Pension Municipal Compliance Report and Tax Levy Request**

Summary: The Village of Lake Zurich takes seriously its commitment to properly fund public safety pensions as a way to attract and retain talent and to show our commitment to public safety personnel. A well-funded pension system like the one in Lake Zurich provides for the fair treatment of police officers and their retirement benefits.

The Illinois Pension Code requires the Village to levy a tax each year to meet the actuarial requirements of the Police Pension Fund. The Lake Zurich Police Pension Board requests a tax levy in the amount of $2,767,200 for the Village Board to consider. Last year, the Police Pension Board requested a levy of $2,509,796 and the actual levy was the same amount. The Police Pension Fund is now 57.2% funded, a decrease of 0.9%% on an actuarial value from last year's status of 58.1% funded.

Deputy Chief of Police Sieber thanked the Board.

Recommended Action: No Village Board action requested at this point. This tax levy request is for discussion purposes only.

D. **Fire Pension Municipal Compliance Report and Tax Levy Request**

Summary: The Village of Lake Zurich has a well-funded Fire Pension Fund that offers financial security to public safety personnel during retirement. Offering a solid pension plan is crucial for retaining skilled firefighter-paramedics and encourages a long-term commitment to the profession.

The Illinois Pension Code requires the Village levy a tax each year to meet the actuarial requirements of the Fire Pension Fund. The Lake Zurich Fire Pension Board is requesting a tax levy in the amount of $3,338,600 for the Village Board to consider. Last year, the Fire Pension Board requested a levy of $3,013,176 and the actual levy was $3,008,404. The Fire Pension Fund is now 69.3% funded, an increase of 0.8% on an actuarial value from last year's status of 68.5% funded.

FF/PM Spencer Cordell addressed the Board and thanked them

Recommended Action: No Village Board action requested at this point. This tax levy request is for discussion purposes only.

8. TRUSTEE REPORTS

No reports

9. VILLAGE STAFF REPORTS

A. Monthly data metrics

10. ADJOURNMENT

A motion to adjourn the meeting was made by Trustee Marx, seconded by Trustee Bharadwaj.
AYES: 4 Trustee Bharadwaj, Marx, Riley, Weider.
NAYS: 0
ABSENT: 2 Trustees Spacone, Sugrue.
MOTION CARRIED.

The meeting adjourned at 7.53pm

Respectfully submitted:

Kathleen Johnson, Village Clerk.

Approved by:

_____ _____

Mayor Thomas M. Poynton Date.

VILLAGE OF LAKE ZURICH

At the Heart of Community

FINANCE DEPARTMENT

70 East Main Street
Lake Zurich, Illinois 60047

(847) 438-5141
LakeZurich.org

October 29, 2025

The warrant report for the November 3, 2025 Village Board meeting totals $5,482,385.20. Details of the report is available upon request.

Sincerely,

/s/ Rita Kruse
Finance Director/Treasurer

PUBLIC WORKS DEPARTMENT

505 Telser Road
Lake Zurich, Illinois 60047

(847) 540-1696
Fax (847) 726-2182
LakeZurich.org

At the Heart of Community

AGENDA ITEM 6c

MEMORANDUM

Date: October 24, 2025

To: Ray Keller, Village Manager

From: Steven J. Paulus, Public Works Assistant Director

Copy: Michael J. Brown, Public Works Director

Subject: Boss SR Mag Purchase-Public Works

Issue: To gain some efficiencies with sidewalk snow removal, Staff is recommending the purchase of a Boss SR Mag utility vehicle for the Public Works Department.

Strategic Plan – The requested vehicle purchase is consistent with the following Goals and Objectives of the Strategic Plan.

Goal #1 Financial Sustainability
Objective F: Continue to conduct organizational analyses to determine if further efficiencies are obtainable

Goal #2 Infrastructure Investment
Objective B: Explore the feasibility of the development of a Fixed Asset Analysis and Inventory (to include the preparation of a schedule for asset replacement and maintenance)

Background: Currently, Public Works clears approximately 21 miles of sidewalks during snow operations. To accomplish this, Public Works utilizes several pieces of equipment including a track machine with a snow blower/snow plow, a tractor with a snow blower, pickup trucks, two walk-behind snow blowers, and a Trackless snowblower and plow recently purchased in 2024. An average snow event consumes approximately 80-man man-hours utilized on sidewalk clearing alone.

Analysis: The Main Street Revitalization Project is nearing completion, and the Public Works staff has been evaluating several plans for snow removal from the new sidewalks and parking areas. It has been determined that a purchase of another piece of snow removal equipment is needed in order to remove snow without damaging the new brickwork. This equipment is built specifically for sidewalk snow removal and within tight spaces. The unit has numerous attachments, including a salt spreader, snow plow, snow blower, and sidewalk brooms.

The proposed new unit is a Boss SR Mag purchased through the Sourcewell Purchasing Cooperative. The proposed unit will have updated features including Tier snowplow, a snowblower and broom. This purchase was not budgeted for in 2025, but savings realized with the new replacement fuel island has provided ample funding to make this purchase.

Recommendation: Purchase one Boss SR Mag, including a 48"snowblower, v-snowplow and a 48" broom from Russo Power Equipment, using the Sourewell contract in the amount not to exceed $30,000.00.

RUSSO

39 E. Belvidere Road
Hainesville, IL 60030
(847) 752-0420
RussoPower.com

Sales Quote
SQ20177911

Page 1 of 1

Bill-to
Village Of Lake Zurich
Bea Corral
70 E Main Street
Lake Zurich, IL 60047
United States

Ship-to
Village Of Lake Zurich
Bea Corral
70 E Main Street
Lake Zurich, IL 60047
United States

Sales Quote Details

Customer ID	1088743
Customer PO	
Sales Rep	Nathan Jernigan
Document Date	10/2/2025
Shipment Method	
Terms	Net 45 Days
Customer Phone	(847)540-1689

Item No.	Description	Qty	List Price	Unit Price	Line Amount
SNR24400BSR	Snow Equipment / Snowrator / Mag / 747cc / KOH	1	19,116.80	16,965.00	16,965.00
SETUP-SNWTC	Set-up Snow Tractor	1	150.00	150.00	150.00
SNR24023BSR	Kit-Plow System,V,4'2",Sr Mag	1	4,686.50	3,599.00	3,599.00
STX24410BSR	Kit-Snowthrower,48",Sr Mag	1	5,788.60	4,379.00	4,379.00
BRX25175BSR	Kit-Broom,48",Sr Mag	1	5,273.60	4,069.00	4,069.00
DISCOUNT	Sourcewell #112624-TTC	0	0.00	0.00	0.00

Did you know...

Fall preparation made easy! From leaf blowers to lawn fertilizers, we have everything you need to tackle autumn cleanup and prepare your property for winter. Visit RussoPower.com/fall-clean-up for more solutions.

Prices reflected on this quote are valid for 7 days

Signature : _____

Subtotal	**29,162.00**
Tax	0.00
Total	**29,162.00**

OFFICE OF THE VILLAGE MANAGER
Human Resources Division

70 East Main Street
Lake Zurich, Illinois 60047

(847) 438-5141
LakeZurich.org

At the Heart of Community

AGENDA ITEM 6d

MEMORANDUM

Date: November 3, 2025

To: Ray Keller, Village Manager

From: Douglas Gibson, Human Resources Director

Subject: Public Safety Employee Benefit Act Ordinance

Issue: The attached ordinance and procedure amend and formalize the process for application for health insurance benefits pursuant to the Public Safety Employee Benefits Act (820 ILCS 320/10). This ordinance is established in recognition of the Village's obligations under state law to provide health insurance benefits to its public safety employees who qualify for, and are determined to be eligible to receive, certain health insurance benefits from the City.

Analysis: Municipalities in Illinois are not explicitly required by state law to publish a defined process for applying for Public Safety Employee Benefits Act (PSEBA) benefits on their website. However, there are strong practical and legal reasons why many do so or should consider doing so:

- Providing a defined application process helps ensure due process for public safety employees and protects the municipality from claims of arbitrary or inconsistent decision-making.
- A documented process allows consistent handling of PSEBA applications across cases and departments.
- While PSEBA is not directly tied to FOIA or OMA, any related ordinances, resolutions, or administrative policies are generally subject to public disclosure. Making the process readily available aligns with open government practices.
- Courts have scrutinized municipalities over vague or unpublished PSEBA procedures. Having a clear, posted policy can help withstand legal challenges by demonstrating the municipality has an established, fair process.

Recommendation: Staff recommends the approval of the attached ordinance and procedure regarding the application process of health benefits under the Public Safety Employee Benefits Act.

w/Attachments:

1. Ordinance establishing the procedure for the Village of Lake Zurich to determine eligibility under the Public Safety Employee Benefits Act.
2. Hearing procedures for Medical Insurance Benefits under PSEBA
3. PSEBA Application

VILLAGE OF LAKE ZURICH

ORDINANCE NO. 2025-11-628

ORDINANCE ESTABLISHING THE PROCEDURE FOR THE VILLAGE OF LAKE ZURICH TO DETERMINE ELIGIBILITY UNDER THE PUBLIC SAFETY EMPLOYEE BENEFITS ACT

WHEREAS, the Village of Lake Zurich is a non-home rule municipality in accordance with the Constitution of the State of Illinois of 1970; and

WHEREAS, the Village pursuant to its non-home rule powers has authority to adopt ordinances and to promulgate rules and regulations that pertain to its government and affairs that protect the public health, safety, and welfare of its citizens; and

WHEREAS, the Village, pursuant to the Illinois Municipal Code (65 ILCS 5/1-2-1), has the authority to pass all ordinances and make all rules and regulations proper or necessary, to carry into effect the powers granted to municipalities, with such fines or penalties as may be deemed proper; and

WHEREAS, the Village, pursuant to the Illinois Municipal Code (65 ILCS 5/10-4-1), has the authority to provide by ordinance regarding the relations between all municipal officers and employees in respect to each other, he municipality, and the people; and

WHEREAS, the Village, pursuant to *Englum v. City of Charleston*, 2017 IL App (4th) 160747 (2017), has the authority to establish an administrative procedure for determining claims for benefits under the Public Safety Employee Benefits Act (820 ILCS 320/1 et seq.), subject to judicial review by seeking a common law writ of certiorari; and

WHEREAS, the President and Board of Trustees of the Village authorized the Village Manager to utilize application and investigation process; and

WHEREAS, the Village now desires to amend its procedure by adopting the following procedure and finds that this is in the best interest of the municipality and its citizens.

NOW, THEREFORE, BE IT ORDAINED by the President and Board of Trustees of the Village of Lake Zurich, Lake County, Illinois, as follows:

Section 1: If any provision of this Ordinance is subsequently declared by State or Federal legislative or judicial authority to be unlawful, unenforceable, or not in accordance with applicable statutes, all other provisions of this Agreement shall remain in full force and effect.

Section 2: This Ordinance shall be in full force and effect from and after its passage, approval, and publication in pamphlet form as provided by law.

Section 3: That Article ___, MEDICAL INSURANCE BENEFITS UNDER THE PUBLIC SAFETY EMPLOYEE BENEFITS ACT, be and is created to read as follows in:

EXHIBIT A

EXHIBIT B

ADOPTED this 3rd of November, 2025 by the following vote:

Ayes: _____

Nays:_____

Absent: _____

APPROVED by the Mayor on this _____ day of November, 2025.

_____
Tom Poynton, MAYOR

_____

Kathleen Johnson, VILLAGE CLERK

EXHIBIT B

Village of Lake Zurich

Application for Public Safety Employee Benefits Act ("PSEBA") Benefits

The completion of the Application does not automatically qualify one for benefits. The Village of Lake Zurich shall determine eligibility. Additional information may be requested or required. Failure to complete or provide sufficient details of the circumstances of the incident may result in denial of benefits.

Name of Individual Completing Application:_____

If the person completing this application is not the full time Firefighter or Police Officer, state your relationship to injured or deceased public safety officer.

_____

_____

Was the injured/deceased a full-time Firefighter or full-time Police Officer?_____

Is the public safety officer injured or deceased?_____

The undersigned states, under oath, as follows:

Name of Injured/Deceased Public Safety Officer: Phone Number:

Address: City/State/Zip:

Date of hire of public safety officer:_____

1. Name, age, and relationship of legal dependents of the public safety officer: (Provide a copy of marriage license and birth certificates of each dependent child with this application.)

_____

_____

_____

2. Describe in detail when, where and how injury and/or death occurred: (Use additional page if length exceeds space)

_____

_____

_____

{00251677.DOC v. 1 }

3. Describe in detail when, where and how disabling and any contributing injuries and/or death occurred and provide any documents in support.

4. List any and all witnesses to the qualifying injury and/or death:

5. Identify the individual to whom you reported the injury and the circumstances surrounding that report. If the report was not made contemporaneous to the injury, provide an explanation as to why the report was not made contemporaneous to the injury.

6. _____Was the injury/death in response to fresh pursuit, in response to what was reasonably believed to be an emergency, an unlawful act perpetrated by another, or during the investigation of a criminal act? If so, describe how.

7. Identify the Incident Report Number (s)_____

8. Please describe the nature, extent, date, and circumstances of any previous personal injuries or illness that created any temporary, partial or permanent disability for the public safety officer. This information should be provided without regard to the work related nature of the injury or illness. Please indicate the name and address of the treating physician(s).

9. Did any of the injuries identified in the question immediately preceding effect the public safety officer's ability to perform his/her job duties (or the essential functions of his/her job) in any manner? If yes, please explain how you are so affected.

10. Please identify (name and address) all physicians and physician associated treaters (such as physical therapists, chiropractor, physician assistants etc.) that you have seen in the past ten (10) years.

11. Describe any outside activities, sports, sports leagues, hobbies any other physical activities in which you participate. Provide sufficient information to identify the league and/or location of the activity in which you participate.

12. Aside from the accident for which the public safety officer is seeking benefits, has any physician rendered an opinion, that the public safety officer is physically unable to perform the essential functions of the job of a public safety officer.

13. Aside from the accident for which the public safety officer is seeking benefits, has any physician rendered an opinion, that the public safety officer is physically or mentally disabled for

any other reason and unable to perform the essential functions of the job of a public safety officer.

14. Please state whether the public safety officer was employed by any other employer or was self-employed in the twelve (12) months preceding the injury. If so, identify the employer, position held, and hours worked.

15. Was the public safety officer working in any other capacity in the forty-eight hours preceding the injury for which they are seeking benefits? If so, where were they working, what were they doing, and who was with them?

16. Has a line-of-duty disability pension been for granted by the Village's Fire or Police Pension Fund Board?

☐ Yes ☐ No

17. If yes, provide the date the pension was granted along with a copy of the Pension Board decision. In addition, provide copies of any materials submitted by you in support of such a pension as well as any other materials that are in your possession that were considered by the Pension Board:

18. If no, provide the date and a copy of the pension application along with copies of any materials submitted.

19. Provide any other facts that would qualify the injured or deceased public safety officer for PSEBA benefits:

20. Is the public safety officer currently employed? If yes, provide the name, address and telephone number of the employer.

21. Is the public safety officer eligible for health insurance benefits through his/her current employer? If yes, provide details of benefits offered.

22. Is the spouse of the public safety officer currently employed? If yes, provide the name, address and telephone number of the employer.

23. Is the spouse of the public safety officer eligible for health insurance benefits through their current employer? If yes, provide details of benefits offered.

24. Is the child(ren) of the public safety officer currently employed? If yes, provide the name, address and telephone number of the employer.

25. Is the child(ren) of the public safety officer eligible for health insurance benefits through their current employer? If yes, provide details of benefits offered.

26. Is the child(ren) of the public safety officer eligible for health insurance benefits through any other source, such as a mother or father who is not the spouse of the applicant. If so, provide the details of the eligibility for insurance including the identity and relationship of the individual through whom the child(ren) are eligible for insurance.

27. Is the child(ren) currently enrolled in school? If yes, identify the date(s) the child was enrolled, course of study, and anticipated date of graduation. _____

_____

28. The Act states that benefits shall be provided to the injured public safety officer, the public safety officer's spouse and for each dependent child of the public safety officer. List other current sources of health insurance benefits payable to the injured or deceased public safety officer through other employment, other entity or spouse; include company name, benefit plan, description of benefits and costs to you and/or spouse for a single and/or family coverage.

_____

_____

_____

_____

29. Has the injured or deceased public safety officer or any family member on his/her behalf previously made a request for benefits? If so, identify when the request was made, how it was made and to whom it was made and provide any documentation supporting your previous request for benefits.

_____

_____

_____

_____

If the public safety officer, his/her spouse or any of their dependent children become eligible and/or obtain other sources of health insurance benefits, you must notify the Village of Lake Zurich within 30 days of the effective date.

If you or your spouse becomes employed, or are self-employed, you must notify the Village of Lake Zurich within 30 days of the effective date along with the identity of the employer, and position held.

Essential Functions of the Position of Public Safety Officer

From the position description attached as Appendix 1, specifically list the essential functions that you or the injured public safety officer are unable to perform. Also list any reasonable accommodations that you feel could be made to allow you or the injured public safety officer to perform functions as a public safety officer.

It will be assumed that you or the injured public safety officer are able to perform those duties not listed without accommodation.

Duty that I am Unable to Perform	Reasonable Accommodation to Perform Duty

Medical Information

To determine eligibility for PSEBA benefits, the Village of Lake Zurich will review relevant medical records concerning the injured public safety officer. Please have the waiver form (attached as Appendix 2) completed to authorize the Village of Lake Zurich to review these medical records.

VERIFICATION OF INFORMATION PROVIDED BY APPLICANT

This statement is made for the sole purpose of receiving benefits under the Public Safety Employee Benefits Act from the Village of Lake Zurich. The information contained in this application is true to the best of my knowledge and belief. I understand that it is unlawful for a person to *willfully and knowingly make,* or cause to be made, any false, fraudulent, or misleading oral or written statement to obtain health insurance coverage as provided by the Public Safety Employee Benefits Act. 820 ILCS 320/10(a)(3). Such actions constitute a Class A Misdemeanor and can serve as the basis for denial or forfeiture of any benefits paid out under the Public Safety Employee Benefits Act.

I agree to abide by the requirements set forth above for retention of any benefits provided by the Village of Lake Zurich.

I, _____, being duly sworn, and state that I have reviewed the information provided in this application FOR BENEFITS UNDER THE PUBLIC SAFETY EMPLOYEE BENEFITS ACT, and declare, under the penalties provided by law pursuant to section 1-109 of the Code of Civil Procedure, that the statements set forth herein are true and correct, except as to matters therein stated to be on information and belief and as to such matters, I certify that I believe them to be true.

_____ _____
Signature of Applicant Date

State of Illinois)
County of ____)

Subscribed and sworn to
Before me this ___ day of_____
_____

_____
Notary Public

EXHIBIT A

Medical Insurance Benefits Under the Public Safety Employee Benefits Act

The general purpose of this administrative order is to establish the process by which an individual can apply for health insurance benefits pursuant to the Public Safety Employee Benefits Act (820 ILCS 320/1 *et seq*.) ("PSEBA"). This administrative order is not a contract that bestows an entitlement on a particular individual, and may be modified by the Village of Lake Zurich at any time without notice.

A. Application Form

The Village has developed a standard application form for those wishing to apply for PSEBA benefits. A copy of this application form can be obtained from the Village Manager or their designee.

B. Process For Applying

An application for PSEBA benefits must be submitted either by hand delivery, electronic mail delivery, or certified mail to the Village of Lake Zurich addressed to the Village Manager, Village of Lake Zurich, 70 East Main Street Lake Zurich, IL 60047. In the event the Applicant has received a line-of-duty disability pension from the Village's Fire or Police Pension Board, the Applicant is responsible for providing the Village with copies of any hearing transcripts and/or exhibits. PSEBA application forms must be signed under oath and appropriately notarized. The medical release that accompanies the PSEBA application form must also be completed by the Applicant.

C. Processing The Application By Human Resources

Upon receipt of a complete and fully executed PSEBA application form, the Village Manager or their designee will review the application form and associated materials to determine whether the Applicant is eligible for PSEBA benefits. If the Village Manager, or their designee, determines that additional information is necessary to render a decision, an informal meeting may be scheduled with the Applicant and/or the Applicant's representative. Alternatively, the Village Manager or their designee, may schedule a meeting pursuant to the procedures outlined in Part E below. The Village Manager or their designee may also consult with other individuals and/or resources as they deem appropriate.

D. PSEBA Benefits

Individuals receiving benefits under PSEBA will only be able to change from one plan to another during the Village's Open Enrollment Period.

Health insurance benefits payable from any other source will reduce the benefits payable from the Village. Each Applicant will be required to sign an affidavit attesting to the fact that he/she is not eligible for insurance benefits from any other source.

It is the responsibility of the Applicant and/or the benefit recipient to notify the Village within 30 days of any changes to other sources of health insurance benefits. Receipt of benefits in violation of this provision will require reimbursement to the Village of any benefits received. The Village reserves the right on an annual basis to have the Applicant and/or the benefit recipient provide another affidavit affirming whether other health insurance is available or payable to the Applicant, his/her spouse, and/or his/her qualifying dependent children.

The Applicant is also required to notify the Village when the Applicant and/or benefit recipient becomes Medicare eligible so the Village can assist with the transition to Medicare coverage and/or adjust health insurance benefits accordingly.

E. Hearing Process

Upon receipt of a timely notice from the Applicant, the Village shall schedule an administrative hearing and serve the Applicant with notice of the administrative hearing along with a date for the scheduled administrative hearing.

If the Applicant or the Village, upon receiving written notice of the administrative hearing date, cannot attend said date as indicated in the notice of administrative hearing, the Applicant or the Village, as the case may be, must contact the Hearing Officer within 7 calendar days after being served with notice of the administrative hearing, communicating alternative hearing date(s) which are within close proximity of the original hearing date indicated by the Hearing Officer. Continuances will be granted for good cause only. Failure to appear and/or cooperate in the hearing process may result in denial of benefits.

F. Appointment and Power of Hearing Officer

The Village Manager is hereby authorized to serve as the Hearing Officer or to appoint a third-party neutral person to hold the position of Hearing Officer for any hearing that shall be scheduled by the Village.

The Hearing Officer shall have all the powers granted to him under common law relative to the conduct of an administrative hearing including the power to:

(1) preside over all Village hearings involving PSEBA;
(2) administer oaths;
(3) hear testimony taken under oath and affirmation and accept evidence that is relevant to the issue of eligibility under PSEBA;
(4) issue subpoenas to secure attendance of witnesses and the production of relevant papers or documents upon the request of the parties or their representatives;

(5) rule upon objections in the admissibility of evidence and other motions;
(6) preserve and authenticate the record of the hearing and all exhibits in evidence introduced at the hearing;
(7) issue a determination based on the evidence presented at the hearing, after entertaining arguments in either oral or written format, at the discretion of the Hearing Officer, the determination of which shall be in writing and shall include a written finding of fact, decision, and order.

G. Administrative Hearing

An administrative hearing shall be held to adjudicate and determine whether the Applicant is eligible for benefits under PSEBA. If the Applicant is found eligible, the benefits shall be consistent with the Act.

(1) Time and date. Hearings shall be held on the date, time and place as established by the Hearing Officer with appropriate notice served upon the Applicant.
(2) Record. The proceedings shall be recorded by a certified court reporter, and a transcript of all proceedings shall be made by said certified court reporter. The cost of the court reporter and transcripts shall be borne by the Village.
(3) Procedures. The Village and the Applicant shall be entitled to representation by counsel at said hearing and may present witnesses, may present testimony and documents, may cross-examine opposing witnesses, and may request the issuance of subpoenas to compel the appearance of relevant witnesses or the production of relevant documents. Each party shall bear the costs of its own counsel and witnesses.
(4) Evidence. In so far as is practical, the rules of evidence as set forth in the Illinois Code of Evidence shall apply.
(5) Final determination. The determination by the Hearing Officer of whether the Applicant is eligible for the benefits under the Public Safety Employee Benefits Act (820 ILCS 320/1 *et seq.*) shall constitute a final administrative determination for the purpose of judicial review.
(6) Burden of proof. At any administrative hearing, the Applicant shall have the obligation and burden of proof to establish that the Applicant is qualified to receive the benefits by clear and convincing evidence.
(7) Administrative records. All records pertaining to the administrative process will be held in a separate file in the Applicant's name maintained by the Village.

G. Decision

A written decision will be provided to the Applicant and the Village.

NOTICE OF PROPOSED PROPERTY TAX INCREASE FOR THE VILLAGE OF LAKE ZURICH

I. A public hearing to approve a proposed property tax increase for the Village of Lake Zurich for 2025 will be held on Monday, November 3, 2025 at 7:00 p.m. at the Lake Zurich Village Hall, 70 East Main Street, Lake Zurich, Illinois.

Any person desiring to appear at the public hearing and present testimony to Village officials of the taxing district may contact Erin Rauscher, Deputy Village Clerk, 70 East Main Street, Lake Zurich, IL 60047 at (847) 540-1687. Attendance is encouraged.

II. The corporate and special purpose property taxes extended for 2024 were $9,584,034. The proposed corporate and special purpose taxes to be levied for 2025 are $9,949,227. This represents an 3.81% increase over the previous year.

III. The property taxes extended for debt service for 2024 were $1,389,414. The estimated property taxes to be levied for debt service for 2025 are $1,416,270. This represents a 1.93% increase over the previous year.

IV. The total property taxes extended for 2024 were $10,973,449. The estimated total property tax to be levied for 2025 is $11,365,497. This represents an 5.10% increase over the previous year.

FINANCE DEPARTMENT

70 East Main Street
Lake Zurich, Illinois 60047

(847) 438-5141
LakeZurich.org

At the Heart of Community

MEMORANDUM

AGENDA ITEM 8a

Date: October 28, 2025

To: Ray Keller, Village Manager

From: Rita Kruse, Director of Finance

Subject: 2025 Property Tax Levy & Abatements

Issue: By statute, the Village is required to pass an ordinance each year for the annual property tax levy and any necessary abatement ordinances. The 2024 tax levy will be used to fund operations for fiscal year 2026 (January – December 2026). Details as to the 2025 levy are provided below, as well as an attached ordinance for Village Board consideration.

Analysis: As the proposed property tax levy for 2026 will NOT exceed 105% of the actual 2024 property tax extensions, the Village not is required to hold a Truth in Taxation Public Hearing on the proposed property tax levy. The total proposed change to the levy is 3.81%. In the interest of transparency and disclosure, Staff will hold a Truth in Taxation Hearing on November 3, 2025 where the public has a chance to comment on the proposed increase. The hearing notice was published Monday, October 28, 2025.

Property Tax Levy – Summary: The Village is a non-home rule municipality that is subject to the Property Tax Extension Limitation Law (PTELL) as dictated by the State. The statute limits the increase in the amount of property taxes extended (for capped funds) to the lessor of the annual change in the applicable Consumer Price Index or 5%. The components subjects to the "cap" include Ambulance Service, Corporate Levy, Fire Protection, Firefighter Pension, Illinois Municipal Retirement Fund (IMRF), Police Pension and Police Protection. The 2.9% increase allowable under PTELL is applied to the existing extension base from the 2024 levy of the same capped components, increasing the allowable levy by about $327k.

In addition, the Village is allowed to "capture" the increase in the equalized assessed valuation (EAV) of the Village that is attributable to new construction. Estimated new Equalized Assessed Value (EAV) for the village from new property is about $14 million, bringing in another roughly $145k in taxes. Exhibit A of the attached ordinance summarizes the proposed levy calculations and impact of the CPI and new construction on total property tax extensions.

Distribution: Based on the estimated levy amount, the components of the levy are forecasted to change as shown in the chart below.

SUMMARY BY CATEGORY				
	2024 Extension	2025 Levy	% Change	$ Change
Capped Funds				
Ambulance	994	1,000	0.65%	6
Corporate	-	-	N/A	-
Fire Protection	2,006,702	2,050,026	2.16%	43,324
Firefighter Pension (Capped)	2,857,992	2,991,279	4.66%	133,287
IMRF	40,713	45,000	10.53%	4,287
Police Pension	2,509,798	2,767,200	10.26%	257,402
Police Protection	2,006,702	2,050,026	2.16%	43,324
Total Capped	9,422,900	9,904,531	5.11%	481,631
Non-Capped Funds				
Firefighter Pension (Non-Capped)	150,422	157,436	4.66%	7,014
Debt Service	1,389,414	1,416,270	1.93%	26,856
Special Recreation	400,004	400,000	0.00%	(4)
Total Non-Capped	1,939,840	1,973,706	1.75%	33,866
Total	11,362,740	11,878,237	4.54%	515,497

The line items for police and fire protection levy amounts represent only a fraction of the actual expenditures for public safety for the village. A large amount of the levies for ambulance service and IMRF pension were allocated into the Police and Fire Pension line items to help meet pension funding requirements. Total estimated IMRF expense included in the 2025 budget is $461k. Outside of the public safety pension line items, the capped items are combined into a single line on the tax bills, so the taxpayers are unaffected by any shift between the other lines.

Three components of the property tax levy are not subject to the caps of PTELL: Debt Service, Special Recreation and a small portion of the Firefighters' Pension contribution. As the village abates the majority of bond payments, only about 12% of the tax bill for the village is attributable to debt service. For 2025, only one issuance remains, the 2026 short-term issuance. Special Recreation is levied at $400,000, the same as 2025, to accommodate the special needs of the community. The special recreation levy allows for services such as interpreters for park programs and improvements to facilities and parks for accessibility so that all patrons can partake in the opportunities and programs. Last is the uncapped portion of the Firefighters' Pension contribution. Per Public Act 93-0689, the increase in pension amounts attributable to spouses and children of deceased firefighters is not subject to the PTELL cap. For this levy, the amount equates to about $157k; the remainder of the firefighters' pension levy falls in to the capped portion of the levy.

Pension Funds: As required by state statute, the village has retained the services of enrolled actuaries to determine the annual contribution requirement for both pension funds. This is the seventh year using services from Foster and Foster. They have prepared reports for both pension funds. No assumption changes were made from the previous year.

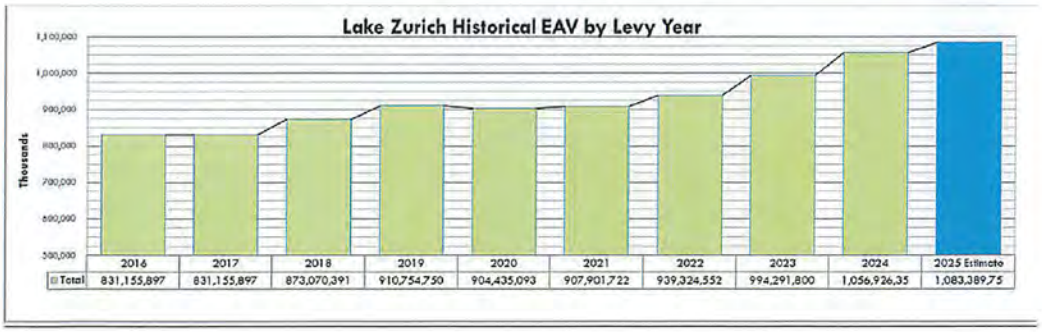
The Village's statutory required funding for the Police Pension Fund for this year is $2,767,200. For the proposed 2025 levy, the Foster and Foster recommended amount is $2,767,200, an increase of $257k from the 2024 extension. Staff feels it would be prudent and fiscally beneficial to maintain funding by accepting the recommended amount. With the funding requirement for the 2025 levy, the funding level for the Police Pension Fund decreases from 58.1% to 57.2%.

The 2024 levy request for the Police Pension Fund contains a proposed levy of $2,767,200. This amount matches the amount requested by the Police Pension Fund, which utilizes the same report from Foster and Foster for their annual reporting.

The statutorily required funding for the Firefighters' Pension Fund this year is $3,148,715. For the proposed 2025 levy, the Foster and Foster recommended amount is $3,148,715. This is an increase of $140k from the 2024 extension. With the funding requirement for the 2025 levy, the funding level for the Firefighters' Pension Fund increases from 68.5% to 69.3%.

For the Firefighters' Pension Fund, the 2025 levy request contains a proposed levy of $3,338,600. The Firefighters' Pension Fund has chosen, similar to prior years, to retain their own actuary and has submitted their request for funding based on a recommendation from Lauterbach and Amen of $3,338,600. As Foster and Foster's report represents the village's official actuary report, the village will fund $3.1 million as identified in Foster and Foster's report.

EAV Change: The taxable EAV is currently estimated to increase from $1,056,926,355 to $1,083,389,754, a total increase of 2.5%. This increase is based on a conservative review of preliminary data from Lake County and the Assessor. While the EAV for 2025 will not be finalized for a few months, the estimate provides a reasonable guide at this point. The following graphic shows the past nine (9) years of EAV by category and an additional year showing the estimate EAV for 2025.



Household Impact: It is impossible to predict the exact impact on households, as there are varying factors which can affect each homeowner. One example is EAV changes. While the total EAV of the village is estimated to increase, some homeowners may experience a decrease in value. Another factor is exemptions, such as the homeowner exemption or senior exemption, which affect the taxable EAV. A home with a market value of $450,000, and no other changes could expect about a $140 annual increase to the Village for the 2026 levy.

SSA's: Also included is a summary of the levies for the Special Service Areas (SSA's) within the village for the 20245 levy year. The active SSA's are #8, #9, and #13. The SSA's have been filed with the County for levying each year, so no separate ordinance is required.

ACTIVE SSA LEVIES

SSA	DESCRIPTION	LEVY TYPE	AMOUNT
SSA #8	Heatherleigh	Ad Valorem	$ 10,105
SSA #9	Willow Ponds	Ad Valorem	11,950
SSA #13	Coventry Creek	Non-Ad Valorem	30,000
		Total SSA Levies for 2025	$ 52,055

Abatements: Three (3) ordinances totaling $2,143,014 regarding debt service abatements are also being presented to the board for consideration. When the bond issuances were filed with the county, they included provisions for levying the funds necessary to make the debt service payments. These debt service obligations were all issued with the intent of payments being made from Tax Increment Financing (TIF) incremental revenues or water and sewer revenues. The recommended ordinances will notify the county clerk NOT to levy for these debt payments. The issuances to be abated total $2,030,814 for TIF and $112,200 for water, specifically:

TIF Debt	
Series 2015A	1,227,360.00
Series 2016A	803,454.00
TIF	2,030,814.00

Water & Sewer	
Series 2016B	112,200.00
	112,200.00

Recommendation: Staff recommends the Village Board adopt each of the attached ordinances for the 2025 Village Property Tax Levy and the three debt service abatement ordinances. The filing deadline for this levy year is Tuesday, December 30, 2025.

w/Attachments: Ordinance - Property Tax Levy with Exhibit A - Calculation

Abatement Ordinance – Series 2015A

Abatement Ordinance – Series 2016A

Abatement Ordinance – Series 2016B

EXHIBIT A

Village of Lake Zurich
Property Tax Levy Calculation

Levy Year: 2025
Fiscal Year: 2026

EAV ESTIMATE	
2024 Levy EAV	1,056,926,355
Growth 2.9%	30,650,864
Estimate Total EAV	1,087,577,219
New Construction	(4,187,465)
2025 Capped EAV Estimate	1,083,389,754
Extension Base with 2.9% CPI	9,295,583
Limiting Rate Estimate	0.858009%

PROPERTY TAX EXTENSION ESTIMATE					
	CAPPED	NON-CAPPED			Total
	General Levy	Fire Pension 93-0689	Debt	SRA	Total
2024 Extension	9,033,608	150,422	1,389,414	400,004	10,973,449
Base Extension	9,033,608				9,033,608
CPI Increase -2.9%	261,975	-	-	-	261,975
New Construction	35,929	-	-	-	35,929
Provision for Loss - 0.5%	46,478	-	-	-	46,478
Fire Pension 93-0689	-	157,436	-	-	157,436
Debt for 2025 Levy	-	-	1,416,270	-	1,416,270
SRA for 2025 Levy	-	-	-	400,000	400,000
2025 Levy	9,377,990	157,436	1,416,270	400,000	**11,351,696**
% Change					3.45%

SUMMARY BY CATEGORY				
	2024 Extension	2025 Levy	% Change	$ Change
Capped Funds				
Ambulance	994	1,000	0.65%	6
Corporate	-	-	N/A	-
Fire Protection	2,006,702	2,050,026	2.16%	43,324
Firefighter Pension (Capped)	2,857,992	2,991,279	4.66%	133,287
IMRF	40,713	45,000	10.53%	4,287
Police Pension	2,509,798	2,767,200	10.26%	257,402
Police Protection	2,006,702	2,050,026	2.16%	43,324
Total Capped	9,422,900	9,904,531	5.11%	481,631
Non-Capped Funds				
Firefighter Pension (Non-Capped)	150,422	157,436	4.66%	7,014
Debt Service	1,389,414	1,416,270	1.93%	26,856
Special Recreation	400,004	400,000	0.00%	(4)
Total Non-Capped	1,939,840	1,973,706	1.75%	33,866
Total	11,362,740	11,878,237	4.54%	515,497

VILLAGE OF LAKE ZURICH

ORDINANCE NO. 2025-11-629

ANNUAL TAX LEVY ORDINANCE

WHEREAS, the President and Board of Trustees of the Village of Lake Zurich, County of Lake and State of Illinois, will on December 1, 2025 consider approval and adoption of the Budget for said Village for the fiscal year commencing January 1, 2026 through December 31, 2026 the amount of said budget being the aggregate sum of $61,111,901; and

WHEREAS, the Corporate Authorities of the Village of Lake Zurich have ascertained that the total amount of appropriations budgeted for in 2026 and amounts deemed necessary to defray additional expenses and liabilities for all corporate purposes to be provided for by the tax levy for the fiscal year commencing January 1, 2026 and ending December 31, 2026 amounts to $9,904,531; and

WHERAS, the Corporate Authorities of the Village of Lake Zurich acknowledge that for accounting purposes the total amount received from the tax levy shall be recognized as revenue during the fiscal year that begins on January 1, 2026 and ends on December 31, 2026, and

WHEREAS, the President and Board of Trustees properly noticed and conducted, on November 3, 2025, a public hearing on the proposed tax levy, all in accordance with the requirements of the Illinois Truth-In-Taxation Act, Illinois Complied Statutes Ch. 35, {215 et seq.

NOW, THEREFORE, BE IT ORDAINED BY THE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF LAKE ZURICH, LAKE COUNTY AND STATE OF ILLINOIS, as follows:

Section 1. Recitals. The foregoing recitals are hereby incorporated into this Ordinance as findings of the President and Board of Trustees.

Section 2. Tax levy. There shall be and is hereby levied on all taxable property within the corporate limits of said Village for the fiscal year commencing January 1, 2026 and ending December 31, 2026, the sum of $9,904,531 for General Corporate purposes, and the sum of $1,973,706 for special purposes, making a combined levy of $11,878,237 as set forth in the attached Exhibit A, which Exhibit A is by this reference hereby fully incorporated into and made a part of this ordinance.

Section 3. Unexpended Balance. Any unexpended balance of any item or items levied in and by this Ordinance may be expended in making up any deficiency in any items under the same general budget and levy for the same general purpose.

Section 4. Filing with County Clerk. The Village Clerk is hereby authorized and directed to file a certified copy of this Ordinance, with the County Clerk of Lake County, Illinois, prior to December 30, 2025, and in accordance with law, so that said tax may be extended and collected according to law.

Section 5. Severability. Should any clause, sentence, paragraph, or part of this Ordinance be declared by a court of competent jurisdiction to be invalid, such decision shall not affect the validity of the Ordinance as a whole or of any part of this ordinance other than the part so declared to be invalid.

Section 6. Effective Date. This Ordinance shall be in full force and effect immediately on, and after, its passage by two-thirds of all Corporate Authorities now holding office and approval, the corporate authorities hereby finding and declaring that the matters contained herein are matters of urgency. The Village Clerk is hereby authorized and directed to immediately cause this Ordinance to be published in pamphlet form in the manner provided by law.

PASSED this _____ day of November, 2025.

AYES:
NAYS:
ABSENT:

APPROVED this _____ day of November, 2025.

ATTEST:

_____
Thomas Poynton, Village President

_____
Kathleen Johnson, Village Clerk

TRUTH IN TAXATION
CERTIFICATE OF COMPLIANCE

I the undersigned, certify that I am the presiding Chief Executive Officer/Village President of the Village of Lake Zurich, and as such presiding officer, I also certify that Ordinance No. 2025-11-629 a copy of which is attached, was adopted pursuant to, and in all respects in compliance with the tax provisions of Public Act 87-17, Sections 18-60 through 18-85 of the "Truth in Taxation" law. The Village held a public hearing on October 28, 2025 (copy of public notice attached) to give residents an opportunity to comment on the requested levy.

This certificate applies to the 2025 levy.

Date: November _____, 2025.

Village President: _____
Thomas Poynton

(SEAL)

VILLAGE OF LAKE ZURICH

ORDINANCE NO. 2025-11-630

AN ORDINANCE ABATING CERTAIN TAXES LEVIED FOR $11,775,000 GENERAL OBLIGATION REFUNDING BONDS, SERIES 2015A

WHEREAS, the President and Board of Trustees of the Village of Lake Zurich, adopted Ordinance No. 2015-04-057 on the 6th day of April, 2015, titled "An Ordinance authorizing and providing for the issue of $11,775,000 General Obligation Refunding Bonds (Sales Tax Alternate Revenue Source), Series 2015A, of the Village of Lake Zurich, Lake County, Illinois; and

WHEREAS, the Bond Ordinance provides for the levy, of $1,227,360 in real estate taxes for the year 2025 to pay principal and interest due on said bonds in the forthcoming 2026 fiscal year; and

WHEREAS, said Bond Ordinance authorizes the President and Board of Trustees to use Village of Lake Zurich Sales Tax Revenue in lieu of real estate tax for payment of the 2015A Bonds; and

WHEREAS, the President and Board of Trustees have determined that the relevant fund has sufficient funds available to pay the $1,227,360 principal and interest installments that will become due in fiscal year 2026.

NOW, THEREFORE, BE IT ORDAINED by the President and Board of Trustees of the Village of Lake Zurich, Lake County and State of Illinois, as follows:

Section 1 Recitals. The foregoing recitals are hereby incorporated into this Ordinance as findings for the President and Board of Trustees.

Section 2 Authorization of Abatement. The President and Board of Trustees hereby authorize and direct abatement of $1,227,360 levied for the year 2025 for payment of said principal and interest due in fiscal year 2026.

Section 3 Filing with County Clerk. The Village Clerk is hereby authorized and directed to file a certified copy of this Ordinance, with the County Clerk of Lake County, prior to December 30, 2025 and in accordance with law, so that said real estate tax may be abated.

Section 4 Publication. The Village Clerk is hereby authorized and directed to publish said ordinance in pamphlet form as provided by law.

Section 5. Effective Date. The ordinance shall be in full force and effect from and after passage, approval, and publication as provided by law.

PASSED this _____ day of November, 2025

AYES:

NAYS:

ABSENT:

APPROVED this _____ day of November, 2025

_____
Thomas Poynton, Village President

ATTEST:

_____
Kathleen Johnson, Village Clerk

VILLAGE OF LAKE ZURICH

ORDINANCE NO. 2025-11-631

AN ORDINANCE ABATING CERTAIN TAXES LEVIED FOR $7,100,000 GENERAL OBLIGATION REFUNDING BONDS, SERIES 2016A

WHEREAS, the President and Board of Trustees of the Village of Lake Zurich, adopted Ordinance No. 2016-05-132 on the 16th day of May, 2016, titled "An Ordinance providing for the issue of $7,100,000 Taxable General Obligation Refunding Bonds (Alternate Revenue Source), Series 2016A, of the Village of Lake Zurich, Lake County, Illinois; and

WHEREAS, the Bond Ordinance provides for the levy, of $803,454 in real estate taxes for the year 2025 to pay principal and interest due on said bonds in the forthcoming 2026 fiscal year; and

WHEREAS, said Bond Ordinance authorizes the President and Board of Trustees to use Village of Lake Zurich Sales Tax Revenue in lieu of real estate tax for payment of the 2016A Bonds; and

WHEREAS, the President and Board of Trustees have determined that the relevant fund has sufficient funds available to pay the $803,454 principal and interest installments that will become due in fiscal year 2026.

NOW, THEREFORE, BE IT ORDAINED by the President and Board of Trustees of the Village of Lake Zurich, Lake County and State of Illinois, as follows:

Section 1 Recitals. The foregoing recitals are hereby incorporated into this Ordinance as findings for the President and Board of Trustees.

Section 2 Authorization of Abatement. The President and Board of Trustees hereby authorize and direct abatement of $803,454 levied for the year 2025 for payment of said principal and interest due in fiscal year 2026.

Section 3 Filing with County Clerk. The Village Clerk is hereby authorized and directed to file a certified copy of this Ordinance, with the County

Clerk of Lake County, prior to December 30, 2025 and in accordance with law, so that said real estate tax may be abated.

Section 4 Publication. The Village Clerk is hereby authorized and directed to publish said ordinance in pamphlet form as provided by law.

Section 5. Effective Date. The ordinance shall be in full force and effect from and after passage, approval, and publication as provided by law.

PASSED this _____ day of November, 2025

AYES:

NAYS:

ABSENT:

APPROVED this _____ day of November, 2025

ATTEST:

_____
Thomas Poynton, Village President

_____
Kathleen Johnson, Village Clerk

VILLAGE OF LAKE ZURICH

ORDINANCE NO. 2025-11-632

AN ORDINANCE ABATING CERTAIN TAXES LEVIED FOR $1,000,000 GENERAL OBLIGATION BONDS (WATERWORKS AND SEWERAGE SYSTEM ALTERNATE REVENUE SOURCE), SERIES 2016B

WHEREAS, the President and Board of Trustees of the Village of Lake Zurich, adopted Ordinance No. 2016-08-144 on the 1st day of August, 2016, titled "An Ordinance providing for the issuance of $1,000,000 General Obligation Bonds (Waterworks and Sewerage System Alternate Revenue Source), Series 2016B, of the Village of Lake Zurich, Lake County, Illinois; and

WHEREAS, the Bond Ordinance provides for the levy, of $112,200 in real estate taxes for the year 2025 to pay principal and interest due on said bonds in the forthcoming 2026 fiscal year; and

WHEREAS, said Bond Ordinance authorizes the President and Board of Trustees to use Village of Lake Zurich Sales Tax Revenue in lieu of real estate tax for payment of the 2016B Bonds; and

WHEREAS, the President and Board of Trustees have determined that the relevant fund has sufficient funds available to pay the $112,200 principal and interest installments that will become due in fiscal year 2026.

NOW, THEREFORE, BE IT ORDAINED by the President and Board of Trustees of the Village of Lake Zurich, Lake County and State of Illinois, as follows:

Section 1 Recitals. The foregoing recitals are hereby incorporated into this Ordinance as findings for the President and Board of Trustees.

Section 2 Authorization of Abatement. The President and Board of Trustees hereby authorize and direct abatement of $112,200 levied for the year 2025 for payment of said principal and interest due in fiscal year 2026.

Section 3 Filing with County Clerk. The Village Clerk is hereby authorized and directed to file a certified copy of this Ordinance, with the County Clerk of Lake County, prior to December 30, 2025 and in accordance with law, so that said real estate tax may be abated.

Section 4 Publication. The Village Clerk is hereby authorized and directed to publish said ordinance in pamphlet form as provided by law.

Section 5. Effective Date. The ordinance shall be in full force and effect from and after passage, approval, and publication as provided by law.

PASSED this _____ day of November, 2025

AYES:

NAYS:

ABSENT:

APPROVED this _____ day of November, 2025

ATTEST:

_____
Thomas Poynton, Village President

_____
Kathleen Johnson, Village Clerk

VILLAGE OF LAKE ZURICH

At the Heart of Community

COMMUNITY DEVELOPMENT DEPARTMENT

505 Telser Road
Lake Zurich, Illinois 60047

Phone (847) 540-1696
Fax (847) 726-2182
LakeZurich.org

MEMORANDUM

Date: October 29, 2025

To: Ray Keller, Village Manager

From: Sarosh Saher, Community Development Director

CC: Colleen McCauley, Village Planner
David Modrzejewski, Building Services Supervisor

Re: **<u>Public Hearing</u> for an Annexation Agreement**
<u>Consideration:</u> Annexation, Rezoning, Development Concept and Final Plan Approval
2500 North Rand Road – Luxe Corsa Auto Suites

AGENDA ITEM 8b

Issue: Mr. Romeo Kapudija, representing Luxe Corsa Partners, LLC, (the "Applicant"), requests consideration of an annexation agreement, annexation, zoning and concurrent development concept and final plan (Final Plan) for the development of an approximately 20-acre property on the east side of Rand Road with new luxury automobile condominium and retail to be known as "Luxe Corsa Auto Suites," and legally described in Exhibit A attached hereto (the "Subject Property"). The owner of the property is Calabrese Family Living Trust.

The Subject Property is currently located in unincorporated Lake County. At this time, the Applicant is specifically seeking the following:

- Public Hearing to consider a proposed Annexation Agreement
- Resolution approving an Annexation Agreement containing the provisions for annexation and development of the subject property.
- Annexation Ordinance annexing the approximate 20-acre property to the Village of Lake Zurich through approval of a Plat of Annexation
- Development (PUD) Ordinance providing for the following:
  a. A Special Use Permit for a Planned Unit Development and Approval of a Development Concept and Final Plan

b. Zoning classification as depicted in the exhibit entitled "Zoning Overview" prepared by OKW Architects dated July 11, 2025 described as follows:
   i. The westerly portion of the property with frontage on Rand Road to be zoned within the B-1 Local & Community Business; and
   ii. The remaining easterly portion of the property to be zoned with the I Industrial Zoning Districts
c. Final Plat of Subdivision
d. Modifications to the existing bulk requirements of the zoning code as generally described below and further detailed within this ordinance:
   i. Bulk requirements for commercial and industrial development
   ii. Parking requirements for commercial development

2014-2019 Strategic Plan: This agenda item is consistent with the following objectives under Goal #2 – Development:

- Expand the Village's role as a major regional economic hub in Lake County
- Continue Route 12 Corridor Development
- Become more business friendly and customer oriented

Background. The property commonly referred to as the "Calabrese Property," is currently addressed as 24455 N US Highway 21 and is currently located in unincorporated Lake County. It is located on the east side of Rand Road and flanked on north and south by the EZ-Go property (south) and the Mount St. Joseph property (north), both of which are also located within unincorporated Lake County. The Subject Property achieves contiguity with Lake Zurich on the south east corner as it abuts the Meadow Wood east Subdivision.

Historically, the site has functioned as a storage yard and office space for a construction business. Structures on the site include a single-family residence and accessory garage repurposed for office and storage use and a large industrial storage building used for equipment and material storage. The site contains a substantial amount of outdoor storage, including semi-truck trailers, multiple vehicles, and construction-related materials. A single vehicular access off Rand Road serves as the only means of access to the Subject Property. All existing structures and material are proposed to be demolished and removed from the site.

Proposal. The 20-acre property is proposed to be developed with a high-end automobile dealership on the west end, an automotive clubhouse and 11 automobile condominium buildings within the central portion of the site, and a large stormwater detention facility on its eastern end.

Retail Automobile Dealership Building along Rand Road.
The front or westerly portion of the site will be developed with a high-end automobile dealership with an attached coffee shop and an automobile detailing center. The lot will be zoned within the B-1 Local and Community Business district.

The proposed 2-story dealership building will contain approximately 14,000 square feet of floor area, with an additional 5,000-square-foot mezzanine. The building will front Rand Road, with 32

associated parking spaces located to the rear of the structure. A north-facing patio will serve the coffee shop component of the development. The building's architecture is designed with high ceilings, glass windows, and a contemporary exterior with metal accents. The transparent glass corner of the building will showcase vehicles for sale.

Automobile Condominiums and Clubhouse on the Remaining Portion of the Site
The remaining portion of the site will be developed with an automotive clubhouse and 11 automobile condominium buildings and a stormwater detention facility.

Clubhouse Building.
The two-story clubhouse with 20,265 square feet of building area, will house a variety of amenities along with the leasing office. The ground floor will feature a lounge and bar area, designed to accommodate catered food for events, along with a salon, leasing office, and outdoor patio. The second floor will include multiple golf and racing simulators, a fitness room, and an outdoor putting green with a terrace. The clubhouse is centrally located and will offer automobile condominium owners a recreational space to gather and enjoy a variety of amenities.

Automobile Condominium Buildings
The 11 automobile condominium buildings will be arranged throughout the site, with Buildings 1 through 6 located west of the clubhouse and the remaining buildings positioned to the east and south. East of Buildings 7 through 10, a stormwater retention pond will provide a natural buffer to the existing wetland beyond. The retention pond will be planted with a native seed mix, left in a natural state of vegetation, and remain undisturbed to protect the surrounding wetland.

Each automobile condominium building will be two stories in height, approximately 28 feet tall, and will feature individual balconies for each unit. Two floor plan options will be available:
- Type A units at approximately 1,500 square feet for 26 units; and
- Type B units at approximately 1,150 square feet for 95 units.

The development will offer a total of condominium 121 units.

The architecture incorporates fiber cement panels, accented by hangers above the garage doors. The buildings are differentiated by varying tones on the facades and a series of illuminated way-finding graphics on the end caps of each building.

Each automobile condominium will include a bathroom and utility room on the first floor, with stairs leading to a mezzanine level. The units will be delivered as "vanilla boxes," allowing owners to customize the interior layout and finishes to their specific preferences. Individual building permits will be required for each unit's buildout.

A detailed evaluation and summary of the project can be found in the Staff Report from June 17 that was provided to the Planning and Zoning Commission, which is attached to this memorandum.

Analysis. The annexation and development agreement includes provisions for the following development requirements:

a. Rezoning the Subject Property within the B-1 Local & Community Business and I Industrial Zoning Districts

b. Public and private improvements by the developer, including easements, with public improvements to be accompanied with security for acceptance of the public improvements in the form of a Letter of Credit (LOC).
c. A "back-up" Special Service Area (back-up SSA) for the maintenance of stormwater and natural resource protection areas within the subdivision. The back-up SSA will only be used if the property owners association defaults on its maintenance responsibilities.
d. All related development -related permit and connection fees and other fees owed to the village and jurisdictional agencies.

The Planning and Zoning Commission (PZC) considered the application at a public hearing on August 20, 2025 and recommended approval of the proposed annexation, zoning classification within the B-1 and I districts, and the Development Concept Plan. The PZC voted 6-0 in favor of recommending approval of the development concept plan for the development.

The video stream from the PZC meeting can be accessed via the following link:
https://play.champds.com/lakezurichil/event/164

Recommendation. At their meeting on August 20, 2025, the PZC recommended approval of the development concept plan incorporating the conditions for approval provided by staff in its report and consolidated its findings.

Staff therefore recommends approval of the following documents and their specific attachments:

1. A Resolution Approving and Authorizing the Execution and Attestation of an Annexation Agreement With Luxe Corsa Partners, LLC, an Illinois limited liability company.
2. An Ordinance Annexing Certain Property to the Village of Lake Zurich (2500 North Rand Road).
3. An Ordinance (the "PUD" ordinance) Rezoning Newly Annexed Property within a B-1 Local and Community Business District, and I Industrial District, and Granting Approval of a Planned Unit Development, Development Concept and Final Plan and Modifications to the Zoning and Land Development Code for a Commercial and Industrial Subdivision – Luxe Corsa Auto Suites at 2500 N Rand Road (Calabrese Property).

The recommendation for approval is inclusive of the following conditions for approval that are contained within the accompanying PUD ordinance (item #3 above):

1. Substantial conformance with the following documentation submitted as part of the application subject to revisions required by Village Staff and applicable governmental agencies:
   a. Zoning Application dated July 16, 2025, and prepared by Mr. Romeo Kapudija, representing Luxe Corsa Partners, LLC
   b. Exhibit A: Legal Description
   c. Petition for Annexation dated July 16, 2025

d. Plat of Annexation dated June 10, 2025, and prepared by R.E. Allen and Associates, LTD
e. Plat of Survey dated June 10, 2025, and prepared by R.E. Allen and Associates, LTD
f. Architectural Design Plans dated July 11, 2025, and prepared by OKW Architects
g. Architectural Narrative dated July 15, 2025, and prepared by OKW Architects
h. Preliminary EOPC dated April 07, 2025, and prepared by Pearson, Brown & Associates, Inc.
i. Ecological Compliance Assessment Tool dated February 12, 2025, and prepared by Illinois Department of Natural Resources
j. Letter of exemption from archaeological survey dated June 18, 2025, and prepared by the Illinois Department of Natural Resources State Historic Preservation Office
k. Preliminary Landscape Plan and Landscape Narrative dated July 15, 2025, prepared by Kathryn Talty Landscape Architecture
l. Natural Recourses Information Report dated June 18, 2025, and prepared by McHenry-Lake County Soil & Water Conservation District
m. Preliminary Engineering (sheets 1-25) dated July 16, 2025, and prepared by Pearson, Brown & Associates, Inc.
n. Preliminary Stormwater Management Report dated July 16, 2025, and prepared by Pearson, Brown & Associates, Inc.
o. Purchase Agreement prepared by Law Offices of Donald C. Battaglia, LTD.
p. Site Lighting Diagram dated March 05, 2025, and prepared by OKW Architects
q. Traffic Impact Study dated July 16, 2025 and prepared by Kenig, Lindren, O'Hara, Aboona, Inc. (KLOA)
r. Wetland Delineation Report dated November 26, 2024 and prepared by ILM Environments

2. The Developer shall enter into a binding Annexation Agreement with the Village agreeing to install all the required improvements and providing surety for such improvements by means of a Letter of Credit and in a format as approved by the Village. In addition to the requirements outlined in Chapter 5 of the Land Development Code entitled "Procedure for Subdivision Approval," which are applicable to a PUD, specifically Section 10-5-7 entitled "Agreements and Guarantee of Improvements," such agreement shall additionally contain the following additional provisions:
   a. Establishment of a "backup" open space, stormwater management, snow removal, and private roadway repair and replacement Special Service Area (SSA) to ensure that these areas and features are cared for and maintained in the event of a future Property Owner Association dissolution or its lack of required maintenance of these areas.
   b. Such backup SSA shall be accompanied by a short and long-term maintenance plan prepared by the Developer and approved by the Village Engineer.

3. The Developer shall establish a Property Owners Association prior to the issuance of any certificate of occupancy or sale of a unit or interest in the Subject Property, which will be responsible for upkeep of the private common areas including the private streets and driveways, the on-site detention facilities and landscape material within common open space, consistent with the requirements herein. The provisions for such Association shall

be established prior to approval of the Final Plan as defined in Section 9-22-4.C of the Lake Zurich Zoning Code (the "Final Plan"), and shall be subject to the review and approval of the Village.

4. All streets within the subdivision shall be maintained as private streets. Such streets shall be constructed according to Village construction standards applicable to public streets, and shall be owned and maintained by the HOA.

5. All sidewalks within and along the frontage of the Development on the Subject Property shall be constructed by the Developer as part of the development. Additionally, a 5-foot wide sidewalk shall be constructed along the frontage of the property along Rand Road.

6. Off street parking spaces shall be designed with a minimum nine feet (9') wide by twenty feet (20') long and not less than one hundred eighty (180) square feet; provided, however, that the minimum length of a perimeter space or space perpendicular to a landscape area shall be no less than eighteen feet (18').

7. All signage shall conform to the requirements of the sign regulations at Title 12 of the Municipal Code. Free standing ground mounted signs shall be designed as monument style signs with the appropriate amount of landscape material maintained in good condition.

8. The Developer shall design and construct a means of access to the stormwater management facilities for the purpose of conducting maintenance of such facilities located within the areas north of the built-out portion of the Development. Such access way shall be designed to accommodate for materials, vehicles, equipment authorized by the HOA and when necessary, authorized by the Village, to allow for the maintenance of these facilities.

9. Developer shall pay all building permit fees, village connection fees and recapture fees as outlined and required under Title 13 of the Lake Zurich Municipal Code.

   All fees required by other agencies are to be obtained from such agencies. The Village serves as a pass-through agency for the purpose of collecting Lake County sanitary connection fees and the Watershed Development Permit Fee.

10. Construction shall commence in accordance with the approved Final Plan within two (2) years after the approval of such Plan, or such other time as may be approved by the Village Board of Trustees. Failure to commence construction within such period shall, unless an extension of time shall have been granted by the village manager pursuant to subsection 9-12-1J of the Lake Zurich Municipal Code, automatically render void the Final Plan approval and all approvals of the PUD and all permits based on such approvals; and the manager shall have the right, without further direction, to initiate an appropriate application to revoke the special use permit for all portions of the PUD that have not yet been completed.

    Upon commencement of work, construction shall be completed within 2 years of approval of the Final Plan, unless a construction schedule is submitted by the Developer and

approved by the village outlining an alternate improvement period as outlined in the Village Code. Failure to act accordingly shall be cause for the Village Board of Trustees to draw on the Letter of Credit or other guarantees to complete said improvements as described in the Final Plan.

11. The development as a PUD shall be in compliance with all other applicable codes and ordinances of the Village of Lake Zurich, including general and continuing compliance with Title 10 of the Village Code, the Land Development Code, and all of the engineering and land improvement requirements, standards and specifications including those set forth in Chapter 6 of said Land Development Code, unless otherwise approved or provided for in the final engineering plans for the Subject Property.

Exhibits:

- Resolution Approving Annexation Agreement and its attached exhibits
- Ordinance Annexing the Property to the Village of Lake Zurich
- Notice of Annexation Agreement Hearing (Certification of publication and mailing)
- The "PUD" Ordinance for the development
- August 20, 2025 staff report and planning and zoning commission final findings and recommendations

VILLAGE OF LAKE ZURICH

RESOLUTION NO. 2025-11-105

A RESOLUTION APPROVING AND AUTHORIZING THE EXECUTION AND ATTESTATION OF AN ANNEXATION AGREEMENT WITH LUXE CORSA PARTNERS, LLC, AN ILLINOIS LIMITED LIABILITY COMPANY

WHEREAS, Luxe Corsa Partners, LLC, an Illinois limited liability company (hereinafter referred to as "Developer") is the contract purchaser and prospective developer of certain real property consisting of approximately 20 acres, located in unincorporated Lake County, Illinois, and legally described in Exhibit A attached hereto and hereby made a part hereof, (hereinafter referred to as the "Subject Property"); and

WHEREAS, Developer intends to develop the Subject Property with a commercial/industrial subdivision and stormwater management facilities; and

WHEREAS, Calabrese Family Living Trust (hereinafter referred to as "Owner") is the legal title holder and record owner of the Property; and

WHEREAS, Developer, Owner and Village of Lake Zurich (hereinafter referred to as "Village") desire to have the Subject Property annexed to the Village pursuant to and in accordance with the provisions of Section 7-1-8 of the Illinois Municipal Code, 65 I LCS 5/7-1-8 and applicable law; and

WHEREAS, in furtherance thereof, the Developer, Owner and Village desire to enter into an annexation agreement to govern the terms and conditions for annexation of the Property to the Village, (hereinafter referred to as "Annexation Agreement"); and

WHEREAS, a public hearing on the Annexation Agreement was held on November 3, 2025, pursuant to public notice and the provisions of 65 I LCS 5/11-15.1-5 et seq.

NOW, THEREFORE, BE IT RESOLVED BY THE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF LAKE ZURICH, LAKE COUNTY, ILLINOIS, as follows:

SECTION ONE. Recitals. The foregoing recitals are hereby incorporated into, and made a part of, this Resolution as findings of the President and Board of Trustees of the Village of Lake Zurich.

SECTION TWO. Approval and Execution. The Annexation Agreement by and between the Village, Developer and Owner, in substantially the form attached to this Resolution as Exhibit B, is hereby conditionally approved, subject to final review by and approval of the final form by the Village Attorney. The Village Board President and the Village Clerk are hereby authorized and directed to execute and attest the Annexation Agreement on behalf of the Village upon receipt of: (i) an annexation petition requesting annexation of the Property to the Village pursuant to 65 ILCS 5/7-1-8 ("Annexation Petition"), duly executed by the Owner; and (ii) an original copy of the Annexation Agreement duly executed by the Owner and Developer.

SECTION THREE. Recordation. The Village Clerk shall be, and is hereby, authorized and directed to record the fully executed Annexation Agreement on behalf of the Village upon closing on the Property by Developer and receipt of a signed Annexation Petition and signed Annexation Agreement from Owner and Developer and after the Annexation Agreement's execution by the Village President and attestation by the Village Clerk.

SECTION FOUR. Effective Date. This Resolution shall be in effect upon passage by the President and Board of Trustees of the Village of Lake Zurich by a vote of two-thirds of the corporate authorities then holding office, in the manner required by law.

PASSED THIS _____ day of November, 2025.

Ayes:

Nays:

Absent:

Abstain:

EFFECTIVE on this _____ day of November, 2025.

ATTEST:

_____
Thomas Poynton, Village President

_____

Kathleen Johnson, Village Clerk

EXHIBIT A
Legal Description

THAT PART OF THE NORTH HALF OF THE SOUTH EAST QUARTER OF SECTION 7, TOWNSHIP 43 NORTH, RANGE 10, EAST OF THE 3RD P.M., DESCRIBED AS FOLLOWS: BEGINNING AT A POINT ON THE WEST LINE OF SAID NORTH HALF OF THE SOUTH EAST QUARTER, 990 FEET NORTH OF THE SOUTH WEST CORNER OF SAID NORTH HALF OF THE SOUTH EAST QUARTER; THENCE EAST PARALLEL WITH THE SOUTH LINE OF SAID NORTH HALF OF THE SOUTH EAST QUARTER, 1056 FEET; THENCE SOUTH PARALLEL WITH THE WEST LINE OF SAID NORTH HALF OF THE SOUTH EAST QUARTER, 330 FEET; THENCE EAST PARALLEL WITH THE SOUTH LINE OF SAID NORTH HALF OF THE SOUTH EAST QUARTER, 833.8 FEET TO A POINT WHICH IS 761.6 FEET WEST OF THE EAST LINE OF SAID NORTH HALF OF THE SOUTH EAST QUARTER; THENCE NORTH PARALLEL WITH THE EAST LINE OF SAID NORTH HALF OF THE SOUTH EAST QUARTER, 667.6 FEET TO THE NORTH LINE OF SAID NORTH HALF OF THE SOUTH EAST QUARTER; THENCE WEST ON THE NORTH LINE OF THE NORTH HALF OF THE SOUTH EAST QUARTER TO THE NORTH WEST CORNER OF SAID NORTH HALF OF THE SOUTH EAST QUARTER; THENCE SOUTH ON THE WEST LINE OF SAID NORTH HALF OF THE SOUTH EAST QUARTER, 338.7 FEET TO THE PLACE OF BEGINNING, IN LAKE COUNTY, ILLINOIS.

Exhibit B
Annexation Agreement

ANNEXATION AND DEVELOPMENT AGREEMENT
2500 North Rand Road – Luxe Corsa Auto Suites
Luxe Corsa Partners LLC, Calabrese Family Living Trust

THIS AGREEMENT is made and entered into this _____ day of _____, 2025, by and between the Village of Lake Zurich, a municipal corporation (hereinafter referred to as "Village"); Luxe Corsa Partners LLC (collectively referred to as “Applicant” or “Developer”) and Calabrese Family Living Trust, ("Owner”).

W I T N E S S E T H:

WHEREAS, the Property which is the subject of this annexation agreement is legally described on Exhibit "A" attached hereto and hereby made a part hereof, hereinafter referred to as the “Subject Property”; and

WHEREAS, the Owner of the Subject Property is the legal title holder of the Subject Property as described on Exhibit "A;" and

WHEREAS, the annexation of the Subject Property as provided herein will promote the sound planning and development of the Village as a balanced community and will be beneficial to the Village; and

WHEREAS, Applicant and Owner desire to have the Subject Property annexed to the Village, and the Applicant, Owner and Village desire to obtain assurances from each other as to certain matters covered by this Agreement for a period of twenty (20) years from and after the execution of this Agreement; and

WHEREAS, the Subject Property is currently contiguous to the existing boundaries of the Village; and

WHEREAS, there are currently no electors residing upon the Subject Property; and

WHEREAS, pursuant to Section XI, (I), (2) of the Zoning Ordinance, an application has heretofore been filed with the Village Clerk for rezoning of the Subject Property; and

WHEREAS, said application was forwarded to the Planning and Zoning Commission (PZC); and

WHEREAS, a public hearing was held by the PZC on said rezoning as required by the Zoning Ordinance of the Village and the PZC has submitted to the Corporate Authorities of the Village (hereinafter referred to as the “Corporate Authorities”) their findings of fact and recommendation with respect to said rezoning; and

WHEREAS, after due notice as required by law, a public hearing on this Annexation Agreement ("Agreement") has been held by the Corporate Authorities of the Village; and

WHEREAS, the parties wish to enter into a binding agreement with respect to the said annexation of the Subject Property and for other related matters pursuant to the provisions of Division 15.1 of Article 11 of Chapter 65 of the Illinois Compiled Statutes, upon the terms and conditions contained in this Agreement; and

WHEREAS, all public hearings and other actions required to be held or taken prior to the adoption and execution of this Agreement, in order to make the same effective, have been held or taken, such public hearings and other actions having been held pursuant to public notice as required by law and in accordance with all requirements of law prior to the adoption and execution of this Agreement; and

WHEREAS, the Owner of record of the Subject Property has signed a petition for annexation of the Subject Property to the Village, which petition is hereinafter referred to as the "Annexation Petition"; and

WHEREAS, the Corporate Authorities of the Village, Applicant and Owner deem it to be to the mutual advantage of the parties and in the public interest that the Subject Property be annexed to the Village and developed as hereinafter provided.

NOW THEREFORE, in consideration of the premises and the mutual promises herein set forth, the parties hereto agree as follows:

1. Annexation: Subject to the provisions of Article 7 of Chapter 65 of the Illinois Compiled Statutes, the parties deem it to be to the mutual advantage of the parties and in the public interest to have the Subject Property annexed to the Village. The parties agree to do all things necessary or appropriate to cause the Subject Property (legally described in Exhibit A) to be duly and validly annexed to the Village immediately after approval of this Agreement and as described below. The parties shall cause such annexation to be effected pursuant to the provisions of Section 7-1-8 of Chapter 65 of the Illinois Compiled Statutes. The plat of annexation of the Subject Property is attached hereto as Exhibit B and made a part hereof.

2. Zoning: Upon annexation of the Subject Property to the Village as set forth herein, the Corporate Authorities shall immediately rezone and classify the Subject Property to the B-1 Local Community Business District and the I Industrial District under the Lake Zurich Zoning Code unless otherwise recommended after a public hearing by the Village of Lake Zurich Planning and Zoning Commission (PZC).

3. Execution and Recording of this Agreement and Final Plat of Subdivision. Immediately after execution of this Agreement by the Developer, the Village shall affix all required Village signatures and certifications to the Approved Final Plat of Subdivision; provided, however, that no such signatures and certifications shall be affixed by the Village until the Developer shall have (1) obtained all other required approvals, sworn statements, signatures, and certifications on such Final Plat, (2) presented the Village with adequate evidence of merchantable fee simple title to the Mixed-residential Subdivision being vested in the Developer, (3) posted the performance security required pursuant to Section 16 of this Agreement, and (4) deposited with

the Village Clerk a sufficient sum, in current funds, to reimburse the Village for the actual cost of recording the Approved Final Plat of Subdivision and this Agreement. After final approval, execution, and certification of the Approved Final Plat of Subdivision by the Village, the Village shall promptly cause the Approved Final Plat of Subdivision and this Agreement to be properly recorded with the Lake County Recorder of Deeds.

4. Back-up Open Space, Stormwater Management, Special Service Area. Promptly after the approval of the Final Plat of Subdivision by the Village, the Village shall give all notices required by, and shall hold public hearings as required and pursuant to the Illinois Special Service Area Tax Law, 35 ILCS 200/27-5 et seq., for the purpose of considering and establishing a back-up special service area exclusively for the subject Subdivision (the "back-up Special Service Area"), for the purpose of generating revenues sufficient to allow the Village to assume the obligations of maintaining repairing and/or replacing within the Subdivision the following: Any common areas/outlots, open space, natural area(s) and waterways, including landscape materials, and stormwater management and stormwater retention/detention areas and facilities, should the Developer and its successors default on its obligations to ensure that these areas and features are timely and properly cared for, maintained and replaced. The Developer agrees to cooperate with the creation of the back-up Special Service Area and shall not, and hereby agrees not to, object to the creation of the back-up Special Service Area. Developer shall include provisions in the Declaration of Covenants, Conditions and Restrictions (the "Declaration") for the Homeowners Association (defined below) permitting the creation of the Back-Up SSA.

Developer agrees to provide such agreement to cooperate with the creation of the back-up Special Service Area by appropriate written documentation, if so requested by the Village. The Developer shall pay to the Village, immediately upon presentation of a written invoice therefor, all reasonable legal, engineering, and other consulting or administrative fees, costs, and expenses incurred or accrued for that time spent on work in connection with the review and processing of plans for, and the creation of, the back-up Special Service Area, including without limitation all reasonable costs incurred by the Village for publications and recordings required in connection with the foregoing. The Developer and its successors acknowledge their responsibility to timely pay for the maintenance, repair and/or replacement costs set forth herein, of all property owned by the Developer and its successors, and for all tax levies pursuant to this Special Service Area in the event of the ultimate institution of such Special Service Area.

Developer also agrees to easement rights, including easement language within the Final Plat of Subdivision for the Subject Property for the Village to access the Subject Property for the performance of the ongoing maintenance, repair and/or replacement responsibilities within the Subdivision, including the above maintenance using the revenues from the backup Special Service Area, including for the common maintenance of the stormwater and any natural resource protection areas within the Subdivision that requires the future owners to maintain the stormwater and any natural resource protection areas, including landscape materials and all other common areas. Such language shall also create the right, without obligation, for the Village to enter the common areas/outlots, open space, natural area(s), and stormwater management and stormwater retention/detention areas and facilities for necessary or emergency maintenance and/or maintain, repair and/or replace and preserve the areas and impose the costs of such work on the homeowners,

with lien rights in the event of nonpayment, or by recourse to the imposition of the revenues derived from the backup SSA.

5. Property Owners Association (POA). The Developer shall establish one or more Property Owners Association(s) (POA), prior to the issuance of any certificate of occupancy or sale of a unit or interest in the Subject Property, to assume the ongoing maintenance, repair and/or replacement responsibilities within the Subdivision, as provided herein. The provisions for such declaration shall be subject to the review and approval of the Village. Developer shall be responsible for the preparation (and submittal to the Village for review and approval) and ultimate recording of an appropriate declaration of covenants, restrictions and easements creating a POA for the Subdivision. The declaration shall grant the Village the right, without any duties, to assume the ongoing maintenance, repair and/or replacement responsibilities within the Subdivision, should the POA fail to do so, utilizing the funding available from the SSA to be established hereunder for such duties.

6. Street Improvements: Village, Developer and Owner acknowledge and agree that street improvements are required for the Development. All streets within the boundaries of the Development shall be designated as "private streets" and shall be owned and maintained by the Developer or its successors in the form of a Property Owners Association (POA). Such streets shall be constructed by the Developer at its cost and in compliance with the Village Standards for Street Construction and best engineering practices and as approved in the Final Plan.

7. Sidewalk Improvements: The Village and Owners acknowledge and agree that sidewalks and parkway trees are required within and along the required right of way A 5-foot wide sidewalk shall be constructed along the frontage of the Subject Property along Rand Road (Rt 12). Such sidewalk shall comply with the sidewalk construction standards of the Village, best engineering practices and Village permits for which shall be obtained from the Illinois Department of Transportation (IDOT) for the construction of such sidewalk. Owners agree to comply with the determination of the Village following its receipt of the recommendation of the Village to install the required sidewalks upon receipt of all necessary permits and approvals by the pertinent authority.

8. Street Lights. Street lights as required by the Final Plan shall be installed by and at the expense of Developer along the private streets in conformance with standards and requirements of Commonwealth Edison (ComEd) and best engineering practices. Street lights shall be energized prior to the first occupancy permit issued. ComEd has the exclusive right to effect the installation of required streetlights, and ComEd controls the time of commencement of street light installation and completion thereof. Accordingly, if the Developer has paid ComEd in a timely manner and in full for installation of all required street lights, and ComEd delays installation thereof for any reason not attributable to or caused by any act or omission of the Developer, and if, further, such delay by ComEd causes a failure to meet the specified completion date for street light installation, then the Developer shall not be responsible for such failure and the Village shall not penalize the Developer therefor by withholding certificates of occupancy or any other certificates or permits. The Developer and its successors, including subsequent property owners and/or the POA shall be solely responsible for all streetlight installation and any other maintenance, repair or replacement

responsibilities and energy charges from ComEd or any other source of operation of all street lights not assumed by ComEd within the Subdivision at all times.

9. Water and Sanitary Sewer Service: The Development on the Subject Property shall be connected to public water and sanitary sewer mains/systems. Developer shall be required to construct and install any required extension to the existing water main from the current location of such main(s), bringing the line to the Subject Property from the appropriate location(s) designated by Village. Such water and sewer connections shall be made for any buildings to be built on the Subject Property prior to and as a condition of the issuance of an occupancy permit. All connections to said water and sanitary sewer systems shall be made by Developer in accordance with the Final Plan approved by Village, Village Standards and best engineering practices, and Developer shall pay all applicable water connection fees to the Village as required by Village Codes. Developer shall additionally pay all applicable Lake County sewer connection fees at rates that are established at the time of requesting such permits.

Village represents and warrants that it owns, operates and maintains (i) a potable water supply and distribution system, and (ii) a sanitary sewer system, each of which systems and mains have, and at all times will have, sufficient capacity to accommodate the anticipated potable water, fire protection and sanitary sewer needs of the Subject Property and the residents of the Subject Property to the extent that the Subject Property is developed in accordance with the Final Plan. Such Final Plan will be reviewed by the Corporate Authorities of Village, and approved for the development of the Subject Property in accordance with all applicable codes and ordinances. Village agrees that said Final Plan shall include the Final Plat of Subdivision for the Property as required by the terms of Village's Land Development Code. Said Final Plan approval shall be effective for the term as outlined within the provisions contained within the Land Development Code. Developer agrees that no work related to water and sanitary improvements shall commence prior to obtaining approval of the pertinent local, county or state agencies and posting of any required improvement guaranties. No such approval by the pertinent local, county or state agencies and/or posting of the required improvement guaranties by Developer shall delay the permitting or construction described in Section 23 below.

10. Stormwater Improvements: The development on the Subject Property shall be constructed in compliance with all applicable Village and County stormwater restrictions and requirements. Owner shall be required to construct and install any required stormwater improvements in accordance the requirements of the Village Engineer and best engineering practices and with final engineering plans to be approved by the Village.

11. Fees and Contributions: Developer shall pay all Fees and Contributions, Water and Sanitary Connection Fees, and Building Permit Fees and deposits as a condition of the approval of the PUD and Final Plat. The water and sanitary connection fees are paid pro-rata and due at the time a building permit is issued for the applicable building and shall include the fees for all units contained within each building. The fee amount per unit shall be paid as outlined in Exhibit C.

The Village represents that the Subject Property is not subject to any School, Library and Park land contributions

The Subject Property is currently subject to recapture fees under Ordinance No. 2009-08-648 entitled – "An Ordinance Establishing A Recapture Fee For The Meadow Wood Subdivision For Certain Water Main And Sanitary Sewer Improvements," approved on August 3, 2009 (effective date) and such Ordinance being in full force and effect for a period of twenty (20) years from the effective date. Owner/Developer shall, at the time of requesting the first building permit, pay to Village the full amount calculated as follows, as outlined in Section 2 of said Ordinance No. 2009-08-648, :

PIN #14-07-400-001 / 21.00 Acres
Sanitary Sewer: $697.37058 x 21.00 Acres = $14,644.78
Water Main: $157.65666 x 21.00 Acres = $3,310.79
Total = $17,955.57
Per Section, simple interest at the rate of five percent for a period of 5 years = $4,488.89
Total Amount Due to Village = $22,444.46

Village agrees that no fee increases or new types or classifications of land development, subdivision, impact or building permit fees, donations, requirements, costs or impositions not in existence as of the date of this Agreement will be imposed upon the Subject Property or Developer in connection with its development of the Subject Property for a period of four (4) years after recording of the Final Plat for the Subject Property. Upon expiration of said four (4) year period, Village may thereafter adopt other and further development fees or requirements or modify any then-existing fees or requirements as long as such fees or requirements are imposed by a Village ordinance of general applicability. The provisions in this paragraph excludes any sewer connection and other development related fees owed to Lake County, or other fees imposed by governmental agencies not under the control of the Village.

12. Impact Requirements: Owner agrees that any and all recaptures, contributions, dedications, donations and easements provided for in this Agreement substantially advance legitimate governmental interests of the Village including, but not limited to, providing its residents, and in particular the residents of the Subject Property, with access to and use of public utilities, streets, fire protection and emergency services. Owner further agrees that the recaptures, contributions, dedications, donations and easements required by this Agreement are uniquely attributable to, reasonably related to and made necessary by the annexation of the Subject Property. Owner agrees to waive any possible objections to any of these recaptures, contributions, dedications, donations or easements.

Any subsequent purchasers of all or a portion of the Subject Property (or any of the Parcels individually) by purchasing all or any part of the Subject Property shall by such purchase automatically acknowledge agreement with all of the provisions of this Paragraph, and shall be deemed to have done so without any other confirming documentation.

13. Tree Preservation: Owners agree to submit a tree preservation plan to the Village together with the final engineering plans for the subdivision of the Subject Property. Owner agrees to fully comply with all tree preservation requirements set forth in the Lake Zurich Subdivision Ordinance and in accordance with the tree preservation plan, as the same may be revised and approved by the Village.

14. Easements: Owner shall provide all easements, both on-site and off-site (where applicable), which may be required by the Village Engineer to enable the Subject Property to receive water and sanitary sewer service, public inspection or public work services or emergency services and other public utilities, private utilities including cable television. Such required easements and easement provisions shall be depicted on the Final Plat. The location for all public improvements, including public utilities, streets, fire protection and emergency services shall be as shown on final engineering plans approved by Village, with all utilities to be placed underground.

15. Final Plan: The Final Plan shall include but not be limited to all final plats of subdivision, final planned unit development plans, final landscape plans, final engineering plans, and final building elevations which are in substantial conformance with the Preliminary Plan and subject to compliance with the Zoning and Land Development Codes and all other documents and reports related to the development. The Final Plan documents are attached hereto within Exhibit B.

Developer may submit one or more final plats of subdivision for the Subject Property and Village shall approve such final plats of subdivision so submitted provided they are in substantial conformance with the terms and conditions of this Agreement, the Preliminary Plan, and otherwise meet all requirements of the Village Zoning and Land Development Codes, as modified by this Agreement. All final plats of subdivision shall comply with Village Land Development Code in all respects unless specifically stated otherwise in this Agreement, and as indicated on the Preliminary Plan. The final plat(s) of subdivision approved by Village for the Subject Property is/are herein referred to individually and collectively, as the case may be, as the "Final Plat".

Construction shall commence in accordance with the approved Final Plan within two (2) years after the approval of such plan, or such other time as may be approved by the Village board of trustees. Failure to commence construction within such period shall, unless an extension of time shall have been granted by the village manager pursuant to subsection 9-12-1J of the Lake Zurich Municipal Code, automatically render void the Final Plan approval and all approvals of the planned unit development and all permits based on such approvals; and the manager shall, without further direction, initiate an appropriate application to revoke the special use permit for all portions of the planned unit development that have not yet been completed.

Upon commencement of work, construction shall be completed within 2 years of approval of the Final Plan, unless for good cause shown, additional time is requested by the Developer, including the submission of a proposed construction schedule and such extension is approved by the Village Staff outlining an alternate construction period as outlined in the Municipal Code. Based on a failure to request and be granted approval by the Village for an extension of time, the Village Board of Trustees shall have the right to draw on the Letter of Credit or other guarantees to complete said Improvements as described in the Final Plan.

16. Plan Changes: Subject to staff review and approval, and without the requirement to amend this Agreement, Developer may construct additional floor plans, models, elevations, and building types so long as they are consistent with Village Municipal Code Requirements. Any

change or modification to the engineering plans and specifications or any change or modification to the building plans or changes in the Preliminary Plan which are determined by the Village Manager (as defined in the Lake Zurich Municipal Code) as: (i) in substantial compliance with the Preliminary Plan or other plans or plats as approved by the Village Board; (ii) in compliance with the Lake Zurich Municipal Code, as amended, except as specifically varied herein; and (iii) in compliance with good engineering practice, are herein referred to as an "Incidental Change." Any change in the product mix set forth in the Preliminary Plan that does not affect the configuration or increase the overall density shall be an Incidental Change hereunder. Incidental Changes may be approved or rejected by the Village Manager without Planning and Zoning Commission or Village Board review or public hearing.

17. Code Compliance: Except state or county mandates which are outside of the control of Village, for a period of two years from the Effective Date of this Agreement, any changes to Village's Building, Plumbing, Electrical, Fire Prevention codes ("Village Codes") shall not be applicable to the development of the Subject Property. In the event that any modifications or amendments to the above referenced codes affecting the Subject Property benefit Developer during the term of this agreement, said modification shall be effective as to the Subject Property.

18 Marketing Signage and Marketing Trailer, Construction and Storage Trailers: Developer may place and utilize one (1) one marketing trailer and one (1) construction supply storage trailer upon such parts of the Subject Property as required for development and/or construction purposes. Developer shall have the right to install and maintain marketing signage per the attached Exhibit D.

19. Subdivision Improvement Guarantee: Developer shall post one or more performance guarantees for the required subdivision improvements and off-site improvements in the form of an irrevocable Letter of Credit (the "Letter of Credit") as determined by the Village generally in the format attached to this Agreement as Exhibit E and to be approved by Village. Public and private improvements shall hereinafter be referred to as "Improvements." The amount of the Letter of Credit shall be based on the Village Engineer opinion of the probable cost of the Improvements (the "EOPC") to ensure that the work is being guaranteed to cover the cost of construction of the Development.

Periodic reductions in the guarantee, as the case may be, will be approved by Village based upon the Village Engineer's certification of completion of work on the affected Improvements based upon documentation supplied from time to time by Developer and the inspection of such Improvements by the Village Engineer. The Village Engineer shall notify Developer without unreasonable delay of (1) its certification of the completion of the work on account of which Developer requests a reduction in the Letter of Credit, and any corresponding reduction in the Letter of Credit, or (2) any deficiencies in the work on the affected Improvements or incomplete work on such Improvements, each to be identified with specificity, and detail of all corrections to defective work and/or work to be completed in order to obtain the Village Engineer's certification of completion of the work on the affected Improvements. Any necessary re-inspection shall be completed within fifteen (15) days following notice from Developer to the Village Engineer that it has corrected such deficiencies and/or completed such work, as the case may be.

The Letter of Credit shall be automatically renewed on an annual basis and extended for an additional year until the completion and approval or acceptance of the Improvements, in order to guarantee ongoing work on the Development. Extensions of time to complete the Improvements shall require that the Letter of Credit be renewed automatically for such extended period of time. The amount of such renewal of the Letter of Credit shall be based on an updated EOPC of the then current cost of construction of the remaining Improvements in the Development.

Once complete, Village shall accept the public improvements and maintenance provisions (i.e. underground utilities before road improvements are complete) after such improvements have been installed, tested and approved by Village, and Developer has satisfied the Village's final acceptance and maintenance requirements. No such acceptance of the public improvements by Village and/or posting of the required Letter of Credit by Developer shall hold up the permitting or construction described in Section 20 hereof.

20. Demolition, Soil Erosion Control & Grading Plan Approval (Initial Plans): If separately requested by Developer, and upon review and approval of the Initial Plans and required permits from other local, state and federal agencies, Village shall permit Developer to proceed with site demolition, site clearing (including tree removal) and earthwork prior to the approval of any Final Plans (i.e. Final Subdivision Improvement Plans and Final Plats) provided Developer posts with Village guarantees in the form of a Surety (the "Surety") in the format attached to this Agreement as Exhibit E and approved by Village for such site demolition, site clearing and earthwork in the amount sufficient to restore the affected area, including, without limitation, the costs of erosion control, re-spreading topsoil and seeding the disturbed area. Such Demolition, Soil Erosion Control & Grading Plan Approval (the "Initial Plans") shall only pertain to "mass grading" and not to excavation for the construction and installation of utilities.

21. IEPA Permits. Developer shall prepare and Village will execute (review and provide signature) and return to Developer both IEPA Sanitary Sewer Main Extension and IEPA Water Main Extension Permits ("IEPA Permits") within one (1) week of submittal thereof by Developer, and only upon approval of the Final Plan.

22. Sanitary Sewer and Water Main Improvements: Upon Village review and approval of the Final Utility Plan, the required Letter of Credit described in Section 16 above in the amount of such work contemplated with such improvements, and approval of all necessary permits by the Illinois Environmental Protection Agency (IEPA), Village will allow Developer to install the sanitary sewer main and water main for this Subdivision.

23 Building and Occupancy Permits: The construction of new buildings and structures shall only commence upon issuance of a building permit for such building or structure. Village shall allow the permitting and construction of one or more model homes and/or speculative homes. The model homes may be utilized for the purpose of sales offices. Developer shall have the right to occupy and use said models, as well as their garages, for sales, sales promotions and offices for sales personnel, all as may be desirable or in any way connected with the sales of homes on the Subject Property. Each model and speculative home shall only be allowed for construction after an access roadway constructed to binder course is installed and prior to potable water and sanitary service being available. Permits for such model and speculative home shall only be issued after

Village staff and fire prevention bureau are satisfied that access to these structures is safe and adequate.

No final certificate of occupancy for any new home within the Development shall be issued until compliance with the applicable requirements of this Agreement and until water and sanitary service is connected, inspected and approved by Village.

24. Temporary Certificate of Occupancy. Temporary Certificates of Occupancy for individual units may be granted only between the months of December and April when the construction of a building containing multiple attached condominium units has been completed but, for good cause, minor building and site improvements that are affected by weather conditions, such as seeding or sod, final grading, asphalt or concrete work, or the like, have not been completed. Such temporary certificate of occupancy shall be issued by the Village's Building Official, but only after a request therefor, payment of the required fee, and posting of the required bond. No temporary certificate of occupancy shall be issued except after a finding by the building official that such permit will not adversely affect the health, welfare, or safety of the occupants or the general public. Prior to issuance of a temporary or final certificate of occupancy, permission will not be authorized for any building or individual unit to be used for human occupancy, or for storage of any vehicles, personal equipment, furniture, or belongings within a unit or on the property. As a condition of the issuance of a TCO, the Village shall require that all reasonable punch list items with the Owner be satisfactorily addressed before issuance of final Certificate of Occupancy.

25. Construction Sequencing. Developer shall coordinate the various construction activities, including site clearing, demolition, earthwork, infrastructure installation, and house construction, to minimize disruption on the adjoining roadways and adjacent properties, control erosion and sediment runoff into any adjoining offsite stormwater facilities and waterways, and ensure the safe and efficient completion of the Improvements. Developer shall prepare and provide to the Village a detailed construction sequence schedule in the form of a Gantt chart or similar format that outlines the timeline for all activities beginning with earth-disturbing activities through to completion of the Improvements. Such schedule shall incorporate phasing of site clearing and construction where necessary to limit areas of active earth disturbance around sensitive areas of the site. At all times, the Developer and its contractors shall maintain open communication with the Village and all stakeholders throughout the completion of the Improvements.

26. Pre-construction meeting(s) required. The Village shall require Developer, its general contractor, sub-contractors and trades, to attend one or more pre-construction meetings with and relevant local and municipal representatives to review construction requirements prior to the commencement of any work. Such meeting shall ensure that all permits, agreements and guarantees (Sureties such as Letters of Credit) and applicable fees are in place, including those related to off-site improvements and wetland and creek stabilization. At all times during the project, Developer shall follow the details and requirements as outlined in the pre-construction meeting.

27. Designated Erosion Control Inspector (DECI) required. In conformance with the Designated Erosion Control Inspector (DECI) program of the Lake County Stormwater

Management Commission, the Developer shall employ and assign an independent DECI during the course of completion of the Improvements. The DECI shall serve as the liaison between the Developer and Village's Enforcement Officers (EO) to inspect and report on the status of installed Erosion Control and Sediment Control devices. The DECI shall produce reports on such matters as needed and in the format required by the Village.

28. Inspections of Site and Subdivision Improvements required. Al all times during construction of the site or subdivision improvements a representative of the General Contractor shall be on-site, supervising construction activities. The Village Engineer or inspectors designated by the Village shall conduct inspections of the site or subdivision improvements at such times as may be determined appropriate by the Village. At any time that the Village Engineer or inspectors determines that construction is not in compliance with the standards and procedures established herein, the Village shall have the authority to order all work to be stopped at the recommendation of the Village Engineer or inspectors until such time that the work is brought into compliance with the approved Final Plan.

29. Construction Observation. The Village of Lake Zurich shall employ, at Developer's expense, the services of a civil engineer to observe, monitor and inspect certain aspects of the development to ensure that they are being constructed according to the design plans, specifications, and codes. Construction observation will be required for water and sanitary utility construction, construction within the public roadway, stormwater management facility construction, and construction within wetlands or waterways that traverse the Property being developed.

The Village's engineer designated for observation shall visit the site regularly and at a frequency that the Village deems necessary to oversee the progress, check for quality control, resolve any issues, and provide feedback to the Village. This will ensure that the construction project is completed successfully and meets safety, functionality, and the Village's construction, development and compliance standards for those items to be dedicated and accepted by the Village for ownership and maintenance in the long term. The Village shall have the right to increase the frequency of Construction Observation activities should the developer fail to demonstrate that the construction project is being completed safely, in a timely manner and to the Village's construction, development and compliance standards.

The Developer will establish a Ten Thousand and No/100 Dollars ($10,000.00) escrow, which shall be replenished in the event that the balance of such escrow decreases below Five Thousand and No/100 Dollars ($5,000.00), which shall be drawn upon by the Village for its reasonable inspection & review costs incurred pursuant to its duties and obligations relative to construction observation. Any balance of such funds remaining upon completion of all construction observation activities performed in connection with the development of the Subject Property shall be refunded to Developer within thirty (30) days following the completion of all plan reviews and inspections.

30. Site and Surrounding Area Maintenance during Construction. Developer shall at all times during the construction of the project take measures to ensure safety, protect the surrounding environment, and maintain regulatory compliance. Developer shall prepare a plan to implement a regular street sweeping schedule to remove construction debris caused by the project. Developer

shall use appropriate equipment including specialized street sweepers designed to handle construction debris, focus on high-traffic areas, entry/exit points and areas prone to debris accumulation. Developer shall properly dispose of or store on site all construction debris and collected materials. Any subsequent purchasers of all or a portion of the Subject Property (or any of the parcels or any lot created hereunder individually) by purchasing all or any part of the Subject Property shall by such purchase, automatically acknowledge agreement with all of the provisions of this Paragraph, and shall be deemed to have done so without any other confirming documentation.

31. Disconnection: Once any portion or all of the Subject Property is annexed to the Village, the Owner and their respective successors, heirs, executors and assigns all agree that during the term of this Agreement they will not seek to disconnect any portion or all of the Subject Property or any of the respective Parcels from the Village, and that they will oppose any disconnection proceeding that may be filed.

32. Warranties and Representations: The Owner represents and warrants to the Village as follows:

A. That the legal title holder and the owner of record of the Subject Property is as set forth on the first page of this Agreement.

B. That other than the Owner, no other entity or person has any interest in the Subject Property or any of the matters as herein proposed.

C. That Owner has provided the legal descriptions of the Subject Property set forth in this Agreement and that said legal description is accurate and correct.

33. General Provisions:

A. Notices: Notice or other writings which any party is required to, or may wish to, serve upon any other party in connection with this Agreement shall be in writing and shall be delivered personally or sent by registered or certified mail, return receipt requested, postage prepaid, or by Federal Express, UPS or other nationally recognized courier, addressed as follows:

(1) If to Village or Corporate Authorities:

Mayor
VILLAGE OF LAKE ZURICH
70 East Main Street
Lake Zurich, Illinois 60047

With a copy to:

Village Manager
VILLAGE OF LAKE ZURICH
70 East Main Street
Lake Zurich, Illinois 60047; and

KLEIN, THORPE AND JENKINS, LTD.
20 North Wacker Drive, Suite 1660
Chicago, Illinois 60606-2903
Attn: Scott Uhler

(2) If to Owner:

[Owner Name]
[Owner Address]

With a copy to:

[Owner's Attorney]
[Owner's Attorney Address]

And to:

[Any additional party Subject to this agreement]

(3) If to Developer:

[Developer Name]
[Developer Address]

With a copy to:

[Developer's Attorney]
[Developer's Attorney Address]

or to such other address as any party may from time to time designate in a written notice to the other parties.

B. Continuity of Obligations:

(1) The provisions of this Agreement shall inure to the benefit of and shall be binding upon Developer and Owner, and each of their respective successors in any manner in title and shall be binding upon Village and the successor Corporate Authorities of Village and any successor municipality. Developer and Owner, with respect to the portion of the Subject Property then owned by such party, and each of their respective successors shall at all times during the term of this Agreement remain liable to Village for the faithful performance of all obligations imposed upon Developer and Owner by this Agreement until such obligations have been fully performed or until Village, at its sole option, has otherwise released Developer and/or Owner from any or all of such obligations.

(2) All terms and conditions of this Agreement shall constitute covenants running with the land and shall bind each subsequent record owner of any portion or all of the Subject Property, including individual lot owners. Nothing contained in this Agreement shall be construed to restrict or limit the right of an owner to sell or convey all or any portion of the Subject Property, whether improved or unimproved. Upon transfer of any or all of the Subject Property, all rights, duties and interest of the legal title owner hereunder with respect to the portion of the Subject Property so

conveyed shall run to the benefit of and be binding upon owner's successors in interest, and such owner's obligations under this Agreement with respect to the portion of the Subject Property so conveyed shall terminate; provided, however, that solely with respect to transfer by Developer of any undeveloped portion of the Subject Property, or other applicable development security with respect to such undeveloped portion of the Subject Property so conveyed are posted by the new owner and/or developer and are approved and accepted by Village, which approval and acceptance shall not be unreasonably withheld, conditioned and/or delayed. In the event of any sale, transfer or assignment of all or any part of the Subject Property by Developer to another builder or developer for the purposes of building and development, such subsequent owner, builder or developer shall be entitled to all rights and benefits with respect to such portion of the Subject Property conveyed to such subsequent owner, builder or developer, as the case may be.

(3) Owner has executed this Agreement as the legal title holder of the Subject Property on the Execution Date and, following the closing with Developer and at the time that this Agreement is recorded, and not as the developer. Accordingly, Village hereby agrees and acknowledges that Owner shall have no obligations hereunder, including, without limitation, no obligation to develop the Subject Property and/or to construct any improvements thereon, all of which development obligations rest solely with Developer. [In no event shall: (a) a default by Developer hereunder be deemed a default by Owner hereunder; and (b) a default by Owner hereunder be deemed a default by Developer hereunder.]

C. Court Contest: In the event that the annexation of the Subject Property or other terms of this Agreement are challenged in any court proceeding, the period of time during which such litigation is pending, including (without limitation) the appeal time therefor, shall not be included, if allowed by law, in calculating the twenty (20) year period provided in subparagraph O below.

D. Remedies: Village, Developer and Owner, and each of their respective successors and assigns, covenant and agree that in the event of default of any of the terms, provisions or conditions of this Agreement by any of the parties, or their successors or assigns, which default exists uncorrected for a period of ten (10) days after written notice to any party to such default, the party seeking to enforce said provision shall have the right of specific performance and if said party prevails in a court of law, it shall be entitled to specific performance. It is further expressly agreed by and between the parties hereto that the remedy of specific performance herein given shall not be exclusive of any other remedy afforded by law to the parties, or their successor or successors in title. [In no event shall: (a) a default by Developer hereunder be deemed a default by Owner hereunder and Owner shall not be liable for any default of Developer; and (b) a default by Owner hereunder be deemed a default by Developer hereunder and Developer shall not be liable for any default of Owner.]

E. Survival of Representations: The parties agree that the representations, warranties and recitals set forth in the preambles to this Agreement are material to this Agreement and the parties hereby confirm and admit their truth and validity and hereby incorporate such representations, warranties and recitals into this Agreement and the same shall continue during the period of this Agreement.

F. Captions and Paragraph Headings: The captions and paragraph headings used herein are for convenience only and are not a part of this Agreement and shall not be used in construing it.

G. No Waiver or Relinquishment of Right to Enforce Agreement: Failure of any party to this Agreement to insist upon the strict and prompt performance of the terms, covenants, agreements and conditions herein contained, or any of them, upon the other party imposed, shall not constitute or be construed as a waiver or relinquishment of either party's right thereafter to enforce any such term, covenant, agreement or condition, but the same shall continue in full force and effect.

H. Village Approval or Direction: Where Village approval or direction is required by this Agreement, such approval or direction means the approval or direction of the Corporate Authorities of Village unless otherwise expressly provided herein or required by law, and any such approval may be required to be given only after and if all requirements for granting such approval have been met unless such requirements are inconsistent with the express provisions of this Agreement.

I. Recording: This Agreement, and any subsequent amendments thereto shall be recorded by the Village in the office of the Recorder of Deeds in Lake County, Illinois at the expense of the Village.

J. Amendment: This Agreement sets forth all the promises, inducements, agreements, conditions and understandings between the parties relative to the subject matter thereof, and there are no promises, agreements, conditions or understandings, either oral or written, express or implied, between them, other than are herein set forth. Except as herein otherwise provided, no subsequent alteration, amendment, change or addition to this Agreement shall be binding upon the parties hereto unless authorized in accordance with law and reduced in writing and signed by them. No changes that materially impact the Development or the immediate surroundings shall be made without the prior express written agreement with the Village.

K. Counterparts: This Agreement may be executed in two (2) or more counterparts, each of which taken together, shall constitute one and the same instrument.

L. Conflict between the Text and Exhibits: In the event of a conflict in the provisions of the text of this Agreement and the Exhibits attached hereto, the text of the Agreement shall control and govern.

M. Definition of Village: When the term Village is used herein it shall be construed as referring to the Corporate Authorities of the Village unless the context clearly indicates otherwise.

N. Execution of Agreement: This Agreement shall be signed last by Village and the President of Village shall affix the date on which he or she signs this Agreement on Page 1 hereof,

which date shall be the Execution Date of this Agreement. The Effective Date of this Agreement shall be the date set forth in Section 1 above.

O. Term of Agreement: This Agreement shall be in full force and effect for a term of twenty (20) years from and after the date of execution of this Agreement. In the event that the Subject Property, or any individual Parcel(s), has not been annexed by a date which is nineteen years six months (19½ years) from and after the date of execution of this Agreement, the parties hereto and all successors and assigns (specifically including the then-current owner(s) of the portion not previously annexed) agree to take all necessary action to have this Agreement amended to extend its term for an additional twenty (20) years. In the event that such Amendment is not entered into and executed by all appropriate parties, the Village shall have the right to terminate water service to any Parcel(s) not then annexed upon ten (10) days notice to the owner(s) of such Parcel(s).

P. Automatic Expiration of Agreement: This Agreement shall automatically be void and otherwise invalid if it is not signed by all necessary parties within one hundred and eighty (180) days of the effective date of the Ordinance authorizing the President and Clerk of the Village of Lake Zurich to sign this Agreement on behalf of said Village.

Q. Mutual Assurances. The parties agree to do all things necessary and appropriate to carry out the terms and conditions of this Agreement and to aid and assist each other in furthering the intent of the parties as reflected by the terms of this Agreement, including without limitation, the holding of public hearings, enactment by Village of such resolutions and ordinances as are required herein, the execution of permits, applications and agreements and the taking of such other actions as may be necessary to enable the parties to comply with the terms and provisions of this Agreement. Owner shall have no liability, obligation or expense payments related to such mutual assurances and cooperation.

R. Cooperation. Village, Developer and Owner shall do all things necessary or appropriate to carry out the terms and provisions of this Agreement and to aid and assist each other in carrying out the terms and objectives of this Agreement and the intentions of the parties as reflected by said terms, including the terms of the any ordinance passed concurrently herewith. Village, Developer and Owner shall act in good faith, reasonably and promptly with respect to all consents, approvals and actions required or requested of it or taken by it hereunder or in connection with the development of the Subject Property. During the term of this Agreement, Developer and Owner, with respect to that portion of the Subject Property then owned by it, may continue the current uses on the Subject Property including farming and general agricultural uses as to those portions of the Subject Property not then developed. Owner shall have no liability, obligation or expense payments related to such mutual assurances and cooperation.

S. Limited Rights/Obligation of Owner. Owner has executed this Agreement as the current legal title holder of the Subject Property and, following the closing with Developer and at the time that this Agreement is recorded, and not as the developer. Accordingly, Village hereby agrees and acknowledges that Owner shall have no obligations hereunder, including, without limitation, no obligation to develop the Subject Property and/or to construct any improvements thereon, all of which development obligations rest solely with Developer.

T. Reimbursement of Village for Legal and Other Fees and Expenses:

To Effective Date of Agreement: The Owner, concurrently, with the approval of this Agreement, shall reimburse the Village for the following expenses incurred in the preparation and review of this Agreement, and any ordinances, letters of credit, plats, easements or other documents relating to the Subject Property:

(a) The costs incurred by Village for engineering services;
(b) The costs incurred by Village for establishing the backup (dormant) Special Services Area (SSA) on the Subject Property;
(c) All attorneys' fees incurred by Village in connection with this Agreement and the zoning approvals of the Subject Property; and
(d) Miscellaneous Village expenses, such as but not limited to legal publication costs, recording fees, consultant fees and copying expenses.

From and After Effective Date of Agreement:

Except as otherwise expressly provided in the paragraph immediately following this paragraph, upon written demand by Village made by and through its Mayor, the Owner from time to time but not more frequently than once a month shall promptly reimburse Village for all expenses and costs incurred by Village in the administration of this Agreement, including engineering fees, attorneys' fees and out-of-pocket expenses involving various and sundry matters such as, but not limited to, preparation and publication, if any, of all notices, resolutions, ordinances and other documents required hereunder.

Notwithstanding the immediately preceding paragraph, the Owner shall in no event be required to reimburse Village or pay for any expenses or costs of Village as aforesaid more than once, whether such are reimbursed or paid through special assessment proceedings, through fees established by Village ordinances or otherwise.

Such costs and expenses incurred by Village in the administration of the Agreement shall be evidenced to the Owner upon his request, by a sworn statement of the Village; and such costs and expenses may be further confirmed by the Owner at its option from additional documents designated from time to time by the Owner relevant to determining such costs and expenses.

In any event that any third party or parties institute any legal proceedings against the Owner and/or the Village, which relate to the terms of this Agreement, then, in that event, the Owner, on notice from Village shall assume, fully and vigorously, the entire defense of such lawsuit and all expenses of whatever nature relating thereto; provided, however:

(a) The Owner shall not make any settlement or compromise of the lawsuit, or fail to pursue any available avenue of appeal of any adverse judgment, without the approval of the Village.

(b) If the Village, in its sole discretion, determines there is, or may probably be, a conflict of interest between Village and the Owner, on an issue of importance to

the Village having a potentially substantial adverse effect on the Village, then the Village shall have the option of being represented by its own legal counsel. In the event the Village exercises such option, then the Owner shall reimburse the Village, from time to time on written demand from the Mayor of Village and notice of the amount due, for any expenses, including but not limited to court costs, attorneys' fees and witnesses' fees, and other expenses of litigation, incurred by the Village in connection therewith.

In the event the Village institutes legal proceedings against the Owner for violation of this Agreement and secures a judgment in its favor, the court having jurisdiction thereof shall determine and include in its judgment against the Owner all expenses of such legal proceedings incurred by Village, including but not limited to the court costs and attorneys' fees, witnesses' fees, etc., incurred by the Village in connection therewith (and any appeal thereof). The Owner may, in Owner's sole discretion, appeal any such judgment rendered in favor of the Village against the Owner.

U. Land Trustee Exculpation. This instrument is executed by the undersigned Land Trustee, not personally but solely as Trustee in the exercise of the power and authority conferred upon and vested in it as such Trustee. It is expressly understood and agreed that all the warranties, indemnities, representations, covenants, undertakings and agreements herein made on the part of the Trustee are undertaken by it solely in its capacity as Trustee and not personally. No personal liability or personal responsibility is assumed by or shall at any time be asserted or enforceable against the Trustee on account of any warranty, indemnity, representation, covenant, undertaking or agreement of the Trustee in this instrument.

*** SIGNATURE PAGE TO FOLLOW***

SIGNATURE PAGE

IN WITNESS WHEREOF, the parties hereto have set their hands and seals to this Agreement on the day and year first above written.

VILLAGE OF LAKE ZURICH,
an Illinois municipal corporation

By: _____
Village Mayor

ATTEST:

By: _____
Village Clerk

OWNER/DEVELOPER

Owner:

[Owner Name and address]

By: _____

Name: _____

Title: _____

Developer:

[Developer Name and Address]

By: _____

Name: _____

Title: _____

VILLAGE ACKNOWLEDGMENT

STATE OF ILLINOIS)
)
COUNTY OF _____)

I, the undersigned, a Notary Public, in and for the County and State aforesaid, DO HEREBY CERTIFY that _____ and _____, respectively the Lake Zurich Village Mayor and Village Clerk, are personally known to me to be the same persons whose names are subscribed to the foregoing instrument, and that they appeared before me this day in person and severally acknowledged that they signed and delivered the said instrument and caused the corporate seal of said municipal corporation to be affixed thereto, pursuant to authority given by the Board of Trustees of said municipal corporation, for the uses and purposes therein set forth.

GIVEN under my hand and official seal, this _____ day of _____, 20__.

_____
Notary Public

OWNER ACKNOWLEDGMENT

STATE OF ILLINOIS)
)
COUNTY OF _____)

I, the undersigned, a Notary Public, in and for the County and State aforesaid, DO HEREBY CERTIFY that _____ and _____ are personally known to me to be the same persons whose names are subscribed to the foregoing instrument, and that they appeared before me this day in person and severally acknowledged that they signed and delivered the said instrument as their free and voluntary act for the uses and purposes therein set forth.

GIVEN under my hand and official seal, this _____ day of _____, 20__.

_____
Notary Public

DEVELOPER ACKNOWLEDGMENT

STATE OF ILLINOIS)
)
COUNTY OF _____)

I, the undersigned, a Notary Public, in and for the County and State aforesaid, DO HEREBY CERTIFY that _____, the [title] of _____, who is personally known to me to be the same person whose name is subscribed to the foregoing instrument as such _____, and that he appeared before me this day in person and acknowledged that he signed and delivered the said instrument as his free and voluntary act, and as the free and voluntary act of said corporation, for the uses and purposes therein set forth.

GIVEN under my hand and official seal, this _____ day of _____, 20__.

_____
Notary Public

EXHIBIT LIST

A. Legal Description
B. Annexation Plat and Final Plan Documents
C. Fees and Contributions
D. Marketing Signage and Marketing Trailer, Construction and Storage Trailers
E. Letter of Credit Format

EXHIBIT A
LEGAL DESCRIPTION

That part of the North half of the South East quarter of Section 7, Township 43 North, Range 10, East of the 3rd P.M., described as follows: Beginning at a point on the West line of said North half of the South East quarter, 990 feet North of the South West corner of said North half of the South East quarter; thence East parallel with the South line of said North half of the South East quarter, 1056 feet; thence South parallel with the West line of said North half of the South East quarter, 330 feet; thence East parallel with the South line of said North half of the South East quarter, 833.8 feet to a point which is 761.6 feet West of the East line of said North half of the South East quarter; thence North parallel with the East line of said North half of the South East quarter, 667.6 feet to the North line of said North half of the South East quarter; thence West on the North line of the North half of the South East quarter to the North West corner of said North half of the South East quarter; thence South on the West line of said North half of the South East quarter, 338.7 feet to the place of beginning, in Lake County, Illinois.

Exhibit B. Final Plan Documents

a. [INSEET FINAL PLAN DOCUMENTS HERE]

Exhibit C. FEES AND CONTRIBUTIONS

A. Building Fees/Village Fees. Refer to Title 13 of the Lake Zurich Municipal Code for all Building Permit Fees. All fees required by other agencies are to be obtained from such agencies. The Village serves as a pass-through agency for the purpose of collecting Lake County sanitary connection fees and the Watershed Development Permit Fee.

Exhibit D.
Marketing Signage and Marketing Trailer, Construction and Storage Trailers

Marketing Signage Requirements. Also known as Real Estate Activity Signs (Title 12 of the Lake Zurich Municipal Code)

12. Real Estate Activity Sign
When a structure or lot is offered for sale, lease, or rent, such lot is permitted an additional temporary sign as follows:

a. Real estate activity signs are permitted in all districts. Real estate signs must be located on the site of the property for sale, lease, or rent.

b. Real estate signs are limited to one per street frontage.

c. Real estate activity signs may be constructed as either freestanding, wall, or window signs.

d. Real estate activity signs are limited to 16 square feet in residential districts and 32 square feet in all other districts.

e. Freestanding signs are limited to five feet in height and must be located within five feet from any lot line.

f. Real estate activity signs may not be illuminated.

g. Real estate activity signs must be removed within five days of final closing, lease, or rental. If such real estate signs are used in conjunction with a promotional event related to the sale, lease or rent, such signs may be installed 48 hours prior to event and must be removed within 24 hours of the end of the event.

Marketing Trailer, and Construction and Storage Trailers must be located designed and operated in conformance with the 2018 Building Codes adopted by the Village of Lake Zurich.

Exhibit E. Letter of Credit Format

SAMPLE LETTER OF CREDIT

DATE OF ISSUE:[Date]	IRREVOCABLE STANDBY LETTER OF CREDIT NUMBER [*] DATE AND PLACE OF EXPIRY: [1 YEAR FROM ISSUE DATE, TO BE INSERTED AT TIME OF ISSUANCE]
APPLICANT: [Developer Name] [Developer Address]	BENEFICIARY: VILLAGE OF LAKE ZURICH 70 EAST MAIN STREET LAKE ZURICH, IL 60047
ADVISING BANK: [Name of Bank if Applicable]	AMOUNT: $[Insert LOC amount here) (in U.S. DOLLARS)

WE, [Bank Name] (THE "BANK"), HEREBY ISSUE TO THE VILLAGE OF LAKE ZURICH, 70 EAST MAIN STREET, LAKE ZURICH, IL 9THE BENEFICIARY) THIS IRREVOCABLE LETTER OF CREDIT NUMBER [ ]* (THE "LETTER OF CREDIT"), IN THE AGGREGATE AMOUNT USD[$] AVAILABLE WITH [Bank Name] AGAINST PRESENTATION OF THE FOLLOWING DOCUMENTS:

1. BENEFICIARY'S SIGNED DRAFT AT SIGHT DRAWN ON [Bank Name], BEARING THE CLAUSE "DRAWN UNDER [Bank Name] LETTER OF CREDIT NO.[*] DATED [*]."

2. BENEFICIARY'S CERTIFICATE SIGNED BY THE VILLAGE CLERK OF VILLAGE OF LAKE ZURICH, STATING EITHER:
(A) THAT SAID LETTER OF CREDIT IS ABOUT TO EXPIRE AND HAS NOT BEEN EXTENDED; OR (B) THAT WORK HAS NOT BEEN COMPLETED IN ACCORDANCE WITH THE PLANS, SPECIFICATIONS AND AGREEMENTS (INCLUDING ANY AMENDMENTS THEREOF) FOR THE FOLLOWING PROJECT:

(The "Project")

[describe the project, location, type of land use, number of units, etc., in one or 2 sentences]

AND

3. THE ORIGINAL OF THIS LETTER OF CREDIT AND ALL AMENDMENTS, IF ANY.

THIS IRREVOCABLE LETTER OF CREDIT SHALL EXPIRE ON *[expiration date]; PROVIDED, HOWEVER, THE UNDERSIGNED SHALL SEND THE VILLAGE CLERK, BY CERTIFIED MAIL, RETURN RECEIPT REQUESTED, OR OVERNIGHT COURIER AT LEAST 35 DAYS PRIOR TO THE EXPIRATION DATE THAT SAID LETTER OF CREDIT IS ABOUT TO EXPIRE. IN NO EVENT SHALL THIS IRREVOCABLE LETTER OF CREDIT OR THE OBLIGATIONS CONTAINED HEREIN EXPIRE EXCEPT UPON SAID PRIOR WRITTEN NOTICE, IT BEING EXPRESSLY AGREED BY THE UNDERSIGNED THAT THE ABOVE EXPIRATION DATE SHALL BE EXTENDED AS SHALL BE REQUIRED TO COMPLY WITH THIS NOTICE PROVISION.

THE EXPIRATION DATE OF THIS STANDBY LETTER OF CREDIT SHALL BE AUTOMATICALLY EXTENDED FOR SUCCESSIVE ONE YEAR PERIODS, UNLESS ISSUER NOTIFIES BENEFICIARY BY REGISTERED MAIL OR OTHER RECEIPTED MEANS OF DELIVERY SENT TO BENEFICIARY'S ABOVE STATED ADDRESS SIXTY (60) OR MORE DAYS BEFORE THE THEN CURRENT EXPIRATION DATE THAT ISSUER ELECTS NOT TO EXTEND THE EXPIRATION DATE.

PARTIAL AND MULTIPLE DRAWS ARE PERMITTED. FOLLOWING ANY PARTIAL DRAW HONORED BY US, WE WILL ENDORSE THIS LETTER OF CREDIT AND RETURN THE ORIGINAL TO THE BENEFICIARY BY OVERNIGHT COURIER SERVICE, PROVIDED THERE IS A BALANCE AND THE LETTER OF CREDIT HAS NOT EXPIRED.

THE UNDERSIGNED FURTHER AGREES THAT THIS IRREVOCABLE LETTER OF CREDIT SHALL REMAIN IN FULL FORCE AND EFFECT AND PERTAIN TO ANY AND ALL AMENDMENTS OR MODIFICATIONS WHICH MAY BE MADE FROM TIME TO TIME TO THE PLANS, SPECIFICATIONS AND AGREEMENTS FOR THE PROJECT, WITHOUT NOTICE FROM THE VILLAGE OF SUCH AMENDMENTS OR MODIFICATIONS.

ALL BANKING CHARGES ASSOCIATED WITH THIS LETTER OF CREDIT ARE FOR THE ACCOUNT OF THE APPLICANT.

THIS LETTER OF CREDIT SETS FORTH IN FULL THE TERMS OF OUR UNDERTAKING, AND SUCH UNDERTAKING SHALL NOT IN ANY WAY BE MODIFIED, AMPLIFIED OR LIMITED BY REFERENCE TO ANY DOCUMENT, INSTRUMENT OR AGREEMENT REFERRED TO IN THIS STANDBY LETTER OF CREDIT, EXCEPT ONLY ISP98 REFERRED TO HEREIN, AND ANY SUCH REFERENCE SHALL NOT BE DEEMED TO INCORPORATE HEREIN ANY SUCH DOCUMENT, INSTRUMENT OR AGREEMENT.

ALL ACTS, REQUIREMENTS AND OTHER PRECONDITIONS FOR THE ISSUANCE OF THE IRREVOCABLE LETTER OF CREDIT HAVE BEEN COMPLETED.

THE BANK HEREBY UNDERTAKES AND ENGAGES THAT ALL DRAWINGS MADE IN CONFORMITY WITH THIS IRREVOCABLE LETTER OF CREDIT WILL BE DULY HONORED IF PRESENTED TO [Bank Name] BY 4:00 PM CENTRAL TIME ON OR BEFORE THE THEN CURRENT EXPIRY DATE. IF, WITHIN TEN (10) DAYS OF THE DATE ANY DRAWINGS MADE IN CONFORMITY WITH THIS IRREVOCABLE LETTER OF CREDIT IS PRESENTED, WE FAIL TO HONOR THE DRAWING, WE AGREE TO PAY ALL REASONABLE ATTORNEY FEES, COURT COSTS AND OTHER EXPENSES INCURRED BY THE VILLAGE OF LAKE ZURICH, IN ENFORCING THE TERMS OF THIS LETTER OF CREDIT.

THIS LETTER OF CREDIT IS SUBJECT TO THE INTERNATIONAL STANDBY PRACTICES 1998 ("ISP98"), INTERNATIONAL CHAMBER OF COMMERCE PUBLICATION NO. 590.

PLEASE ADDRESS ALL CORRESPONDENCE REGARDING THIS LETTER OF CREDIT TO [Bank Name] REFERENCING THE LETTER OF CREDIT NUMBER MENTIONED ABOVE. FOR TELEPHONE ASSISTANCE, PLEASE CONTACT [Bank representative at Phone Number] OR BY EMAIL TO [email address]

legal notices

to place a legal advertisement, email legals@dailyherald.com or call 847-427-4671 hours: M - F 8:30 a.m. - 4:30 p.m.

Probate

LEGAL NOTICE
IN THE CIRCUIT COURT OF THE EIGHTEENTH JUDICIAL CIRCUIT
LAKE COUNTY, ILLINOIS
Estate of
Pamela H. Haberkorn
Deceased
Gen No. 2025PR000054
Notice is given of the death of Pamela H. Haberkorn, of Gurnee, Illinois. Letters of Office were issued on September 25, 2025 to Yvonne Marie Holtz, 370 Cherrywood Trail, Wauconda, IL 60084 whose attorney is Stella Day, 350 N. Milwaukee Ave., Ste. 202, Libertyville, IL 60048.
Claims against the estate may be filed in the office of the Clerk of the Circuit Court or with representative, or both, on or before April 7, 2026, which date is not less than 6 months after the date of first publication of this notice and any claim not filed within that period is barred. Copies of any claim filed with the Clerk must be mailed or delivered to the representative and to the attorney within 10 days after it is filed.
E-filing is now mandatory for documents in civil cases with limited exemptions. To e-file, you must first create an account with an e-filing service provider. Visit https://efile.illinois courts.gov/service-providers.htm to learn more and to select a service provider. If you need additional help or have trouble e-filing, visit http://www.illinoiscourts.gov/FAQ/gethelp.asp.
Yvonne M. Holtz
(Representative)
Stella Day
(Attorney)
Prepared by:
Stella Day - JTLG, LLC
350 N. Milwaukee Ave., Suite 202
Libertyville, IL 60048
847-549-0600
Fax: 847-549-0977
Stella@LawJTLG.com
Published in Daily Herald Oct. 9, 16, 23, 2025 (38661)

LEGAL NOTICE
UNITED STATES OF AMERICA
STATE OF ILLINOIS
COUNTY OF DUPAGE
IN THE CIRCUIT COURT OF THE EIGHTEENTH JUDICIAL CIRCUIT
Estate of
SHARON S. LORENZ
Case No.: 2024PR000637
Notice is given of the death of Sharon S. Lorenz, late of Winchester, Illinois was 2994272 Winchester Circle S2, Unit 1, Warrenville, IL 60555. Letters of Office were issued on October 2, 2025 to Christine L. Young, 142 Sandalwood Ln. Bolingbrook, IL 60440 as Independent Executor whose attorney is Teresa L. Emerson, Thomas & Emerson, Ltd.
The estate will be administered without Court Supervision, unless under Section 28-4 of the Probate Act of 1975 (755 ILCS 5/28-4) any interested person terminates independent administration of any time by mailing or delivering a petition to terminate to the Circuit Court Clerk.
Claims against the estate may be filed in the Office of CANDICE ADAMS, Circuit Court Clerk, 505 N. County Farm Road, Wheaton, Illinois, or with the representative or both on or before April 2, 2026, any claim not filed within that period is barred. Copies of a claim filed with the Clerk must be mailed or delivered to the representative and to the attorney within 10 days after it is filed.
E-filing is now mandatory for documents in civil cases with limited exemptions. To e-file, you must first create an account with an e-filing service provider. Visit https://efile.illinoiscourts.gov/service-providers.htm to learn more and to select a service provider. If you need additional help or have trouble e-filing, visit http://www.illinoiscourts.gov/FAQ/gethelp.asp.
Christine L. Young
Executor
Prepared by:
Teresa L. Emerson
Thomas & Emerson, Ltd.
1 E. Wacker Drive, Suite 2600
Chicago, IL 60601
312-565-2200
Teresa.Emerson@outlook.com
Published in Daily Herald Oct. 9, 16, 23, 2025 (38661)

LEGAL NOTICE
IN THE CIRCUIT COURT OF THE NINETEENTH JUDICIAL CIRCUIT
LAKE COUNTY, ILLINOIS
Estate of
JUDY G. LAGRECA
Deceased
Gen No. 2025PR000433
Notice is given of the death of JUDY G. LAGRECA of GRAYSLAKE, ILLINOIS. Letters of Office were issued on OCTOBER 2, 2025 to LESTER LAPOLLETTE, 42222 HOLLY RD., LIBERTYVILLE, IL 60048 whose attorney is KIMBERLY WISNIESKI, SEGAL-MCCAMBRIDGE-SINGER-MAHONEY & WISNIESKI, LTD., 10 E. SCRANTON AVE. #203A, LAKE BLUFF, IL 60044-2228.
Claims against the estate may be filed in the Office of the Clerk of the Circuit Court or with representative, or both, on or before April 16, 2026, which date is not less than 6 months from the date of the first publication of this notice and any claim not filed within that period is barred. Copies of any claim filed with the Clerk must be mailed or delivered to the representative and to the attorney within 10 days after it is filed.
E-filing is now mandatory for documents in civil cases with limited exemptions. To e-file, you must first create an account with an e-filing service provider. Visit https://efile.illinoiscourts.gov/service-providers.htm to learn more and to select a service provider. If you need additional help or have trouble e-filing, visit http://www.illinoiscourts.gov/FAQ/gethelp.asp.
LESTER LAPOLLETTE
(Representative)
KIMBERLY WISNIESKI
(Attorney)
Prepared by:
KIMBERLY WISNIESKI
10 E. SCRANTON AVE. #203A
LAKE BLUFF, IL 60044
847-234-4238
ARDC # 6242821
KIMBERLY@SEGALLAW.COM
Published in Daily Herald Oct. 16, 23, 30, 2025 (38981)

LEGAL NOTICE
IN THE CIRCUIT COURT OF THE NINETEENTH JUDICIAL CIRCUIT
LAKE COUNTY, ILLINOIS
Estate of
ELLEN E. BODELL
Deceased
Gen No. 2025PR000433
Notice is given of the death of ELLEN E. BODELL, of LAKE FOREST, ILLINOIS. Letters of Office were issued on OCTOBER 13, 2025 to KARSTIN BODELL, 1071 ARBOR TRACE BROOKHAVEN, GA 30319 and
KIMBERLY WISNIESKI, SEMMELMAN, BRADY & WISNIESKI, LTD., 10 E. SCRANTON AVE. #203A, LAKE BLUFF, IL 60044 whose attorney is
Claims against the estate may be filed in the Office of the Clerk of the Circuit Court or with representative, or both, on or before April 16, 2026, which date is not less than 6 months after the date of the first publication of this notice and any claim not filed within that period is barred. Copies of any claim filed with the Clerk must be mailed or delivered to the representative and to the attorney within 10 days after it is filed.
E-filing is now mandatory for documents in civil cases with limited exemptions. To e-file, you must first create an account with an e-filing service provider. Visit https://efile.illinoiscourts.gov/service-providers.htm to learn more and to select a service provider. If you need additional help or have trouble e-filing, visit http://www.illinoiscourts.gov/FAQ/gethelp.asp.
KARSTIN BODELL
(Representative)
KIMBERLY WISNIESKI
(Attorney)
Prepared by:
KIMBERLY WISNIESKI
10 E. SCRANTON AVE. #203A
LAKE BLUFF, IL 60044
847-234-4238
ARDC # 6242821
KIMBERLY@SEGALLAW.COM
Published in Daily Herald Oct. 16, 23, 30, 2025 (38983)

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Judicial Sales

IN THE CIRCUIT COURT OF THE 16TH JUDICIAL CIRCUIT KANE COUNTY GENEVA, ILLINOIS
Bayview Loan Servicing, LLC A Delaware Limited Liability Company Bank & Trust Co., N.A.; PLAINTIFF, vs. Nancy F. Rodriguez; et al. DEFENDANTS No. 2023-FC-000206 NOTICE OF SHERIFF'S SALE OF REAL ESTATE PUBLIC NOTICE IS HEREBY GIVEN that pursuant to a Judgment of Foreclosure and Sale entered in the above cause on 03/06/2025, Rex Hein, the Sheriff of Kane County, Illinois will on Wednesday, the 5th day of November 2025 at the hour of 9:00 AM at Kane County Sheriff's Office Lobby, 37W755 IL Rt 38 St. Charles, IL 60175, or in a place otherwise designated at the time of sale, County of Kane and State of Illinois, sell at public auction to the highest bidder for cash, as set forth below, the following described real estate: PARCEL 1: LOT 1 IN BLOCK 1 IN SUNSET RIDGE SUBDIVISION, A SUBDIVISION OF PART OF THE SOUTHWEST 1/4 OF SECTION 9, TOWNSHIP 41 NORTH, RANGE 8 EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: BEGINNING AT THE NORTHEAST CORNER OF SAID LOT 1; THENCE SOUTH 00°07'11" EAST ALONG THE EASTERLY LINE OF SAID LOT 1; A DISTANCE OF 90.00 FEET TO A SOUTHEAST CORNER OF SAID LOT 1; THENCE NORTH 84 DEGREES, 36 MINUTES, 21 SECONDS WEST ALONG THE SOUTHERLY LINE OF SAID LOT 1 A DISTANCE OF 90.00 FEET; THENCE NORTH 00 DEGREES, 07 MINUTES, 11 SECONDS EAST, A DISTANCE OF 90.00 FEET TO A POINT ON THE NORTHERLY LINE OF SAID LOT 1 THAT IS 36.46 FEET, MEASURED ALONG SAID NORTHERLY LINE, WESTERLY OF THE NORTHEAST CORNER THEREOF; THENCE SOUTH 84 DEGREES, 36 MINUTES, 21 SECONDS EAST ALONG SAID NORTHERLY LINE, A DISTANCE OF 36.46 FEET TO THE POINT OF BEGINNING, IN THE CITY OF ELGIN, KANE COUNTY, ILLINOIS. PARCEL 2: EASEMENT FOR INGRESS AND EGRESS CREATED BY WARRANTY DEED RECORDED AUGUST 4, 1994 AS DOCUMENT 94068107 MADE BY FIRST FEDERAL DEVELOPMENT CORPORATION TO JOHN G. MURRAY AND JILL M. MURRAY WHICH WAS SET FORTH IN THE DECLARATION RECORDED AS DOCUMENT 94068108 AND AMENDED AND RESTATED IN DEED TO HICKORY RIDGE TOWNHOUSE ASSOCIATION RECORDED JANUARY 24, 1995 AS DOCUMENT 1996493 FOR THE BENEFIT OF PARCEL 1 OVER LOT 13 OF HICKORY RIDGE, IN THE CITY OF ELGIN, KANE COUNTY, ILLINOIS. P.I.N. 06-09-303-026 Improved with Residential property Commonly known as 1N 603 Hickory Ridge, Elgin, IL 60123 Sale terms: 10% down of the highest bid by certified funds at the close of the auction; The balance, including the Judicial sale fee for Abandoned Residential Property Municipality Relief Fund, which is calculated at the rate of $1 for each $1,000 or fraction thereof of the amount paid by the purchaser not to exceed $300, is due within twenty four (24) hours. Not four (24) hours. The subject property is subject to general real estate taxes, special assessments, or special taxes levied against said real estate and is offered for sale without any representation as to quality or quantity of title and without recourse to Plaintiff and in "AS IS" condition. The sale is further subject to confirmation by the Circuit Court of Kane County. The minimum bid for foreclosure takes place after 1/1/2021, purchasers other than the mortgagee will be required to pay any assessment and legal fees due under The Condominium Property Act, 765 ILCS 605/9(g)(1) and (g)(4). If the sale is set aside for any reason, the Purchaser at the sale shall be entitled only to a return of the deposit paid. The Purchaser shall not be entitled to any other relief against any of the following: the Mortgagee or the Mortgagee's attorney. Upon payment in full of the amount bid, the purchaser shall receive a Certificate of Sale, which will entitle the purchaser to a Deed to the real estate after Confirmation of the sale. The property will NOT be open for inspection and Plaintiff makes no representation as to the condition of the property. Prospective bidders are admonished to make their own inspection of the property and shall BE ARE THE MORTGAGOR (HOMEOWNER). YOU HAVE THE RIGHT TO REMAIN IN POSSESSION FOR 30 DAYS AFTER ENTRY OF AN ORDER OF POSSESSION, IN ACCORDANCE WITH SECTION 15-1701(C) OF THE ILLINOIS MORTGAGE FORECLOSURE LAW. For information, examine the court file or contact Plaintiff's attorney: Codilis & Associates, P.C., 15W030 North Frontage Road, Suite 100, Burr Ridge, IL 60527, (630) 794-5876. Please refer to file number 14-22-07572. 1327-6090

Probate

IN THE CIRCUIT COURT OF THE 16TH JUDICIAL CIRCUIT KANE COUNTY, 540 SOUTH RANDALL ROAD, ST. CHARLES, ILLINOIS
ESTATE OF: CHARLES R. BOWEN, DECEASED, 22-PR-302 Notice is given of the death of the above named decedent. Letters of office were issued to John Wisz, P.O. Box 134, Burlington, Illinois 60109, Independent Executor, whose attorney of record is Martin J. Fogarty, Hart-land Law Firm, 1545 Waukegan Road, Suite 1-3 Glenview, Illinois 60025. Claims against the estate may be filed in the office of the Clerk of this court, 540 South Randall Road, St. Charles, Illinois, or with the representative or both on or before April 15, 2023 admitting the will to probate, that the will is not to be admitted to probate, that the will is void, or that the will is not to be admitted to probate, or after admission of the will to probate. The will of decedent has been admitted to probate. A copy of the petition with the court to require proof of the will by testimony of the witnesses to the will in open court or other evidence may be obtained from the Clerk of this court. Upon request, Letters of Office will be delivered to the representative after the entry of an order admitting the will to probate. The will be admitted without court supervision, unless within 60 days after the mailing or delivery of a notice from the representative as required by section 5/18-3 of the Probate Act of 1975, the heirs or legatees file a petition for hearing in which they request that the estate be administered under supervision and the court enters an order that supervision is necessary. Claims against the estate must be filed with the clerk on or before the date barred. Copies of a claim filed with the clerk must be mailed or delivered to the representative and to the attorney within 10 days after it is filed. Notice of the Probate Act of 1975 (III. Compiled Stat. 1992, Ch. 755, par. 5/8-1). You also are notified that pursuant to section 5/8-1 of the Probate Act of 1975 (III. Compiled Stat. 1992, Ch. 755, par. 5/8-1) to contest the validity of the will by filing a petition with the court within 6 months after admission of the will to probate. The estate will be administered without court supervision, unless within 60 days after the mailing or delivery of a notice from the representative as required by section 5/18-3 of the Probate Act of 1975, the heirs or legatees file a petition for hearing in which they request that the estate be administered under supervision and the court enters an order that supervision is necessary. Claims against the estate must be filed with the clerk on or before the date barred. Copies of a claim filed with the clerk must be mailed or delivered to the representative and to the attorney within 10 days after it is filed. Notice of the Probate Act of 1975 (III. Compiled Stat. 1992, Ch. 755, par. 5/8-1). You also are notified that pursuant to section 5/8-1 of the Probate Act of 1973

VILLAGE OF LAKE ZURICH

ORDINANCE NO. 2025-11-633

AN ORDINANCE ANNEXING CERTAIN TERRITORY TO THE VILLAGE OF LAKE ZURICH
(2500 North Rand Road – Calabrese Property)

WHEREAS, Calabrese Family Living Trust are the legal and record title owners of a tract of land located at *24455 N. Rt 12* in unincorporated Lake County, Illinois, and legally described on the plat of annexation (the *"Plat of Annexation')* attached to this Ordinance and by this reference incorporated into this Ordinance as Exhibit A (the *"Annexation Property');* and

WHEREAS, the Annexation Property is comprised of approximately 20 acres, is contiguous to the corporate limits of the Village of Lake Zurich, and is not within the corporate limits of any municipality; and

WHEREAS, Luxe Corsa Partners, LLC, an Illinois limited liability company (hereinafter referred to as "Developer") is the contract purchaser and prospective developer of certain real property; and

WHEREAS, the Developer and Owner have previously filed with the Village Clerk a duly executed petition seeking annexation of the Annexation Property signed by the owners of record of the Annexation Property, which owners also constitute at least 51 percent of the electors residing within the boundaries of the Annexation Property; and

WHEREAS, the Owners desire and propose to have the Annexation Property annexed to the Village pursuant to and in accordance with the provisions of Section 7-1-8 of the Illinois Municipal Code, 65 ILCS 5/7-1-8; and

WHEREAS, the Developers and/or Owners have paid or agreed to pay the Village's required annexation fee; and

WHEREAS, all petitions and other documents necessary to accomplish the Annexation have been executed; and

WHEREAS, notice of the Annexation has been delivered to all entities and officials in accordance with, and as required by or pursuant to, the provisions of Section 7-1-1 of the Illinois Municipal Code, 65 ILCS 5/7-1-1; and

WHEREAS, the Village is authorized to annex the Annexation Property pursuant to said Section 7-1-8; and

WHEREAS, the Annexation and development of the Annexation Property is governed by an annexation agreement approved by the Lake Zurich Resolution No. 2025-____-_____.

WHEREAS, the President and Board of Trustees of the Village of Lake Zurich have found and determined that it is in the best interests of the Village that the Annexation Property be annexed.

NOW THEREFORE, BE IT ORDAINED by the President and Board of Trustees of the Village of Lake Zurich, Lake County and State of Illinois, as follows:

Section 1. Recitals. The foregoing recitals are hereby incorporated into this Ordinance as findings of the President and Board of Trustees.

Section 2. Annexation. The Annexation Property is hereby annexed to the Village of Lake Zurich.

Section 3. Recordation and Reporting. The Village Clerk is hereby authorized and directed to record in the Office of the Lake County Recorder of Deeds, promptly after the effective date of this Ordinance, a certified copy of this Ordinance including the Plat of Annexation attached hereto as Exhibit A to the Ordinance, hereby made a part hereof, and the affidavits of service of notice as required by law. The Village Administrator is hereby authorized and directed to notify the Election Authorities, as defined in Section 7-1-1 of the Illinois Municipal Code, 65 ILCS 5/7-1-1, and the United States Post Office branches serving the Subject Property of the Annexation by registered or certified mail within 30 days after the effective date of this Ordinance.

Section 4: Effective Date. This Ordinance shall be in full force and effect upon its passage and approval, as provided by law.

PASSED THIS _____ day of November, 2025

AYES:

NAYS:

ABSENT:

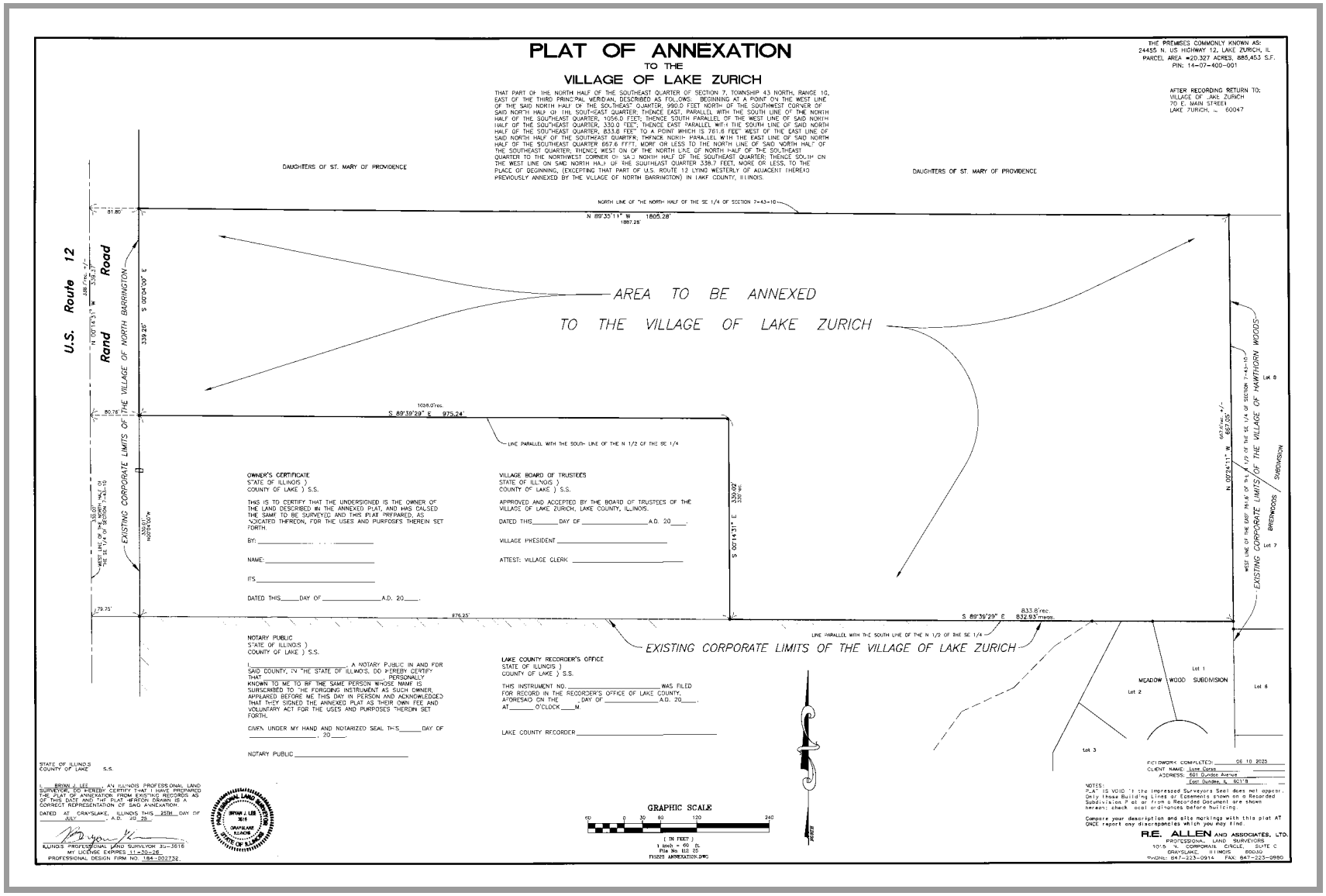
APPROVED this _____ day of November, 2025.

ATTEST:

_____
Thomas Poynton, Village President

_____
Kathleen Johnson, Village Clerk

Exhibit A
Plat of Annexation


PLAT OF ANNEXATION
TO THE
VILLAGE OF LAKE ZURICH
THAT PART OF THE NORTH HALF OF THE SOUTHEAST QUARTER OF SECTION 7, TOWNSHIP 43 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: BEGINNING AT A POINT ON THE WEST LINE OF THE SAID NORTH HALF OF THE SOUTHEAST QUARTER, 990.0 FEET NORTH OF THE SOUTHWEST CORNER OF SAID NORTH HALF OF THE SOUTHEAST QUARTER; THENCE EAST, PARALLEL WITH THE SOUTH LINE OF THE NORTH HALF OF THE SOUTHEAST QUARTER, 1056.0 FEET; THENCE SOUTH, PARALLEL OF THE WEST LINE OF SAID NORTH HALF OF THE SOUTHEAST QUARTER, 330.0 FEET; THENCE EAST PARALLEL WITH THE SOUTH LINE OF SAID NORTH HALF OF THE SOUTHEAST QUARTER, 833.8 FEET TO A POINT WHICH IS 761.8 FEET WEST OF THE EAST LINE OF SAID NORTH HALF OF THE SOUTHEAST QUARTER; THENCE NORTH, PARALLEL WITH THE EAST LINE OF SAID NORTH HALF OF THE SOUTHEAST QUARTER 657.6 FEET, MORE OR LESS TO THE NORTH LINE OF SAID NORTH HALF OF THE SOUTHEAST QUARTER; THENCE WEST ON OF THE NORTH LINE OF NORTH HALF OF THE SOUTHEAST QUARTER TO THE NORTHWEST CORNER OF SAID NORTH HALF OF THE SOUTHEAST QUARTER; THENCE SOUTH ON THE WEST LINE ON SAID NORTH HALF OF THE SOUTHEAST QUARTER 338.7 FEET, MORE OR LESS, TO THE PLACE OF BEGINNING, (EXCEPTING THAT PART OF U.S. ROUTE 12 LYING WESTERLY OF ADJACENT THEREIO PREVIOUSLY ANNEXED BY THE VILLAGE OF NORTH BARRINGTON) IN LAKE COUNTY, ILLINOIS.
THE PREMISES COMMONLY KNOWN AS:
24455 N. US HIGHWAY 12, LAKE ZURICH, IL
PARCEL AREA =20.327 ACRES, 885,453 S.F.
PIN: 14-07-400-001
AFTER RECORDING RETURN TO:
VILLAGE OF LAKE ZURICH
70 E. MAIN STREET
LAKE ZURICH, IL 60047
DAUGHTERS OF ST. MARY OF PROVIDENCE
DAUGHTERS OF ST. MARY OF PROVIDENCE
NORTH LINE OF THE NORTH HALF OF THE SE 1/4 OF SECTION 7-43-10
N 89°35'11" W 1805.28'
1887.25'
U.S. Route 12
Rand Road
AREA TO BE ANNEXED
TO THE VILLAGE OF LAKE ZURICH
EXISTING CORPORATE LIMITS OF THE VILLAGE OF NORTH BARRINGTON
EXISTING CORPORATE LIMITS OF THE VILLAGE OF HAWTHORN WOODS
BRENWOOD SUBDIVISION
MEADOW WOOD SUBDIVISION
Lot 1
Lot 2
Lot 3
Lot 6
Lot 7
Lot 8
S 89°39'29" E 975.24'
1039.0'rec.
LINE PARALLEL WITH THE SOUTH LINE OF THE N 1/2 OF THE SE 1/4
S 89°39'29" E 832.93'meas.
833.8'rec.
LINE PARALLEL WITH THE SOUTH LINE OF THE N 1/2 OF THE SE 1/4
S 00°14'31" E 339.00'
330 rec.
N 00°04'09" W 657.05'
657.6'rec. +/-
WEST LINE OF THE EAST 761.8' OF THE N 1/2 OF THE SE 1/4 OF SECTION 7-43-10
N 00°14'31" W 338.7'rec. +/-
S 00°04'09" E 339.26'
81.80'
80.76'
79.75'
876.25'
95.00'
WEST LINE OF THE NORTH HALF OF THE SE 1/4 OF SECTION 7-43-10
OWNER'S CERTIFICATE
STATE OF ILLINOIS)
COUNTY OF LAKE) S.S.
THIS IS TO CERTIFY THAT THE UNDERSIGNED IS THE OWNER OF THE LAND DESCRIBED IN THE ANNEXED PLAT, AND HAS CAUSED THE SAME TO BE SURVEYED AND THIS PLAT PREPARED, AS INDICATED THEREON, FOR THE USES AND PURPOSES THEREIN SET FORTH.
BY: _____
NAME: _____
ITS _____
DATED THIS_____DAY OF _____A.D. 20____.
VILLAGE BOARD OF TRUSTEES
STATE OF ILLINOIS)
COUNTY OF LAKE) S.S.
APPROVED AND ACCEPTED BY THE BOARD OF TRUSTEES OF THE VILLAGE OF LAKE ZURICH, LAKE COUNTY, ILLINOIS.
DATED THIS_____DAY OF _____A.D. 20____.
VILLAGE PRESIDENT _____
ATTEST: VILLAGE CLERK _____
NOTARY PUBLIC
STATE OF ILLINOIS)
COUNTY OF LAKE) S.S.
I, _____, A NOTARY PUBLIC IN AND FOR SAID COUNTY, IN THE STATE OF ILLINOIS, DO HEREBY CERTIFY THAT _____ PERSONALLY KNOWN TO ME TO BE THE SAME PERSON WHOSE NAME IS SUBSCRIBED TO THE FORGOING INSTRUMENT AS SUCH OWNER, APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT THEY SIGNED THE ANNEXED PLAT AS THEIR OWN FEE AND VOLUNTARY ACT FOR THE USES AND PURPOSES THEREIN SET FORTH.
GIVEN UNDER MY HAND AND NOTARIZED SEAL THIS_____DAY OF _____, 20____.
NOTARY PUBLIC _____
LAKE COUNTY RECORDER'S OFFICE
STATE OF ILLINOIS)
COUNTY OF LAKE) S.S.
THIS INSTRUMENT NO. _____ WAS FILED FOR RECORD IN THE RECORDER'S OFFICE OF LAKE COUNTY, AFORESAID ON THE _____ DAY OF _____ A.D. 20____, AT _____ O'CLOCK ____M.
LAKE COUNTY RECORDER _____
STATE OF ILLINOIS
COUNTY OF LAKE S.S.
I, BRIAN J. LEE, AN ILLINOIS PROFESSIONAL LAND SURVEYOR, DO HEREBY CERTIFY THAT I HAVE PREPARED THE PLAT OF ANNEXATION FROM EXISTING RECORDS AS SHOWN ON SAID PLAT HEREON, WHICH IS A CORRECT REPRESENTATION OF SAID ANNEXATION.
DATED AT GRAYSLAKE, ILLINOIS THIS 23RD DAY OF JULY, A.D. 20 25
ILLINOIS PROFESSIONAL LAND SURVEYOR 35-3618
MY LICENSE EXPIRES 11-30-26
PROFESSIONAL DESIGN FIRM NO. 184-002732
BRIAN J. LEE 3618 GRAYSLAKE ILLINOIS STATE OF ILLINOIS
GRAPHIC SCALE
60 0 30 60 120 240
(IN FEET)
1 inch = 60 ft.
File No. ELS 25
FY2025 ANNEXATION.DWG
NORTH
FIELDWORK COMPLETED: 06 10 2025
CLIENT NAME: Jane Cores
ADDRESS: 601 Quince Avenue
Corr Dundee, IL 60118
NOTES:
"P.A." IS VOID if the impressed Surveyors Seal does not appear.
Only those Building Lines or Easements shown on a Recorded Subdivision Plat or from a Recorded Document are shown hereon; check local ordinances before building.
Compare your description and site markings with this plat AT ONCE report any discrepancies which you may find.
R.E. ALLEN AND ASSOCIATES, LTD.
PROFESSIONAL LAND SURVEYORS
105 N. CORPORATE CIRCLE, SUITE C
GRAYSLAKE, ILLINOIS 60030
PHONE: 847-223-0914 FAX: 847-223-0980

VILLAGE OF LAKE ZURICH ILLINOIS

At the Heart of Community

Village of Lake Zurich
Zoning Application Guide

PETITION FOR ANNEXATION
TO THE VILLAGE OF LAKE ZURICH
Pursuant to Illinois Municipal Code, 65 ILCS 5/7-1-8

TO: The Mayor and Board of Trustees
Of the Village of Lake Zurich
Lake County, Illinois

THIS PETITION is made pursuant to Section 7-1-8 of the Illinois Municipal Code, 65 ILCS 5/7-1-8. The Petitioners state the following:

a. The Petitioners are all of the owners of record of all of the territory that is legally described on Exhibit A attached hereto and, by this reference, incorporated herein (the "Territory").

b. The Petitioners constitute at least 51 percent of the electors residing within the Territory.

c. The Territory is not located within the corporate limits of any municipality, is unincorporated, and is contiguous to the Village of Lake Zurich ("Lake Zurich").

The Petitioners hereby request that the Territory be annexed to Lake Zurich by an ordinance passed and approved by the President and the Board of Trustee of Lake Zurich, pursuant to Section 7-1-8 of the Illinois Municipal Code, subject only to payment of the Annexation Fee of $1,100/acre.

The Petitioners hereby further request that Lake Zurich give any and all notices required by statute and ordinance, and take all such further action as may be necessary or appropriate to effectuate such annexation of the Territory to Lake Zurich.

DATED this 16 day of July, 2025.

Attested by ROMEO KAPUDIJA (Petitioner's Name) (Signature)

MANAGER (Title)

681 DUNDEE AVE, EAST DUNDEE IL 60118 (Address)

DON CALABRESE (Name of Owner) Don Calabrese (Signature of Owner)

IF PETITIONER (ROMEO KAPUDIJA) DOES NOT CLOSE ON THIS PROPERTY BY 12/31/25, THIS SUBJECT PROPERTY ANNEXATION WILL BE NULL & VOID AND CURRENT OWNER (DON CALABRESE) WILL NOT ANNEX AT THIS TIME.

7/16/25

OFFICIAL SEAL
ROBERT JOSEPH
Notary Public - State of Illinois
Commission No. 561686
My Commission Expires July 19, 2027

VILLAGE OF LAKE ZURICH

ORDINANCE NO. 2025-11-634

AN ORDINANCE REZONING NEWLY ANNEXED PROPERTY WITHIN AN B-1 LOCAL AND COMMUNITY BUSINESS DISTRICT AND I INDUSTRIAL DISTRICT, AND GRANTING APPROVAL OF A PLANNED UNIT DEVELOPMENT, DEVELOPMENT CONCEPT AND FINAL PLAN AND MODIFICATIONS TO THE ZONING AND LAND DEVELOPMENT CODE FOR A COMMERCIAL SUBDIVISION
Luxe Corsa Auto Suites at 2500 North Rand Road (Calabrese Property)

WHEREAS, the property herein described on Exhibit A hereto, and commonly referred to as the Calabrese Property located at 2500 North Rand Road ("Subject Property"), has been annexed to the Village of Lake Zurich ("Village"); and

WHEREAS, prior to annexation to the Village of Lake Zurich, the Property was located in unincorporated Lake County, addressed as 24455 North US Highway 12 and zoned within an GC General Commercial District; and

WHEREAS, the annexation of the Property was approved by Village of Lake Zurich Ordinance No. 2025-____-_____, and subject to an annexation agreement adopted through Resolution No. 2025-____-_____; and

WHEREAS, Luxe Corsa Partners, LLC, an Illinois limited liability company (hereinafter referred to as "Developer"), is the applicant ("Applicant") for a planned unit development for the Property ("PUD"), said Property comprised of approximately 20 acres, and is the Applicant for the commercial and industrial subdivision to be known as *Luxe Corsa Auto Suites* (hereinafter referred to as "Subdivision"); and

WHEREAS, Calabrese Family Living Trust (hereinafter referred to as "Owner"), is the legal title holder of the Property, and has granted consent to Applicant to petition the Village for the annexation, zoning classification and development of the Property; and

WHEREAS, Applicant has filed zoning and subdivision application PZC 2025-13 received July 16, 2025, (the "Application"), seeking the grant and approval of the following for the Property:

1. Development (PUD) Ordinance providing for the following:
    a. A Special Use Permit for a Planned Unit Development and Approval of a Development Concept and Final Plan
    b. Zoning classification as depicted in the exhibit entitled "Zoning Overview" prepared by OKW Architects dated July 11, 2025 described as follows:
        i. The westerly portion of the property with frontage on Rand Road to be zoned within the B-1 Local & Community Business; and
        ii. The remaining easterly portion of the property to be zoned with the I Industrial Zoning Districts
    c. Final Plat of Subdivision
    d. Modifications to the existing bulk requirements of the zoning code as generally described below and further detailed within this ordinance:
        i. Bulk requirements for commercial and industrial development
        ii. Parking requirements for commercial development

WHEREAS, the Applicant seeks concurrent approval of a Development Concept Plan and Final Plan for a Planned Unit Development (the "PUD") per Section 9-22-4.B of the Chapter 22 of the Lake Zurich Zoning Code, such PUD attached hereto and made a part hereof as Exhibit B; and

WHEREAS, in compliance with the law, and the requirements of the Village of Lake Zurich Zoning Code, notice of the public hearing was published on July 26, 2025, in *The Daily Herald,* and the Village posted a public meeting sign on the Property on July 23, 2025, both the newspaper and sign notices informing the public of a hearing to be held before the Lake Zurich Planning and Zoning Commission ("PZC") on August 20, 2025, to consider the Application for the requested approvals; and

WHEREAS, the PZC received and considered the STAFF REPORT dated August 20, 2025, addressing a request for Site Plan and Zoning approval for a new commercial and industrial subdivision and considered all information presented by the Applicant, and the applicable factors required under of the Zoning Code and recommended that the Board of Trustees consider the findings and recommendations of the PZC from August 20, 2025, and approve the requested rezoning and subdivision approval requested in this Application, subject to those conditions set forth in said STAFF REPORT; and

WHEREAS, the President and Board of Trustees of the Village of Lake Zurich met on November 3, 2025, and considered the findings and recommendations of the Planning and Zoning Commission, including the STAFF REPORT dated August 20, 2025, said required rezoning, zoning and land development (subdivision) standards, findings and recommendations and attached hereto as Exhibit C including:

1. The approval of a Special Use Permit to authorize a Planned Unit Development and approval of the Development Concept and Final Plan on the Property for the Planned Unit Development, in accordance with the procedures and standards set forth in Chapters 18, 19 and 22, specifically Section 9-22-4, Subsections A, B and C and entitled "Procedure"; and Section 9-22-5, A and B, entitled "Standards for Planned Unit Developments," of the Zoning Code of the Village of Lake Zurich; and

2. The approval of the Site Plan as part of the special use for this Planned Unit Development and Exterior Appearance of the Buildings and Structures, consistent with the Planned Unit Development, as contained within the Development Plans and Elevations prepared by OKW Architects on behalf of Applicant, and specified in Section 2, C, 2 hereinafter, in accordance with the procedures and standards set forth in Chapter 20, Section 9-20-1 entitled "General Provisions" and Section 9-20-3 entitled "Standards for Site Plan Disapproval" and Chapter 21, Section 9-21-1 entitled "General Provisions" and Section 9-21-3 entitled "Standards and Considerations for Exterior Appearance Approval" of the Zoning Code of the Village of Lake Zurich; and

3. The approval of an amendment to the Zoning Map of the Village of Lake Zurich to reclassify the newly annexed Property within the B-1 Local and Community Business District and I Industrial District in accordance with the procedure and standards set forth in Chapter 18, Section 9-18-2 entitled "Procedure" and 9-18-3 entitled "Standards for Amendments" of the Zoning Code of the Village of Lake Zurich; and

4. The approval of those modifications to the Zoning Codes related to Bulk, Space, and Yard Requirements in the B-1 Local and Community Business District and I Industrial District in accordance with Chapter 22, Section 9-22-8 entitled "Authority to Modify Regulations" and as described in Section 4 of this Ordinance;

and having considered all of the facts and circumstances affecting the Application and these approvals, the President and Board of Trustees have determined that the applicable standards have been satisfied by the Applicant.

NOW, THEREFORE, BE IT ORDAINED by the President and Board of Trustees of the Village of Lake Zurich, Lake County, Illinois, as follows:

SECTION 1: ADOPTION AND INCORPORATION OF RECITALS. The foregoing recitals, findings, recommendations, exhibits and plans are incorporated herein as findings and requirements of the President and Board of Trustees, and all Exhibits referenced herein are made a part of and incorporated into this Ordinance and related approvals, except as otherwise provided below.

SECTION 2: GRANT OF DEVELOPMENT CONCEPT PLAN AND FINAL PLAN FOR A PLANNED UNIT DEVELOPMENT (PUD), MAP AMENDMENT AND PLAN MODIFICATIONS AND CONDITIONS. The President and Board of Trustees, pursuant to the authority vested in them under the laws of the State of Illinois, Chapters 19, 20, 21 and 22 of the Lake Zurich Zoning Code, Chapter 8 of the Land Development Code, and applicable Codes and Ordinances of the Village, hereby grant the following zoning and development approval(s), as shown and provided in the STAFF REPORT dated August 20, 2025, and final findings and recommendations of the Planning and Zoning Commission, all consisting of 29 pages:

A. The Planned Unit Development and Development Concept Plan and Final Plan for the Property, attached hereto and made a part hereof as Exhibit B, to authorize a commercial and industrial subdivision, as described in Section 2.C, herein and in accordance with the standards for the grant of a special use set forth at Chapter 19, Section 9-19-3 of the Zoning Code of the Village of Lake Zurich entitled "Standards for Special Use Permits," in accordance with the procedures for a planned unit development concept plan set forth at Chapter 22, Section 9-22-4 of the Zoning Code of the Village of Lake Zurich and in accordance with the standards for the grant of a planned unit development set forth at Chapter 22, Section 9-22-5 of the Zoning Code of the Village of Lake Zurich entitled "Standards for Planned Unit Developments."

B. An amendment to the Zoning Map of the Village of Lake Zurich to classify the westerly 1.3-acre area of the Property within B-1 Local and Community Business District and the 18.7-acre area of the Property within an I Industrial District in accordance with the procedure and standards set forth in Chapter 18, Section 9-18-2 entitled "Procedure" and 9-18-3 of the Zoning Code of the Village of Lake Zurich entitled "Standards for Amendments, including general conformance with the Comprehensive Plan for this Property and the Village of Lake Zurich.

C. The foregoing approvals, including the Development Concept and Final Plan for the PUD, shall be further subject to the following conditions:

1. Substantial conformance with the following documentation submitted as part of the application subject to revisions required by Village Staff and applicable governmental agencies:
    a. Zoning Application dated July 16, 2025, and prepared by Mr. Romeo Kapudija, representing Luxe Corsa Partners, LLC
    b. Exhibit A: Legal Description
    c. Petition for Annexation dated July 16, 2025
    d. Plat of Annexation dated June 10, 2025, and prepared by R.E. Allen and Associates, LTD
    e. Plat of Survey dated June 10, 2025, and prepared by R.E. Allen and Associates, LTD
    f. Architectural Design Plans dated July 11, 2025, and prepared by OKW Architects

g. Architectural Narrative dated July 15, 2025, and prepared by OKW Architects
h. Preliminary EOPC dated April 07, 2025, and prepared by Pearson, Brown & Associates, Inc.
i. Ecological Compliance Assessment Tool dated February 12, 2025, and prepared by Illinois Department of Natural Resources
j. Letter of exemption from archaeological survey dated June 18, 2025, and prepared by the Illinois Department of Natural Resources State Historic Preservation Office
k. Preliminary Landscape Plan and Landscape Narrative dated July 15, 2025, prepared by Kathryn Talty Landscape Architecture
l. Natural Recourses Information Report dated June 18, 2025, and prepared by McHenry-Lake County Soil & Water Conservation District
m. Preliminary Engineering (sheets 1-25) dated July 16, 2025, and prepared by Pearson, Brown & Associates, Inc.
n. Preliminary Stormwater Management Report dated July 16, 2025, and prepared by Pearson, Brown & Associates, Inc.
o. Purchase Agreement prepared by Law Offices of Donald C. Battaglia, LTD.
p. Site Lighting Diagram dated March 05, 2025, and prepared by OKW Architects
q. Traffic Impact Study dated July 16, 2025 and prepared by Kenig, Lindren, O'Hara, Aboona, Inc. (KLOA)
r. Wetland Delineation Report dated November 26, 2024 and prepared by ILM Environments

2. The Developer shall enter into a binding Annexation Agreement with the Village agreeing to install all the required improvements and providing surety for such improvements by means of a Letter of Credit and in a format as approved by the Village. In addition to the requirements outlined in Chapter 5 of the Land Development Code entitled "Procedure for Subdivision Approval," which are applicable to a PUD, specifically Section 10-5-7 entitled "Agreements and Guarantee of Improvements," such agreement shall additionally contain the following additional provisions:
   a. Establishment of a "backup" open space, stormwater management, snow removal, and private roadway repair and replacement Special Service Area (SSA) to ensure that these areas and features are cared for and maintained in the event of a future Property Owner Association dissolution or its lack of required maintenance of these areas.
   b. Such backup SSA shall be accompanied by a short and long-term maintenance plan prepared by the Developer and approved by the Village Engineer.

3. The Developer shall establish a Property Owners Association prior to the issuance of any certificate of occupancy or sale of a unit or interest in the Subject Property, which will be responsible for upkeep of the private common areas including the private streets and driveways, the on-site detention facilities and landscape material within common open space, consistent with the requirements herein. The provisions for such Association shall be established prior to approval of the Final Plan as defined in Section 9-22-4.C of the Lake Zurich Zoning Code (the "Final Plan"), and shall be subject to the review and approval of the Village.

4. All streets within the subdivision shall be maintained as private streets. Such streets shall be constructed according to Village construction standards applicable to public streets, and shall be owned and maintained by the HOA.

5. All sidewalks within and along the frontage of the Development on the Subject Property shall be constructed by the Developer as part of the development. Additionally, a 5-foot wide sidewalk shall be constructed along the frontage of the property along Rand Road.

6. Off street parking spaces shall be designed with a minimum nine feet (9') wide by twenty feet (20') long and not less than one hundred eighty (180) square feet; provided, however, that the minimum length of a perimeter space or space perpendicular to a landscape area shall be no less than eighteen feet (18').

7. All signage shall conform to the requirements of the sign regulations at Title 12 of the Municipal Code. Free standing ground mounted signs shall be designed as monument style signs with the appropriate amount of landscape material maintained in good condition.

8. The Developer shall design and construct a means of access to the stormwater management facilities for the purpose of conducting maintenance of such facilities located within the areas north of the built-out portion of the Development. Such access way shall be designed to accommodate for materials, vehicles, equipment authorized by the HOA and when necessary, authorized by the Village, to allow for the maintenance of these facilities.

9. Developer shall pay all building permit fees, village connection fees and recapture fees as outlined and required under Title 13 of the Lake Zurich Municipal Code.

   All fees required by other agencies are to be obtained from such agencies. The Village serves as a pass-through agency for the purpose of collecting Lake County sanitary connection fees and the Watershed Development Permit Fee.

10. Construction shall commence in accordance with the approved Final Plan within two (2) years after the approval of such Plan, or such other time as may be approved by the Village Board of Trustees. Failure to commence construction within such period shall, unless an extension of time shall have been granted by the village manager pursuant to subsection 9-12-1J of the Lake Zurich Municipal Code, automatically render void the Final Plan approval and all approvals of the PUD and all permits based on such approvals; and the manager shall have the right, without further direction, to initiate an appropriate application to revoke the special use permit for all portions of the PUD that have not yet been completed.

    Upon commencement of work, construction shall be completed within 2 years of approval of the Final Plan, unless a construction schedule is submitted by the Developer and approved by the village outlining an alternate improvement period as outlined in the Village Code. Failure to act accordingly shall be cause for the Village Board of Trustees to draw on the Letter of Credit or other guarantees to complete said improvements as described in the Final Plan.

11. The development as a PUD shall be in compliance with all other applicable codes and ordinances of the Village of Lake Zurich, including general and continuing compliance with Title 10 of the Village Code, the Land Development Code, and all of the engineering and land improvement requirements, standards and specifications including those set forth in Chapter 6 of said Land Development Code, unless otherwise approved or provided for in the final engineering plans for the Subject Property.

SECTION 3: FINDINGS ON THE SPECIAL USE PERMITS AND MAP AMENDMENT. The findings, conditions and recommendations of the PZC as set forth in the STAFF REPORT dated August 20, 2025, consisting of 29 pages, are hereby accepted by the President and Board of Trustees as the Board's own and shall be made a part of the official record for the Application and the approvals granted in Section 2, Paragraphs A, B, and C of this Ordinance. The President and Board of Trustees hereby find and determine that the standards for the grant of the Special Use Permits and Map Amendment sought by Applicant have been met, along with the standards for the approval of the Planned Unit Development and the Development Concept and Final Plan.

SECTION 4: MODIFICATIONS FROM THE PROVISIONS OF THE ZONING AND LAND DEVELOPMENT CODE. The President and Board of Trustees, pursuant to the authority vested in them under the laws of the State of Illinois and the Lake Zurich Zoning Code, hereby grant the following modifications to such Codes pursuant to the PUD granted herein and an adjustment to the Village Land Development Code:

A. The Applicant shall be granted a modification to develop the commercial lot for the use of a new commercial building containing an automobile dealership,

automobile detail center and coffee shop with a total of 32 spaces; whereas Section 9-10-1 entitled off-street parking requires such structures in the B-1 Local and Community Business district to have a minimum of 72 parking spaces.

B. The Applicant shall be granted a modification to develop the industrial lot related to the clubhouse with a with a total of 26 spaces; whereas Section 9-10-1 entitled off-street parking requires such structures in the I Industrial district to have a minimum of 104 parking spaces.

C. The Applicant shall be granted a modification to reduce the Special Yard abutting Route 12 to 30.18 feet; whereas Section 9-4-10 entitled "Bulk Space and Yard Requirements" requires special yards abutting Route 12 in the B-1 Local and Community Business district to have a minimum special yard setback of 50 feet.

D. The Applicant shall be granted a modification to reduce the rear yard to 5 feet; whereas Section 9-4-10 entitled "Bulk Space and Yard Requirements" requires rear yards in the B-1 Local and Community Business district to have a minimum rear yard setback of 5 feet.

E. The Applicant shall be granted a modification to reduce the interior yard to 17.5 feet; whereas Section 9-6-10 entitled "Bulk Space and Yard Requirements" interior side yards in the I Industrial district to have a minimum side yard setback of 20 feet.

F. The Applicant shall be granted an landscape opacity along its frontage with Rand Road to be less than 30% to allow for visibility of the retail automobiles sales building; whereas Section 9-8A-3. Entitled "Landscaping Requirement" requires that Opacity expressed as a percentage for properties in the B-1 Local and Community Business District abutting an arterial street (Rand Road be no less than 30%.

G. The Applicant shall be granted the construction of wall signs within the interior of the lot to exceed the maximum square footage allowed; whereas Section 12-1-7 General Sign Standards requires that wall-mounted signage be up to 1.5 square feet for each linear foot of the building façade on which it is located.

SECTION 5: COMPLIANCE WITH ORDINANCE AND ALL CODES. Except as otherwise specifically provided in writing in advance by the Village, no work may be commenced on the Property pursuant to the approvals granted in this Ordinance until all conditions precedent of this Ordinance to such work have been fulfilled and after all permits, approvals, and other authorizations for such work have been properly applied for, paid for, and granted in accordance with applicable law. As well, Applicant shall have no right to final approvals or permits for use and occupancy of the Property until all work and requirements provided for hereinabove are properly completed. Ongoing, future compliance and maintenance in good repair, consistent with these approvals, shall be required at all times.

SECTION 6: SEVERABILITY. If any section, paragraph, subdivision, clause, sentence or provision of this Ordinance shall be adjudged by any Court of competent jurisdiction to be invalid, such judgment shall not affect, impair, invalidate or nullify the remainder thereof, which remainder shall remain and continue in full force and effect.

SECTION 7: CONFLICTS. All ordinances or parts of ordinances in conflict herewith are hereby repealed to the extent of such conflict.

SECTION 8: EFFECTIVE DATE. This Ordinance shall be in full force and effect upon its passage and approval and publication, as provided by law.

SECTION 9: LIMITATIONS. Subject to an extension of time granted by the Village manager, the special use permit for the subject planned unit development shall be valid for a period no longer than two (2) years unless a building permit is issued and construction is actually begun within that period and is thereafter diligently pursued to completion. In the event of the expiration of the Development Concept and Final Plan for the PUD, the Village further reserves the right to vacate the plat of subdivision thereafter and require the developer to apply for and request approval for a subdivision to proceed with development of the Property.

SECTION 10: BINDING EFFECT; SUCCESSION IN INTEREST. This Ordinance shall constitute a covenant running with the land and be binding upon and inure to the benefit of the parties hereto, their successors in interest, assignees, lessees, and upon any successor municipal authorities of the Village and successor municipalities. Except as otherwise expressly provided herein, upon the conveyance or assignment by Applicant of its interest in the Property to any successor, assign or nominee, Applicant shall be released from any and all further liability or responsibility under this Ordinance except to the extent previously undertaken by Applicant, or for which Applicant has posted security to perform an obligation in which case Applicant shall be bound to continue to complete its performance unless a replacement bond or letter of credit is posted by the new owner or Applicant, and accepted by the Village, which shall not be unreasonably withheld. In such event, the Applicant shall be released from the underlying obligation to perform. The Village shall thereafter look only to the successor, assign, or nominee of duties and obligations of Applicant hereby undertaken.

PASSED THIS _____ day of November, 2025.

AYES:

NAYS:

ABSENT:

APPROVED this _____ day of November 2025.

ATTEST:

_____
Thomas Poynton, Village President

_____
Kathleen Johnson, Village Clerk

EXHIBIT A

Legal description of Property

THAT PART OF THE NORTH HALF OF THE SOUTH EAST QUARTER OF SECTION 7, TOWNSHIP 43 NORTH, RANGE 10, EAST OF THE 3RD P.M., DESCRIBED AS FOLLOWS: BEGINNING AT A POINT ON THE WEST LINE OF SAID NORTH HALF OF THE SOUTH EAST QUARTER, 990 FEET NORTH OF THE SOUTH WEST CORNER OF SAID NORTH HALF OF THE SOUTH EAST QUARTER; THENCE EAST PARALLEL WITH THE SOUTH LINE OF SAID NORTH HALF OF THE SOUTH EAST QUARTER, 1056 FEET; THENCE SOUTH PARALLEL WITH THE WEST LINE OF SAID NORTH HALF OF THE SOUTH EAST QUARTER, 330 FEET; THENCE EAST PARALLEL WITH THE SOUTH LINE OF SAID NORTH HALF OF THE SOUTH EAST QUARTER, 833.8 FEET TO A POINT WHICH IS 761.6 FEET WEST OF THE EAST LINE OF SAID NORTH HALF OF THE SOUTH EAST QUARTER; THENCE NORTH PARALLEL WITH THE EAST LINE OF SAID NORTH HALF OF THE SOUTH EAST QUARTER, 667.6 FEET TO THE NORTH LINE OF SAID NORTH HALF OF THE SOUTH EAST QUARTER; THENCE WEST ON THE NORTH LINE OF THE NORTH HALF OF THE SOUTH EAST QUARTER TO THE NORTH WEST CORNER OF SAID NORTH HALF OF THE SOUTH EAST QUARTER; THENCE SOUTH ON THE WEST LINE OF SAID NORTH HALF OF THE SOUTH EAST QUARTER, 338.7 FEET TO THE PLACE OF BEGINNING, IN LAKE COUNTY, ILLINOIS.

EXHIBIT B

Development Concept Plan and Final Plan exhibits as outlined in Section 2.C.1
submitted as part of the Application, and revised per Village reviews and requirements

EXHIBIT C

Staff report and planning and zoning commission final recommendation/conditions
dated August 20, 2025.

ZONING APPLICATION

Community Development Department
505 Telser Rd.
Lake Zurich, IL 60047
Phone: (847) 540-1696
Fax: (847) 540-1769

(Please Type or Print)

1. Address of Subject Property: 24455 N. Rt. 12 Lake County
2. **Please attach complete legal description**
3. Property Identification number(s): 1407400001
4. Owner of record is: Calabrese Family Living Trust Phone: 847 812 9200
   E-Mail don.calabrese3669@gmail.com Address: see above
5. Applicant is (**if different from owner**): n/a Phone:
   E-Mail Address:
6. Applicant's interest in the property (owner, agent, realtor, etc.): Purchaser (Luxe Corsa Partners LLC)
7. All existing uses and improvements on the property are: Construction Company Storage
   Single Family Home used as an Office & Several Storage Buildings
8. The proposed uses on the property are: 1. Auto Dealership, Coffee House, Condo Car Garages
   and Club house for the Development
9. List any covenants, conditions, or restrictions concerning the use, type of improvements, setbacks, area, or height requirements placed on the Subject Property and now of record and the data of expiration of said restrictions:
   No overnight stays and 34' height restriction per the Village
10. Describe any contract or agreement of any nature relevant to the sale or disposal of the Subject Property:
    Outside of our Contract/Agreement to purchase the property, nothing that we know
11. For applications requiring a public hearing, please attach a list which contains the PIN, owner, and owner's mailing address of all properties located within 250 feet (excluding all Public Right-of-Ways) of the Subject Property.

THE APPLICANT'S SIGNATURE BELOW INDICATES THE INFORMATION CONTAINED IN THIS APPLICATION AND ON ANY ACCOMPANYING DOCUMENTS IS TRUE AND CORRECT.
THE APPLICANT ALSO ACKNOWLEDGES IF THE CONSULTANT EXPENSES EXCEED THE INITIAL ESCROW DEPOSIT, THE APPLICANT WILL REIMBURSE THE ACCOUNT IMMEDIATELY.

Rohit Kapadia
(Name of applicant)

(Signature of applicant)

Subscribed and sworn to before me this 16 day of July, 2025.

OFFICIAL SEAL
ROBERT JOSEPH
Notary Public - State of Illinois
Commission No. 561686
My Commission Expires July 19, 2027

(Notary Public)

My Commission Expires

Don Calabrese
(Name of Owner, if different)

(Signature of Owner, if different)

Subscribed and sworn to before me this 16th day of July, 2025.

OFFICIAL SEAL
ROBERT JOSEPH
Notary Public - State of Illinois
Commission No. 561686
My Commission Expires July 19, 2027

(Notary Public)

My Commission Expires

Please indicate what zoning relief your application requires. For assistance, please contact Staff.

☑ Zoning Code **Map** Amendment to change zoning of Subject Property from GC to [redacted]

☐ Zoning Code **Text** Amendment to amend the following section(s) of the Zoning Code _____

(See Section 18-103 of the Lake Zurich Zoning Code for specific standards. If a specific parcel is the subject of this amendment, then provide the additional information listed in Section 18-103C.)

☐ Special Use Permit/Amendment for _____

(See Section 19-103 of the Lake Zurich Zoning Code for specific standards.)

☑ Planned Unit Development/Major Adjustment/Amendment

(Planned Unit Developments are a distinct category of special use and are intended to create a more desirable environment than through strict application of the zoning and subdivision regulations. See Section 22-105 of the Lake Zurich Zoning Code for specific standards. Please list all the 'modifications' requested in the cover letter.)

☐ Variation for _____

(See Section 17-104 of the Lake Zurich Zoning Code for specific standards. Please indicate what your specific hardships are in the cover letter.)

☑ Modification to the Land Development Code (includes retaining walls more than 2 feet in height)
(See Section 10-6-18 of the Land Development Code for specific standards.)

☑ Preliminary Plat of Subdivision

☐ Final Plat of Subdivision or Amendment to Plat of Subdivision
(See Sections 10-5-2 and 10-5-9 of the Land Development Code for specific standards.)

☑ Site Plan Approval/Major Adjustment/Amendment
(See Section 20-103 of the Lake Zurich Zoning Code for specific standards.)

☑ Exterior Appearance Approval or Amendment
(See Section 21-103 of the Lake Zurich Zoning Code for specific standards.)

APPLICATION TO ANNEX CERTAIN TERRITORY

All land annexed to the Village is classified automatically after such annexation in the R-1\2 Single Family Residential District. The owner must file an application for a Zoning Map amendment if he or she desires a different zoning classification for the Subject Property.

☑ Petition to Annex Certain Territory (Please complete attached petition)

☑ Application to Annex Certain Territory

COMPREHENSIVE PLAN APPLICATION

☐ Comprehensive Plan **Map** Amendment for _____

_____

☐ Comprehensive Plan **Text** Amendment for _____

_____

July 11, 2025

Mr. Orlando Stratman

Chairperson of Planning and Zoning Commission

Village of Lake Zurich

505 Telser Rd.

Lake Zurich, Illinois 60047

Re: 24455 N. Rand Rd. Lake County Illinois

Dear Mr. Stratman:

I represent Luxe Corsa LLC., who is the contract purchaser of the above reference property, which is approximately 20 acres which includes 5.037 acres of existing wetlands and currently has a zoning classification of General Commercial (GC) based on Lake County zoning.

Luxe Corsa, LLC. is seeking to annex the subject property and once it is annexed, our development plan is to provide a High-End Auto Dealership with an attached Coffee House to be located at the front of the property and 121 (maximum units) Condo Car Suites to be located in eleven (11) separate buildings along with a Clubhouse for the Condo Car Garage owners. As part of the annexation we are requesting the property be rezoned from R-1/2 to B1 (for the Dealership/Coffee House) and Industrial (for the Condo Car Suites and the Clubhouse).

Pertaining to access of the property, it is our plan to use the existing access off of Rt. 12 (Rand Rd.). Currently the property has access to sanitary sewer in the right of way along Rt. 12. For the storm sewer we plan to reroute the existing pipe on the property to the existing outlet and we plan on extending the water main from approx. 375' south of our project property to its northern property line. As part of our Annexation agreement we will include a Recapture agreement to any and all parties that in the future tie into this water line extension.

As mentioned above our project/development will include a High-End Auto Dealership, which is for sales only will provide the Village with sales tax revenue. The dealerships back of house will only provide prepping of vehicles, a detailing service and no service work will be performed. We are also planning on Coffee House which will be located on the northside of the Dealership will be an additional source of sales tax revenue to the Village.

The architecture of the Luxe Corsa Auto Suite development reflects a high level of refinement to match the expectations of a design-oriented group of buyers. The buildings on site include the car condo buildings (121 maximum units), a 2-story dealership / coffee shop, and a 2-story clubhouse. The architecture of all three building types evokes racing-oriented themes.

The dealership / coffee shop building fronts Rand Road and therefore creates the first impression of the site. The building architecture features a transparent corner of glass to showcase exotic vehicles. Punctuated by illuminated racing stripes and accent metal, the primary building façade material is a high-density fiber cement panel of varying textures.

Beyond an electronic gate, the bulk of the rest of the site is comprised of the car condo buildings. The buildings vary in size and depth, as some of the buildings are single-loaded and others have back-to-back units. The building architecture incorporates fiber cement panels, accented by wood-look headers above the garage doors. The buildings are differentiated by varying tones on the façade and by an intentional series of race track / wayfinding graphics on the end caps of each unit. These graphics will be illuminated by indirect lighting so that they are visible into the early evening hours. The theme of racing and movement is further illustrated through varying spacing on joints and reveals across the façade.

The clubhouse building creates a focal point in the middle of the site. The architecture is intentionally dramatic, through use of a dark fiber cement exterior accented by dark metal. The entry canopy is incorporates illuminated racing stripes and the second floor offers a welcoming terrace with string lights.

The Condo Car Suites will be constructed in two (2) different sizes with the ability to combine multiple units in order to accommodate larger vehicle collections. The interior of the units will include stairs to a mezzanine level. On the first floor will contain a bathroom with Shower and a Utility room, basically we will be providing a "White Box" which will allow the owners to build out the spaces to their own specifications (each build out will be required to secure a building permit).

The landscape design of the Luxe Corsa Auto Suites blends ornamental planting design with the context of the native landscape in which the site resides, focusing on aesthetic and ecologic attributes.

A full tree inventory and an extensive evaluation of the existing plant material was conducted. The landscape design considered the indigenous tree communities found while performing the inventory and utilized the same or similar species types throughout the plan. The site plan celebrates the existing wetlands and the stormwater basin is treated as an extension of such, by utilizing native, wetland plant communities.

The landscape treatment around the buildings is intended to compliment the architectural design and provide seasonal interest in areas of high visibility along Rand Road. Special attention was paid to the vehicular circulation and screening was provided in areas where headlight spillage may occur. Future, neighboring developments were considered with strategic plant placement, buffering the views into the site from the adjacent uses.

The following is a list of documents that we will be submitting via a Dropbox.

1. Application
2. Architectural Design Plans and Narrative
3. Civil Drawings
4. Landscaping Drawings and Narrative
5. Civil Estimate
6. Site Lighting Diagram
7. Stormwater Report
8. Survey, Topos and Legal Description
9. Auto Turns
10. Traffic Study
11. Tree Inventory
12. Evidence of Title/Ownership
13. Geotech Report
14. Miscellaneous Reports
15. Wetlands Report

Please let me know if you have any questions

Thank you,

Robbie Joseph

LAW OFFICES OF
DONALD C. BATTAGLIA, Ltd.
5543 W. Diversey Avenue
Chicago, Illinois 60639
TEL: (773) 292-0100 FAX: (312) 575-3510
don@battaglialaw.com

April 18th 2023

Don Calabrese
24455 N Hwy 12
Lake Zurich IL 60047

LETTER OF INTENT

Dear Mr. Calabrese:

This letter will confirm the intentions of Kapital Investment Partners LLC ("Purchaser") for the Purchase of the property located at 24455 N Hwy 12, Lake Zurich, IL together with approximately 28 acres of land east of Rand Road, (the "Subject Property"), from Calabrese Family Living Trust (collectively "Property Owner"), hereinafter collectively referred to as the "Proposed Transaction".

1. The Proposed Transaction will be effective pursuant to and subject to conditions to be contained in a Contract for the Purchase of Real Property (the "Purchase Agreement") and a Special Use Permit and Zoning Change for the use of the Land (the "License Agreement"), and all documents necessary to complete the Proposed Transaction will contain such representations, warranties, covenants and conditions as are customary and appropriate to transactions of this nature, and will be effectuated according to the following conditions and terms:

a. The Purchase Option Agreement, Special Use Permit and Zoning Change are each contingent upon the other.

b. Sale price of the Purchase of the Subject Property and all improvements thereon is $6,200,000.

c. The License Agreement will contain a provision whereby Kapital Investment Partners must obtain a Special Use Permit and Zoning Change for the use of the Subject Premises within 240 days.

d. Initial Deposit: $25,000 increased to a total of $100,000 upon acceptance of this agreement.

3. Notwithstanding the above, the Proposed Transaction may be terminated at the option of either party if the Agreement has not been executed within 30 days of acceptance of this Letter of Intent, and thereafter, neither of the parties will be obligated to continue further to bring about consummation of the Proposed Transaction without both of their written consents

and both Initial and increased Deposit Money shall be returned to Tenant.

4. Purchaser and Property Owner shall each pay its own expenses in connection with the transactions contemplated hereby.

5. The Proposed Purchase Transaction is contingent on obtaining financing and the Subject Property appraising at no less than the sale price.

6. Buyer for the Proposed Transaction may be a business entity formed by Buyer wherein Buyer is principal.

7. All information disclosed heretofore or hereafter by either party to the other shall not be used by such other party otherwise than as contemplated herein and shall be kept confidential by the other and disclosed only on a "need to know" basis to the other's members, managers, partners, directors, employees, counsel and accountant(s), and shall not be disclosed except to the extent that: it was known when received, it is or hereafter becomes lawfully obtainable from other sources; it is necessary to disclose such information to regulatory authorities having jurisdiction over either party or their subsidiaries or affiliated companies, or as may otherwise be required by law; or to the extent such duty as to confidentiality is waived by the party entitled to claim benefits of these confidentiality provisions. Such obligation as to confidentiality and nonuse shall survive the termination of this letter of intent. In the event of such termination, each party shall return upon request to the other all documents (and reproductions thereof) received from the other that include information not within the exceptions contained in this paragraph.

8. Until such time as the Agreement is executed or the Proposed Transaction is terminated pursuant to paragraph 3 above, Property Owner shall not solicit, authorize the solicitation of, or enter into any discussion with any third party concerning any offer or possible offer by a third party to acquire the Property. In addition, during this period, neither party shall offer, authorize the offering of, or enter into any discussions with any third party concerning, any confidential information applicable to the Proposed Transaction unless required to do so by law or regulation.

This letter states the intention of the parties made in good faith, and the representations made herein are intended to be and are binding obligations for the parties to consummate the Proposed Transaction. This letter replaces and supersedes all previous correspondence and discussions concerning the Proposed Transaction.

If you agree with the terms and conditions described above, please so indicate by signing the enclosed copy of this letter in the space provided and returning it to the undersigned.

Unless this letter is agreed to by Seller on or before 5 PM, C.S.T., on April 28, 2023, the offer made herein shall terminate except as Purchaser, at its option, may extend it. Purchaser

reserves the right to withdraw this letter by oral or written notice to Property Owner at any time before its receipt of Property Owners written acceptance of this letter.

By their signatures below, the persons signing this Letter of Intent represent and warrant that they have the authority to bind the Tenant and Property Owner to the terms set forth herein.

_____
Kapital Investment Partners LLC (Romeo Kapudija)

ACCEPTED AND AGREED TO THIS ____ DAY of APRIL_____, 2023

_____
Calabrese Family Living Trust (Don Calabrese)

LUXE CORSA

AUTO SUITES

Lake Zurich / Village Board Review
October 1, 2025

OKW Architects

PEARSON, BROWN & ASSOCIATES, INC.
CONSULTING ENGINEERS

July 15, 2025

Luxe Corsa Auto Suites
Architectural Narrative

The architecture of the Luxe Corsa Auto Suite development reflects a high level of refinement to match the expectations of a design-oriented group of buyers. The buildings on site include the car condo buildings (121 maximum units), a 2-story dealership / coffee shop, and a 2-story clubhouse. The architecture of all three building types evokes racing-oriented themes.

The dealership / coffee shop building fronts Rand Road and therefore creates the first impression of the site. The building architecture features a transparent corner of glass to showcase exotic vehicles. Punctuated by illuminated racing stripes and accent metal, the primary building façade material is a high-density fiber cement panel of varying textures.

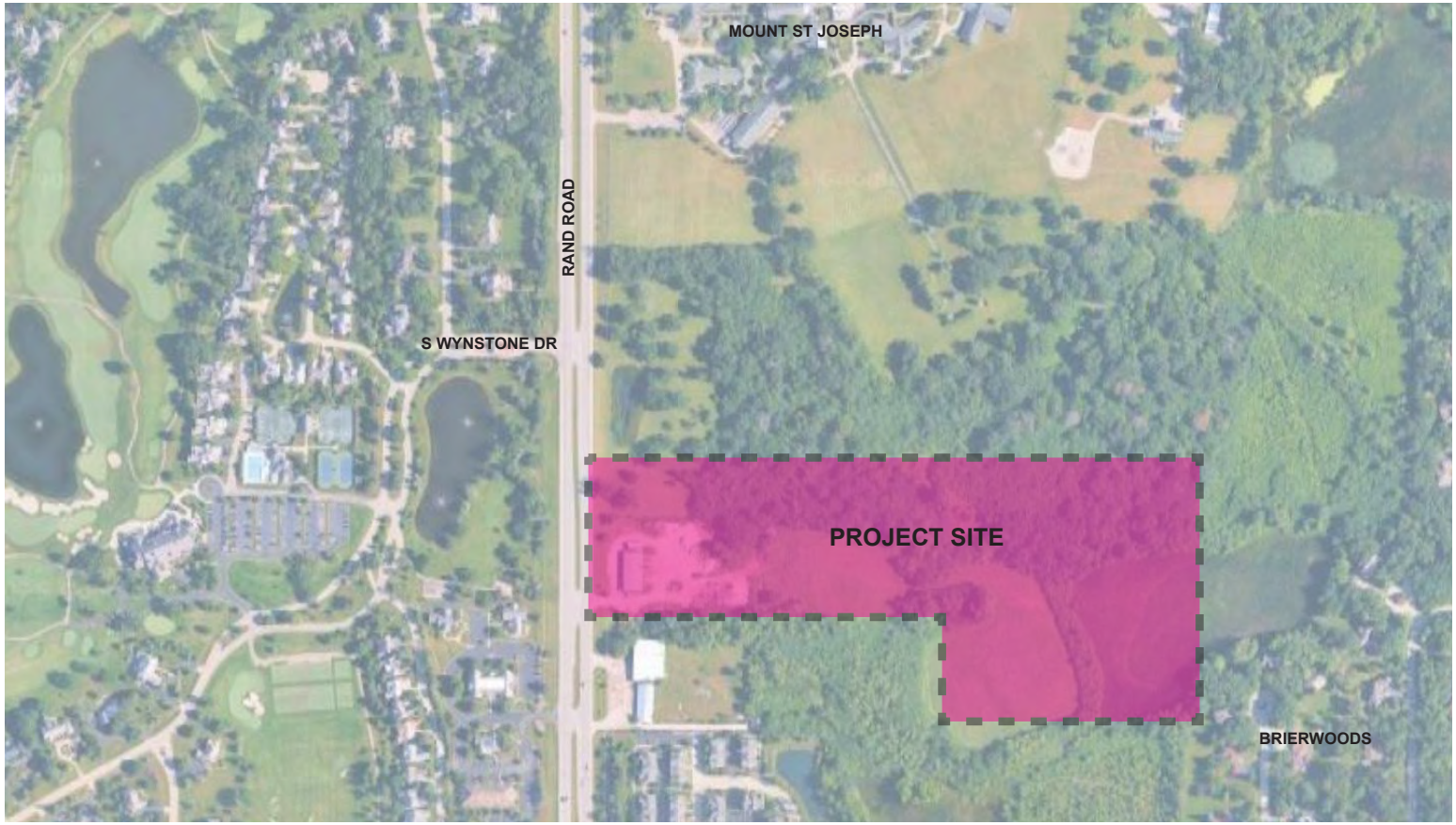
Beyond an electronic gate, the bulk of the rest of the site is comprised of the car condo buildings. The buildings vary in size and depth, as some of the buildings are single-loaded and others have back-to-back units. The building architecture incorporates fiber cement panels, accented by wood-look headers above the garage doors. The buildings are differentiated by varying tones on the façade and by an intentional series of race track / wayfinding graphics on the end caps of each unit. These graphics will be illuminated by indirect lighting so that they are visible into the early evening hours. The theme of racing and movement is further illustrated through varying spacing on joints and reveals across the façade.

The clubhouse building creates a focal point in the middle of the site. The architecture is intentionally dramatic, through use of a dark fiber cement exterior accented by dark metal. The entry canopy is incorporates illuminated racing stripes and the second floor offers a welcoming terrace with string lights.

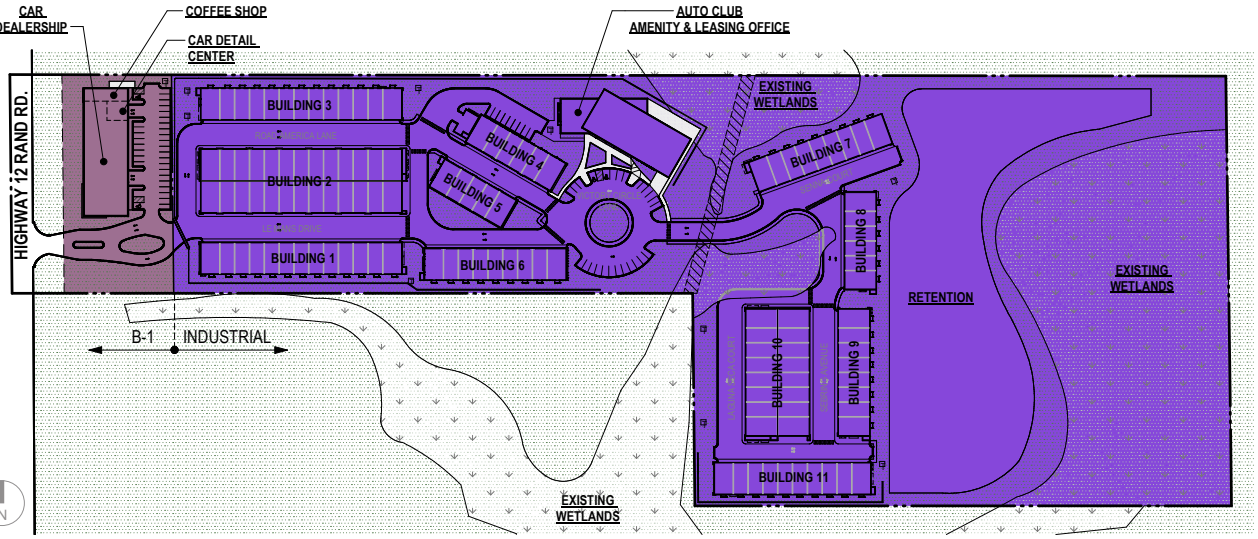
OKW Architects

OKW ARCHITECTS
600 W. Jackson, Suite 250
Chicago, Illinois 60661
P: 312.798.7700
okwarchitects.com

SITE OVERVIEW



ZONING OVERVIEW



SITE PLAN
SCALE: 1" = 160' - 0"

DEVELOPMENT SUMMARY

DEALERSHIP : B-1 (BUSINESS)

SECTION		ZONING REQ	PROPOSED	NOTES
9-4-2, 9-4-3	PLANNED UNIT DEVELOPMENTS PER CH. 22	SPECIAL USE, PLANNED UNIT DEVELOPMENTS	SPECIAL USE, PLANNED UNIT DEVELOPMENTS	
			USE: CAR DEALERSHIP	
			USE: COFFEE SHOP, NO DRIVE THRU	
			USE: AUTO DETAILING	
9-4-10	HEIGHT	MAX 35', 2 STORIES	35'-0" , 2 STORIES	
	LOT AREA	20,000 SF	57,576 SF	
	LOT WIDTH	100'	339.32'	
	SETBACKS			
	FRONT	50' ABUTTING ROUTE 12	30.18'	
	SIDE	10'	NORTH - 10' FROM PATIO, 20'-3" FROM BUILDING SOUTH - 119'-3"	
	REAR	25'	5' FROM PARKING, 66' FROM BUILDING	DIMENSION TO REAR OF B-1 ZONE, NOT TO OVERALL SITE
	FAR	0.18 RETAIL USE	19,000 SF / 57,576 SF = 0.33	NOT INCLUDING HWY 12 R.O.W.
	MIN LANDSCAPE AREA	40%	37%	
9-10-1	PARKING	COFFEE SHOP - 8 SPACES DETAIL CENTER - 4 SPACES DEALERSHIP - 60 SPACES TOTAL - 72 SPACES	32 SPACES PROVIDED	

DEVELOPMENT SUMMARY

CAR CONDOS AND CLUB HOUSE : INDUSTRIAL

SECTION		ZONING REQ	PROPOSED	NOTES
9-6-2, 9-6-3	PLANNED UNIT DEVELOPMENTS PER CH. 22	SPECIAL USE, PLANNED UNIT DEVELOPMENTS	SPECIAL USE, PLANNED UNIT DEVELOPMENTS	
			USE: CAR CONDOMINIUM STORAGE UNITS	
			USE: CLUBHOUSE ACCESSORY TO MAIN USE	
9-9-1	ACCESSORY STRUCTURE-CLUBHOUSE		CLUBHOUSE ACCESSORY TO MAIN USE	
9-4-10	HEIGHT	MAX 55'	CAR CONDO : 30'-0", 2 STORY CLUBHOUSE : 35'-0", 2 STORY	
	LOT AREA	20,000 SF	828,098 SF	
	LOT WIDTH	100'	339.32'	
	SETBACKS			
	FRONT	35'	38'-1"	DIMENSION TO FRONT OF INDUSTRIAL ZONE NOT TO OVERALL SITE
	SIDE	20'	NORTH - 20' FROM BUILDING, 16' FROM BALCONY SOUTH - 17'-5" FROM BUILDING, 13'-5" FROM BALCONY	
	REAR	25'	VARIES, 518' MIN	
	FAR	0.45	243,100 CAR CONDO + 24,500 CLUBHOUSE = 267,380 SF / 828,098 SF = 0.32	
	MIN LANDSCAPE AREA	20%	57%	
9-10-1	PARKING	CAR CONDOS - 25 SPACES CLUBHOUSE - 104 SPACES TOTAL - 129 SPACES	CAR CONDOS - 536 SPACES CLUBHOUSE - 26 SPACES TOTAL - 562 SPACES	

OKW Architects
OKW ARCHITECTS
600 W. Jackson, Suite 250
Chicago, IL 60661

LUXE CORSA

LUXE CORSA AUTO SUITES
Lake Zurich, IL
October 1, 2025 Project #: 25009

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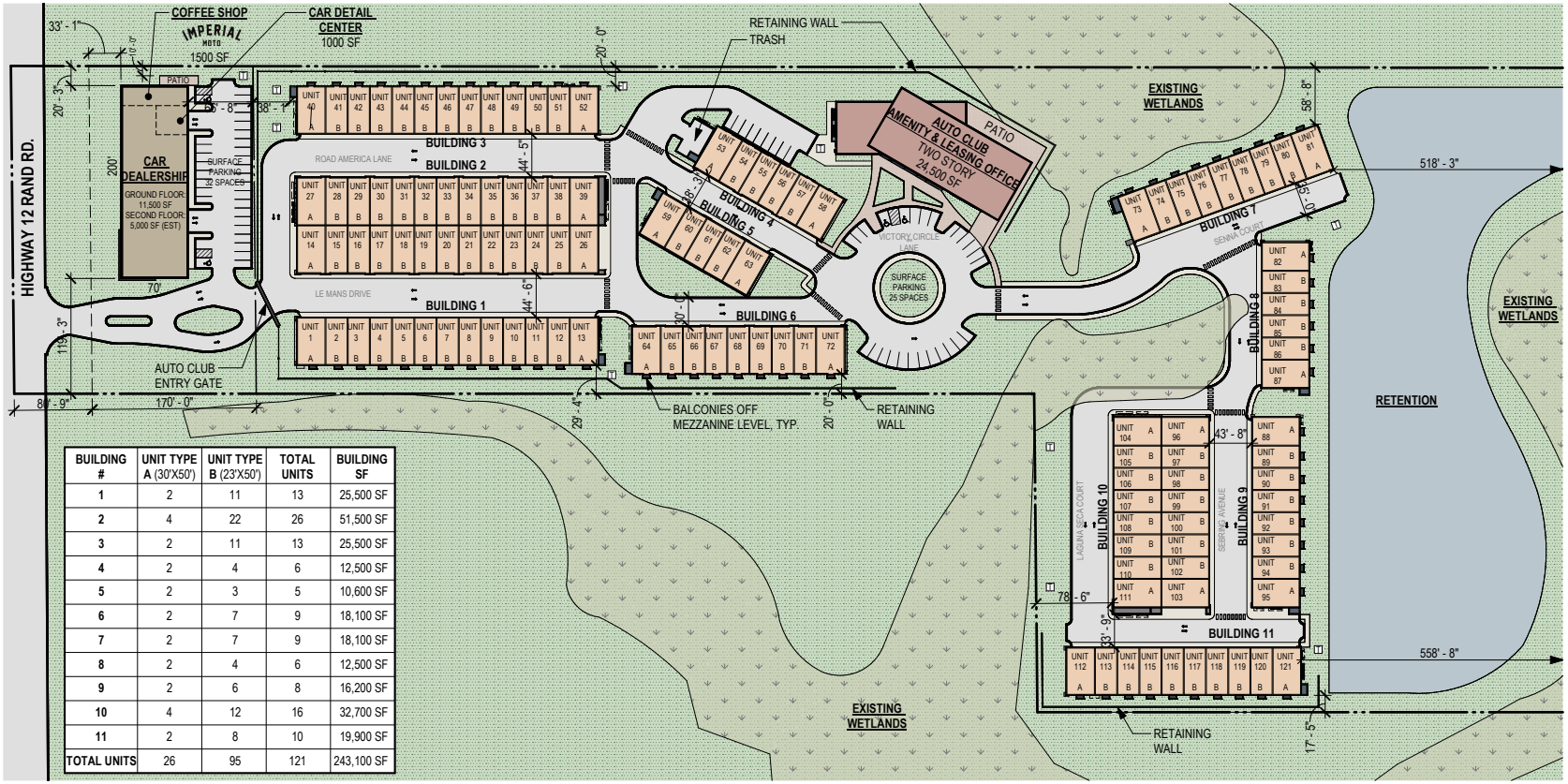
SITE PLAN



BUILDING #	UNIT TYPE A (30'X50')	UNIT TYPE B (23'X50')	TOTAL UNITS	BUILDING SF
1	2	11	13	25,500 SF
2	4	22	26	51,500 SF
3	2	11	13	25,500 SF
4	2	4	6	12,500 SF
5	2	3	5	10,600 SF
6	2	7	9	18,100 SF
7	2	7	9	18,100 SF
8	2	4	6	12,500 SF
9	2	6	8	16,200 SF
10	4	12	16	32,700 SF
11	2	8	10	19,900 SF
TOTAL UNITS	26	95	121	243,100 SF

SITE PLAN
SCALE: 1" = 100' - 0"

OKW Architects
OKW ARCHITECTS
600 W. Jackson, Suite 250
Chicago, IL 60661

LUXE CORSA

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Lake Zurich, IL
October 1, 2025 Project #: 25009

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VIEW OF DEALERSHIP

OKW ARCHITECTS
600 W. Jackson, Suite 250
Chicago, IL 60661

LUXE CORSA

LUXE CORSA AUTO SUITES
Lake Zurich, IL
October 1, 2025 Project #: 25009

VIEW OF DEALERSHIP

OKW ARCHITECTS
600 W. Jackson, Suite 250
Chicago, IL 60661

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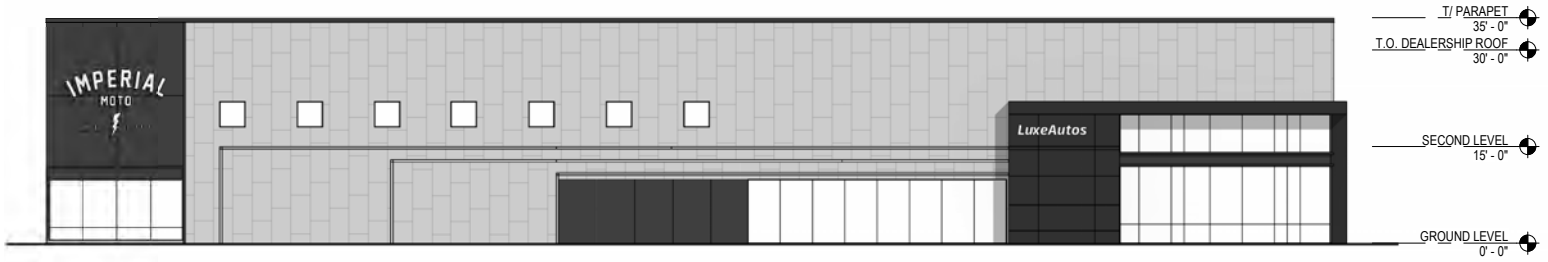
Lake Zurich, IL
October 1, 2025 Project #: 25009

DEALERSHIP ELEVATIONS

SOUTH ELEVATION
SCALE: 1/16" = 1' - 0"



WEST ELEVATION
SCALE: 1/16" = 1' - 0"

OKW Architects
OKW ARCHITECTS
600 W. Jackson, Suite 250
Chicago, IL 60661

LUXE CORSA

LUXE CORSA AUTO SUITES
Lake Zurich, IL
October 1, 2025 Project #: 25009

AUTO CLUB ENTRANCE

OKW ARCHITECTS
600 W. Jackson, Suite 250
Chicago, IL 60661

LUXE CORSA

LUXE CORSA AUTO SUITES
Lake Zurich, IL
October 1, 2025 Project #: 25009

AUTO CLUB CLUBHOUSE

OKW ARCHITECTS
600 W. Jackson, Suite 250
Chicago, IL 60661

LUXE CORSA

LUXE CORSA AUTO SUITES
Lake Zurich, IL
October 1, 2025 Project #: 25009

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AUTO CLUB CLUBHOUSE

OKW ARCHITECTS
600 W. Jackson, Suite 250
Chicago, IL 60661

LUXE CORSA

LUXE CORSA AUTO SUITES
Lake Zurich, IL
October 1, 2025 Project #: 25009

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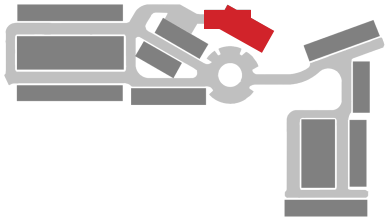
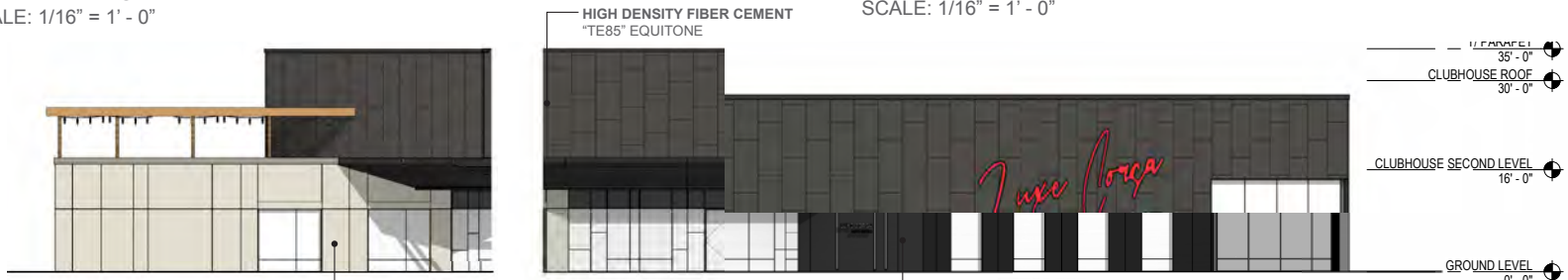
ELEVATIONS - CLUBHOUSE



NORTH ELEVATION 1
SCALE: 1/16" = 1' - 0"

NORTH ELEVATION 2
SCALE: 1/16" = 1' - 0"

WEST ELEVATION
SCALE: 1/16" = 1' - 0"



SOUTH ELEVATION
SCALE: 1/16" = 1' - 0"

OKW Architects
OKW ARCHITECTS
600 W. Jackson, Suite 250
Chicago, IL 60661

LUXE CORSA

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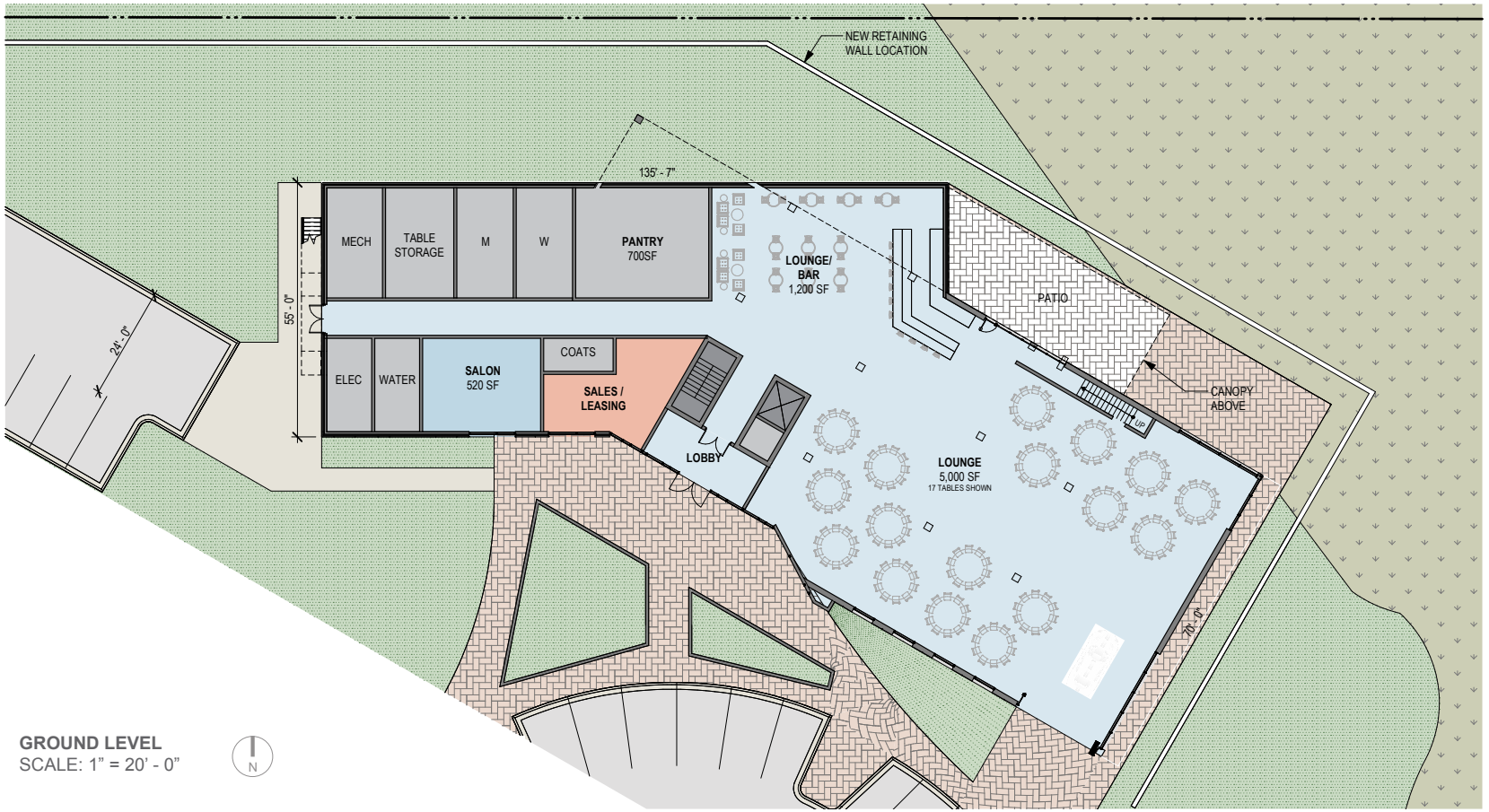
Lake Zurich, IL
October 1, 2025 Project #: 25009

11

CLUBHOUSE



GROUND LEVEL
SCALE: 1" = 20' - 0"

N

OKW ARCHITECTS
600 W. Jackson, Suite 250
Chicago, IL 60661

LUXE CORSA

LUXE CORSA AUTO SUITES
Lake Zurich, IL
October 1, 2025 Project #: 25009

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CLUBHOUSE

GROUND LEVEL
SCALE: 1" = 20' - 0"

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Chicago, IL 60661

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October 1, 2025 Project #: 25009

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AUTO CLUB VIEW OF BUILDINGS 3 THROUGH 5

OKW ARCHITECTS
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Chicago, IL 60661

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AUTO CLUB VIEW OF BUILDING 4

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AUTO CLUB VIEW OF BUILDING 5

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AUTO CLUB VIEW OF BUILDING 4

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AUTO CLUB VIEW OF BUILDINGS 3 THROUGH 5

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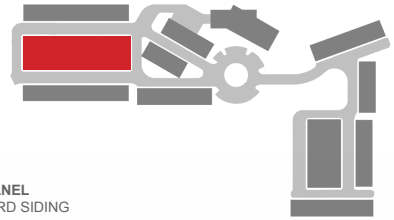
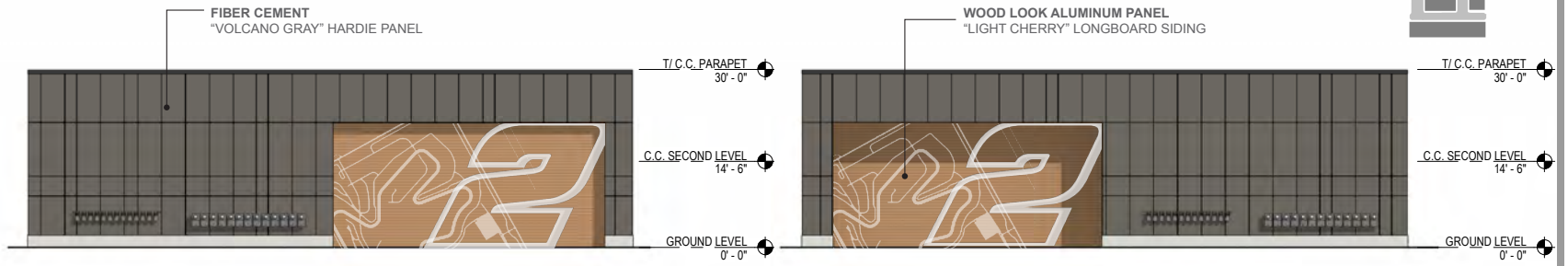
October 1, 2025 Project #: 25009

AUTO CLUB ELEVATIONS

BUILDING 2





WEST ELEVATION
SCALE: 1/16" = 1' - 0"

EAST ELEVATION
SCALE: 1/16" = 1' - 0"

SOUTH ELEVATION
SCALE: 1/16" = 1' - 0"

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Lake Zurich, IL
October 1, 2025 Project #: 25009

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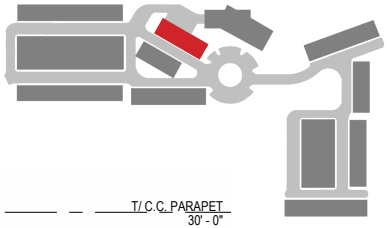
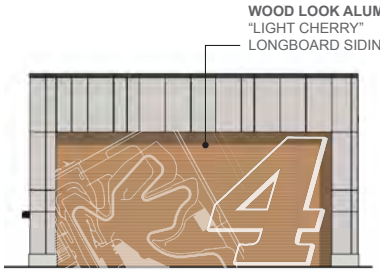
AUTO CLUB ELEVATIONS

BUILDING 4



NORTH ELEVATION
SCALE: 1/16" = 1' - 0"



EAST ELEVATION
SCALE: 1/16" = 1' - 0"

SOUTH ELEVATION
SCALE: 1/16" = 1' - 0"

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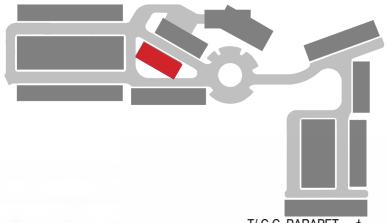
Lake Zurich, IL
October 1, 2025 Project #: 25009

AUTO CLUB ELEVATIONS

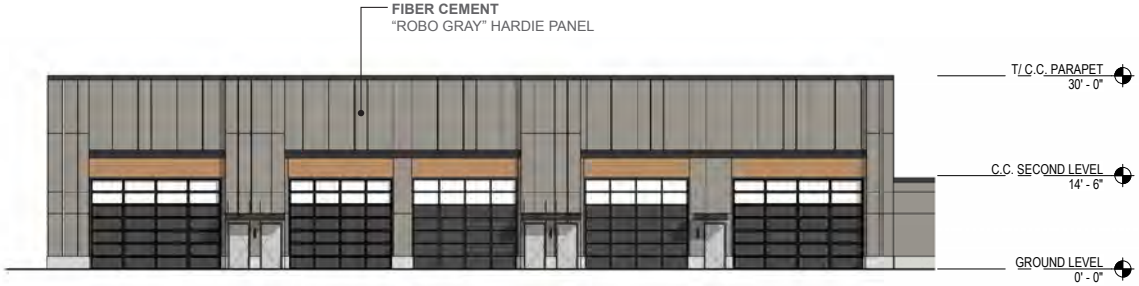
BUILDING 5



EAST ELEVATION
SCALE: 1/16" = 1' - 0"

SOUTH ELEVATION
SCALE: 1/16" = 1' - 0"

WEST ELEVATION
SCALE: 1/16" = 1' - 0"



NORTH ELEVATION
SCALE: 1/16" = 1' - 0"

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LUXE CORSA

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Lake Zurich, IL
October 1, 2025 Project #: 25009

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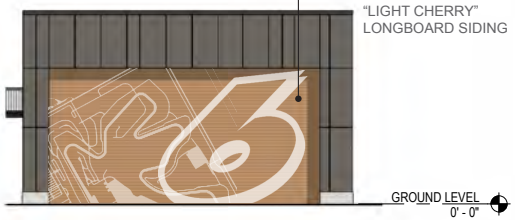
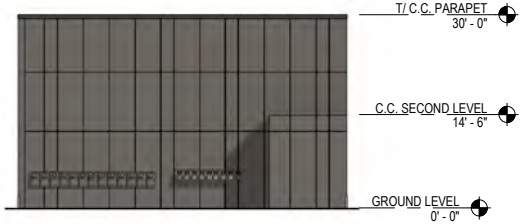
AUTO CLUB ELEVATIONS

BUILDING 6



EAST ELEVATION
SCALE: 1/16" = 1' - 0"



WEST ELEVATION
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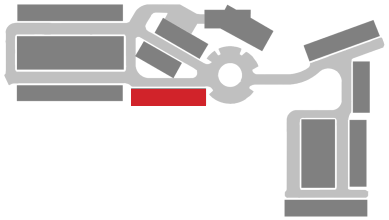

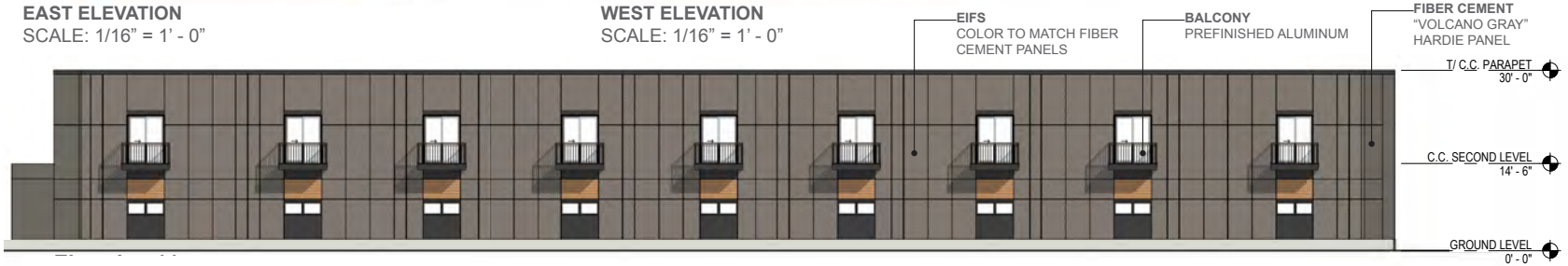

SOUTH ELEVATION
SCALE: 1/16" = 1' - 0"

NORTH ELEVATION
SCALE: 1/16" = 1' - 0"

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Lake Zurich, IL
October 1, 2025 Project #: 25009

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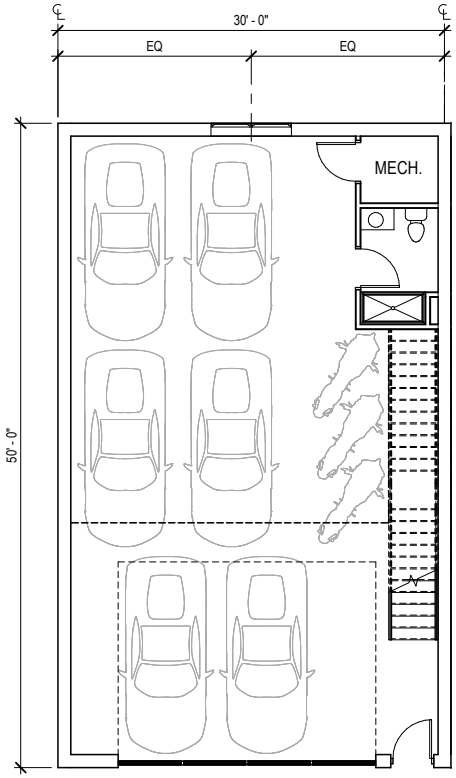
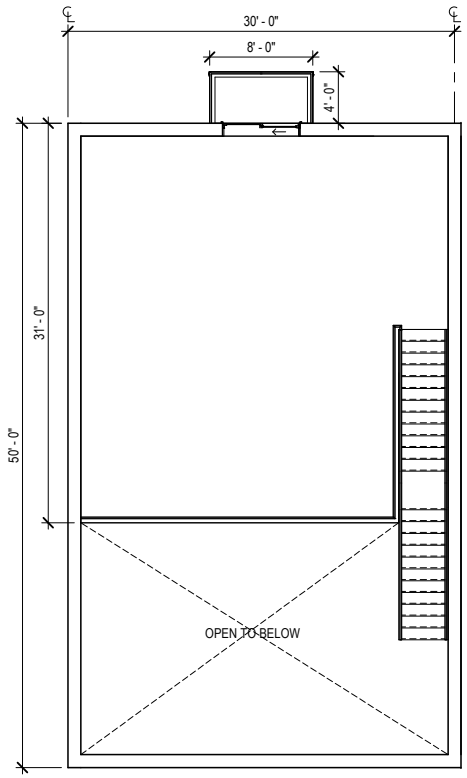
UNIT PLANS - TYPE A



UNIT 1ST FLOOR
1,500 SF
SCALE: 1/8" = 1' - 0"



UNIT MEZZANINE
930 SF
SCALE: 1/8" = 1' - 0"

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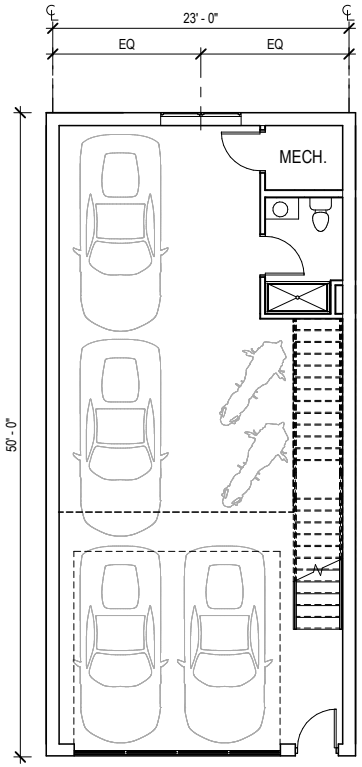
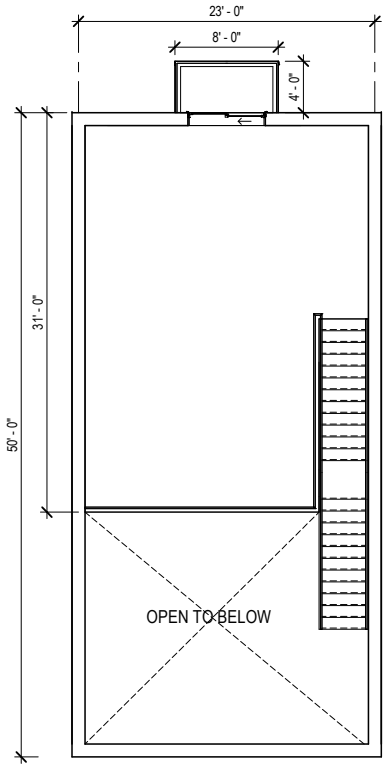
October 1, 2025 Project #: 25009

UNIT PLANS - TYPE B



UNIT 1ST FLOOR
1,150 SF
SCALE: 1/8" = 1' - 0"



UNIT MEZZANINE
713 SF
SCALE: 1/8" = 1' - 0"

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LUXE CORSA

LUXE CORSA AUTO SUITES
Lake Zurich, IL
October 1, 2025 Project #: 25009

MATERIALS

CAR CONDOS

FIBER CEMENT PANEL
BASIS OF DESIGN:
HARDIE ARCHITECTURAL COLLECTION
ALTERNATE: NICHIHA, ILLUMINATION SERIES

DREAM COLLECTION: VOLCANO GRAY

DREAM COLLECTION: ROBO GRAY

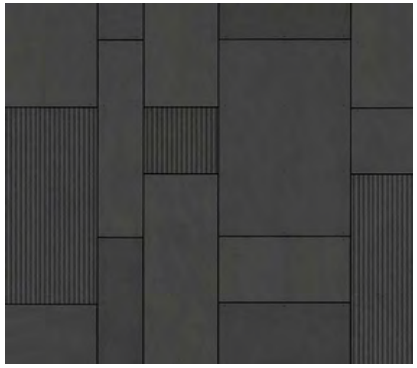
DREAM COLLECTION: PLASTER WHITE

WOOD LOOK ALUMINUM SIDING
BASIS OF DESIGN:
LONGBOARD TONGUE & GROOVE PLANKS
FINISH: LIGHT CHERRY
ALTERNATE: NICHIHA, ROUGHSAWN,PECAN

EIFS
FINISH: FINE

METAL PANEL

CLUBHOUSE



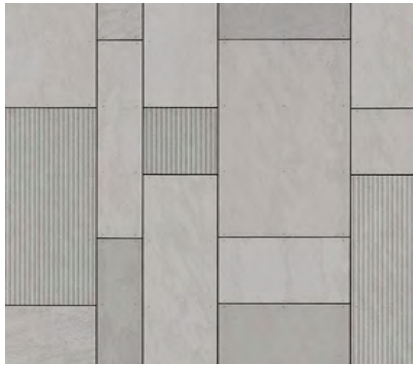
HIGH DENSITY FIBER CEMENT
BASIS OF DESIGN:
EQUITONE TECTIVA TE85

FIBER CEMENT
BASIS OF DESIGN:
EQUITONE - N861

METAL PANEL
BASIS OF DESIGN:
PAC-CLAD - Cchampagne

METAL PANEL

DEALERSHIP



HIGH DENSITY FIBER CEMENT
BASIS OF DESIGN:
EQUITONE TECTIVA TE15

ALTERNATE: PRECAST PANELS WITH INTEGRAL STAIN AND DECORATIVE REVEALS / FORMLINER

METAL PANEL

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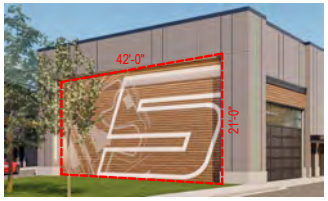
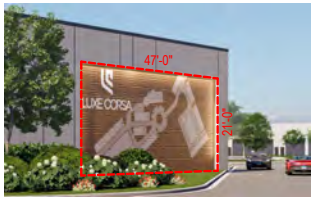
LUXE CORSA

SIGNAGE DIAGRAM

WALL MOUNTED TENANT SIGN
INTERNALLY ILLUMINATED
18' X 14'



A BUILDING NUMBER GRAPHIC, TYP
EXTERNALLY ILLUMINATED
42' X 21'

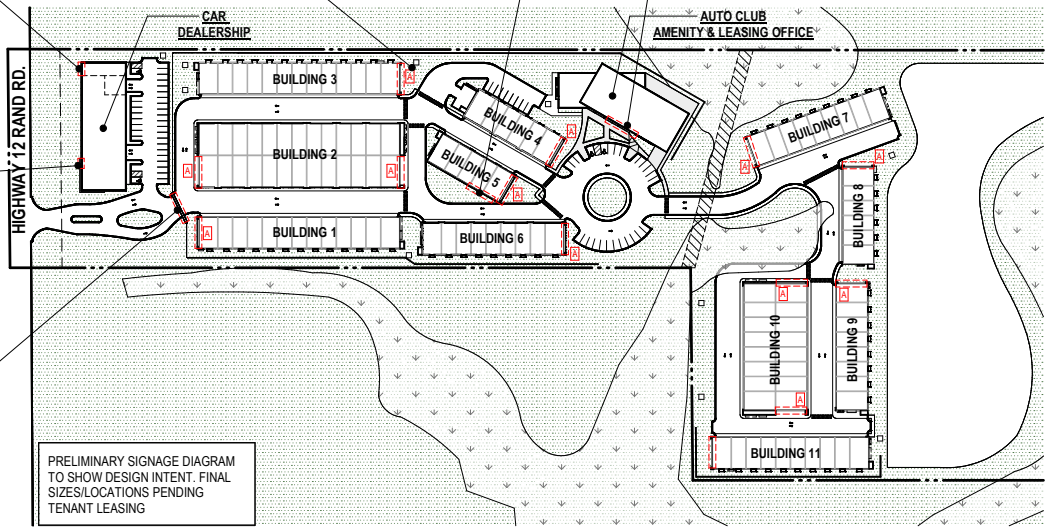


BUILDING NUMBER GRAPHIC
EXTERNALLY ILLUMINATED
47' X 21'

WALL MOUNTED
AUTO SUITE SIGN
INTERNALLY ILLUMINATED
35' X 16' , 7' X 4'

WALL MOUNTED TENANT SIGN
INTERNALLY ILLUMINATED
16' X 5'

WALL MOUNTED AUTOSUITE SIGN
INTERNALLY ILLUMINATED
18' X 6'



PRELIMINARY SIGNAGE DIAGRAM TO SHOW DESIGN INTENT. FINAL SIZES/LOCATIONS PENDING TENANT LEASING

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Chicago, IL 60661

LUXE CORSA

LUXE CORSA AUTO SUITES
Lake Zurich, IL
October 1, 2025 Project #: 25009

Kathryn Talty
landscape architecture

1926 Waukegan Road | Suite 340
Glenview, Illinois 60025
c 847.612.5154
www.ktlandarch.com

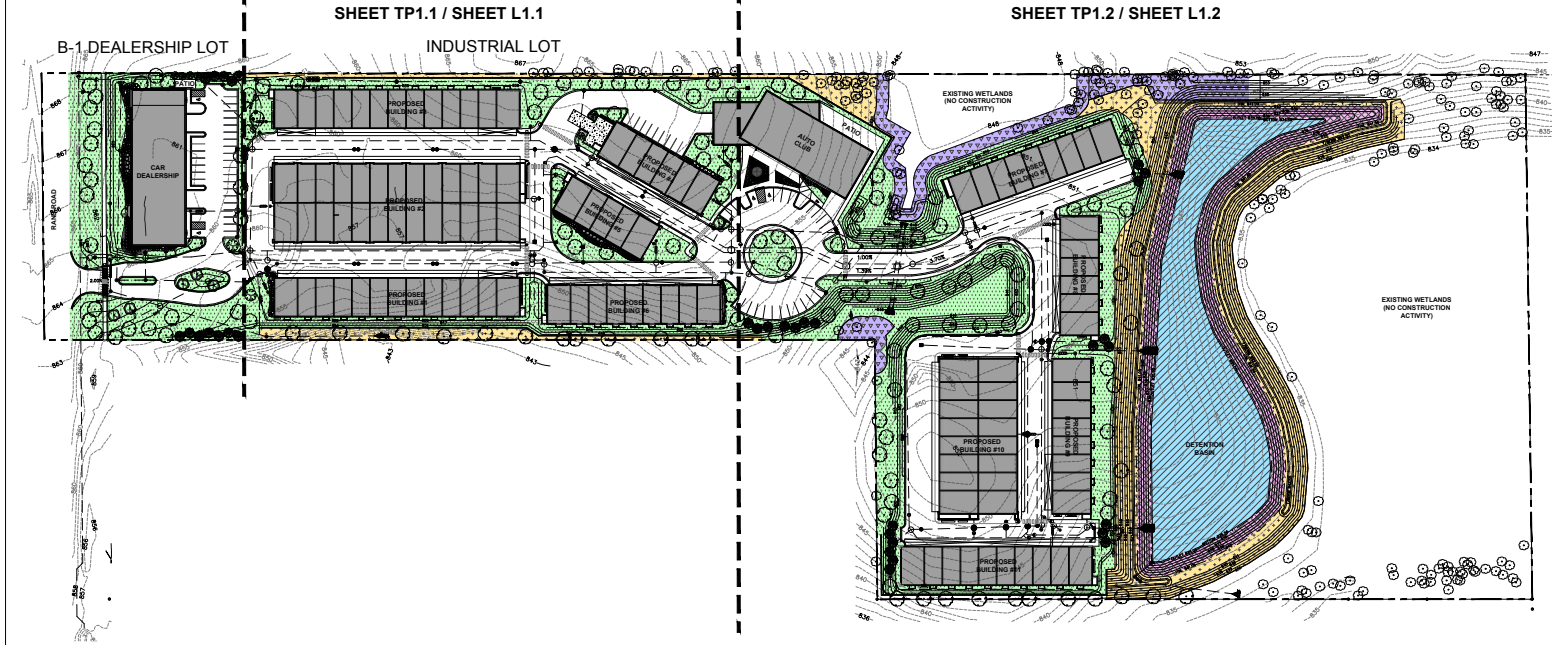
July 15, 2025

Luxe Corsa Auto Suites
Landscape Architecture Narrative

The landscape design of the Lux Corsa Auto Suites blends ornamental planting design with the context of the native landscape in which the site resides, focusing on aesthetic and ecologic attributes.

A full tree inventory and an extensive evaluation of the existing plant material was conducted. The landscape design considered the indigenous tree communities found while performing the inventory and utilized the same or similar species types throughout the plan. The site plan celebrates the existing wetlands and the stormwater basin is treated as an extension of such, by utilizing native, wetland plant communities.

The landscape treatment around the buildings is intended to compliment the architectural design and provide seasonal interest in areas of high visibility along Rand Road. Special attention was paid to the vehicular circulation and screening was provided in areas where headlight spillage may occur. Future, neighboring developments were considered with strategic plant placement, buffering the views into the site from the adjacent uses.



OVERALL LANDSCAPE PLAN

SCALE: 1" = 60'-0"

N

0 30' 60' 120'

Lake Zurich Landscape Ordinance Requirement Summary

	Required	Proposed
B-1 Dealership Lot		
North: Dealership Patio and parking abutting Mt St Joseph		
Shade Trees (3" cal)		3
Evergreen Trees (6' HT)		4
Evergreen Trees (8' HT)		5
East: Dealership abutting Car Condo		
Shade Trees (3" cal)		8
South: Dealership abutting GC zoning in Lake County		
Shade Trees (3" cal)		8
Ornamental Trees (6' HT)		3
Evergreen Trees (8' HT)		7
West: Dealership abutting arterial street (Rand Rd)		
Plant Units & 30% Opacity: 340 LF	6	6
Perimeter: Shade Trees (3" cal)	12	12
Ornamental Trees (6' HT)		2
Shrubs	54	133
Grasses		52
Groundcover		50
Industrial Lot	**Required**	**Proposed**
North: Abutting Mt St Joseph		
Shade Trees (3" cal)		15
Wetlands		
East: Abutting wetland and detention		
Native planted with "No Mow" signage		
South: 541' from edge of turf grass to east lot line		
Shade Trees (3" cal)		3
Native planted with "No Mow" signage		

GROUND TREATMENT KEY

BASE OF DETENTION AREAS BELOW THE NWL

Areas below the NWL to be planted with emergent plugs. See Sheet L2.0 for schedule and Sheet L2.1 for preferred installation method.

DETENTION AREAS BETWEEN THE NWL & HWL

Area of detention between the NWL & HWL to be seeded with "Swale Seed Mix" as supplied by Stantec Native Plant Nursery. See Sheet L2.0 for schedule.

OPEN AREAS - NO MOW

Open areas not including detention, unless otherwise specified, to be seeded with "Low-Profile Prairie Seed Mix" as supplied by Stantec Native Nursery. See Sheet L2.0 for schedule.

OPEN AREAS - NO MOW

Areas within the wetland buffer to be seeded with "Emergent Wetland Seed Mix". See Sheet L2.0 for schedule.

TURF GRASS - MOWED LAWN

All areas of restoration, not designated to be planted or mulched, are to be seeded with standard turf seed grass and covered with an erosion control blanket.

NOTE: All other areas disturbed by construction activities, excluding shrub beds, to be restored with turf grass seed and covered with an erosion control blanket.

no.	revision description	initial	date
	SSDD FOR ICE#	IAF	07-11-25
	INTELLIGENT MOSS	IAF	07-16-25
	SSDD FOR PD#1	SSP	10-01-25

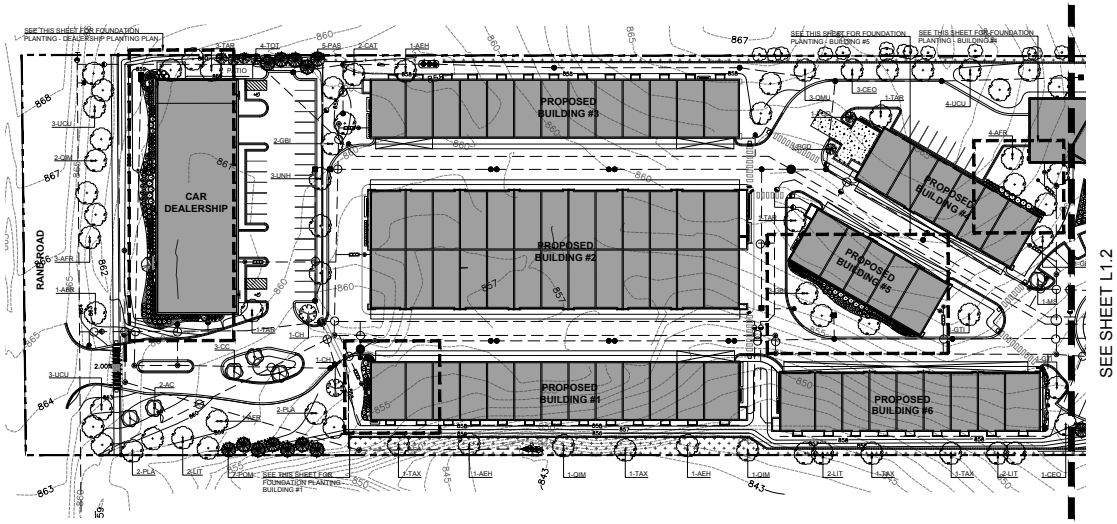
LUXE CORSA
CAR CONDOS
LAKE ZURICH, ILLINOIS

OVERALL LANDSCAPE PLAN
GROUND TREATMENT KEY
LANDSCAPE REQUIREMENTS

date 10.10.25
drawn DSP
checked IAF

job no. 25210

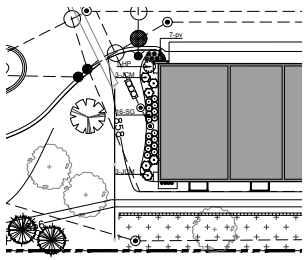
sheet no. L1.0



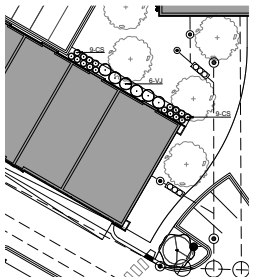
SEE SHEET L1.2

LANDSCAPE PLAN - WEST
SCALE: 1" = 40'-0"

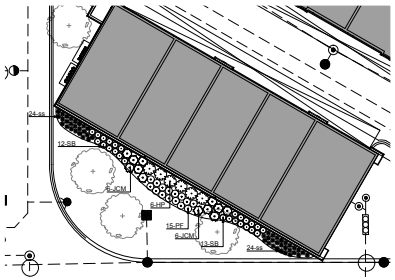
N 0 20' 40' 80'



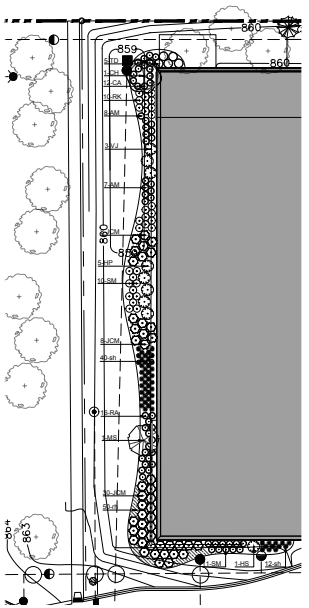
BUILDING #1 PLANTING
SCALE: 1" = 20'-0"



BUILDING #4 PLANTING
SCALE: 1" = 20'-0"



BUILDING #5 PLANTING
SCALE: 1" = 20'-0"



DEALERSHIP PLANTING PLAN
SCALE: 1" = 20'-0"

Kathryn Eddy

no.	revision description	initial	date
	SSMD FOR REVIEW	MT	07-11-25
	INTELLIGENT PROCESS	MT	07-16-25
	SSMD FOR PERMIT	SP	10-01-25

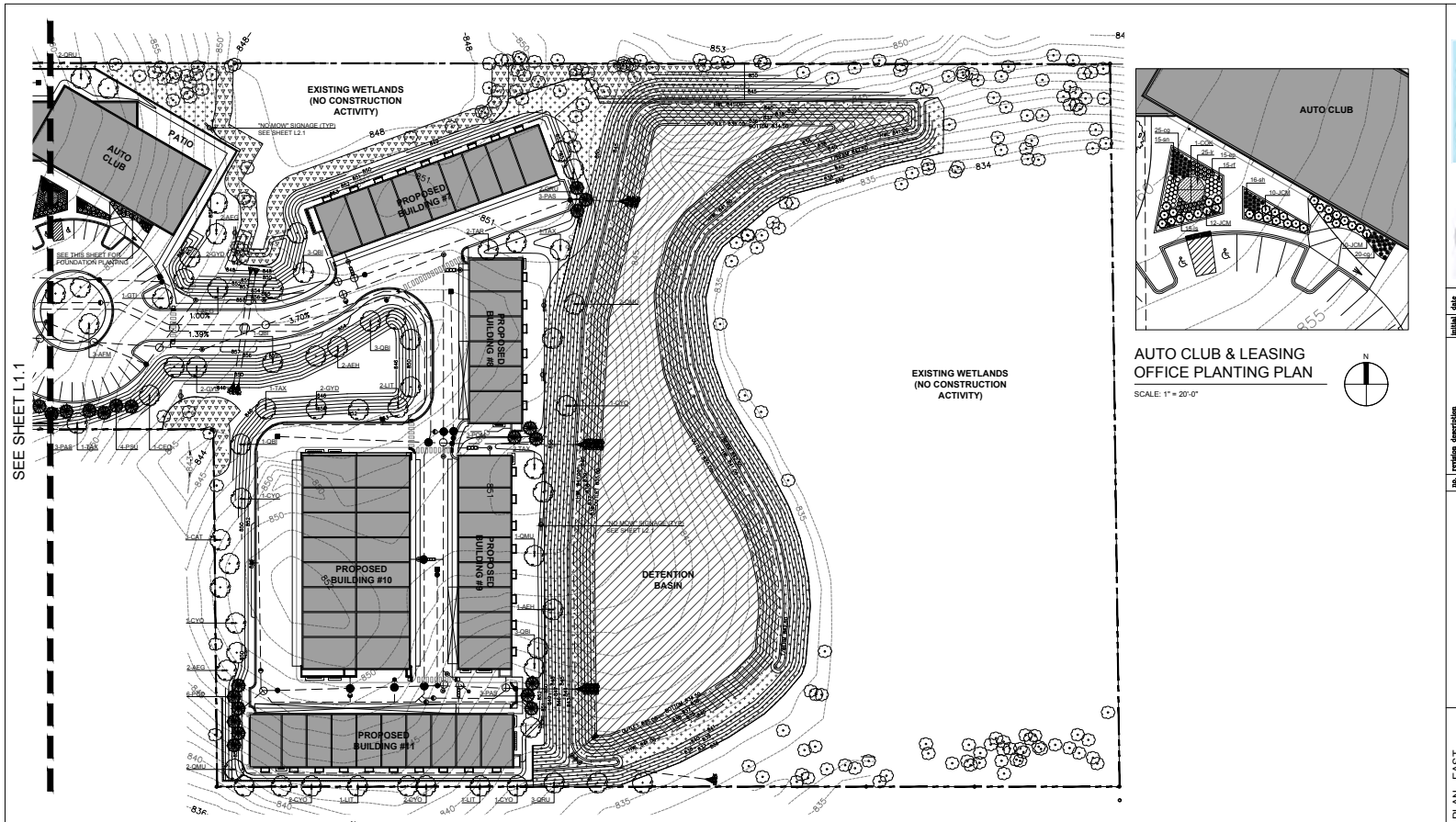
LUXE CORSA
CAR CONDOS
LAKE ZURICH, ILLINOIS

LANDSCAPE PLAN WEST

date 08.18.25
drawn KMP
checked MT

job no. 25210

sheet no. L1.1



AUTO CLUB & LEASING
OFFICE PLANTING PLAN

SCALE: 1" = 20'-0"

N

no.	revision description	initial	date
	SSDD FOR REVIEW	MT	07-11-25
	INTELLIGENT PROCESS	MT	07-16-25
	SSDD FOR PERMIT	SP	10-01-25

LUXE CORSA
CAR CONDOS
LAKE ZURICH, ILLINOIS

LANDSCAPE PLAN - EAST

date: 08.18.25
drawn: ASP
checked: MT

job no.
25210

sheet no.
L1.2

Roster Plant List

Symbol	Quantity	Botanical Name	Common Name	Size	Origin	Notes
		Shade Trees				
AFR	9	ACER X FREEMANII 'AUTUMN BLAZE'	AUTUMN BLAZE FREEMAN MAPLE	3" BB	NATIVAR	
AES	5	AESCULUS GLABRA	OHIO BUCKEYE	3" BB	NATIVE	
AEH	6	AESCULUS HIPPOCASTANUM	COMMON HORSECHESTNUT	3" BB	NATIVE	
CYO	4	CARYA OVATA	SHAGBARK HICKORY	3" BB	NATIVE	
CAT	5	CATALPA SPECIOSA	NORTHERN CATALPA	3" BB	NATIVE	
CEO	5	CELTIS OCCIDENTALIS	HACKBERRY	3" BB	NATIVE	
GIB	8	GINKGO BILOBA 'AUTUMN GOLD'	GINKGO	3" BB		MALE SPEC ONLY
GTI	3	GLEDITSIA TRIACANTHOS 'SHADEMASTER'	SHADEMASTER HONEYLOCUST	3" BB		
GYD	8	GYMNOCLADUS DIOICUS	KENTUCKY COFFEETREE	3" BB	NATIVE	
LIT	10	LIRIODENDRON TULIPIFERA	TULIPTREE	3" BB	NATIVE	
PLA	4	PLATANUS x ACERIFOLIA 'MORTON CIRCLE'	EXCLAIMATION LONDON PLANETREE	3" BB	NATIVE	
QIB	11	QUERCUS BICOLOR	SWAMP WHITE OAK	3" BB	NATIVE	
QIM	4	QUERCUS IMBRICARIA	SHINGLE OAK	3" BB	NATIVE	
QMU	8	QUERCUS MUEHLENBERGII	CHINKAPIN OAK	3" BB	NATIVE	
QRU	7	QUERCUS RUBRA	RED OAK	3" BB	NATIVE	
TAX	9	TAXODIUM DISTICHUM	BALD CYPRESS	3" BB		
TAR	8	TILIA AMERICANA 'REDMOND'	REDMOND AMERICAN LINDEN	3" BB	NATIVAR	
VCU	10	ULMUS x 'MORTON'	ACCOLADE ELM	3" BB		
UNH	3	ULMUS x 'NEW HORIZON'	NEW HORIZON ELM	3" BB		
		Evergreen Trees				
PAG	5	PICEA ABIES	NORWAY SPRUCE	6' BB		
PGD	8	PICEA GLAUCA VAR. DENDATA	BLACK HILLS SPRUCE	6' BB		
POM	7	PICEA OMORIKA	SERBIAN SPRUCE	6' BB		
PSU	4	PSEUDOTSUGA MENZIESII	DOUGLAS FIR	6' BB		
TOT	3	THUJA OCCIDENTALIS 'TECHNY'	TECHNY ARBORVITAE	6' BB	NATIVAR	
		Ornamental Trees				
AC	2	AMELANCHIER CANADENSIS	SHADBLOW SERVICEBERRY	6' BB	NATIVE	
CC	3	CERCIS CANADENSIS	EASTERN REDBUD	6' BB	NATIVE	
CH	3	CHIONANTHUS VIRGINICUS	WHITE FRINGETREE	6' BB	NATIVE	
COK	1	CORNUS KOUSA	KOUSA DOGWOOD	6' BB		
MS	2	MALUS SARGENT	SARGENT CRABAPPLE	6' BB		
		Evergreen Shrubs				
JCM	90	JUNIPERUS CHINENSIS 'MINT JULIP'	MINT JULIP SPREADING JUNIPER	24" BB		
TO	11	TAXUS x MEDIA 'DENSI'	DENSE YEW	24" BB		
		Deciduous Shrubs				
AM	15	ARONIA MELANOCARPA 'IROQUOIS BEAUTY'	IROQUOIS BEAUTY BLACK CHOKEBERRY	5 GAL	NATIVAR	
CA	29	CLETHRA ALNIFOLIA 'HUMMINGBIRD'	HUMMINGBIRD CLETHRA	5 GAL	NATIVAR	
HS	1	HIBISCUS SYRIACUS	ROSE OF SHARON	6' BB		
HP	12	HYDRANGEA PANICULATA 'TARDIVA'	TARDIVA HYDRANGEA	36" BB		
PF	15	POTENTILLA FRUTICOSA 'GOLD DROP'	GOLD DROP POTENTILLA	5 GAL	NATIVAR	
RA	18	RHUS AROMATICA 'GRO LOW'	GRO LOW SUMAC	5 GAL	NATIVAR	
RK	10	ROSA 'KNOCKOUT'	KNOCKOUT SHRUB ROSE	2 GAL		
SG	16	SPIREA JAPONICA 'GOLD FLAME'	GOLD FLAME SPIREA	24" BB		
SM	21	SYRINGA MEYERI 'PALIBIN'	DWARF KOREAN LILAC	24" BB		
SB	25	SYRINGA x 'BLOOMERANG'	BLOOMERANG LILAC	5 GAL		
VJ	9	VIBURNUM X JUDDII	JUDD VIBURNUM	36" BB		
		Groundcover				
V	50	LIRIOPE SPICATA	CREEPING LILYTURF	3" POTS		
H	50	RUELLIA HUMILIS	WILD PETUNIA	3" POTS	NATIVE	
		Perennials				
KB	15	ECHINACEA PALLIDA	PALE PURPLE CONEFLOWER	1 GAL	NATIVE	
N	15	LEUCANTHEMUM X SUPERBUM 'BECKY'	SHASTA DAISY	1 GAL		
rf	15	RUDBECKIA FULGIDA var. SPECIOSA	BLACK-EYED SUSAN	1 GAL	NATIVE	
sn	15	SALVIA NEMEROSA 'CARADONNA'	CARADONNA SALVIA	1 GAL		
		Grasses				
cg	45	CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER'	FEATHER REED GRASS	3 GAL		
pv	7	PANICUM VIRGATUM	SWITCH GRASS	3 GAL	NATIVE	
sh	48	SCHIZACHYRIUM SCOPARIUM 'PRAIRIE BLUES'	LITTLE BLUESTEM	1 GAL	NATIVAR	
sh	52	SPOROBOLUS HETEROLEPIS	PRAIRIE DROPSEED	1 GAL	NATIVE	

Emergent Plugs - Permanent Standing Water

Symbol	Quantity	Botanical Name	Common Name	Size	Mean height	Notes
	12	ACORUS AMERICANUS	SWEET FLAG	3" PLUG	2'	12" O.C. - FORB
	8	ALISMA SUBCORDATUM	MUD PLANTAIN	3" PLUG	3'	24" O.C. - FORB
	8	ASCLEPIAS INCARNATA	SWAMP MILKWEED	3" PLUG	4'	24" O.C. - FORB
	12	CALTHA PALUSTRIS	MARSH MARIGOLD	3" PLUG	2'	12" O.C. - FORB
	3	CAREX AQUATILIS	WATER SEDGE	3" PLUG	5'	48" O.C. - GSR
	6	CAREX LACUSTRIS	COMMON LAKE SEDGE	3" PLUG	3'	36" O.C. - GSR
	6	CAREX VULPINOIDEA	FOX SEDGE	3" PLUG	3'	36" O.C. - GSR
	8	IRIS VERSICOLOR	BLUE FLAG IRIS	3" PLUG	3'	24" O.C. - FORB
	3	JUNCUS EFFUSUS	COMMON RUSH	3" PLUG	2'	24" O.C. - GSR
	6	LOBELIA CARDINALIS	CARDINAL FLOWER	3" PLUG	4'	36" O.C. - FORB
	8	PONTEDERIA CORDATA	PICKEREL WEED	3" PLUG	3'	24" O.C. - FORB
	8	SAGITTARIA LATIFOLIA	COMMON ARROWHEAD	3" PLUG	3'	24" O.C. - FORB
	3	SCHOENOPLECTUS ACUTUS	HARD-STEMMED BULRUSH	3" PLUG	6'	48" O.C. - GSR
	8	SCHOENOPLECTUS TABERNAEMONTANI	GREAT BULRUSH	3" PLUG	6'	48" O.C. - GSR
	8	SOLIDAGO OHIOENSIS	OHIO GOLDENROD	3" PLUG	3'	24" O.C. - FORB
	8	SPARGANIUM EURYCARPUM	GREAT BUR REED	3" PLUG	4'	24" O.C. - FORB

Notes: Plant quantities are estimated based on spacing recommended. Quantity reflects 1,000 SF - Multiply across total area to be treated with emergents
Plugs to be planted in groupings of "like species"
Final layout to be approved by Landscape Architect

Swale Seed Mix

Botanical Name	Common Name	PLS Ounces/Acre
Permanent Grasses/Sedges:		
Andropogon gerardii	Big Bluestem	4.00
Carex crinitaeifa	Crested Owl Sedge	3.00
Carex lurida	Bottlebrush Sedge	3.00
Carex spp.	Prairie Sedge Species	6.00
Carex vulpinoidea	Brown Fox Sedge	3.00
Elymus canadensis	Canada Wild Rye	16.00
Elymus virginicus	Virginia Wild Rye	16.00
Juncus canadensis	Canadian Rush	1.00
Panicum virgatum	Switch Grass	3.00
Scirpus atrovirens	Dark Green Rush	2.00
Scirpus cyperinus	Wool Grass	0.50
Spartina pectinata	Prairie Cord Grass	3.00
	Total	66.00
Temporary Cover:		
Avena sativa	Common Oat	512.00
	Total	512.00
Forbs:		
Alisma subcordatum	Common Water Plantain	1.00
Asclepias incarnata	Swamp Milkweed	2.00
Conepsis lutgens	Tall Coreopsis	1.00
Eutherma graminifolia	Common Grass-Leaved Goldenrod	0.50
Eutrochium maculatum	Spotted Joe-Pye Weed	1.00
Iris virginica v. shrevei	Blue Flag	4.00
Lythrs salicaria	Marsh Blazing Star	1.00
Lycopus americanus	Common Water Horehound	0.50
Mimulus ringens	Monkey Flower	0.50
Penthorum sedoides	Ditch Stonecrop	0.50
Pycnanthemum virginianum	Common Mountain Mint	0.50
Rudbeckia hirtida	Brown-Eyed Susan	1.00
Senna hebecarpa	Wild Senna	1.00
Silphium terebinthinaceum	Prairie Dock	1.00
Symphyotrichum novae-angliae	New England Aster	0.50
Verbena hastata	Blue Vervain	0.50
Zizia aurea	Golden Alexanders	2.00
	Total	35.00

Mix Statistics

Native Component	PLS lbs./Acre	PLS Seeds/Acre	PLS Seeds/Sq. Ft.	% of Native Mix
Forbs	1.25	1,161,855	27.13	31.09%
Grasses	3.75	2,619,949	60.15	68.91%
Total Natives	5.00	3,801,804	87.28	100.00%
Cover	30.00	576,000	13.22	
Totals	37.00	4,377,804	100.50	

Low-Profile Prairie Seed Mix

Botanical Name	Common Name	PLS Ounces/Acre
Permanent Grasses:		
Bouteloua curtipendula	Side-Oats Grama	16.00
Carex spp.	Prairie Sedge Species	4.00
Elymus canadensis	Canada Wild Rye	32.00
Koeleria macrantha	June Grass	1.00
Panicum virgatum	Switch Grass	1.00
Schizachyrium scoparium	Little Bluestem	36.00
	Total	90.00
Temporary Cover:		
Avena sativa	Common Oat	512.00
	Total	512.00
Forbs:		
Amorpha canescens	Lead Plant	0.50
Asclepias syriaca	Common Milkweed	2.00
Asclepias tuberosa	Butterfly Weed	2.00
Baptisia alba	White Wild Indigo	2.00
Chamaecrista fasciculata	Partridge Pea	10.00
Conepsis lanceolata	Sand Coreopsis	5.00
Conepsis palmata	Prairie Coreopsis	1.00
Dalea candida	White Prairie Clover	1.50
Dalea purpurea	Purple Prairie Clover	1.50
Desmanthus illinoensis	Illinois Bundleflower	3.00
Echinacea purpurea	Broad-Leaved Purple Coneflower	8.00
Eryngium yuccifolium	Rattlesnake Master	2.00
Liatris aspera	Rough Blazing Star	2.00
Liatris aspera	Rough Blazing Star	0.50
Lupinus perennis v. occidentalis	Wild Lupine	4.00
Monarda fistulosa	Wild Bergamot	0.50
Oligoneuron rigidum	Stiff Goldenrod	1.00
Parthenium integrifolium	Wild Quinine	1.00
Petalostemon digitatus	Foxglove Beard-Tongue	0.50
Petalostemon hirsutus	Hairy Beard-Tongue	1.00
Ratibida pinnata	Yellow Coneflower	4.00
Rudbeckia hirta	Black-Eyed Susan	5.00
Rudbeckia subtomentosa	Sweet Black-Eyed Susan	1.00
Silphium terebinthinaceum	Prairie Dock	1.00
Solidago speciosa	Showy Goldenrod	0.50
Symphyotrichum ericoides	Heath Aster	0.25
Symphyotrichum laeve	Smooth Blue Aster	0.50
Symphyotrichum novae-angliae	New England Aster	0.50
Tradescantia ohiensis	Common Spiderwort	1.00
Verbena stricta	Hoary Vervain	1.00
Vernonia gigantea	Smooth Tall Ironweed	1.50
Veronicastrum virginicum	Culver's Root	0.25
	Total	66.00

Mix Statistics

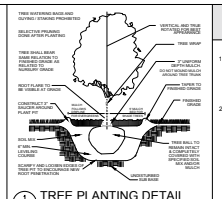
Native Component	PLS lbs./Acre	PLS Seeds/Acre	PLS Seeds/Sq. Ft.	% of Native Mix
Forbs	4.13	1,731,814	39.76	66.32%
Grasses	5.63	891,416	20.46	33.98%
Total Natives	9.75	2,623,230	60.22	100.00%
Cover	32.00	576,000	13.22	
Totals	41.75	3,199,230	73.44	

Emergent Wetland Seed Mix

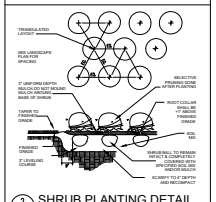
Botanical Name	Common Name	PLS Ounces/Acre
Permanent Grasses/Sedges/Rushes:		
Bolboschoenus fluviatilis	River Bulrush	1.00
Carex comosa	Bristly Sedge	2.50
Carex lacustris	Common Lake Sedge	0.50
Carex lurida	Bottlebrush Sedge	4.00
Carex stricta	Common Tussock Sedge	1.00
Carex vulpinoidea	Brown Fox Sedge	2.00
Eleocharis palustris	Great Spike Rush	1.00
Juncus effusus	Common Rush	1.00
Leersia oryzoides	Rice Cut Grass	3.00
Schoenoplectus acutus	Hard-Stemmed Bulrush	2.50
Schoenoplectus pungens	Chairmaker's Rush	1.50
Schoenoplectus tabernaemontani	Great Bulrush	6.00
	Total	26.00
Temporary Cover:		
Avena sativa	Common Oat	512.00
	Total	512.00
Forbs:		
Acorus americanus	Sweet Flag	1.00
Alisma subcordatum	Common Water Plantain	2.00
Asclepias incarnata	Swamp Milkweed	1.00
Bidhorria cylindrica	False Nettle	1.00
Cephalanthus occidentalis	Buttonbush	6.00
Decodon verticillatus	Swamp Loosestrife	0.50
Eutrochium maculatum	Spotted Joe-Pye Weed	0.50
Hibiscus spp.	Rose Mallow Species	4.00
Iris virginica v. shrevei	Blue Flag	6.00
Lobelia cardinalis	Cardinal Flower	0.25
Lobelia siphilitica	Great Blue Lobelia	0.25
Lycopus americanus	Common Water Horehound	1.00
Mimulus ringens	Monkey Flower	1.00
Peltandra virginica	Arrow Arum	16.00
Penthorum sedoides	Ditch Stonecrop	0.50
Persicaria spp.	Pinkweed Species	2.00
Pontederia cordata	Pickerel Weed	4.00
Sagittaria latifolia	Common Arrowhead	2.00
Sparganium eurycarpum	Common Bur Reed	6.00
Verbena hastata	Blue Vervain	1.00
	Total	56.00

Mix Statistics

Native Component	PLS lbs./Acre	PLS Seeds/Acre	PLS Seeds/Sq. Ft.	% Native Mix
Forbs	3.50	1,354,087	31.08	34.63%
Grasses	1.63	2,556,083	58.68	65.37%
Total Natives	5.13	3,910,179	89.77	100.00%
Cover	32.00	576,000	13.22	
Totals	37.13	4,486,179	103.00	



1 L2.0 TREE PLANTING DETAIL
SCALE: NO SCALE



2 L2.0 SHRUB PLANTING DETAIL
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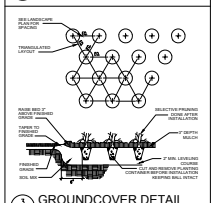

3 L2.0 GROUNDCOVER DETAIL
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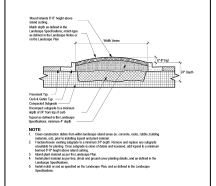
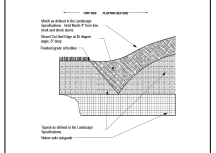


4 L2.0 PARKING ISLAND DETAIL
SCALE: NO SCALE



5 L2.0 SPADED PLANTING BED EDGE DETAIL
SCALE: NO SCALE

GENERAL CONSTRUCTION NOTES

1. REQUIRED LANDSCAPE MATERIAL SHALL SATISFY AMERICAN ASSOCIATION OF NURSERYMEN STANDARDS AND BE STAKED, WRAPPED, WATERED AND MULCHED PER ORDINANCE.
2. BEFORE ANY EXCAVATION ON THE SITE, CALL TO LOCATE ANY EXISTING UTILITIES ON THE SITE. THE CONTRACTOR SHALL FAMILIARIZE HIM/HERSELF WITH THE LOCATIONS OF ALL BURIED UTILITIES IN THE AREAS OF WORK BEFORE STARTING OPERATIONS. THE CONTRACTOR SHALL BE LIABLE FOR THE COST OF REPAIRING OR REPLACING ANY BURIED CONDUITS, CABLES OR PIPING DAMAGED DURING THE INSTALLATION OF THIS WORK.
3. FOUR FOOT HIGH FENCING OR OTHER RIGID MATERIAL IS TO BE ERECTED AROUND THE DRIP-LINE OF ALL TREES TO BE SAVED.
4. PLANT QUANTITIES ON PLANT LIST INTENDED TO BE A GUIDE. ALL QUANTITIES SHALL BE CHECKED AND VERIFIED ON PLANTING PLAN. ANY DISCREPANCIES SHALL BE DISCUSSED WITH THE LANDSCAPE ARCHITECT.
5. ANY DEVIATIONS FROM OR MODIFICATIONS TO THIS PLAN SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
6. CONTRACTOR TO NOTIFY LANDSCAPE ARCHITECT UPON DELIVERY OF PLANT MATERIAL TO THE SITE. LANDSCAPE ARCHITECT RESERVES THE RIGHT TO REJECT ANY PLANT MATERIAL THAT DOESN'T MEET STANDARDS OR SPECIFICATIONS OF THE PROJECT.
7. ALL PLANT MATERIAL TO BE INSTALLED PER THE PLANTING DETAILS PROVIDED ON THIS PLAN SET.
8. ALL BED EDGES TO BE WELL SHAPED, SPADE CUT, WITH LINES AND CURVES AS SHOWN ON THIS PLAN SET.
9. ALL PLANTING BEDS TO BE PREPARED WITH PLANTING MIX: 50% TOPSOIL, 50% SOIL AMENDMENTS (3 PARTS PEATMOSS, 1 PART COMPOST, 1 PART SAND)
10. ALL PARKING LOT ISLANDS SHALL BE BACKFILLED WITH THE FOLLOWING: 2' OF BLENDED GARDEN SOIL MIX (60% TOPSOIL, 30% COMPOST, 10% SAND) *OR 4" OF ONE STEP* BY MIDWEST TRADING, TOP DRESSED AND TILLED INTO 18" OF TOPSOIL.
11. ALL SPECIFIED LANDSCAPE MATERIAL INDICATED ON THE CONSTRUCTION DOCUMENTS WILL BE REQUIRED TO BE MAINTAINED THROUGHOUT THE LIFE OF THE PROJECT AND MUST BE REPLACED SHOULD IT DIE OR BECOME DAMAGED.
12. ALL PLANT MATERIAL SHALL HAVE A ONE YEAR GUARANTEE FROM SUBSTANTIAL COMPLETION AS DETERMINED BY THE LANDSCAPE ARCHITECT, AND SHALL BE REPLACED SHOULD IT DIE WITHIN THAT PERIOD.
13. PROTECT STRUCTURES, SIDEWALKS, PAVEMENTS AND UTILITIES TO REMAIN FROM DAMAGE CAUSED BY SETTLEMENT, LATERAL MOVEMENT, UNDERMINING, WASHOUTS AND OTHER HAZARDS CAUSED BY SITE IMPROVEMENT OPERATIONS.
14. ALL LAWN AREAS TO BE SEEDED WITH STANDARD TURF GRASS SEED AND COVERED WITH EROSION CONTROL BLANKET. UNLESS OTHERWISE SPECIFIED ON THE PLAN.
15. ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES, EXCLUDING SHRUB BEDS, TO BE RESTORED WITH TURF GRASS SEED AND COVERED WITH AN EROSION CONTROL BLANKET.
16. CAREFULLY MAINTAIN PRESENT GRADE AT BASE OF ALL EXISTING TREES TO REMAIN. PREVENT ANY DISTURBANCE OF EXISTING TREES INCLUDING ROOT ZONES. USE TREE PROTECTION BARRICADES WHERE INDICATED. PROTECT EXISTING TREES TO REMAIN AGAINST UNNECESSARY CUTTING, BREAKING OR SKINNING OF ROOTS, BRUISING OF BARK OR SMOTHERING OF TREES. DRIVING, PARKING, DUMPING, STOCKPILING AND/OR STORAGE OF VEHICLES, EQUIPMENT, SUPPLIES, MATERIALS OR DEBRIS ON TOP THE ROOT ZONES AND/OR WITHIN THE DRIPLINE OF EXISTING TREES OR OTHER PLANT MATERIAL TO REMAIN IS STRICTLY PROHIBITED.
17. THE CONTRACTOR AT ALL TIMES SHALL KEEP THE PREMISES ON WHICH WORK IS BEING DONE, CLEAR OF RUBBISH AND DEBRIS. ALL PAVEMENT AND DEBRIS REMOVED FROM THE SITE SHALL BE DISPOSED OF LEGALLY
18. ALL WORK AND OPERATIONS SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES AND ORDINANCES.

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no.	revision description	date
	SSDD FOR ICAEP	07-11-25
	ENTITLEMENT PROCESS	07-14-25
	SSDD FOR PERMIT	09-26-25

LUXE CORSA
CAR CONDOS
LAKE ZURICH, ILLINOIS

MASTER PLANT LIST
SEED MIX SCHEDULE
CONSTRUCTION NOTES
PLANTING DETAILS

date. 09.19.25
drawn. DSP
checked KMT

job no. 25210

sheet no. L2.0

NATIVE PLANT & SEED INSTALLATION MANAGEMENT AND MONITORING PLAN

ALL NATIVE PLANTING AND SEEDING INSTALLATION, MANAGEMENT AND MONITORING TO BE CONDUCTED BY A QUALIFIED, EXPERIENCED CONTRACTOR SPECIALIZING IN RESTORING AND MANAGING NATURAL LANDSCAPES IN THE MIDWEST.
THE SELECTED CONTRACTOR IS TO BE HELD ACCOUNTABLE FOR THE APPROPRIATE INSTALLATION METHODS AND MANAGEMENT AND MONITORING OF ALL NATIVE AREAS.

PLANT MATERIAL INSTALLATION - NATIVE SEEDING

PREPARE AREA FOR SEEDING - PREPARE THE SOIL AND CREATE OPTIMAL PLANT CONDITIONS, BEFORE DISTURBING ANY GROUND:

- CHECK FOR ANY BURIED UTILITIES
- CLEAR AREA OF DEBRIS THAT WOULD INTERFERE WITH PLANTING
- MOW ANY EXCESS EXISTING VEGETATION GROWTH
- APPLY BROAD-SPECTRUM OR TARGETED HERBICIDE, DEPENDING ON SPECIES PRESENT
- DE-COMPACT ANY AREAS OF SPECIAL CONCERN
  - LIGHTLY DE-COMPACT TILLED OR LOOSE SOIL WITH A ROLLER, CULTIPACKER, OR SIMILAR EQUIPMENT. IF USING A NO-TILL SEED DRILL, TILLING CAN USUALLY BE OMITTED.
  - IF GROUND IS WET, TILLING SHOULD NOT OCCUR UNTIL THE SOIL DRIES ENOUGH TO BREAK APART WHEN TILLED.

FOLLOW THE APPROPRIATE TIMING:

- THE OPTIMAL TIME TO INSTALL SEED IS FROM THE FALL (NOVEMBER 1) TO LATE SPRING (JUNE 15).
- WETLANDS SHOULD BE SEEDED IN THE WINTER WHILE THE SITE IS FROZEN AND EQUIPMENT CAN MORE EASILY ACCESS THE SITE.

METHOD FOR SEEDING AND EROSION CONTROL:

- BROADCASTING:
  - FOR SMALL (TYPICALLY TWO ACRES OR LESS) OR IRREGULARLY SHAPED AREAS, SEED CAN BE PLANTED BY HAND BROADCASTING. TO AID SEED DISTRIBUTION, COMBINE THE SEED MIX WITH FILLER MATERIALS, SUCH AS DRY SAWDUST, SAND, OR VERMICULITE.
  - USING A HAND-CRANK OR TOW-BEHIND BROADCASTER, START WITH HALF OF THE SEED AND TRY TO COVER THE ENTIRE AREA WITH THAT AMOUNT OF SEED. TAKE THE REMAINING HALF OF THE SEED, GO TO THE OPPOSITE END OF THE SITE AND COVER IT AGAIN. AFTER BROADCASTING IS COMPLETE, IT IS IMPORTANT TO USE A CULTIPACKER OR ROLLER OVER THE AREA TO MAKE GOOD SEED-TO-SOIL CONTACT. DO NOT COVER SEED MORE THAN 1/4-INCH DEEP.
- NO-TILL DRILL:
  - FOR LARGER AREAS AND SITES WITH EXISTING VEGETATION, USE A NO-TILL SEED DRILL, WHICH DOES NOT REQUIRE THE SOIL TO BE TILLED BEFORE PLANTING, RESULTING IN MINIMAL SOIL DISTURBANCE. NO-TILL DRILLS PLANT SEED IN ROWS BY OPENING SLITS IN THE SOIL, INTO WHICH SEED IS DEPOSITED. IF USING A NO-TILL DRILL, SEED SHOULD NOT BE BURIED BELOW 1/8" DEPTH PER SPECIFIC MANUFACTURER'S RECOMMENDATIONS. BECAUSE THE DIVERSITY OF SEED SIZES MAKES DRILL CALIBRATION A CHALLENGE, PERFORM A FEW TEST AREAS FIRST TO HELP PREVENT RUNNING OUT OF SEED.
- EROSION CONTROL METHOD:
  - INSTALL BIODEGRADABLE EROSION CONTROL BLANKET (NAG S75BN OR EQUAL) UNTIL SEED HAS GERMINATED.

PLANT MATERIAL MANAGEMENT - NATIVE SEEDING - 5-YEAR PERIOD

TO HELP ENSURE SUCCESS, PROJECTS NEED A MAINTENANCE AND MONITORING PLAN THAT IS FLEXIBLE AND SUPPORTS SITE DEVELOPMENT GOALS. WHILE NATIVE PLANTS TEND TO GERMINATE AND DEVELOP AT A SLOWER RATE THAN ORNAMENTAL PERENNIALS OR TURF GRASS, REGULAR MAINTENANCE DURING THE ESTABLISHMENT PERIOD GREATLY IMPROVES PROJECT SUCCESS. REGULAR MAINTENANCE AND MONITORING CONTROLS INVASIVE SPECIES, ENSURES OPTIMAL MOISTURE LEVELS ARE PRESENT, AND IDENTIFIES OTHER NECESSARY MANAGEMENT ACTIONS.

- NATIVE AREAS NEED BETWEEN 3 TO 5 YEARS TO ESTABLISH.
- PREFERRED PLANTING LATE FALL (ANY TIME AFTER NOVEMBER 1, IF THE SOIL SURFACE IS DRY AND COLD ENOUGH TO PREVENT GERMINATION AND SEED CAN BE WORKED INTO SOIL.
- LET SEED GERMINATE AND GROW FOR ONE FULL SEASON. **DO NOT** APPLY HERBICIDES FOR WEED CONTROL WITHIN THE FIRST GROWING SEASON. IF LARGE WEEDS ARE UNSIGHTLY, CLIP OFF; **DO NOT PULL** WEEDS TO KEEP GROWTH DOWN. **DO NOT** ALLOW SEED HEADS TO FORM.
- MOW FIRST TIME WHEN ESTABLISHED IN FIRST SEASON TO 12"-18" HIGH, TO SCATTER SEED HEADS. IF CLUMPING OCCURS LIGHTLY RAKE TO DISBURSE SEED.
- MOW 2-3 ADDITIONAL TIMES TO MAINTAIN 6-9 INCHES IN HEIGHT.
- SOME PERENNIAL SEEDS MAY NOT GERMINATE UNTIL THE FOLLOWING YEAR.
- IF FALL PLANTING IS NOT POSSIBLE, SPRING SEEDING CAN BE DONE (WEATHER PERMITTING) AS EARLY AS JANUARY - PREFERABLY BEFORE APRIL 15.
- SECOND SEASON MOW 3-4 TIMES TO MAINTAIN 8-10 INCHES IN HEIGHT.
- AT THE END OF THIRD SEASON A CONTROLLED BURN PROGRAM TO BE PERFORMED.
- A (FOUR) ANNUAL WEED CONTROL EVENTS (SELECTIVE HERBICIDE AND MECHANICAL) TO BE PERFORMED THROUGHOUT ALL NATIVE PLAN COMMUNITIES STARTING ONCE THE SEED IS SOWN UNTIL SIGN-OFF IS GRANTED.

MINIMUM PERFORMANCE STANDARDS AND MONITORING ACTIVITIES

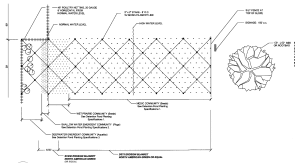
NATIVE PLANT MATERIALS

PERFORMANCE STANDARDS ARE ESTABLISHED FOR ALL PROPOSED PROJECTS INVOLVING NATURALIZED AREAS SO THAT THE RELATIVE SUCCESS OF CREATION AND ENHANCEMENT EFFORTS MAY BE EVALUATED. IF THE PERFORMANCE STANDARDS ARE NOT ACHIEVED BY THE END OF THE FIVE-YEAR MANAGEMENT AND MONITORING PROGRAM, ACCEPTANCE MEETINGS SHALL BE HELD TO DETERMINE THE FUTURE COURSE OF ACTION. IT IS LIKELY THAT IN SUCH A CASE THAT THE MAINTENANCE AND MONITORING PERIOD WILL BE EXTENDED.

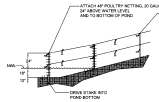
- NOTIFICATION - THE DEVELOPER SHALL NOTIFY (MUNICIPALITY) UPON COMPLETION OF PLANTINGS.
  - THE OWNER'S ENVIRONMENTAL SPECIALIST SHALL INSPECT THE PLANTINGS UPON COMPLETION OF ALL MAINTENANCE PROCEDURES AND NOTIFY (MUNICIPALITY) OF THE REMEDIAL ACTIONS TAKEN.
- NATIVE AREAS ARE TO BE MONITORED FOR A MINIMUM OF 5 (FIVE) YEARS FROM DATE OF INSTALLATION.
  - MONITOR ALL NATIVE AREAS 2 (TWO) TIMES ANNUALLY AT A TIME OF YEAR WHEN PLANTS ARE EVIDENT AND IDENTIFIABLE. VISITS SHOULD OCCUR AT SPACED INTERVALS THROUGHOUT THE GROWING SEASON.
  - CONDUCT MONITORING VISITS UTILIZING SYSTEMATIC FIELD TECHNIQUES. TRAVERSE ENTIRE NATIVE AREA, DOCUMENT FLORA AND NOTE TOP 3 DOMINANT SPECIES.
- WITHIN 3 MONTHS OF SEED INSTALLATION, AT LEAST 95% OF THE SEEDED AREAS ('LOW PROFILE', 'STORMWATER' AND 'SWALE' SEED MIX), AS MEASURED BY AERIAL COVERAGE, SHALL BE VEGETATED. A MINIMUM 100% VEGETATIVE COVERAGE SHALL BE MAINTAINED THROUGHOUT, AND AT THE END OF, THE FIVE-YEAR PERIOD FOR THESE AREAS.
  - THIS STANDARD DOES NOT APPLY TO THE EMERGENT ZONES.
- THE NATURALIZED AREAS SHALL NOT CONTAIN ANY RILLS GREATER THAN 4 INCHES WIDE AND 4 INCHES DEEP THROUGHOUT, AND AT THE END, OF THE THREE-YEAR PERIOD.
- AT THE END OF THE SECOND GROWING SEASON, 30% SEED MIX PRESENCE FOR THE 'LOW PROFILE', 'STORMWATER' AND 'SWALE' SEED MIXES SHALL BE ACHIEVED. AT THE END OF THE THIRD GROWING SEASON, 50% SEED MIX PRESENCE FOR THE 'LOW PROFILE', 'STORMWATER' AND 'SWALE' SEED MIXES SHALL BE ACHIEVED.
  - SEED MIX PRESENCE SHALL BE EVALUATED SEPARATELY FOR EACH OF THESE THREE MIXES.
- NO AREA OVER THE ENTIRE NATIVE PLANTED SITE GREATER THAN 1 SQUARE METER WILL BE DEVOID OF VEGETATION (AS MEASURED BY AERIAL COVERAGE/OCULAR ESTIMATION), UNLESS SPECIFIED ON APPROVED PLANS.
  - THIS ANNUAL PERFORMANCE STANDARD DOES NOT APPLY TO EMERGENT AND AQUATIC COMMUNITIES.
- THE NATIVE PLANTED AREAS WILL MEET THE FOLLOWING ANNUAL STANDARDS FOR THE PRESENCE OF NATIVE, NON-INVASIVE PERENNIAL SPECIES (AS MEASURED BY AERIAL COVERAGE/OCULAR ESTIMATION): YEAR 1 - 15%, YEAR 2 - 50%, YEAR 3 - 75%, YEAR 4 & 5 - 85%
  - THIS STANDARD TO BE MEASURED SEPARATELY FOR EACH SEED MIX ZONE.
- AT THE END OF THE THIRD GROWING SEASON, NONE OF THE THREE MOST DOMINANT SPECIES WITHIN THE PLANTED AREAS WILL BE INVASIVE OR NON-NATIVE SPECIES AS INSPECTED ANNUALLY. THE PROJECT MANAGER WILL DETERMINE THE APPROPRIATE TARGET INVASIVE OR NON-NATIVE SPECIES. THEY WILL TYPICALLY INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING: RAGWEED (AMBROSIA SPP.), CATTAIL (TYPHA SPP.), REED CANARY GRASS (PHALARIS ARUNDINACEA), PURPLE LOOSESTRIFE (LYTHRUM SALICARIA), COMMON REED (PHRAGMITES AUSTRALIS), CANADIAN THISTLE (CIRSIUM ARVENSE), SANDBAR WILLOW (SALIX INTERIOR), KENTUCKY BLUE GRASS (POA PRATENSIS), YELLOW SWEET-CLOVER (MELILOTUS OFFICINALIS), TEASEL (DIPSACUS SPP.), JAPANESE KNOTWEED (REYNOUTRIA JAPONICA), AND ASIAN BITTERSWEET (CELASTRUS ORBICULATUS), BUCKTHORN (RHAMNUS SPP.).
  - THIS STANDARD TO BE MEASURED SEPARATELY FOR EACH SEED MIX ZONE.
- SEED: AT THE END OF THE THIRD GROWING SEASON, 50% VEGETATIVE COVERAGE SHALL BE ACHIEVED (AS MEASURED BY AERIAL COVERAGE/OCULAR ESTIMATION).
- EMERGENTS: RELATIVE COVERAGE OF CATTAILS (AS MEASURED BY AERIAL COVERAGE/OCULAR ESTIMATION) SHALL BE LESS THAN 5% THROUGHOUT, AND AT THE END OF, THE THREE YEAR MONITORING PERIOD.
- PLUGS: 90% OF THE PLANTS WILL BE ALIVE, IN HEALTHY CONDITION, AND REPRESENTATIVE OF THE INDIVIDUAL SPECIES AT THE END OF EACH GROWING SEASON. PLANTING WILL TAKE PLACE UNTIL THIS STANDARD IS ACHIEVED.
- WOODY PLANTS: 100% OF THE PLANTED TREES AND SHRUBS WILL BE ALIVE, IN HEALTHY CONDITION, AND REPRESENTATIVE OF THE INDIVIDUAL SPECIES AT THE END OF THE 2ND GROWING SEASON.
  - ANNUAL REPLACEMENTS ARE REQUIRED TO ACHIEVE THIS STANDARD.
- RELATIVE COVERAGE (DETERMINED BY OCULAR ESTIMATION) OF INVASIVE SPECIES (I.E., COMMON REED, REED CANARY GRASS, PURPLE LOOSESTRIFE, ETC.) IN AGGREGATE SHALL BE LESS THAN 5% THROUGHOUT, AND AT THE END OF, THE THREE-YEAR PERIOD.
  - THIS STANDARD SHALL BE EVALUATED SEPARATELY FOR EACH SEED AND PLANT MIX ZONE (I.E., 'LOW PROFILE', 'STORMWATER' AND 'SWALE' SEED MIX, EMERGENT).
- NATIVE MEAN C VALUE = 3.0 AND NATIVE FQI VALUE = 20.0 FOR ALL NATIVE PLANT COMMUNITIES.
  - THIS STANDARD SHALL BE EVALUATED SEPARATELY FOR EACH SEED AND PLANT MIX ZONE (I.E., 'LOW PROFILE', 'STORMWATER' AND 'SWALE' SEED MIX, EMERGENT).
- SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REGULARLY MAINTAINED. ANY EROSION OBSERVED ON-SITE SHALL BE REPAIRED TO THE DESIGNED CONDITION WITHIN 30 DAYS OF OBSERVATION.

PLANTING NOTES FOR DETENTION AREAS

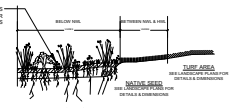
1. REFER TO CIVIL ENGINEERING DRAWINGS FOR CONSTRUCTION DETAILS OF DETENTION AREAS
2. REQUIRED LANDSCAPE MATERIAL SHALL SATISFY AMERICAN ASSOCIATION OF NURSERYMEN STANDARDS AND BE WATERED AND MULCHED PER CONSTRUCTION DOCUMENTS.
3. ALL PROPOSED PLANT SUBSTITUTIONS WITHIN DETENTION AREAS MUST BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
4. ALL REQUIRED LANDSCAPE MATERIAL INDICATED ON THE APPROVED PLANS WILL BE MAINTAINED THROUGHOUT THE LIFE OF THE PROJECT AND MUST BE REPLACED SHOULD IT DIE.
5. CONTRACTOR RESPONSIBLE FOR THE MAINTENANCE ALL PLANT MATERIAL WITHIN DETENTION AREAS AS SPECIFIED BY THE LANDSCAPE ARCHITECT FOR THE FIRST YEAR AFTER INSTALLATION.
6. ALL PLANT MATERIAL WITHIN DETENTION AREAS TO HAVE A 1 YEAR WARRANTEE STARTING UPON LANDSCAPE ARCHITECT ISSUING "SUBSTANTIAL COMPLETION."
7. WATER FOWL BARRIER CONTROL TO BE INSTALLED AT 8' O.C. IN ALL DETENTION AREAS PLANTED WITH PLUGS.
8. METAL SIGNS (12"x18") TO BE INSTALLED AT 150' INTERVALS AROUND ALL NATIVE AREAS STATING "NATIVE PLANTING DO NOT MOW".
9. ALL WORK AND OPERATIONS SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES AND ORDINANCES.



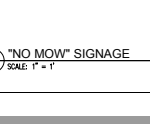
1 L2.1 GOOSE BARRIER PLAN DETAIL
SCALE: NO SCALE



2 L2.1 GOOSE BARRIER SECTION DETAIL
SCALE: NO SCALE



3 L2.1 BIODETENTION PLANTING DETAIL
SCALE: NO SCALE



ALUMINUM SIGN TO BE MOUNTED 4'-0" ABOVE GRADE ON METAL POSTS

LOCATED AS SHOWN ON LANDSCAPE PLAN

4 L2.1 "NO MOW" SIGNAGE
SCALE: 1" = 1'

LANDSCAPE MAINTENANCE SPECIFICATIONS

THE CONTRACTOR SHALL PROVIDE AS A SEPARATE BID, MAINTENANCE FOR A PERIOD OF 1 YEAR AFTER FINAL ACCEPTANCE OF THE PROJECT LANDSCAPING. THE CONTRACTOR MUST BE ABLE TO PROVIDE CONTINUED MAINTENANCE IF REQUESTED BY THE OWNER OR PROVIDE THE NAME OF A REPUTABLE LANDSCAPE CONTRACTOR WHO CAN PROVIDE MAINTENANCE.

STANDARDS

ALL LANDSCAPE MAINTENANCE SERVICES SHALL BE PERFORMED BY TRAINED PERSONNEL USING CURRENT, ACCEPTABLE HORTICULTURAL PRACTICES.

ALL WORK SHALL BE PERFORMED IN A MANNER THAT MAINTAINS THE ORIGINAL INTENT OF THE LANDSCAPE DESIGN.

ALL CHEMICAL APPLICATIONS SHALL BE PERFORMED IN ACCORDANCE WITH CURRENT COUNTY, STATE AND FEDERAL LAWS, USING EPA REGISTERED MATERIALS AND METHODS OF APPLICATION. THESE APPLICATIONS SHALL BE PERFORMED UNDER THE SUPERVISION OF A LICENSED CERTIFIED APPLICATOR.

APPROVALS

ANY WORK PERFORMED IN ADDITION TO THAT WHICH IS OUTLINED IN THE CONTRACT SHALL ONLY BE DONE UPON WRITTEN APPROVAL BY THE OWNER'S REPRESENTATIVE.

ALL SEASONAL COLOR SELECTIONS SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO ORDERING AND INSTALLATION.

SOIL TESTING

THE MAINTENANCE CONTRACTOR SHALL PERFORM SOIL TESTS AS NEEDED TO IDENTIFY ANY IMBALANCES OR DEFICIENCIES CAUSING PLANT MATERIAL DECLINE. THE OWNER SHALL BE NOTIFIED OF THE RECOMMENDATION FOR APPROVAL, AND THE NECESSARY CORRECTIONS MADE AT AN ADDITIONAL COST TO THE OWNER.

ACCEPTABLE SOIL TEST RESULTS:

	LANDSCAPE TREES & SHRUBS	TURF
PH RANGE	5.0-7.0	6.0-7.0
ORGANIC MATTER	+1.5%	+2.5%
MAGNESIUM (MG)	100+LBS./ACRE	100+LBS./ACRE
PHOSPHORUS (P2O5)	150+LBS./ACRE	150+LBS./ACRE
POTASSIUM (K2O)	120+LBS./ACRE	120+LBS./ACRE
SOLUBLE SALTS	NOT TO EXCEED 900PPM/1.9 MMHOS/CM IN SOIL; NOT TO EXCEED 1440 PPM/2.5 MMHOS/CM IN HIGH ORGANIC MIX	NOT TO EXCEED 750PPM/0.75 MMHOS/CM IN SOIL; NOT TO EXCEED 2000 PPM/2.0 MMHOS/CM IN HIGH ORGANIC MIX

FOR UNUSUAL SOIL CONDITIONS, THE FOLLOWING OPTIONAL TESTS ARE RECOMMENDED WITH LEVELS NOT TO EXCEED:

BORON	3 POUNDS PER ACRE
MANGANESE	50 POUNDS PER ACRE
POTASSIUM (K2O)	460 POUNDS PER ACRE
SODIUM	20 POUNDS PER ACRE

WORKMANSHIP

DURING LANDSCAPE MAINTENANCE OPERATIONS, ALL AREAS SHALL BE KEPT NEAT AND CLEAN. PRECAUTIONS SHALL BE TAKEN TO AVOID DAMAGE TO EXISTING STRUCTURES. ALL WORK SHALL BE PERFORMED IN A SAFE MANNER TO THE OPERATORS, THE OCCUPANTS AND ANY PEDESTRIANS.

UPON COMPLETION OF MAINTENANCE OPERATIONS, ALL DEBRIS AND WASTE MATERIAL SHALL BE CLEANED UP AND REMOVED FROM THE SITE. UNLESS PROVISIONS HAVE BEEN GRANTED BY THE OWNER TO USE ON-SITE TRASH RECEPTACLES. ANY DAMAGE TO THE LANDSCAPE, STRUCTURES, OR IRRIGATION SYSTEMS CAUSED BY THE MAINTENANCE CONTRACTOR, SHALL BE REPAIRED BY THE MAINTENANCE CONTRACTOR WITHOUT CHARGE TO THE OWNER.

TURF

GENERAL CLEAN UP

PRIOR TO MOWING, ALL TRASH, STICKS, AND OTHER UNWANTED DEBRIS SHALL BE REMOVED FROM LAWNS, PLANT BEDS, AND PAVED AREAS.

MOWING

TURF GRASSES, INCLUDING BLUE GRASS, TALL FESCUE, PERENNIAL RYEGRASS, ETC., SHALL BE MAINTAINED AT A HEIGHT OF 2" TO 3" IN SPRING AND FALL. FROM JUNE THROUGH SEPTEMBER, MOWING HEIGHT SHALL BE MAINTAINED AT NO LESS THAN 3".

THE MOWING OPERATION INCLUDES TRIMMING AROUND ALL OBSTACLES, RAKING EXCESSIVE GRASS CLIPPINGS AND REMOVING DEBRIS FROM WALKS, CURBS, AND PARKING AREAS. CAUTION: MECHANICAL WEEDERS SHOULD NOT BE USED AROUND TREES BECAUSE OF POTENTIAL DAMAGE TO THE BARK.

EDGING

EDGING OF ALL SIDEWALKS, CURBS AND OTHER PAVED AREAS SHALL BE PERFORMED ONCE EVERY OTHER MOWING. DEBRIS FROM THE EDGING OPERATIONS SHALL BE REMOVED AND THE AREAS SWEPT CLEAN. CAUTION SHALL BE USED TO AVOID FLYING DEBRIS.

FERTILIZING

SEASONALLY STEPPED FERTILIZER SHALL BE APPLIED IN AREAS BASED ON THE EXISTING TURF SPECIES.

LAWN WEED CONTROL- HERBICIDES

SELECTION AND PROPER USE OF HERBICIDES SHALL BE THE LANDSCAPE CONTRACTOR'S RESPONSIBILITY. ALL CHEMICAL APPLICATIONS SHALL BE PERFORMED UNDER THE SUPERVISION OF A LICENSED CERTIFIED APPLICATOR. READ THE LABEL PRIOR TO APPLYING ANY CHEMICAL.

INSECT & DISEASE CONTROL FOR TURF

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MONITORING THE SITE CONDITIONS ON EACH VISIT TO DETERMINE IF ANY INSECT PEST OR DISEASE PROBLEMS EXIST. THE CONTRACTOR SHALL IDENTIFY THE INSECT PEST OR DISEASE, AS WELL AS THE HOST PLANT, AND THEN CONSULT THE MOST CURRENT EDITION OF THE COOPERATIVE EXTENSION SERVICE'S 'COMMERCIAL INSECTICIDE RECOMMENDATION FOR TURF' FOR CONTROL. THE LICENSED APPLICATOR SHALL BE FAMILIAR WITH THE LABEL PROVIDED FOR THE SELECTED PRODUCT PRIOR TO APPLICATION.

INSPECTION AND TREATMENT TO CONTROL INSECT PESTS SHALL BE INCLUDED IN THE CONTRACT PRICE.

TREES, SHRUBS, & GROUND COVER

PRUNING

ALL ORNAMENTAL TREES, SHRUBS AND GROUND COVER SHALL BE PRUNED WHEN APPROPRIATE TO REMOVE DEAD OR DAMAGED BRANCHES, DEVELOP THE NATURAL SHAPES, DO NOT SHEAR TREES OR SHRUBS. IF PREVIOUS MAINTENANCE PRACTICE HAS BEEN TO SHEAR AND BALL, THEN A NATURAL SHAPE WILL BE RESTORED GRADUALLY.

PRUNING GUIDELINES:

1. PRUNE PLANTS THAT FLOWER BEFORE THE END OF JUNE (SPRING BLOOMING) IMMEDIATELY AFTER FLOWERING. FLOWER BUDS DEVELOP DURING THE PREVIOUS GROWING SEASON. FALL, WINTER OR SPRING PRUNING WOULD REDUCE THE SPRING FLOWERING DISPLAY.
2. PRUNE PLANTS THAT FLOWER IN JULY - SEPTEMBER (SUMMER OR AUTUMN BLOOMING) IN WINTER OR SPRING BEFORE NEW GROWTH BEGINS, SINCE THESE PLANTS DEVELOP FLOWERS ON NEW GROWTH.
3. DELAY PRUNING PLANTS GROWN FOR ORNAMENTAL FRUITS, SUCH AS COTONEASTERS AND VIBURNUMS.
4. HOLLIES AND OTHER EVERGREENS MAY BE PRUNED DURING WINTER IN ORDER TO USE THEIR BRANCHES FOR SEASONAL DECORATION. HOWEVER, SEVERE PRUNING OF EVERGREENS SHOULD BE DONE IN EARLY SPRING ONLY.
5. BROADLEAF EVERGREEN SHRUBS SHALL BE HAND-PRUNED TO MAINTAIN THEIR NATURAL APPEARANCE AFTER THE NEW GROWTH HARDENS OFF.
6. HEDGES OR SHRUBS THAT REQUIRE SHEARING TO MAINTAIN A FORMAL APPEARANCE SHALL BE PRUNED AS REQUIRED. DEAD WOOD SHALL BE REMOVED FROM SHEARED PLANTS BEFORE THE FIRST SHEARING OF THE SEASON.
7. CONIFERS SHALL BE PRUNED, IF REQUIRED, ACCORDING TO THEIR GENUS.
   A. YEWS, JUNIPERS, HEMLOCKS AND ARBORVITAE MAY BE PRUNED AFTER NEW GROWTH HAS HARDENED OFF IN LATE SUMMER. IF SEVERE PRUNING IS NECESSARY, IT MUST BE DONE IN EARLY SPRING.
   B. FIRS AND SPRUCES MAY BE LIGHTLY PRUNED IN LATE SUMMER, FALL, OR WINTER AFTER COMPLETING GROWTH. LEAVE SIDE BUDS. NEVER CUT CENTRAL LEADER.
   C. PINES MAY BE LIGHTLY PRUNED IN EARLY JUNE BY REDUCING CANDLES.
8. GROUNDCOVER SHALL BE EDGED AND PRUNED AS NEEDED TO CONTAIN IT WITHIN ITS BORDERS.
9. THINNING: REMOVE BRANCHES AND WATER SPROUTS BY CUTTING THEM BACK TO THEIR POINT OF ORIGIN ON PARENT STEMS. THIS METHOD RESULTS IN A MORE OPEN PLANT, WITHOUT STIMULATING EXCESSIVE GROWTH. THINNING IS USED ON CRAB APPLES, LILACS, VIBURNUMS, ETC.
10. RENEWAL PRUNING: REMOVE OLDEST BRANCHES OF SHRUB AT GROUND, LEAVING THE YOUNGER, MORE VIGOROUS BRANCHES. ALSO REMOVE WEAK STEMS. ON OVERGROWN PLANTS, THIS METHOD MAY BE BEST DONE OVER A THREE-YEAR PERIOD. RENEWAL PRUNING MAY BE USED ON FORSYTHIA, HYDRANGEA, SPIREAS, ETC.

PLANTS OVERHANGING PASSAGEWAYS AND PARKING AREAS AND DAMAGED PLANTS SHALL BE PRUNED AS NEEDED.

SHADE TREES THAT CANNOT BE ADEQUATELY PRUNED FROM THE GROUND SHALL NOT BE INCLUDED IN THE MAINTENANCE CONTRACT. A CERTIFIED ARBORIST UNDER A SEPARATE CONTRACT SHALL PERFORM THIS TYPE OF WORK.

SPRING CLEANUP

PLANT BEDS SHALL RECEIVE A GENERAL CLEANUP BEFORE FERTILIZING AND MULCHING. CLEANUP INCLUDES REMOVING DEBRIS AND TRASH FROM BEDS AND CUTTING BACK HERBACEOUS PERENNIALS LEFT STANDING THROUGH WINTER, E.G. ORNAMENTAL GRASSES, SEDUM AUTUMN JOY.

FERTILIZING

FOR TREES, THE RATE OF FERTILIZATION DEPENDS ON THE TREE SPECIES, TREE VIGOR, AREA AVAILABLE FOR FERTILIZATION, AND GROWTH STAGE OF THE TREE. NATURE SPECIMENS BENEFIT FROM FERTILIZATION EVERY 3 TO 4 YEARS. YOUNGER TREES SHALL BE FERTILIZED MORE OFTEN DURING RAPID GROWTH STAGES.

THE CURRENT RECOMMENDATION IS BASED ON THE RATE OF 1000 SQUARE FEET OF AREA UNDER THE TREE TO BE FERTILIZED. FOR DECIDUOUS TREES, 2 TO 6 POUNDS OF NITROGEN PER 1000 SQUARE FEET; FOR NARROW-LEAF EVERGREENS, 1 TO 4 POUNDS OF NITROGEN PER 1000 SQUARE FEET; FOR BROADLEAF EVERGREENS, 1 TO 3 POUNDS OF NITROGEN PER 1000 SQUARE FEET.

SHRUBS AND GROUNDCOVER SHALL BE TOP-DRESSED WITH COMPOST 1" DEEP OR FERTILIZED ONCE IN MARCH WITH 10-6-4 ANALYSIS FERTILIZER AT THE RATE OF 2 POUNDS PER 100 SQUARE FEET OF BED AREA.
ERICACEOUS MATERIAL SHALL BE FERTILIZED WITH AN ERICACEOUS FERTILIZER AT THE MANUFACTURER'S RECOMMENDATION RATE. IF PLANTS ARE GROWING POORLY, A SOIL SAMPLE SHOULD BE TAKEN.

TREES, SHRUBS, & GROUND COVER (CONT.)

MULCHING

ANNUALLY, ALL TREE AND SHRUB BEDS WILL BE PREPARED AND MULCHED, TO A MINIMUM DEPTH OF 3" WITH QUALITY MULCH TO MATCH EXISTING. BED PREPARATION SHALL INCLUDE REMOVING ALL WEEDS, CLEANING UP SAID BED, EDGING AND CULTIVATING DECAYED MULCH INTO THE SOIL. DEBRIS FROM EDGING IS TO BE REMOVED FROM BEDS WHERE APPLICABLE. IF DEEMED NECESSARY, A PRE-EMERGENT HERBICIDE MAY BE APPLIED TO THE SOIL TO INHIBIT THE GROWTH OF FUTURE WEEDS.

ORGANICALLY MAINTAINED GARDENS SHALL NOT RECEIVE ANY PRE-EMERGENT HERBICIDES. MULCH IN EXCESS OF 4" WILL BE REMOVED FROM THE BED AREAS. SPECIAL CARE SHALL BE TAKEN IN THE MULCHING OPERATION NOT TO OVER-MULCH OR COVER THE BASE OF TREES AND SHRUBS. THIS CAN BE DETRIMENTAL TO THE HEALTH OF THE PLANTS.

WEEDING

ALL BEDS SHALL BE WEEDED ON A CONTINUOUS BASIS THROUGHOUT THE GROWING SEASON TO MAINTAIN A NEAT APPEARANCE AT ALL TIMES.

PRE-EMERGENT (SOIL-APPLIED) AND POST-EMERGENT (FOLIAR-APPLIED) HERBICIDES SHALL BE USED WHERE AND WHEN APPLICABLE AND IN ACCORDANCE WITH THE PRODUCT'S LABEL.

INSECT & DISEASE CONTROL: TREES, SHRUBS & GROUNDCOVER

THE MAINTENANCE CONTRACTOR SHALL BE RESPONSIBLE FOR MONITORING THE LANDSCAPE SITE ON A REGULAR BASIS. THE MONITORING FREQUENCY SHALL BE MONTHLY EXCEPT FOR GROWING SEASON, WHICH WILL BE EVERY OTHER WEEK. TRAINED PERSONNEL SHALL MONITOR FOR PLANT DAMAGING INSECT ACTIVITY, PLANT PATHOGENIC DISEASES AND POTENTIAL CULTURAL PROBLEMS IN THE LANDSCAPE. THE PEST OR CULTURAL PROBLEM WILL BE IDENTIFIED UNDER THE SUPERVISION OF THE CONTRACTOR.

FOR PLANT DAMAGING INSECTS AND MITES IDENTIFIED IN THE LANDSCAPE, THE CONTRACTOR SHALL CONSULT AND FOLLOW THE RECOMMENDATIONS OF THE MOST CURRENT EDITION OF THE STATE COOPERATIVE SERVICE PUBLICATION ON INSECT CONTROL ON LANDSCAPE PLANT MATERIAL.

PLANT PATHOGENIC DISEASE PROBLEMS IDENTIFIED BY THE CONTRACTOR THAT CAN BE RESOLVED BY PRUNING OR PH/SOIL REMOVAL OF DAMAGED PLANT PARTS WILL BE PERFORMED AS PART OF THE CONTRACT. FOR AN ADDITIONAL CHARGE, PLANT PATHOGENIC DISEASES THAT CAN BE RESOLVED THROUGH PROPERLY TIMED APPLICATIONS OF FUNGICIDES SHALL BE MADE WHEN THE OWNER AUTHORIZES IT.

IF THE CONTRACTOR NOTES AN ESPECIALLY INSECT-OR DISEASE-PRONE PLANT SPECIES IN THE LANDSCAPE, HE/SHE WILL SUGGEST REPLACEMENT WITH A MORE PEST-RESISTANT CULTIVAR OR SPECIES THAT IS CONSISTENT WITH THE INTENT OF THE LANDSCAPE DESIGN.

NOTE: FOR IDENTIFICATION OF PLANT-DAMAGING INSECTS AND MITES, A REFERENCE TEXTBOOK THAT CAN BE USED IS INSECTS THAT FEED ON TREES AND SHRUBS BY JOHNSON AND LYON, COMSTOCK PUBLISHING ASSOCIATES. FOR PLAN PATHOGENIC DISEASES, TWO REFERENCES ARE SUGGESTED: SCOUTING AND CONTROLLING WOODY ORNAMENTAL DISEASES IN LANDSCAPES AND NURSERIES, AUTHORIZED BY GARY MOORMAN, PUBLISHED BY PENN STATE COLLEGE OF AGRICULTURAL SCIENCES, AND DISEASES OF TREES AND SHRUBS BY SINCLAIR AND LYON, PUBLISHED BY COMSTOCK PUBLISHING PRESS.

TRASH REMOVAL

THE MAINTENANCE CONTRACTOR SHALL REMOVE TRASH FROM ALL SHRUB AND GROUNDCOVER BEDS WITH EACH VISIT.

LEAF REMOVAL

ALL FALLEN LEAVES SHALL BE REMOVED FROM THE SITE IN NOVEMBER AND ONCE IN DECEMBER. IF REQUESTED BY THE OWNER, THE MAINTENANCE CONTRACTOR, AT AN ADDITIONAL COST TO THE OWNER SHALL PERFORM SUPPLEMENTAL LEAF REMOVALS.

WINTER CLEAN-UP

THE PROJECT SHALL RECEIVE A GENERAL CLEAN-UP ONCE DURING EACH OF THE WINTER MONTHS, I.E., JANUARY, FEBRUARY, AND MARCH.

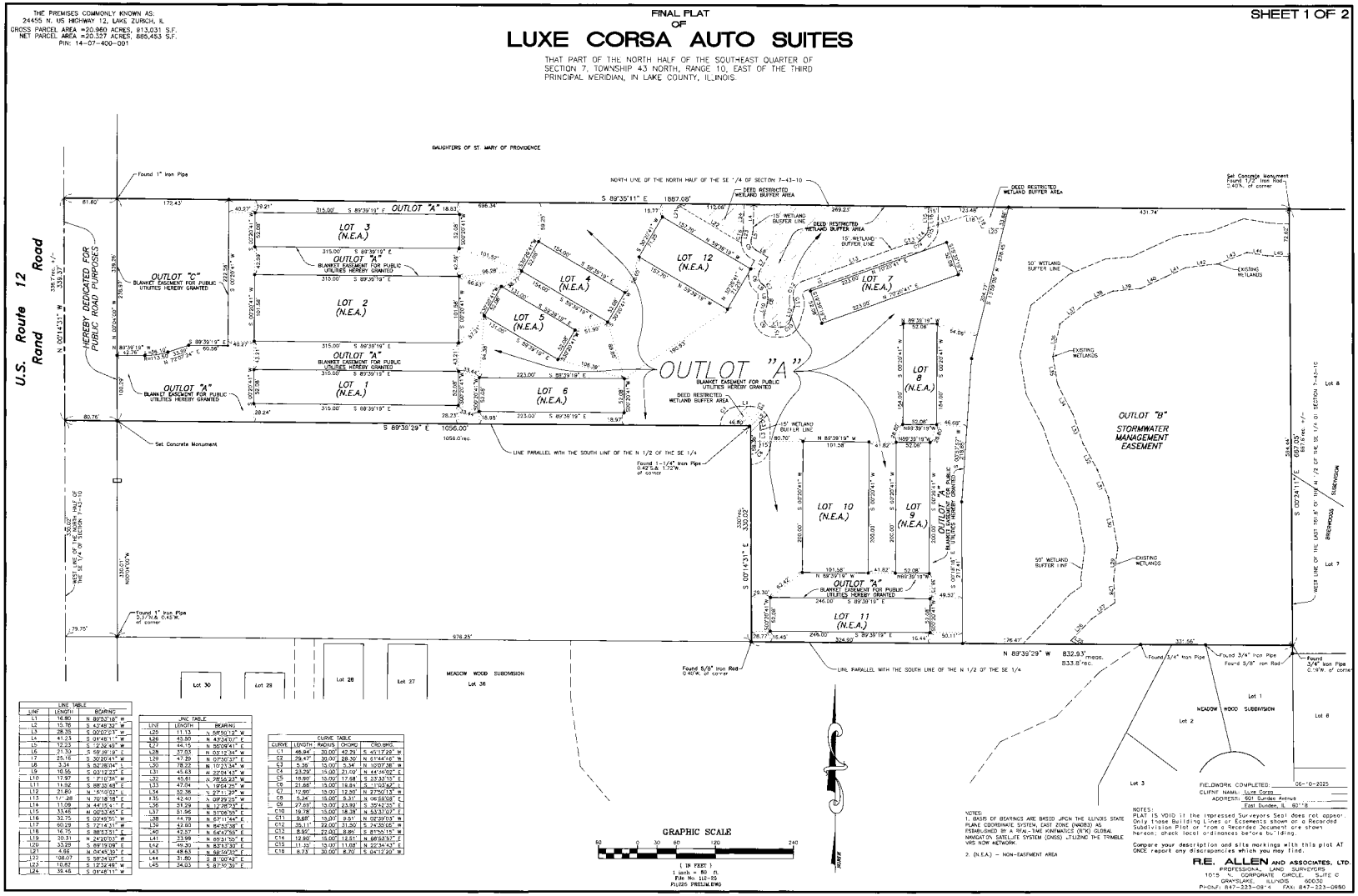
CLEAN-UP INCLUDES:

- CLEANING CURBS AND PARKING AREAS
- REMOVING ALL TRASH AND UNWANTED DEBRIS
- TURNING MULCH WHERE NECESSARY
- INSPECTION OF GROUNDS

SEASONAL COLOR: PERENNIALS, ANNUALS, AND BULBS

THE INSTALLATION OF PERENNIALS, ANNUALS, AND BULBS, UNLESS SPECIFIED HEREIN, SHALL BE REVIEWED WITH THE OWNER, AND, IF ACCEPTED, INSTALLED AND BILLED TO THE OWNER.

**SEASON



LINE TABLE		
LINE	LENGTH	BEARING
L1	16.80	N 89°53'18" W
L2	15.76	S 42°48'32" W
L3	28.35	S 00°02'51" W
L4	41.23	S 01°48'11" W
L5	12.03	S 12°26'45" W
L6	21.30	S 58°38'19" E
L7	25.16	S 30°20'45" W
L8	3.34	S 82°28'14" E
L9	10.55	S 03°12'23" E
L10	17.97	S 71°0'36" W
L11	14.92	S 88°20'48" E
L12	21.80	N 51°0'02" E
L13	17.28	N 70°18'58" E
L14	11.09	N 44°15'41" E
L15	33.48	N 00°33'45" E
L16	32.75	S 00°45'51" W
L17	60.28	S 72°14'11" E
L18	16.75	S 88°33'31" E
L19	20.31	N 24°20'10" W
L20	33.28	S 69°19'09" E
L21	4.98	N 04°44'10" E
L22	108.07	S 59°24'07" E
L23	10.87	S 12°32'46" W
L24	39.48	S 01°48'11" W

LINE TABLE		
LINE	LENGTH	BEARING
L25	11.13	N 58°50'12" W
L26	43.90	N 43°34'07" E
L27	44.15	N 80°08'41" E
L28	37.03	N 05°12'34" W
L29	47.29	N 07°50'37" E
L30	78.22	N 19°23'34" W
L31	45.43	N 22°04'43" W
L32	45.61	N 29°56'03" W
L33	47.04	N 19°04'26" W
L34	52.38	N 27°11'39" W
L35	42.40	N 09°29'20" W
L36	34.29	N 12°26'53" E
L37	51.96	N 51°06'55" E
L38	44.79	N 67°11'44" E
L39	42.60	N 84°57'08" E
L40	42.07	N 64°47'55" E
L41	33.99	N 69°31'55" E
L42	49.30	N 83°13'30" E
L43	48.63	N 88°59'02" E
L44	31.80	S 81°00'49" E
L45	34.03	S 87°30'39" E

CURVE TABLE				
CURVE	LENGTH	RADIUS	CHORD	CHD.BRG.
C1	46.84'	30.00'	42.29'	S 40°17'28" W
C2	29.47'	30.00'	28.30'	N 61°44'46" W
C3	5.35'	13.00'	5.34'	N 10°07'08" W
C4	23.29'	13.00'	21.09'	N 44°49'02" E
C5	19.89'	13.00'	17.68'	S 03°35'15" E
C6	21.68'	13.00'	18.84'	S 71°55'42" E
C7	12.95'	13.00'	12.30'	N 27°52'13" W
C8	5.34'	13.00'	5.31'	N 06°59'58" E
C9	27.68'	13.00'	23.92'	S 55°42'35" E
C10	19.78'	13.00'	18.38'	N 53°37'07" E
C11	9.68'	13.00'	9.51'	N 02°39'03" W
C12	35.11'	23.00'	31.50'	S 74°35'05" W
C13	8.99'	23.00'	8.95'	S 87°55'15" W
C14	12.80'	13.00'	12.51'	N 68°58'57" E
C15	11.15'	13.00'	11.08'	N 22°34'42" E
C16	8.73'	30.00'	8.70'	S 04°12'20" W

THIS PLAT SUBMITTED FOR RECORDING BY, AND RETURN TO:

NAME: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

FINAL PLAT
OF

LUXE CORSA AUTO SUITES

THAT PART OF THE NORTH HALF OF THE SOUTHEAST QUARTER OF SECTION 7, TOWNSHIP 43 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, IN LAKE COUNTY, ILLINOIS.

OWNERS CERTIFICATE

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

THIS IS TO CERTIFY THAT THE UNDERSIGNED IS THE OWNER OF THE LAND DESCRIBED IN THE ANNEXED PLAT, AN HAS CAUSED THE SAME TO BE SURVEYED AND SUBDIVIDED, AS INDICATED THEREON, FOR THE USES AND PURPOSES THEREIN SET FORTH, AND DOES HEREBY ACKNOWLEDGE AND ADOPT THE SAME UNDER THE STYLE AND TITLE THEREON INDICATED.
THE UNDERSIGNED HEREBY DEDICATES FOR PUBLIC USE OF THE LANDS SHOWN ON THIS PLAT FOR THOROUGHFARES, STREETS, ALLEYS AND PUBLIC SERVICES; AND HEREBY ALSO RESERVES FOR AMERITECH AND THE PUBLIC SERVICE COMPANY, DIVISION OF COMMONWEALTH EDISON COMPANY AND THE EASEMENT PROVISIONS WHICH ARE STATED ON "HOPI STANDARD FORM WHICH IS ATTACHED HERETO.
WE FURTHER CERTIFY THAT ... AS OWNER OF THE PROPERTY DESCRIBED AS THE SUBDIVISION AND LEGALLY DESCRIBED ON THE SAME NAME, HAVE DETERMINED TO THE BEST OF MY KNOWLEDGE THE SCHOOL DISTRICT IN WHICH EACH OF THE FOLLOWING LOTS LIES:
LAKE ZURICH ELEMENTARY SCHOOL DISTRICT 95 AND
LAKE ZURICH COMMUNITY HIGH SCHOOL DISTRICT 95

DATED THIS____DAY OF _____ A.D. 20_____

SIGNATURE_____ ADDRESS:_____

PRINTED NAME: _____

TITLE _____

NOTARY PUBLIC

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

I, THE UNDERSIGNED, A NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE, HEREBY CERTIFY THAT OF

NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT AS ... WHO IS PERSONALLY KNOWN TO ME TO BE THE SAME PERSON WHOSE APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT HE SIGNED AND DELIVERED SAID INSTRUMENT OF HIS/HER FREE AND VOLUNTARY ACT AND AS THE FREE AND VOLUNTARY ACT OF SAID _____ FOR THE USES AND PURPOSES THEREIN SET FORTH.

GIVEN UNDER MY HAND AND NOTARIAL SEAL THIS_____ DAY OF _____ A.D. 20_____.

NOTARY PUBLIC _____

COUNTY CLERK CERTIFICATE

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

I, _____ COUNTY CLERK OF LAKE COUNTY, ILLINOIS, DO HEREBY CERTIFY THAT THERE ARE NO DELINQUENT GENERAL TAXES, UNPAID CURRENT GENERAL TAXES, DELINQUENT SPECIAL ASSESSMENTS OR UNPAID CURRENT SPECIAL ASSESSMENTS AGAINST ANY OF THE LAND INCLUDED IN THE DESCRIBED PROPERTY. I FURTHER CERTIFY THAT I HAVE RECEIVED ALL STATUTORY FEES IN CONNECTION WITH THE SUBJECT PLAT.

DATED THIS_____ DAY OF _____, 20_____.

LAKE COUNTY CLERK _____

SURVEYORS CERTIFICATE

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

I, BRYAN J. LEE, ILLINOIS PROFESSIONAL LAND SURVEYOR, NO. 3618, DO HEREBY CERTIFY THAT I HAVE SURVEYED AND SUBDIVIDED THE FOLLOWING DESCRIBED TRACT OF LAND:

THAT PART OF THE NORTH HALF OF THE SOUTHEAST QUARTER OF SECTION 7, TOWNSHIP 43 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: BEGINNING AT A POINT ON THE WEST LINE OF THE NORTH HALF OF THE SOUTHEAST QUARTER, 950.0 FEET NORTH OF THE SOUTHWEST CORNER OF SAID NORTH HALF OF THE SOUTHEAST QUARTER; THENCE EAST, PARALLEL WITH THE SOUTH LINE OF THE NORTH HALF OF THE SOUTHEAST QUARTER, 1056.0 FEET; THENCE SOUTH PARALLEL OF THE WEST LINE OF SAID NORTH HALF OF THE SOUTHEAST QUARTER, 330.0 FEET; THENCE EAST PARALLEL WITH THE SOUTH LINE OF SAID NORTH HALF OF THE SOUTHEAST QUARTER, 813.8 FEET TO A POINT WHICH IS 761.6 FEET WEST OF THE EAST LINE OF SAID NORTH HALF OF THE SOUTHEAST QUARTER; THENCE NORTH PARALLEL WITH THE EAST LINE OF SAID NORTH HALF OF THE SOUTHEAST QUARTER, 330.0 FEET TO A POINT ON THE NORTH LINE OF SAID NORTH HALF OF THE SOUTHEAST QUARTER; THENCE WEST ON THE NORTH LINE OF NORTH HALF OF THE SOUTHEAST QUARTER TO THE NORTHWEST CORNER OF SAID NORTH HALF OF THE SOUTHEAST QUARTER; THENCE SOUTH ON THE WEST LINE ON SAID NORTH HALF OF THE SOUTHEAST QUARTER 338.7 FEET, MORE OR LESS, TO THE PLACE OF BEGINNING, IN LAKE COUNTY, ILLINOIS.

AS SHOWN ON THE ANNEXED PLAT, WHICH IS TRUE AND CORRECT REPRESENTATION THEREOF. DISTANCES ARE SHOWN IN FEET AND DECIMAL PARTS THEREOF. BEARINGS ARE BASED ON TRUE NORTH DETERMINED BY GPS MEASUREMENT, AND THE AREA OF THE SUBDIVISION IS 20.237 ACRES. I HAVE MONUMENTED THE CORNERS OF THE LOTS SHOWN HEREON AND ALL POINTS OF CURVATURE AND POINTS OF TANGENCY WITH IRON RODS. CONCRETE MONUMENTS SET AT OPPOSITE CORNERS OF SUBDIVISION.

I FURTHER CERTIFY THAT THE PROPERTY BASED UPON EXAMINATION OF THE F.E.M.A. MAPS, HAS BEEN DETERMINED THAT SOME OF THE PROPERTY SHOWN HEREON IS SUBJECT TO FLOOD RISK (THE PROPERTY FALLS WITHIN A ZONE "A" AND "X") AS PORTRAYED ON FLOOD INSURANCE RATE MAP NO. 17097C0226K AND 10797C0228K, EFFECTIVE DATE: SEPTEMBER 18, 2013.
I ALSO HEREBY DESIGNATE THE VILLAGE OF LAKE ZURICH TO RECORD THIS PLAT OF SUBDIVISION.

I ALSO CERTIFY THAT THIS SUBDIVISION IS WITHIN THE CORPORATE LIMITS OF THE VILLAGE OF LAKE ZURICH.
THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.
GIVEN UNDER MY HAND AND SEAL THIS_____ DAY OF _____ A.D. 20_____

_____
BRYAN J. LEE, ILLINOIS PROFESSIONAL LAND SURVEYOR 35-3618
MY LICENSE EXPIRES 11-30-26
PROFESSIONAL DESIGN FIRM NO. 184-002732

OWNERS SURFACE WATER DRAINAGE CERTIFICATE

THIS IS TO CERTIFY THAT THE OWNER OF THE LAND HEREIN DESCRIBED OR DULY AUTHORIZED ATTORNEY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF THE DRAINAGE OF SURFACE WATERS WILL NOT BE CHANGED BY THE CONSTRUCTION OF SUCH SUBDIVISION OR ANY PART THEREOF, OR THAT IF SUCH SURFACE WATER DRAINAGE WILL BE CHANGED, ADEQUATE PROVISION HAS BEEN MADE FOR COLLECTION AND DIVERSION OF SUCH SURFACE WATERS INTO PUBLIC AREAS, OR DRAINS WHICH THE SUBDIVIDER HAS THE RIGHT TO USE, AND THAT SUCH SURFACE WATERS WILL NOT BE DEPOSITED ON THE PROPERTY OF ADJOINING LANDOWNERS IN SUCH CONCENTRATIONS AS MAY CAUSE DAMAGE TO THE ADJOINING PROPERTY BECAUSE OF THE CONSTRUCTION OF THE SUBDIVISION.

DATED THIS_____ DAY OF _____, 20_____.

_____
OWNER OR OWNERS ATTORNEY

ENGINEERS SURFACE WATER DRAINAGE CERTIFICATE

THIS IS TO CERTIFY THAT I, REGISTERED PROFESSIONAL ENGINEER, CERTIFY THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF THAT DRAINAGE OF SURFACE WATERS WILL NOT BE CHANGED BY CONSTRUCTION OF SUCH SUBDIVISION OF ANY PART THEREOF, OR, THAT IF SUCH SURFACE WATER DRAINAGE WILL BE CHANGED, ADEQUATE PROVISION HAS BEEN MADE FOR COLLECTION AND DIVERSION OF SUCH WATERS IN TO PUBLIC AREAS, OR DRAINS WHICH THE SUBDIVIDER HAS THE RIGHT TO USE, AND THAT SUCH SURFACE WATERS WILL NOT BE DEPOSITED ON THE PROPERTY OF ADJOINING LANDOWNERS IN SUCH CONCENTRATIONS AS MAY CAUSE DAMAGE TO THE ADJOINING PROPERTY BECAUSE OF THE CONSTRUCTION OF THE SUBDIVISION.

DATED THIS_____ DAY OF _____, 20_____.

_____
ILLINOIS REGISTERED PROFESSIONAL ENGINEER
LICENSE NO.

PLAN COMMISSION CERTIFICATE

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

THIS IS TO CERTIFY THAT THE MEMBERS OF THE PLAN COMMISSION HAVE REVIEWED AND APPROVED THE ANNEXED PLAT.

DATED AT LAKE ZURICH, LAKE COUNTY, ILLINOIS THIS_____ DAY OF _____ A.D. 20_____

PLAN COMMISSION CHAIRMAN

ILLINOIS DEPARTMENT OF TRANSPORTATION CERTIFICATE

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

BY: _____
JOSE RIOS, P.E.
REGION ONE ENGINEER

PLAT SUBMITTED BY CERTIFICATE

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

THE PERSON LISTED IN THE FOLLOWING NOTE IS HEREBY GRANTED PERMISSION TO RECORD THIS PLAT ON BEHALF OF BRYAN J. LEE , ILLINOIS PROFESSIONAL LAND SURVEYOR.

_____
BRYAN J. LEE, ILLINOIS PROFESSIONAL LAND SURVEYOR 35-3618
DATED:
MY LICENSE EXPIRES 11-30-26
PROFESSIONAL DESIGN FIRM NO. 184-002732

THIS PLAT SUBMITTED FOR RECORDING BY:

NAME: _____

BUSINESS: _____

ADDRESS: _____

CITY: _____

STATE/ZIP: _____

DATE: _____

INGRESS AND EGRESS EASEMENT

THE VILLAGE OF LAKE ZURICH AND THE VILLAGE OF LAKE ZURICH FIRE PREVENTION BUREAU, THEIR SUCCESSORS, LICENSEES AND ASSIGNS, ARE HEREBY GIVEN EASEMENT RIGHTS OVER ALL AREAS ON THE PLAT MARKED "INGRESS/EGRESS EASEMENT" AND "PRIVATE DRIVE", AND GRANTED THE RIGHT TO ENTER UPON EASEMENTS HEREIN DESCRIBED FOR THE USES HEREIN SET FORTH AND THE RIGHT TO CUT, TRIM OR REMOVE ANY TREES, SHRUBS OR OTHER PLANTS WITHIN THE EASEMENT AREAS HEREIN GRANTED WHICH INTERFERE WITH THE CONSTRUCTION, INSTALLATION, RECONSTRUCTION, REPAIR, REMOVAL, REPLACEMENT, INSPECTION, MAINTENANCE AND OPERATION THEREOF. NO TEMPORARY OR PERMANENT BUILDINGS, STRUCTURES OR OBSTRUCTIONS SHALL BE PLACED ON OR OVER SAID EASEMENTS THAT INTERFERE WITH THE RIGHTS HEREIN GIVEN.

File No. 112-25
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VILLAGE CLERK CERTIFICATE

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

I, _____ VILLAGE CLERK OF THE VILLAGE OF LAKE ZURICH, ILLINOIS, HEREBY CERTIFY THAT THE ANNEXED PLAT WAS PRESENTED TO AND BY RESOLUTION JULY APPROVED BY THE BOARD OF TRUSTEES OF SAID VILLAGE AT ITS MEETING HELD ON _____ 20_____ AND THAT THE REQUIRED BOND OR OTHER GUARANTEE HAS BEEN POSTED FOR THE COMPLETION OF THE IMPROVEMENTS REQUIRED BY THE REGULATIONS OF SAID VILLAGE.

IN WITNESS WHEREOF, I HAVE HERETO SET MY HAND AND SEAL OF THE VILLAGE OF LAKE ZURICH, ILLINOIS THIS_____DAY OF _____ A.D. 20_____

_____
VILLAGE CLERK

VILLAGE ENGINEER CERTIFICATE

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

I, _____ VILLAGE ENGINEER FOR THE VILLAGE OF LAKE ZURICH, ILLINOIS, HEREBY CERTIFY THAT THE LAND IMPROVEMENTS DESCRIBED IN THE ANNEXED PLAT AND THE PLANS AND SPECIFICATIONS THEREFOR, MEET THE MINIMUM REQUIREMENTS OF SAID VILLAGE.

DATED AT LAKE ZURICH, LAKE COUNTY, ILLINOIS THIS_____ DAY OF _____ A.D. 20_____

_____
VILLAGE ENGINEER

MAYOR'S CERTIFICATE

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

I, _____, MAYOR OF THE VILLAGE OF LAKE ZURICH HAVE APPROVED AND ACCEPTED THIS PLAT BY THE BOARD OF TRUSTEES OF THE VILLAGE.

DATED AT LAKE ZURICH, LAKE COUNTY, ILLINOIS THIS_____ DAY OF _____ A.D. 20_____

_____
VILLAGE MAYOR

CERTIFICATE AS TO SPECIAL ASSESSMENTS

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

I, FINANCE DIRECTOR OF THE VILLAGE OF LAKE ZURICH, DO HEREBY CERTIFY THAT THERE ARE NO DELINQUENT OR UNPAID CURRENT OR FORFEITED SPECIAL ASSESSMENTS OR ANY DEFERRED INSTALLMENTS THEREOF THAT HAVE BEEN APPORTIONED AGAINST THE TRACT OF LAND INCLUDED IN THE PLAT.

DATED AT LAKE ZURICH, LAKE COUNTY, ILLINOIS, THIS_____ DAY OF _____ A.D. 20_____.

_____
FINANCE DIRECTOR

DEED RESTRICTED WETLAND BUFFER AREAS

THE "DEED RESTRICTED WETLAND BUFFER AREAS" AS DESCRIBED AND DESIGNED HEREON IS HEREBY RESERVED FOR THE ESTABLISHMENT AND PRESERVATION OF WETLANDS AND OTHER NATURAL RESOURCES AND AS DRAINAGE AND STORMWATER DETENTION AREAS.
AN EASEMENT OVER THIS PROTECTION AREA IS HEREBY GRANTED TO THE VILLAGE OF LAKE ZURICH TO ENTER ONTO AND WITHIN THIS PROTECTION AREA TO INSPECT, MAINTAIN, ALTER OR OTHERWISE ACT UPON THE PROTECTION AREA IN ANY MANNER DEEMED NECESSARY FOR THE PROTECTION OF THE NATURAL RESOURCES AND STORMWATER MANAGEMENT FACILITIES LOCATED WITHIN THE AREA.
THIS PROTECTION AREA SHALL REMAIN IN ITS NATURAL CONDITION TO PROTECT AND PRESERVE ITS NATURAL FUNCTION AS A GENERAL HABITAT FOR AQUATIC AND LAND SPECIES AND AS WATER PURIFICATION AND RECHARGE AREAS. NO BUILDING OR OTHER STRUCTURE INTENDED FOR PERMANENT USE SHALL BE CONSTRUCTED OR MAINTAINED FOR ANY PURPOSE WITHIN THE PROTECTION AREA EXCEPT FOR STORMWATER MANAGEMENT PURPOSES WITH THE GRADING, CLEARING, AND EXCAVATION APPROVED IN WRITING IN ADVANCE BY THE VILLAGE OF LAKE ZURICH FOR DRAINAGE CONTROL PURPOSES. NO DUMPING, MOWING, FILLING, EXCAVATING, OR TRANSFERRING OF EARTH MATERIAL OR YARD CLIPPINGS SHALL BE PERMITTED WITHIN THE PROTECTION AREA.
THE OWNER OF THE PROPERTY AND HIS SUCCESSORS SHALL MAINTAIN THE PROTECTION AREA CONSISTENT WITH THE NATURAL RESOURCE PLAN ON FILE WITH THE VILLAGE OF LAKE ZURICH. THE MANAGEMENT PLAN MAY FROM TIME TO TIME BE MODIFIED WITH THE APPROVAL OR AT THE DIRECTION OF THE VILLAGE OF LAKE ZURICH CONSISTENT WITH THE CURRENT ORDINANCE, REGULATIONS AND POLICIES OF THE VILLAGE OF LAKE ZURICH.

PUBLIC SERVICE AND UTILITY EASEMENT PROVISIONS

THE RIGHT OF INGRESS AND EGRESS IS HEREBY GRANTED TO THE VILLAGE OF LAKE ZURICH, LAKE COUNTY, ILLINOIS, AU UPON, OVER, IN, ALONG, AND ACROSS ALL PROPERTY DESCRIBED ON THIS PLAT OF SUBDIVISION FOR ENDORSING IN THE SUBDIVISION ALL APPLICABLE LAWS, FOR EMERGENCY VEHICLES ON ANY AND ALL TYPES AND FOR PERSONNEL SERVICING EMERGENCY CONDITIONS IN THE SUBDIVISION, AND FOR ANY AND ALL OTHER EQUIPMENT AND PERSONNEL AS MAY BE REASONABLY REQUIRED IN THE PERFORMANCE OF THE GOVERNMENTAL AND PROPRIETARY AGENCIES ACTING IN COOPERATION WITH THE VILLAGE OF LAKE ZURICH. THE VILLAGE OF LAKE ZURICH MAY TRANSFER TO, OR EXERCISE JOINTLY WITH, ANY OTHER GOVERNMENT OR PUBLIC AGENCY THE RIGHTS GRANTED TO THE VILLAGE OF LAKE ZURICH IN THIS PARAGRAPH.

NO.	DATE	DESCRIPTION	BY
1	09-30-25	ORIGINAL ISSUE	B.J.L.

[redacted]

[redacted]

STORMWATER MANAGEMENT EASEMENT PROVISIONS
AN EASEMENT IS HEREBY GRANTED TO THE VILLAGE, ITS AGENTS, EMPLOYEES AND CONTRACTORS, TOGETHER WITH THE RIGHT OF ACCESS THERETO, IS HEREBY ESTABLISHED FOR AND GRANTED TO THE VILLAGE OF LAKE ZURICH AND TO ITS RESPECTIVE SUCCESSORS AND ASSIGNS, TO ENTER IN, ON, UPON, UNDER, OVER THROUGH, ALONG, AND ACROSS THE AREAS DESIGNATED ON THIS PLAT AS "STORMWATER EASEMENT" OR "SWE" FOR THE PURPOSE OF INSTALLING, OPERATING, MAINTAINING, REPAIRING, AND REPLACING STORMWATER MANAGEMENT IMPROVEMENTS AND FACILITIES, AND ANY APPURTENANCES THERETO, WHICH ARE BEING PROPERLY MAINTAINED IN CONFORMITY WITH THE APPLICABLE ORDINANCES AND REGULATIONS. THE VILLAGE OF ZURICH TOGETHER WITH THEIR RESPECTIVE SUCCESSORS AND ASSIGNS, RESERVE THE RIGHTS, BUT HAVE THE OBLIGATION, TO EVENLY, DISCHARGE AND PERMIT ANY NECESSARY MAINTENANCE, REPAIR, REMOVAL, REPLACEMENT, INSPECTION, MAINTENANCE AND OPERATION OF ANY STORMWATER FACILITIES ASSOCIATED WITH THE IMPROVEMENT OF SAID LOT THAT MAY BE REQUIRED FOR THE PERFORMANCE OF ANY SUCH SERVICE BY THE VILLAGE OF LAKE ZURICH SHALL NOT CONSTITUTE ACCEPTANCE OF SUCH AREAS AS PUBLIC IMPROVEMENTS BY THE VILLAGE OF LAKE ZURICH.
NO BUILDINGS, HOUSE, CONCRETE CURBS, WALLS, FENCES, TREES, WATERMAINS, VALVES, TRANSMISSION LINES, FLOODING, LANDSCAPING, OR OTHER SUCH FEATURES, FACILITIES OR STRUCTURES SHALL BE CONSTRUCTED OR PLACED WITHIN THE AREAS DESIGNATED ON THIS PLAT AS "STORMWATER EASEMENT" OR "SWE" EXCEPT AS APPROVED BY THE VILLAGE OF LAKE ZURICH. SUCH AREAS SHALL NOT BE ALTERED IN A MANNER TO BE NOT IN CONFORMITY WITH THE OPERATION AND MAINTENANCE THEREOF. NOTHING SHALL BE CONSTRUCTED OR PLACED WITHIN, ABOVE OR CHANGED WITHOUT THE WRITTEN PERMISSION OF THE VILLAGE OF LAKE ZURICH.
THE EASEMENT DESCRIBED IN THIS SECTION IS AN EASEMENT APPURTENANT, RUNNING WITH THE LAND AND SHALL BE BINDING ON AND INURE TO THE BENEFIT OF THE OWNERS OF THE LOTS, THEIR HEIRS, SUCCESSORS, ASSIGNS AND TRANSFEREES. THE EASEMENT SET FORTH IN THIS SECTION SHALL NOT BE EXTINGUISHED BY NONCOMPLIANCE WITH ANY ORDINANCES OR REGULATIONS (OR OTHER APPLICABLE REQUIREMENTS) SOMEHOW MAY BE VIOLATED BY THE VILLAGE OF LAKE ZURICH, AND THE RIGHT TO ENFORCE THE PROVISIONS OF THIS EASEMENT AND PRESERVATION OF SAID STORMWATER MANAGEMENT EASEMENT SHALL NOT BE REVOKED EXCEPT BY APPROVAL OF THE VILLAGE OF LAKE ZURICH.

LANDSCAPE PROVISIONS
AN EASEMENT FOR ILLINOIS BELL TELEPHONE COMPANY, THEIR SUCCESSORS AND ASSIGNS, TO CONSTRUCT, OPERATE, REPAIR AND MAINTAIN, UNDERGROUND CONDUITS, CABLES, VAULTS AND OTHER STRUCTURES AND EQUIPMENT, AND ALSO OVERHEAD POLES AND WIRES, CABLES, CONDUITS, ANCHORS, GUYS, STUBS, TRANSFORMERS, PEDESTALS, EQUIPMENT CABINETS OR OTHER FACILITIES AND 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 DESIGNATIONS) ON THE PLAT AND MARKED "EASEMENT", "UTILITY EASEMENT" OR SIMILAR DESIGNATION, AND THE PROPERTY DESIGNATED ON THIS PLAT AS "PUBLIC UTILITY EASEMENT" AND/OR ON THE PLAT AS "COMMON EASEMENT", AND THE PROPERTY DESIGNATED ON THIS PLAT AS "COMMON AREA OR AREAS" AND THE PROPERTY DESIGNATED ON THE PLAT FOR STREETS AND ALLEYS, WHETHER PUBLIC OR PRIVATE, TOGETHER WITH RIGHTS OF INGRESS AND EGRESS. THE GRANTEES SHALL ALSO HAVE THE RIGHT TO CUT DOWN, TRIM OR REMOVE TREES, BUSHES, ROOTS AND SAPLINGS AND TO CLEAR OBSTRUCTIONS FROM THE SURFACE AND SUBSURFACE AS MAY BE NECESSARY. PERMANENT BUILDINGS SHALL NOT BE PLACED ON SAID EASEMENTS, BUT SAID EASEMENTS MAY BE USED FOR GARDENS, SHRUBS, LANDSCAPING AND OTHER PURPOSES THAT DO NOT INTERFERE WITH THE USE OF THE EASEMENTS FOR THE INTENDED PURPOSES. THE TERMINATION OF MUNICIPAL SERVICE SHALL NOT BE A PERMANENT TERMINATION OF THE EASEMENT.

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

THE TERM "COMMON AREA OR AREAS" IS DEFINED AS A LOT, PARCEL OR AREA OF REAL PROPERTY, THE RECEIVING, USE AND ENJOYMENT OF WHICH IS BENEFICIAL TO ALL OR ANY APPURTENANCE TO THE DOMINANTLY IMPROVED SITE, PARCELS 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 "STORAGE AREA". THE TERM "COMMON AREA OR AREAS" ARE TENANTS, INVITEES, PUBLIC BODIES, PROPERTY OWNERS WITH APPROVED DRIVEWAYS AND EASEMENTS, AND THE VILLAGE OF LAKE ZURICH, ILLINOIS, AND ANY SPECIAL TAXING DISTRICT OR AGENCIES, BUT EXCLUDES SUCH AS A POOL, RECREATION POOL OR MECHANICAL EQUIPMENT.

RELOCATION OF FACILITIES WILL BE DONE BY GRANTEES AT EVOF OF THE GRANTOR'S LOT OWNER UPON WRITTEN REQUEST. AN EASEMENT IS HEREBY GRANTED TO THE VILLAGE OF LAKE ZURICH AND TO ALL PUBLIC UTILITY COMPANIES ENTITLED HEREIN TO DOMICIL, THEIR SUCCESSORS AND ASSIGNS, AUTHORITIES, THE VILLAGE OF LAKE ZURICH AND COMMONWEALTH EDISON COMPANY AND CABLE TELEVISION SERVICE AN EASEMENT IS HEREBY RESERVED FOR AND GRANTED TO NORTHERN ILLINOIS GAS COMPANY (NICOR GAS), ITS SUCCESSORS AND ASSIGNS, OVER ALL OF OUTLOT "A" EXCEPT THOSE EASEMENT AREAS IF ANY, AS PLOTTED "EASEMENT" AREAS, HEREON, FOR THE PURPOSE OF INSTALLING, OPERATING, MAINTAINING, REPAIRING, REPLACING AND REMOVING GAS MAINS, SERVICE LINES, REGULATOR STATIONS, METERS, AND ALL OTHER APPURTENANCES FOR THE PURPOSE OF SERVING ALL AREAS SHOWN ON THIS PLAT AS WELL AS OTHER PROPERTY, WHETHER OR NOT CONTIGUOUS THERETO, TOGETHER WITH THE RIGHT OF ACCESS TO SAID PROPERTY. NO BUILDINGS OR OTHER STRUCTURES SHALL BE CONSTRUCTED OR EXISTING IN ANY SUCH "EASEMENT" AREAS. STREETS, ALLEYS, OR THOSE AREAS OF PLACES NOT SHALL ANY OTHER USE BY MADE THEREOF WHICH WILL INTERFERE WITH THE EASEMENTS RESERVED AND GRANTED HEREIN.

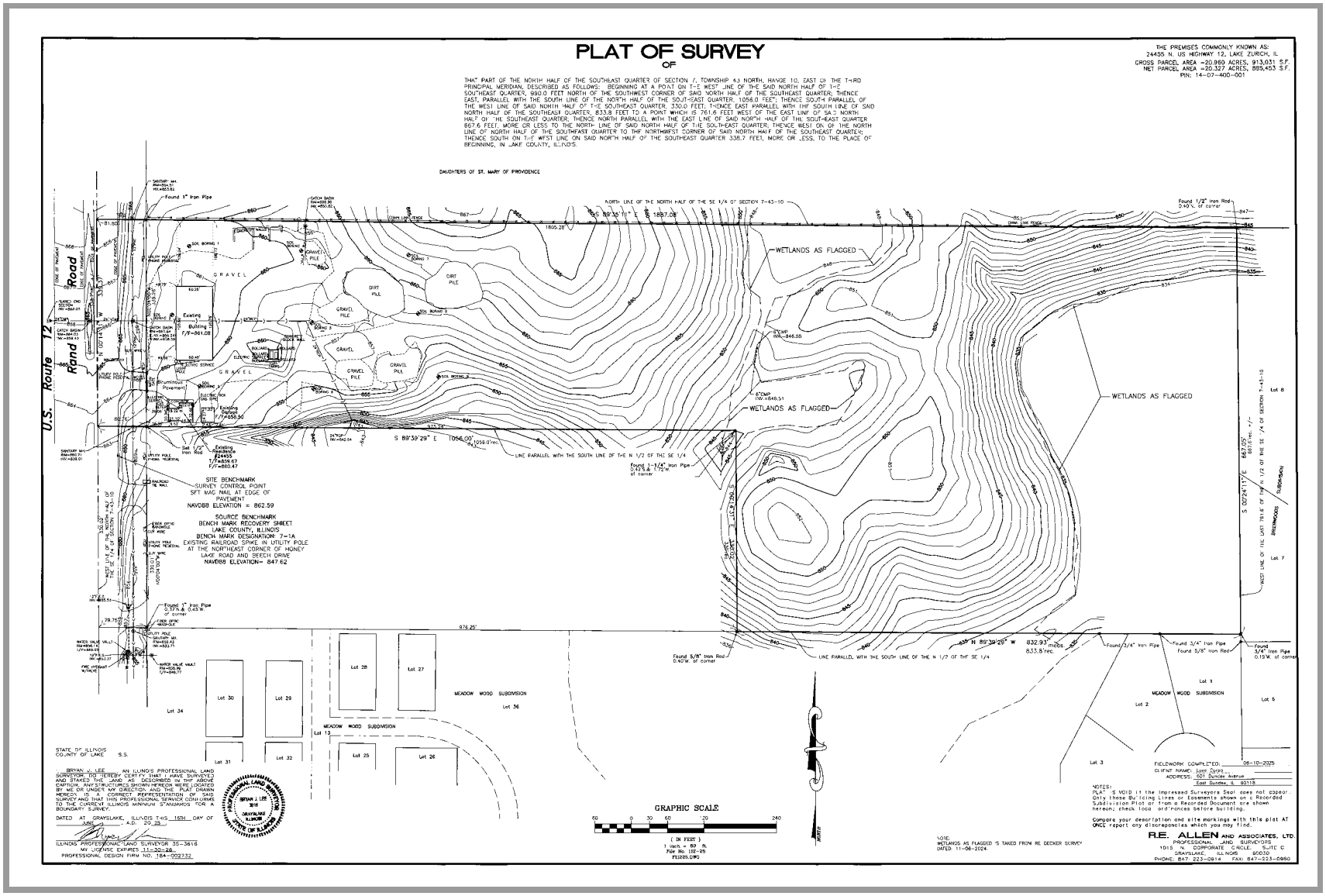
THE VILLAGE OF LAKE ZURICH, A MUNICIPAL CORPORATION, LAKE COUNTY, ILLINOIS, AND ITS SUCCESSORS OR ASSIGNS, JOINTLY AND SEVERALLY SHALL HOLD A PERMANENT EASEMENT, OVER AND ACROSS THE SURFACE OF LOTS 1 THRU 10, OUTLOTS A, B AND C, FOR THE INSTALLATION, CONSTRUCTION, USE, REPAIR AND MAINTENANCE OF ALL PUBLIC UTILITY EQUIPMENT, INCLUDING BUT NOT LIMITED TO FACILITIES USED IN CONNECTION WITH THE TRANSMISSION AND DISTRIBUTION OF ELECTRICITY AND SOUNDS AND SIGNALS, WATER AND SEWERAGE AND STORM AND PIPING. THE RIGHT IS GIVEN TO CUT, TRIM OR REMOVE TREES, BUSHES AND ROOTS, 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 THE AREAS OF THE EASEMENTS. AFTER INSTALLATION OF ANY SUCH FACILITIES, THE GRADE OF THE SUBDIVIDED PROPERTY SHALL NOT BE ALTERED IN A MANNER SO AS TO UNREASONABLY INTERFERE WITH THE PROPER OPERATION AND MAINTENANCE THEREOF.
THE EASEMENT PROVISIONS AND GRANTING LANGUAGE IS HEREBY GRANTED TO THE VILLAGE OF LAKE ZURICH, COMMONWEALTH EDISON COMPANY, AMERITECH, NICOR GAS COMPANY AND CABLE TELEVISION COMPANIES OPERATING UNDER FRANCHISE FROM THE VILLAGE OF LAKE ZURICH OVER ALL AREAS NOT OCCUPIED BY BUILDINGS, PORCHES AND DECKS.

FIELDWORK COMPLETED: 06-10-2025
CLIENT NAME: Luxe Corsa
ADDRESS: 601 Dundee Avenue
East Dundee, IL 60118

NOTES:
PLAT IS VOID if the impressed Surveyor's Seal does not appear. Only these Building Lines or Easements shown on a Recorded Subdivision Plat or from a Recorded Document are shown hereon; check local ordinances before building.

Compare your description and site markings with this plat at ONCE report any discrepancies which you may find.

R.E. ALLEN AND ASSOCIATES, LTD.
PROFESSIONAL LAND SURVEYORS
615 N. CORPORATE CIRCLE, SUITE C
GRAYSLAKE, ILLINOIS 60030
PHONE: 847 223 0914 FAX: 847-223-0980


PLAT OF SURVEY
OF
THAT PART OF THE NORTH HALF OF THE SOUTHEAST QUARTER OF SECTION 7, TOWNSHIP 43 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: BEGINNING AT A POINT ON THE WEST LINE OF THE SAID NORTH HALF OF THE SOUTHEAST QUARTER, 990.0 FEET NORTH OF THE SOUTHWEST CORNER OF SAID NORTH HALF OF THE SOUTHEAST QUARTER; THENCE EAST, PARALLEL WITH THE SOUTH LINE OF THE NORTH HALF OF THE SOUTHEAST QUARTER 1056.0 FEET; THENCE SOUTH PARALLEL OF THE WEST LINE OF SAID NORTH HALF OF THE SOUTHEAST QUARTER, 330.0 FEET; THENCE EAST PARALLEL WITH THE SOUTH LINE OF SAID NORTH HALF OF THE SOUTHEAST QUARTER, 833.8 FEET TO A POINT WHICH IS 761.6 FEET WEST OF THE EAST LINE OF SAID NORTH HALF OF THE SOUTHEAST QUARTER, THENCE NORTH PARALLEL WITH THE EAST LINE OF SAID NORTH HALF OF THE SOUTHEAST QUARTER 867.6 FEET, MORE OR LESS TO THE NORTH LINE OF SAID NORTH HALF OF THE SOUTHEAST QUARTER; THENCE WEST ON THE NORTH LINE OF NORTH HALF OF THE SOUTHEAST QUARTER TO THE NORTHWEST CORNER OF SAID NORTH HALF OF THE SOUTHEAST QUARTER; THENCE SOUTH ON THE WEST LINE ON SAID NORTH HALF OF THE SOUTHEAST QUARTER 338.7 FEET, MORE OR LESS, TO THE PLACE OF BEGINNING, IN LAKE COUNTY, ILLINOIS.
THE PREMISES COMMONLY KNOWN AS:
24455 N. US HIGHWAY 12, LAKE ZURICH, IL
GROSS PARCEL AREA =20.960 ACRES, 913,031 S.F.
NET PARCEL AREA =20.327 ACRES, 885,453 S.F.
PIN: 14-07-400-001
DAUGHTERS OF ST. MARY OF PROVIDENCE
U.S. Route 12
Rand Road
NORTH LINE OF THE NORTH HALF OF THE SE 1/4 OF SECTION 7-43-10
S 89°15'11" E 1887.08
1805.28'
WETLANDS AS FLAGGED
GRAVEL
DIRT PILE
GRAVEL PILE
Existing Building F/F=861.08
Existing Building F/F=859.50
Existing Building F/F=860.47
Found 1/2" Iron Rod 0.90'N. of corner
Found 1" Iron Pipe
Found 1-1/4" Iron Pipe 0.42'S. & 1.72'W. of corner
Found 5/8" Iron Rod 0.40'W. of corner
Found 3/4" Iron Pipe
Found 3/4" Iron Pipe Found 5/8" Iron Rod
Found 3/4" Iron Pipe 0.15'W. of corner
S 89°39'29" E 1056.00' (M&R)
LINE PARALLEL WITH THE SOUTH LINE OF THE N 1/2 OF THE SE 1/4
N 89°39'29" W 832.93' meas. 833.8'rec.
LINE PARALLEL WITH THE SOUTH LINE OF THE N 1/2 OF THE SE 1/4
S 00°24'11"E 867.05' 867.6'rec. +/-
WEST LINE OF THE LAST 761.6' OF THE N 1/2 OF THE SE 1/4 OF SECTION 7-43-10
BRIDGEWOODS SUBDIVISION
Lot 8
Lot 7
Lot 6
Lot 1
Lot 2
Lot 3
MEADOW WOOD SUBDIVISION
SITE BENCHMARK
SURVEY CONTROL POINT
SET MAG NAIL AT EDGE OF PAVEMENT
NAVD88 ELEVATION = 862.59
SOURCE BENCHMARK
BENCH MARK RECOVERY SHEET
LAKE COUNTY, ILLINOIS
BENCH MARK DESIGNATION: 7-1A
EXISTING RAILROAD SPIKE IN UTILITY POLE AT THE NORTHEAST CORNER OF HONEY LAKE ROAD AND BEECH DRIVE
NAVD88 ELEVATION= 847.62
Lot 34
Lot 30
Lot 29
Lot 31
Lot 32
Lot 28
Lot 27
Lot 25
Lot 26
Lot 13
Lot 36
STATE OF ILLINOIS
COUNTY OF LAKE S.S.
I, BRYAN J. LEE, AN ILLINOIS PROFESSIONAL LAND SURVEYOR, DO HEREBY CERTIFY THAT I HAVE SURVEYED AND STAKED THE LAND AS DESCRIBED IN THE ABOVE CAPTION, ANY STRUCTURES SHOWN HEREON WERE LOCATED BY ME OR UNDER MY DIRECTION AND THIS PLAT CORRECTLY REPRESENTS SAID SURVEY AND SUBDIVISION. I FURTHER CERTIFY THAT SAID SURVEY AND THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.
DATED AT GRAYSLAKE, ILLINOIS THIS 16TH DAY OF JUNE, A.D. 25 26
ILLINOIS PROFESSIONAL LAND SURVEYOR 35-3616
MY LICENSE EXPIRES 11-30-26
PROFESSIONAL DESIGN FIRM NO. 184-002752
GRAPHIC SCALE
60 0 30 60 120 240
(IN FEET)
1 inch = 60 ft.
File No. 112-25
FIELDS.DWG
NOTE:
WETLANDS AS FLAGGED IS TAKED FROM RE DECKER SURVEY DATED 11-06-2024.
FIELDWORK COMPLETED: 06-10-2025
CLIENT NAME: Joan Sass
ADDRESS: 601 Dundee Avenue
East Dundee, IL 60118
NOTES:
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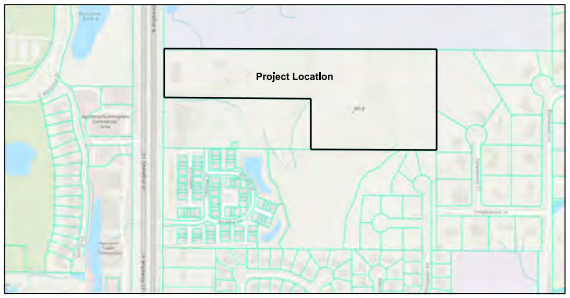
R.E. ALLEN AND ASSOCIATES, LTD.
PROFESSIONAL ENGINEERS AND SURVEYORS
1010 N. CORPORATE CIRCLE, SUITE C
GRAYSLAKE, ILLINOIS 60030
PHONE: 847-223-0814 FAX: 847-223-0880

FINAL ENGINEERING FOR

LUXE CORSA AUTO SUITES

LOCATION MAP NORTH



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LEGEND

EXISTING	PROPOSED		EXISTING	PROPOSED	
		SANITARY SEWER			CENTER LINE
		FORCE MAIN			EASEMENT
		STORM SEWER			BUILDING SETBACK
		P.V.C. STORM SEWER			CURB & GUTTER
		COMBINED SEWER			CURB & REVERSE GUTTER PITCH
		DRAIN TILE			DEPRESSED CURB & GUTTER
		WATER MAIN			GUARD RAIL
		TRENCH BACKFILL			FENCE
		MANHOLE			RETAINING WALL
		CATCH BASIN			CURB RAMP
		INLET			DRIVEWAY HAND
		2' STORM MANHOLE			SIGN
		INLET MANHOLE			MAIL BOX
		FLARED END SECTION			SOIL BORING
		HEAD WALL			DECIDUOUS TREE, DIAMETER
		LIFT STATION			EVERGREEN TREE, HEIGHT
		CLEAN-OUT	T/F 600.00	T/F 600.00	TOP OF FOUNDATION
		METER VAULT	F/G 600.00	F/G 600.00	FINISHED GRADE
		VALVE VAULT	+600.00	+600.00	SPOT ELEVATION
		VALVE BOX	T/C 600.00	T/C 600.00	TOP OF CURB ELEVATION
		BUFFALO BOX	F/L 600.00	F/L 600.00	FLOW LINE OF GUTTER
		FIRE HYDRANT		600	CONTOUR
		CONFLICT			DITCH
		CROSSING			DRAINAGE FLOW
		TRIPLE BASIN			OVERLAND FLOW
		GREASE BASIN	R-600.00	R-600.00	RIM ELEVATION
		GAS MAIN	I-600.00	I-600.00	INVERT ELEVATION
		ELECTRIC CABLE			
		TELEPHONE CABLE			
		FIBER OPTIC CABLE			
		CABLE			
		STREET LIGHT			
		UTILITY POLE			
		PEDESTAL			
		TRANSFORMER			
		GAS VALVE			
		ELECTRIC BOX			

LEGAL DESCRIPTION:

That part of the north half of the south east quarter of Section 7, Township 43 North, Range 10, East of the 3rd P. M., described as follows: Beginning at a point on the west line of said north half of the south east quarter, 990 feet north of the south west corner of said north half of the south east quarter of the south east quarter; thence south parallel with the south line of said north half of the south east quarter, 1316 feet; thence south parallel with the west line of said north half of the south east quarter, 330 feet; thence east parallel with the south line of said north half of the south east quarter, 1316.3 feet to the east line of said west half of the south east quarter; thence north on the east line of said north half of the south east quarter, 330 feet to the place of beginning, in Lake County, Illinois.

BENCHMARKS:

SOURCE BENCHMARK
BENCH MARK RECOVERY SHEET
LAKE COUNTY, ILLINOIS
BENCH MARK DESIGNATION: 7-1A
EXISTING RAILROAD SPIKE IN UTILITY POLE AT THE NORTHEAST CORNER OF HONEY LAKE ROAD AND BEECH DRIVE
NAVD88 ELEVATION= 847.82

SITE BENCHMARK
SURVEY CONTROL POINT
SET MAG NAIL AT EDGE OF PAVEMENT
NAVD88 ELEVATION = 862.59
LOCATED APPROXIMATELY 56' SOUTH OF SOUTH PROPERTY LINE, ALONG ROUTE 12 SHOULDER

PROPERTY INDEX NUMBER:

14-07-400-001

DRAINAGE CERTIFICATE

TO THE BEST OF OUR KNOWLEDGE AND BELIEF THE DRAINAGE OF SURFACE WATERS WILL NOT BE CHANGED BY THE CONSTRUCTION OF THIS DEVELOPMENT OR ANY PART THEREOF, OR, THAT IF SUCH SURFACE WATER DRAINAGE WILL BE CHANGED, REASONABLE PROVISION HAS BEEN MADE FOR COLLECTION AND DIVERSION OF SUCH SURFACE WATERS INTO PUBLIC AREAS, OR DRAINS WHICH THE DEVELOPER HAS A RIGHT TO USE, AND THAT SUCH SURFACE WATERS WILL BE PLANNED FOR IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRACTICES SO AS TO REDUCE THE LIKELIHOOD OF DAMAGE TO THE ADJOINING PROPERTY BECAUSE OF THE CONSTRUCTION OF THIS DEVELOPMENT.

REGISTERED PROFESSIONAL ENGINEER — DATE: 10/01/25

OWNER OR OWNER'S DULY AUTHORIZED AGENT — DATE

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PREPARED FOR:

LUXE CORSA PARTNERS, LLC
601 DUNDEE AVENUE, EAST DUNDEE, ILLINOIS 60118

CONSULTING ENGINEERS:

PEARSON, BROWN & ASSOCIATES, INC.
A PROFESSIONAL DESIGN FIRM - ILLINOIS PROFESSIONAL ENGINEERING CORPORATION - LICENSE NUMBER 184-001658 EXPIRES 04/30/27
1850 W. WINCHESTER ROAD - SUITE 205 LIBERTYVILLE, IL. 60048 (847) 367-6707

NOT FOR CONSTRUCTION

CONTACT JULIE AT 8-1-1 OR 800-892-0123
With the following:
County Lake
City/Twnship Lake Zurich / T43N-R10E
Sec 1/4 Sec No. Sec 7, SE 1/4
Call 2 working days BEFORE YOU DIG.
illinois1call.com

PERMIT	NUMBER	DATE ISSUED
IEPA - SANITARY		
IEPA - WATER		
IDOT		
VILLAGE		

REVISIONS		
1	10/01/25	PER VILLAGE REVIEW COMMENTS
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		

ENGINEER'S SEAL & SIGNATURE

ORIGINAL ISSUE DATE: 07/16/25

SHEET NUMBER 1 OF 25 SHEETS

JOB No. 2451

LUXE CORSA AUTO SUITES

SPECIAL PROVISIONS

THE FOLLOWING SPECIAL PROVISIONS ASSUME A TYPICAL OWNER/DEVELOPER AND FOUR PRIME CONTRACTORS (EXCAVATION, UNDERGROUND, PAVING, AND LIGHTING). IF A GENERAL CONTRACTOR IS INVOLVED, REQUIREMENTS AND RESPONSIBILITIES SHALL APPLY ACCORDINGLY BASED ON CONTRACT RELATIONSHIPS BETWEEN THE GENERAL CONTRACTOR, RELEVANT SUBCONTRACTORS AND THE OWNER/DEVELOPER.

I. GENERAL NOTES

1. THE CONSTRUCTION OF ALL IMPROVEMENTS OF THE PROJECT SHALL BE GOVERNED BY THE LATEST CODES AND ORDINANCES OF THE MUNICIPALITY.

   THE CONSTRUCTION OF ALL SEWER AND WATER MAIN IMPROVEMENTS ON THIS PROJECT SHALL BE GOVERNED BY THE FOLLOWING:
   a. THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER CONSTRUCTION IN ILLINOIS", LATEST REVISION, EXCEPT AS NOTED ON THE PLANS AND SPECIFICATIONS.
   b. THE "ILLINOIS ENVIRONMENTAL PROTECTION AGENCY TITLE 77, PART 890 "THE ILLINOIS PLUMBING CODE", LATEST REVISION.
   c. THE "ILLINOIS ENVIRONMENTAL PROTECTION AGENCY TITLE 35, SUBTITLE C, PART 370 "THE ILLINOIS RECOMMENDED STANDARDS FOR SEWAGE WORKS", LATEST REVISION.
   d. THE "ILLINOIS ENVIRONMENTAL PROTECTION AGENCY TITLE 35, SUBTITLE F "PUBLIC WATER SUPPLIES", LATEST REVISION.

   THE CONSTRUCTION OF ALL PAVING AND GRADING IMPROVEMENTS SHALL BE GOVERNED BY THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AND "STANDARD SPECIFICATIONS AND ROCKWORK SPECIAL PROVISIONS" SPECIAL PROVISIONS, PROVIDING LATEST REVISIONS, PREPARED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION (IDOT). IN CASE OF CONFLICT THE "SPECIAL PROVISIONS" SHALL TAKE PRECEDENCE AND GOVERN, BOTH THE IDOT STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS SHALL THROUGHOUT BE REFERRED TO AS THE "IDOT STANDARD SPECIFICATIONS".

   SOIL EROSION AND SEDIMENT CONTROL ON THIS PROJECT SHALL BE GOVERNED BY THE ILLINOIS URBAN MANUAL", LATEST REVISION.

2. **OWNER AND MUNICIPALITY**
   THE WORD "OWNER" AS USED IN THE SPECIAL PROVISIONS SHALL WHERE APPLICABLE, INCLUDE THE LOCAL MUNICIPALITY OR GOVERNING AUTHORITY.

3. **GUARANTEE PERIOD**
   ALL CONSTRUCTION PERFORMED UNDER THIS CONTRACT SHALL BE GUARANTEED BY THE CONTRACTOR AND HIS SURETY FOR A PERIOD OF TWELVE MONTHS FROM THE DATE OF FINAL ACCEPTANCE BY THE LOCAL MUNICIPALITY, GOVERNING AUTHORITY, OR PRIVATE OWNER OF THE WORK AGAINST DEFECTS IN WORKMANSHIP AND FAULTY OR IMPROPER MATERIALS.

4. **BONDS AND INSURANCE**
   CONTRACTOR SHALL FURNISH PERFORMANCE AND PAYMENT BONDS AS SECURITY FOR THE FAITHFUL PERFORMANCE AND PAYMENT OF ALL HIS OBLIGATIONS UNDER THE PLANS AND SPECIFICATIONS. THESE BONDS SHALL BE IN AMOUNTS AT LEAST EQUAL TO THE CONTRACT PRICE, AND IN SUCH FORM AND WITH SUCH SURETIES AS ARE LICENSED TO CONDUCT BUSINESS IN THE STATE REQUIRED THE PROJECT IS LOCATED AND NAMED IN THE CURRENT LIST OF SURETY COMPANIES ACCEPTABLE ON FEDERAL BONDS" AS PUBLISHED IN THE FEDERAL REGISTER BY THE AUDITOR GENERAL OF THE TREASURY DEPARTMENT. IF THE SURETY ON ANY BOND FURNISHED BY THE CONTRACTOR DECLARED BANKRUPT OR BECOMES INSOLVENT OR ITS RIGHT TO DO BUSINESS IS TERMINATED IN THE STATE WHERE THE WORK IS TO BE PERFORMED, THE CONTRACTOR SHALL, WITHIN FIVE DAYS THEREAFTER SUBSTITUTE ANOTHER BOND AND SURETY, BOTH OF WHICH SHALL BE ACCEPTABLE TO OWNER. CONTRACTOR SHALL PURCHASE AND MAINTAIN SUCH INSURANCE AS WILL PROTECT HIM FROM CLAIMS UNDER WORKMEN'S COMPENSATION LAWS, OTHER BENEFIT LAWS OR OTHER SIMILAR EMPLOYEE BENEFIT LAWS WHICH MAY BE APPLICABLE TO HIS WORK; FROM CLAIMS FOR DAMAGES BECAUSE OF BODILY INJURY, OCCUPATIONAL SICKNESS OR DISEASE OR DEATH OF HIS EMPLOYEES, AND CLAIMS INSURED BY USUAL PERSONAL INJURY LIABILITY COVERAGE WHICH ARE SUSTAINED BY ANY PERSON AS A RESULT OF AN OFFENSE DIRECTLY OR INDIRECTLY RELATED TO EMPLOYMENT OF SUCH PERSON BY THE CONTRACTOR, OR BY ANY OTHER PERSON; FROM CLAIMS FOR DAMAGES BECAUSE OF BODILY INJURY OR DEATH OF ANY PERSON OTHER THAN HIS EMPLOYEES, AND CLAIMS INSURED BY USUAL PERSONAL INJURY LIABILITY COVERAGE; FROM CLAIMS FOR DAMAGES BECAUSE OF INJURY TO OR DESTRUCTION OF TANGIBLE PROPERTY, INCLUDING LOSS OF USE RESULTING THEREFROM; AND FROM CLAIMS FOR DAMAGES BECAUSE OF BODILY INJURY OR DEATH OF ANY PERSON OR PROPERTY DAMAGE OUT OF THE OWNERSHIP, MAINTENANCE OR USE OF ANY MOTOR VEHICLE AND FROM CLAIMS FOR INJURY TO OR DESTRUCTION OF TANGIBLE PROPERTY, INCLUDING LOSS OF USE RESULTING THEREFROM—ANY OF WHICH MAY ARISE OUT OF OR ONLOUT FROM CONTRACTOR'S OPERATIONS UNDER THE PLANS AND SPECIFICATIONS, WHETHER SUCH OPERATIONS BY HIMSELF OR BY ANY SUBCONTRACTOR OR ANYONE DIRECTLY OR INDIRECTLY EMPLOYED BY ANY OF THEM OR FOR WHOSE ACTS ANY OF THEM MAY BE LIABLE. INSURANCE OF WHATEVER NATURE TO BE CARRIED BY THE CONTRACTOR SHALL BE WRITTEN FOR NOT LESS THAN THE LIMITS OF LIABILITY SPECIFIED IN THE CONTRACT DOCUMENTS OR REQUIRED BY LAW, WHICHEVER IS GREATER. SHALL INCLUDE CONTRACTUAL LIABILITY INSURANCE AND SHALL INCLUDE OWNER AND CONSULTANT AS ADDITIONAL INSURED PARTIES, BEFORE STARTING THE WORK, CONTRACTOR SHALL FILE WITH OWNER AND CONSULTANT CERTIFICATES OF SUCH INSURANCE, ACCEPTABLE TO OWNER THEREIN SHALL BE PROVISIONS ENSURING THAT THE CONTRACTOR SHALL BE PROTECTED UNDER EACH THE POLICIES(S) NOT BE CANCELLED OR MATERIALLY CHANGED UNTIL AT LEAST FIFTEEN (15) DAYS' PRIOR WRITTEN NOTICE HAS BEEN GIVEN TO OWNER AND CONSULTANT BY THE CERTIFICATE HOLDER. IN ADDITION TO THE INSURANCE, CLOSE WARRANTY AND INDEMNIFICATION BONDS, COMMISSIONS, OFFICERS, AGENTS AND EMPLOYEES AS ADDITIONAL INSURED TO COVER CLAIMS ARISING WHILE OUT OF THE PERFORMANCE OF THE WORK BY THE APPLICANT OR HIS AGENTS OR CONTRACTORS.

5. **INDEMNIFICATION**
   CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS THE MUNICIPALITY, OWNER AND CONSULTANT, AND THEIR AGENTS AND EMPLOYEES FROM AND AGAINST ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING ATTORNEY'S FEES, ARISING OUT OF OR RESULTING FROM THE PERFORMANCE OF THE WORK, PROVIDED THAT ANY SUCH CLAIM, DAMAGE, LOSS OR EXPENSE (A) IS ATTRIBUTABLE TO BODILY INJURY, SICKNESS, DISEASE OR DEATH, OR TO INJURY TO OR DESTRUCTION OF TANGIBLE PROPERTY (OTHER THAN THE WORK ITSELF), INCLUDING THE LOSS OF USE RESULTING THEREFROM, AND (B) IS CAUSED IN WHOLE OR IN PART BY ANY NEGLIGENT ACT OR OMISSION OF CONTRACTOR, ANY SUBCONTRACTOR, ANYONE DIRECTLY OR INDIRECTLY EMPLOYED BY ANY OF THEM OR ANYONE FOR WHOSE ACTS ANY OF THEM MAY BE LIABLE, REGARDLESS OF WHETHER OR NOT IT IS CAUSED IN PART BY A PARTY INDEMNIFIED HEREUNDER. IN ANY AND ALL CLAIMS AGAINST OWNER OR CONSULTANT OR ANY OF THEIR AGENTS OR EMPLOYEES BY ANY EMPLOYEE OF CONTRACTOR, ANY SUBCONTRACTOR, ANYONE DIRECTLY OR INDIRECTLY EMPLOYED BY ANY OF THEM OR ANYONE FOR WHOSE ACTS ANY OF THEM MAY BE LIABLE, THE INDEMNIFICATION OBLIGATION UNDER THIS PARAGRAPH SHALL NOT BE LIMITED IN ANY WAY BY ANY LIMITATION ON THE AMOUNT OR TYPE OF DAMAGES, COMPENSATION OR BENEFITS PAYABLE BY OR FOR CONTRACTOR OR ANY SUBCONTRACTOR UNDER WORKER'S COMPENSATION ACTS, DISABILITY BENEFIT ACTS OR OTHER EMPLOYEE BENEFIT ACTS.

6. **LIABILITY LIMITATIONS**
   NEITHER OWNER NOR SUBCONTRACTORS ARE SHELVED AND EXPERIENCED IN THE USE AND INTERPRETATION OF PLANS AND SPECIFICATIONS AS MAY BE REQUIRED BY THE CONTRACT DOCUMENTS FOR THIS CONTRACT, THEY HAVE CAREFULLY REVIEWED THE PLANS AND SPECIFICATIONS, AND HAVE FOUND THEM FREE OF AMBIGUITIES AND SUFFICIENT FOR SUCH PURPOSES. FURTHER, THEY HAVE BASED THEIR BID SOLELY ON THESE DOCUMENTS, NOT RELYING IN ANY WAY ON ANY EXPLANATION OR INTERPRETATION, ORAL OR WRITTEN, FROM ANY OTHER SOURCE, HAVING ASSURED HIMSELF OF THE ADEQUACY OF THE DOCUMENTS AND THE ACCURACY OF THE DETAILS THEREIN FOR THE PURPOSES INTENDED, CONTRACTOR AGREES THAT THE CONSTRUCTION OF THE IMPROVEMENTS INCLUDED IN THE CONTRACT DOCUMENTS SHALL NOT BE THE BASIS FOR ANY CLAIM FOR EXTRA COMPENSATION ON ACCOUNT OF ANY ALLEGED MISUNDERSTANDING WITH RESPECT TO THE CONDITIONS OF THE WORK OR ANY ALLEGED ERROR OR OMISSION IN THE CONTRACT DOCUMENTS OR ANY INTERPRETATION OR EXECUTION THEREOF, OR ANY ALLEGED NEGLIGENCE OR NONFEASANCE ON THE PART OF OWNER OR CONSULTANT, WHETHER IN PREPARING THE CONTRACT DOCUMENTS OR IN MAKING ANY INSPECTION OR APPROVAL OF THE WORK OR PAYMENT THEREFOR, OR ANY ALLEGED RESTRAINT OR INTERFERENCE, WHETHER THE SAME BE CONSIDERED AS AN EXPRESS OR IMPLIED PART OF THE CONTRACT, OR ANY OTHER ALLEGED CAUSE, EXCEPT FOR SUCH AS MAY BE EXPRESSLY PROVIDED FOR IN THE CONTRACT DOCUMENTS AND FAILURE TO PERFORM IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS AND/OR WRITTEN OR VERBAL INSTRUCTIONS FROM ENGINEER NOTWITHSTANDING THE FOREGOING, CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR ANY DAMAGES TO THE EXTENT CAUSED BY THE NEGLIGENCE OF CONTRACTOR, ANY SUBCONTRACTOR, ANYONE DIRECTLY OR INDIRECTLY EMPLOYED BY ANY OF THEM OR ANYONE FOR WHOSE ACTS ANY OF THEM MAY BE LIABLE.

7. **SAFETY AND PROTECTION**
   CONTRACTOR SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK. HE SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE SAFETY OF, AND SHALL PROVIDE THE NECESSARY PROTECTION TO PREVENT DAMAGE, INJURY OR LOSS TO:
   a. ALL EMPLOYEES ON THE WORK AND OTHER PERSONS WHO MAY BE AFFECTED THEREBY;
   b. ALL THE WORK AND ALL MATERIALS AND EQUIPMENT TO BE INCORPORATED THEREIN, WHETHER IN STORAGE OR ON OFF THE SITE;
   c. OTHER PROPERTY AT THE SITE OR ADJACENT THERETO, INCLUDING TREES, SHRUBS, LAWNS, WALKS, PAVEMENTS, ROADWAYS, STRUCTURES AND UTILITIES NOT DESIGNATED FOR REMOVAL, RELOCATION OR REPLACEMENT IN THE COURSE OF CONSTRUCTION.

   CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LAWS, ORDINANCES, RULES, REGULATIONS AND ORDERS OF PUBLIC AUTHORITIES BEARING ON THE SAFETY OF PERSONS OR PROPERTY OR ON THEIR PROTECTION FROM DAMAGE, INJURY OR LOSS. HE SHALL ERECT AND MAINTAIN, AS REQUIRED BY THE CONDITIONS AND PROGRESS OF THE WORK, ALL NECESSARY SAFEGUARDS FOR SAFETY AND PROTECTION. HE SHALL NOTIFY OWNERS OF ADJACENT UTILITIES WHEN PROSECUTION OF THE WORK MAY AFFECT THEM, ALL DAMAGE, INJURY OR LOSS TO ANY PROPERTY REFERRED TO CAUSE, DIRECTLY OR INDIRECTLY, IN WHOLE OR IN PART, BY CONTRACTOR, ANY SUBCONTRACTOR OR ANYONE DIRECTLY OR INDIRECTLY EMPLOYED BY ANY OF THEM OR ANYONE FOR WHOSE ACTS ANY OF THEM MAY BE LIABLE, EXCEPT DAMAGE OR LOSS ATTRIBUTABLE TO THE FAULT OR NEGLIGENCE OF THE OWNER OR CONSULTANT OR ANYONE FOR WHOSE ACTS THEY MAY BE LIABLE, SHALL BE REMEDIED BY CONTRACTOR.

   CONTRACTOR SHALL DESIGNATE A RESPONSIBLE MEMBER OF HIS ORGANIZATION AT THE SITE WHOSE DUTY SHALL BE THE PREVENTION OF ACCIDENTS. THIS PERSON SHALL BE THE CONTRACTOR'S SUPERINTENDENT UNLESS OTHERWISE DESIGNATED BY CONTRACTOR IN WRITING TO OWNER. IN EMERGENCIES AFFECTING THE SAFETY OF PERSONS OR THE WORK OR PROPERTY AT THE SITE OR ADJACENT THERETO, CONTRACTOR, WITHOUT SPECIAL INSTRUCTION OR AUTHORIZATION FROM CONSULTANT OR OWNER, IS OBLIGATED TO ACT, AT HIS DISCRETION, TO PREVENT THREATENED DAMAGE, INJURY OR LOSS.

8. **SUPERVISION AND SUPERINTENDENCE**
   CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK EFFICIENTLY AND WITH HIS BEST SKILL AND ATTENTION. HE SHALL BE SOLELY RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES OF CONSTRUCTION. HE SHALL EMPLOY ONLY COMPETENT PERSONNEL FOR THE PERFORMANCE OF THE WORK. HE SHALL BE RESPONSIBLE FOR THE ORDERLY AND SATISFACTORY CONDUCT AND PERFORMANCE OF ALL WORKERS ON THE WORK AND SHALL MAINTAIN AT ALL TIMES STRICT DISCIPLINE AMONG HIS EMPLOYEES AND THOSE OF ALL SUBCONTRACTORS. CONTRACTOR SHALL NOT EMPLOY ON THE WORK ANY UNFIT PERSON OR ANYONE NOT SKILLED IN THE WORK ASSIGNED TO HIM. CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ALL COSTS INCURRED AND FOR ALL WORK PERFORMED WHETHER BY CONTRACTOR OR ANY SUBCONTRACTOR OR OTHERWISE, RESULTING FROM THE EMPLOYMENT OF UNSKILLED OR UNFIT PERSONS OR FROM THE USE OF UNSUITABLE MATERIALS.

   CONTRACTOR SHALL COMPLY WITH ALL PROVISIONS OF THE AGREEMENT APPLICABLE TO LABOR AND SAFETY STANDARDS, AND SHALL TAKE SUCH ADDITIONAL MEASURES AS MAY BE NECESSARY FOR SUCH COMPLIANCE. CONTRACTOR SHALL KEEP ON THE WORK AT ALL TIMES DURING PROGRESS A COMPETENT RESIDENT SUPERINTENDENT, WHO SHALL NOT BE REPLACED WITHOUT WRITTEN NOTICE TO OWNER AND CONSULTANT, EXCEPT UNDER EXTRAORDINARY CIRCUMSTANCES, THE SUPERINTENDENT WILL BE CONSIDERED REPRESENTATIVE AT THE SITE AND SHALL HAVE AUTHORITY TO ACT ON BEHALF OF CONTRACTOR, ALL COMMUNICATIONS GIVEN TO THE SUPERINTENDENT SHALL BE AS BINDING AS IF GIVEN TO THE CONTRACTOR.

9. **SUBSTITUTE MATERIAL OR EQUIPMENT**
   IF THE GENERAL REQUIREMENTS, LAWS, ORDINANCES OR APPLICABLE RULES OR REGULATIONS PERMIT CONTRACTOR TO FURNISH OR USE A SUBSTITUTE THAT IS EQUAL TO ANY MATERIAL OR EQUIPMENT SPECIFIED, AND ANY CONTRACTOR REFUSES TO FURNISH OR USE A PROPOSED SUBSTITUTE, HE SHALL MAKE WRITTEN APPLICATION TO CONSULTANT, OWNER AND VILLAGE FOR APPROVAL OF SUCH A SUBSTITUTE (APPROVAL WITHIN THAT THE PROPOSED SUBSTITUTE WILL PERFORM ADEQUATELY THE FUNCTIONS CALLED FOR BY THE GENERAL DESIGN, BE EQUAL IN AND OF EQUIV. SUBSTANCE TO THAT SPECIFIED AND BE SUITED TO THE SAME USE AS THAT SPECIFIED. THE APPLICATION SHALL STATE THAT THE PROPOSED SUBSTITUTION CONFORMS IN ALL RESPECTS TO THE SPECIFICATIONS FOR THE PROJECT IS SUBJECT TO THE PAYMENT OF ANY LICENSE FEE OR ROYALTY AND IDENTIFYING ALL VARIATIONS OF THE PROPOSED SUBSTITUTE FROM THAT SPECIFIED AND INDICATING AVAILABLE MAINTENANCE SERVICE. NO SUBSTITUTE SHALL BE ORDERED OR INSTALLED WITHOUT THE WRITTEN APPROVAL OF CONSULTANT WHO WILL BE THE JUDGE OF EQUALITY AND MAY REQUIRE CONTRACTOR TO FURNISH SUCH OTHER DATA ABOUT THE PROPOSED SUBSTITUTE AS HE CONSIDERS PERTINENT. NO SUBSTITUTE SHALL BE ORDERED OR INSTALLED WITHOUT SUCH PERFORMANCE GUARANTEE AND BONDS AS OWNER MAY REQUIRE AND/OR SHALL BE FURNISHED AT CONTRACTOR'S EXPENSE.

10. **RECORD DRAWINGS**
    CONTRACTOR SHALL KEEP ONE RECORD COPY OF ALL SPECIFICATIONS, DRAWINGS, ADDENDA, MODIFICATIONS, AND SHOP DRAWINGS AT THE SITE IN GOOD ORDER AND ANNOTATED TO SHOW ALL CHANGES MADE DURING THE CONSTRUCTION PROCESS. THESE SHALL BE AVAILABLE TO CONSULTANT AND SHALL BE DELIVERED TO HIM OR OWNER UPON COMPLETION OF THE PROJECT. CONSULTANT OR OWNER SHALL SUPPLY RECORD DRAWINGS TO THE LOCAL MUNICIPALITY.

11. **INSTRUCTIONS TO CONTRACTORS FROM CONSULTANT**
    THE CONTRACTOR SHALL ONLY ACCEPT INSTRUCTIONS, EITHER VERBAL OR WRITTEN, FROM AUTHORIZED PERSONNEL OF PEARSON, BROWN & ASSOCIATES, INC., THE PERSONNEL SO AUTHORIZED TO ISSUE INSTRUCTIONS TO CONTRACTORS ARE EXCLUSIVELY ROMAN A. ADAMS, GUS DIAMANTOPOULOS AND JOHN CEBULA, NOT WITHOUT OWNERS PERMISSION.

12. **APPLICATION FOR PAYMENT**
    IF REQUIRED BY THE CONSULTANT AND THE MUNICIPALITY REQUIRED FOR THE PROCESSING OF THE APPLICATION FOR PAYMENT, THEN CONTRACTOR SHALL SUBMIT TO CONSULTANT AN APPLICATION FOR PAYMENT ACCEPTABLE TO CONSULTANT AND MUNICIPALITY, PROVIDING SUCH NECESSARY AND ALL INFORMATION PERTINENT TO SAID APPLICATION WHETHER REQUESTED SPECIFICALLY OR NOT, CONSULTANT'S APPROVAL IS REQUIRED BEFORE CONTRACTOR'S DATE OF APPLICATION SUBMITTAL. IF CONTRACTOR HAS AGREED BY CONTRACT AGREEMENT OVER THE SCOPE OF WORK TO A QUANTITY OF EQUIPMENT WITHIN A CERTAIN NUMBER OF CREWS TO BE USED TO COMPLETE WORK ON A SPECIFIC DATE AND PROCEEDS AS DIRECTED BY THE OWNER OR HIS REPRESENTATIVE, AND CONTRACTOR DOES NOT MEET THE AGREED UPON SCHEDULE, CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS INCURRED BY OWNER OR HIS REPRESENTATIVE, AND, AS A RESULT, CAUSED BY DELAYS TO THE PROJECT. THE OWNER OR HIS REPRESENTATIVE RESERVES THE RIGHT TO WITHHOLD APPROVAL FOR PAYMENT UNTIL SUCH TIME AS CONTRACTOR HAS COMPLIED WITH THE CONTRACT AGREEMENT OR SCOPE OF WORK.

13. **RETENTION**
    ANY AND ALL APPLICATIONS FOR PAYMENT SUBMITTED TO CONSULTANT SHALL HAVE A TEN PERCENT (10%) RETENTION FROM THE TOTAL AMOUNT OF THE APPLICATION, UNLESS OTHERWISE REQUESTED BY SUBCONTRACTORS AND WHEN COMPLETED, UPON COMPLETION OF ONE-HUNDRED (100%) PERCENT OF THE WORK, THE RETENTION SHALL BE REDUCED TO FIVE (5%) PERCENT. SUCH TIME AS CONSTRUCTION AND WORK IS COMPLETED AND ACCEPTABLE BY THE MUNICIPALITY, ACCEPTANCE FOR MAINTENANCE OF THE WORK BY SAID GOVERNING AUTHORITIES, UPON TESTING, APPROVAL AND ACCEPTANCE OF THE WORK, THE RETENTION SHALL BE REDUCED TO TWO PERCENT (2%) UNLIMITED. ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE AT WHICH TIME ALL MONIES DUE CONTRACTOR SHALL BE PAID AS RETAINAGE FOR THE ENTIRE WORK, EXCEPT FOR ANY AMOUNTS WITHHELD IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS AND/OR WRITTEN OR VERBAL INSTRUCTIONS FROM ENGINEER NOTWITHSTANDING THE FOREGOING, CONTRACTOR SHALL ALSO BE

14. **CONFLICT BETWEEN COMPONENTS PARTS OF SPECIFICATIONS**
    IN THE EVENT THAT ANY PROVISION OF ANY ONE OF THE GOVERNING COMPONENT PARTS OF THESE SPECIFICATIONS CONFLICT WITH ANY PROVISION IN ANY OTHER OF THE COMPONENT PARTS. THE PROVISIONS IN THE COMPONENT PART FIRST LISTED BELOW SHALL GOVERN OVER ANY OTHER COMPONENT PART WHICH FOLLOWED IT, EXCEPT IN ANY OTHERWISE SPECIFICALLY BE STATED. THE COMPONENT PARTS ARE LISTED IN THE FOLLOWING ORDER:
    a. SPECIAL PROVISIONS
    b. PLANS
    c. REQUIRED SPECIAL PROVISIONS
    d. SUPPLEMENTAL SPECIFICATIONS
    e. STANDARD SPECIFICATIONS

15. **PERMITS**
    THE OWNER OR CONSULTANT SHALL MAKE APPLICATIONS FOR THE FOLLOWING PERMITS WHICH ARE REQUIRED BY GOVERNMENT PERMIT
    IEPA/ NEC SANITARY SEWER, AND WATER SUPPLY

II. GENERAL NOTES

1. NO CONSTRUCTION PLANS SHALL BE USED FOR CONSTRUCTION UNLESS SPECIFICALLY MARKED "FOR CONSTRUCTION." PRIOR TO COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AFFECTING THE WORK WORK WITH THE ACTUAL CONDITIONS AT THE JOB SITE. IF THERE ARE ANY DISCREPANCIES FROM WHAT IS SHOWN ON THE CONSTRUCTION PLANS, HE MUST IMMEDIATELY REPORT THEM TO THE CONSULTANT BEFORE DOING ANY WORK. OTHERWISE THE CONTRACTOR ASSUMES FULL RESPONSIBILITY. IN THE EVENT OF DISAGREEMENT BETWEEN THE PLANS AND SPECIFICATIONS, THE SPECIFICATIONS SHALL GOVERN. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE CONSULTANT OF ANY CONFLICTS BETWEEN THE PLANS AND SPECIFICATIONS AND ANY PART OF THE WORK AFFECTED BY OMISSIONS OR DISCREPANCIES RELATING TO SECURE SATISFACTORY RESOLUTION. THE CONTRACTOR SHALL BE CONSIDERED TO HAVE PROCEEDED AT HIS OWN RISK AND EXPENSE IN THE EVENT OF ANY DOUBT OR QUESTION ARISING WITH RESPECT TO THE TRUE INTENT OF THE PLANS AND SPECIFICATIONS, HE SHALL REQUEST INTERPRETATIONS THEREOF BEFORE PROCEEDING WITH THE WORK AFFECTED.

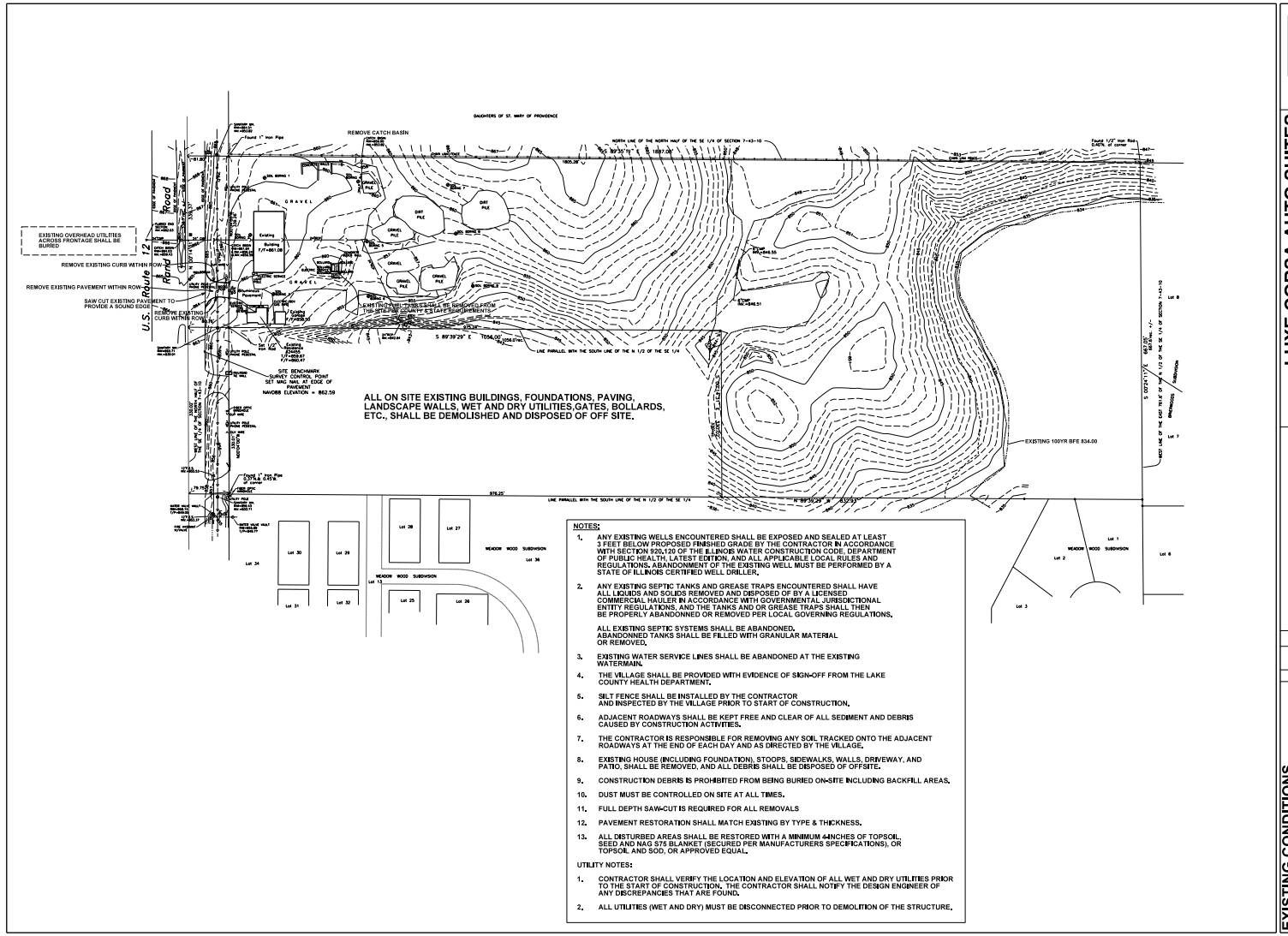
2. THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR THE PROPER ENGAGING, SHORING, AND OTHER REQUIRED PROTECTION OF ALL ROADWAYS BEFORE CONSTRUCTION BEGINS. HE SHALL BE RESPONSIBLE FOR ANY DAMAGE TO PUBLIC OR PRIVATE PROPERTY RESULTING FROM HIS CONSTRUCTIONS AND SHALL MAKE REPAIRS AS NECESSARY TO THE SATISFACTION OF THE CONSULTANT.

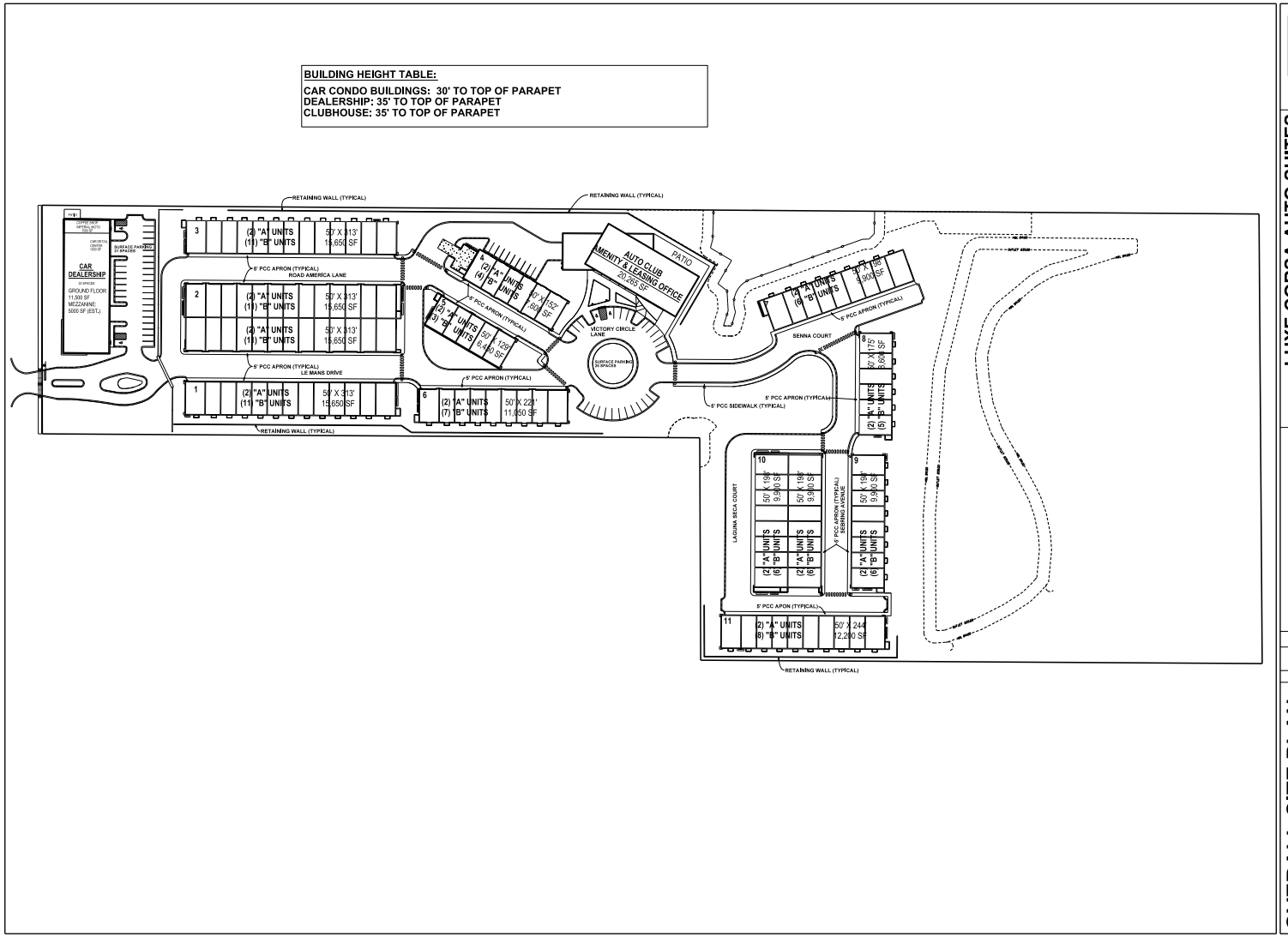
3. ALL LINE AND GRADE STAKES AND PROCEDURE BY CONSULTANT. STAKES WILL BE SET AT THE OWNER'S EXPENSE ONE TIME AND ONE TIME ONLY. CONTRACTOR SHALL NOTIFY THE CONSULTANT THAT STAKES WILL BE NEEDED AT LEAST 3 WORKING DAYS IN ADVANCE OF STARTING THEIR WORK. CONSULTANT WILL NOT BE RESPONSIBLE FOR STAKES THAT ARE DISTURBED OR DESTROYED BY THE CONTRACTOR OR HIS EMPLOYEES, ANY AND ALL RELOCATIONS OR RESTAKING WILL BE ORDERED BY THE CONSULTANT AT THE EXPENSE OF THAT CONTRACTOR REQUESTING THE RESTAKING. IT SHALL BE THE RESPONSIBILITY OF EACH CONTRACTOR TO PRESERVE STAKES PROVIDED FOR HIS USE AND TO REPORT TO THE OWNER'S REPRESENTATIVE ANY IMPROPER DISPLACEMENT OF STAKES OR OTHER MONUMENTS PROVIDED, AND TO BE RESPONSIBLE FOR THE CORRESPONDING CORRECTIONS.

   OFTEN TIMES, CURB GRADE STAKES ARE PLACED AT A 4" OFFSET TO BACK OF CURB AT THE REQUEST OF THE CONTRACTOR AND HIS SUBCONTRACTORS. THESE STAKES ARE FOR THE CONVENIENCE OF THE CONTRACTOR AND HIS SUBCONTRACTOR, ANYONE DIRECTLY OR INDIRECTLY EMPLOYED BY ANY OF THEM OR ANYONE FOR WHOSE ACTS ANY OF THEM MAY BE LIABLE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE DONE TO THESE STAKES DURING THE SETTING OF THE STRINGLINE AND REPORT ANY DISCREPANCIES TO THE CONSULTANT. THE CURB CONTRACTOR SHALL ALSO VERIFY THAT ALL STAKES FOR CURB DEPRESSIONS (DRIVEWAYS, DRIVEWAY PADS, PATHS, EMERGENCY ACCESSES, ETC.) ARE BUILT WITH RESPECT TO POSITION OF ANY CURB.

4. EASEMENTS FOR THE EXISTING UTILITIES, BOTH PUBLIC AND PRIVATE, AND UTILITIES WITHIN PUBLIC RIGHTS-OF-WAY, AND ALL EASEMENTS SUCH AS THOSE SHOWN ON THE PLANS AND DESCRIBED IN THE CONTRACT DOCUMENTS FOR THIS CONTRACT, THEY HAVE CAREFULLY REVIEWED THE PLANS AND SPECIFICATIONS, AND HAVE FOUND THEM FREE OF AMBIGUITIES AND SUFFICIENT FOR SUCH PURPOSES. FURTHER, THEY HAVE BASED THEIR BID SOLELY ON THESE DOCUMENTS, NOT RELYING IN ANY WAY ON ANY EXPLANATION OR INTERPRETATION, ORAL OR WRITTEN, FROM ANY OTHER SOURCE, HAVING ASSURED HIMSELF OF THE ADEQUACY OF THE DOCUMENTS AND THE ACCURACY OF THE DETAILS THEREIN FOR THE PURPOSES INTENDED, CONTRACTOR AGREES THAT THE CONSTRUCTION OF THE IMPROVEMENTS INCLUDED IN THE CONTRACT DOCUMENTS SHALL NOT BE THE BASIS FOR ANY CLAIM FOR EXTRA COMPENSATION ON ACCOUNT OF ANY ALLEGED MISUNDERSTANDING WITH RESPECT TO THE CONDITIONS OF THE WORK OR ANY ALLEGED ERROR OR OMISSION IN THE CONTRACT DOCUMENTS OR ANY INTERPRETATION OR EXECUTION THEREOF, OR ANY ALLEGED NEGLIGENCE OR NONFEASANCE ON THE PART OF OWNER OR CONSULTANT, WHETHER IN PREPARING THE CONTRACT DOCUMENTS OR IN MAKING ANY INSPECTION OR APPROVAL OF THE WORK OR PAYMENT THEREFOR, OR ANY ALLEGED RESTRAINT OR INTERFERENCE, WHETHER THE SAME BE CONSIDERED AS AN EXPRESS OR IMPLIED PART OF THE CONTRACT, OR ANY OTHER ALLEGED CAUSE, EXCEPT FOR SUCH AS MAY BE EXPRESSLY PROVIDED FOR IN THE CONTRACT DOCUMENTS AND FAILURE TO PERFORM IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS AND/OR WRITTEN OR VERBAL INSTRUCTIONS FROM ENGINEER NOTWITHSTANDING THE FOREGOING, CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR ANY DAMAGES TO THE EXTENT CAUSED BY THE NEGLIGENCE OF CONTRACTOR, ANY SUBCONTRACTOR, ANYONE DIRECTLY OR INDIRECTLY EMPLOYED BY ANY OF THEM OR ANYONE FOR WHOSE ACTS ANY OF THEM MAY BE LIABLE, THE INDEMNIFICATION OBLIGATION UNDER THIS PARAGRAPH SHALL NOT BE LIMITED IN ANY WAY BY ANY LIMITATION ON THE AMOUNT OR TYPE OF DAMAGES, COMPENSATION OR BENEFITS PAYABLE BY OR FOR CONTRACTOR OR ANY SUBCONTRACTOR UNDER WORKER'S COMPENSATION ACTS, DISABILITY BENEFIT ACTS OR OTHER EMPLOYEE BENEFIT ACTS.

5. **LIABILITY LIMITATIONS**
   NEITHER OWNER NOR SUBCONTRACTORS ARE SKILLED AND EXPERIENCED IN THE USE AND INTERPRETATION OF PLANS AND SPECIFICATIONS AS MAY BE REQUIRED BY THE CONTRACT DOCUMENTS FOR THIS CONTRACT, THEY HAVE CAREFULLY REVIEWED THE PLANS AND SPECIFICATIONS, AND HAVE FOUND THEM FREE OF AMBIGUITIES AND SUFFICIENT FOR SUCH PURPOSES. FURTHER, THEY HAVE BASED THEIR BID SOLELY ON THESE DOCUMENTS, NOT RELYING IN ANY WAY ON ANY EXPLANATION OR INTERPRETATION, ORAL OR WRITTEN, FROM ANY OTHER SOURCE, HAVING ASSURED HIMSELF OF THE ADEQUACY OF THE DOCUMENTS AND THE ACCURACY OF THE DETAILS THEREIN FOR THE PURPOSES INTENDED, CONTRACTOR AGREES THAT THE CONSTRUCTION OF THE IMPROVEMENTS INCLUDED IN THE CONTRACT DOCUMENTS SHALL NOT BE THE BASIS FOR ANY CLAIM FOR EXTRA COMPENSATION ON ACCOUNT OF ANY ALLEGED MISUNDERSTANDING WITH RESPECT TO THE CONDITIONS OF THE WORK OR ANY ALLEGED ERROR OR OMISSION IN THE CONTRACT DOCUMENTS OR ANY INTERPRETATION OR EXECUTION THEREOF, OR ANY ALLEGED NEGLIGENCE OR NONFEASANCE ON THE PART OF OWNER OR CONSULTANT, WHETHER IN PREPARING THE CONTRACT DOCUMENTS OR IN MAKING ANY INSPECTION OR APPROVAL OF THE WORK OR PAYMENT THEREFOR, OR ANY ALLEGED RESTRAINT OR INTERFERENCE, WHETHER THE SAME BE CONSIDERED AS AN EXPRESS OR IMPLIED PART OF THE CONTRACT, OR ANY OTHER ALLEGED CAUSE, EXCEPT FOR SUCH AS MAY BE EXPRESSLY PROVIDED FOR IN THE CONTRACT DOCUMENTS AND FAILURE TO PERFORM IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS AND/OR WRITTEN OR VERBAL INSTRUCTIONS FROM ENGINEER NOTWITHSTANDING THE FOREGOING, CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR ANY DAMAGES TO THE EXTENT CAUSED BY THE NEGLIGENCE OF CONTRACTOR, ANY SUBCONTRACTOR, ANYONE DIR


NORTH
SCALE: 1" = 80'
EXISTING OVERHEAD UTILITIES ACROSS FRONTAGE SHALL BE BURIED
REMOVE EXISTING CURB WITHIN ROW
REMOVE EXISTING PAVEMENT WITHIN ROW
SAW CUT EXISTING PAVEMENT TO PROVIDE A SOUND EDGE
REMOVE EXISTING CURB WITHIN ROW
U.S. Route 12
Rand Road
REMOVE CATCH BASIN
ALL ON SITE EXISTING BUILDINGS, FOUNDATIONS, PAVING, LANDSCAPE WALLS, WET AND DRY UTILITIES,GATES, BOLLARDS, ETC., SHALL BE DEMOLISHED AND DISPOSED OF OFF SITE.
SITE BENCHMARK
SURVEY CONTROL POINT
SET MAG NAIL AT EDGE OF PAVEMENT
NAVD88 ELEVATION = 862.59
EXISTING 100YR BFE 834.00
MEADOW WOOD SUBDIVISION
NOTES:
1. ANY EXISTING WELLS ENCOUNTERED SHALL BE EXPOSED AND SEALED AT LEAST 3 FEET BELOW PROPOSED FINISHED GRADE BY THE CONTRACTOR IN ACCORDANCE WITH SECTION 920.120 OF THE ILLINOIS WATER CONSTRUCTION CODE, DEPARTMENT OF PUBLIC HEALTH, LATEST EDITION, AND ALL APPLICABLE LOCAL RULES AND REGULATIONS. ABANDONMENT OF THE EXISTING WELL MUST BE PERFORMED BY A STATE OF ILLINOIS CERTIFIED WELL DRILLER.
2. ANY EXISTING SEPTIC TANKS AND GREASE TRAPS ENCOUNTERED SHALL HAVE ALL LIQUIDS AND SOLIDS REMOVED AND DISPOSED OF BY A LICENSED COMMERCIAL HAULER IN ACCORDANCE WITH GOVERNMENTAL JURISDICTIONAL ENTITY REGULATIONS, AND THE TANKS AND OR GREASE TRAPS SHALL THEN BE PROPERLY ABANDONNED OR REMOVED PER LOCAL GOVERNING REGULATIONS.
ALL EXISTING SEPTIC SYSTEMS SHALL BE ABANDONED. ABANDONNED TANKS SHALL BE FILLED WITH GRANULAR MATERIAL OR REMOVED.
3. EXISTING WATER SERVICE LINES SHALL BE ABANDONED AT THE EXISTING WATERMAIN.
4. THE VILLAGE SHALL BE PROVIDED WITH EVIDENCE OF SIGN-OFF FROM THE LAKE COUNTY HEALTH DEPARTMENT.
5. SILT FENCE SHALL BE INSTALLED BY THE CONTRACTOR AND INSPECTED BY THE VILLAGE PRIOR TO START OF CONSTRUCTION.
6. ADJACENT ROADWAYS SHALL BE KEPT FREE AND CLEAR OF ALL SEDIMENT AND DEBRIS CAUSED BY CONSTRUCTION ACTIVITIES.
7. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ANY SOIL TRACKED ONTO THE ADJACENT ROADWAYS AT THE END OF EACH DAY AND AS DIRECTED BY THE VILLAGE.
8. EXISTING HOUSE (INCLUDING FOUNDATION), STOOPS, SIDEWALKS, WALLS, DRIVEWAY, AND PATIO, SHALL BE REMOVED, AND ALL DEBRIS SHALL BE DISPOSED OF OFFSITE.
9. CONSTRUCTION DEBRIS IS PROHIBITED FROM BEING BURIED ON-SITE INCLUDING BACKFILL AREAS.
10. DUST MUST BE CONTROLLED ON SITE AT ALL TIMES.
11. FULL DEPTH SAW-CUT IS REQUIRED FOR ALL REMOVALS
12. PAVEMENT RESTORATION SHALL MATCH EXISTING BY TYPE & THICKNESS.
13. ALL DISTURBED AREAS SHALL BE RESTORED WITH A MINIMUM 4-INCHES OF TOPSOIL, SEED AND NAG S75 BLANKET (SECURED PER MANUFACTURERS SPECIFICATIONS), OR TOPSOIL AND SOD, OR APPROVED EQUAL.
UTILITY NOTES:
1. CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF ALL WET AND DRY UTILITIES PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER OF ANY DISCREPANCIES THAT ARE FOUND.
2. ALL UTILITIES (WET AND DRY) MUST BE DISCONNECTED PRIOR TO DEMOLITION OF THE STRUCTURE.
LUXE CORSA AUTO SUITES
PEARSON,BROWN & ASSOCIATES,INC.
CONSULTING ENGINEERS
DESIGNED BY: G.A.Z.
DRAWN BY: A.Z.
CHECKED BY: J.F.C.
ORIGINAL ISSUE: 07/16/25
DATE BY DESCRIPTION
10/01/25 JFC REVISED PER VILLAGE REVIEW COMMENTS
REVISIONS
EXISTING CONDITIONS & DEMOLITION PLAN
SHEET NUMBER 3
OF 25 SHEETS
JOB No. 2441


BUILDING HEIGHT TABLE:
CAR CONDO BUILDINGS: 30' TO TOP OF PARAPET
DEALERSHIP: 35' TO TOP OF PARAPET
CLUBHOUSE: 35' TO TOP OF PARAPET
RETAINING WALL (TYPICAL)
CAR DEALERSHIP
GROUND FLOOR 11,500 SF
MEZZANINE: 5000 SF (EST.)
SURFACE PARKING 21 SPACES
ROAD AMERICA LANE
LE MANS DRIVE
5' PCC APRON (TYPICAL)
(2) "A" UNITS (11) "B" UNITS 50' X 313' 15,650 SF
(2) "A" UNITS (7) "B" UNITS 50' X 229' 11,050 SF
(2) "A" UNITS (4) "B" UNITS 40' X 152' 6080 SF
(2) "A" UNITS (6) "B" UNITS 50' X 129' 8,400 SF
AUTO CLUB AMENITY & LEASING OFFICE 20,265 SF
PATIO
VICTORY CIRCLE LANE
SURFACE PARKING 39 SPACES
SENNA COURT
(4) "A" UNITS (6) "B" UNITS 50' X 190' 9,900 SF
(2) "A" UNITS (5) "B" UNITS 50' X 152' 6,840 SF
5' PCC SIDEWALK (TYPICAL)
LAGUNA SECA COURT
SEBRING AVENUE
(2) "A" UNITS (8) "B" UNITS 50' X 244' 12,200 SF
NORTH
SCALE: 1" = 60'
LUXE CORSA AUTO SUITES
3465 US ROUTE 12, LAKE ZURICH, ILLINOIS 60047
PEARSON,BROWN & ASSOCIATES,INC.
CONSULTING ENGINEERS
1890 W. WINCHESTER ROAD - SUITE 205
LIBERTYVILLE, ILLINOIS 60048
PHONE: (847) 367-4787
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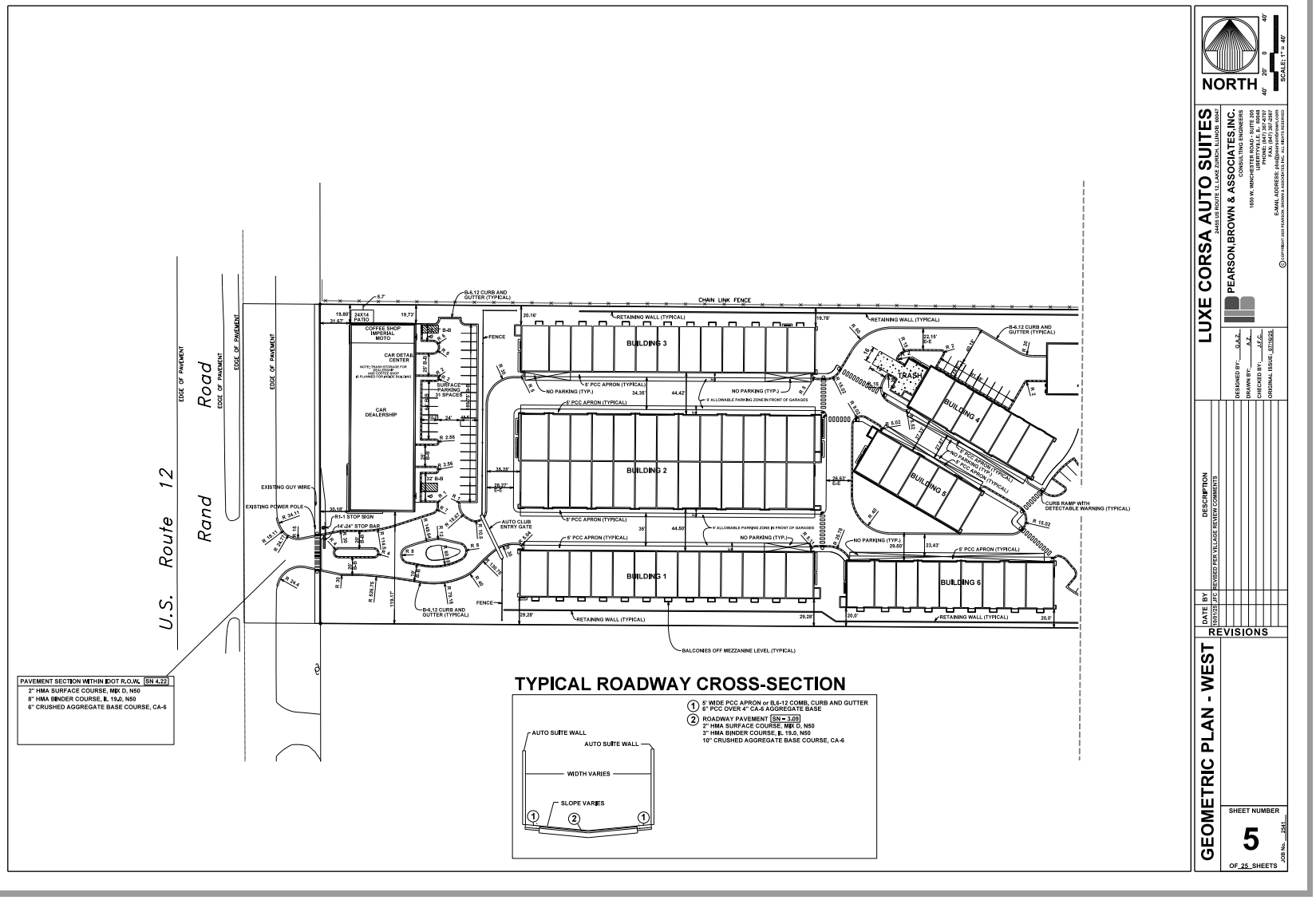
DATE BY DESCRIPTION
10/01/25 JFC REVISED PER VILLAGE REVIEW COMMENTS
REVISIONS
OVERALL SITE PLAN
SHEET NUMBER 4
OF 25 SHEETS
JOB No. 2441



TYPICAL ROADWAY CROSS-SECTION

NORTH
SCALE: 1" = 40'

LUXE CORSA AUTO SUITES
3465 US ROUTE 12, LAKE ZURICH, ILLINOIS 60047

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DESIGNED BY: G.A.Z.
DRAWN BY: A.F.C.
CHECKED BY: A.F.C.
ORIGINAL ISSUE: 07/16/21

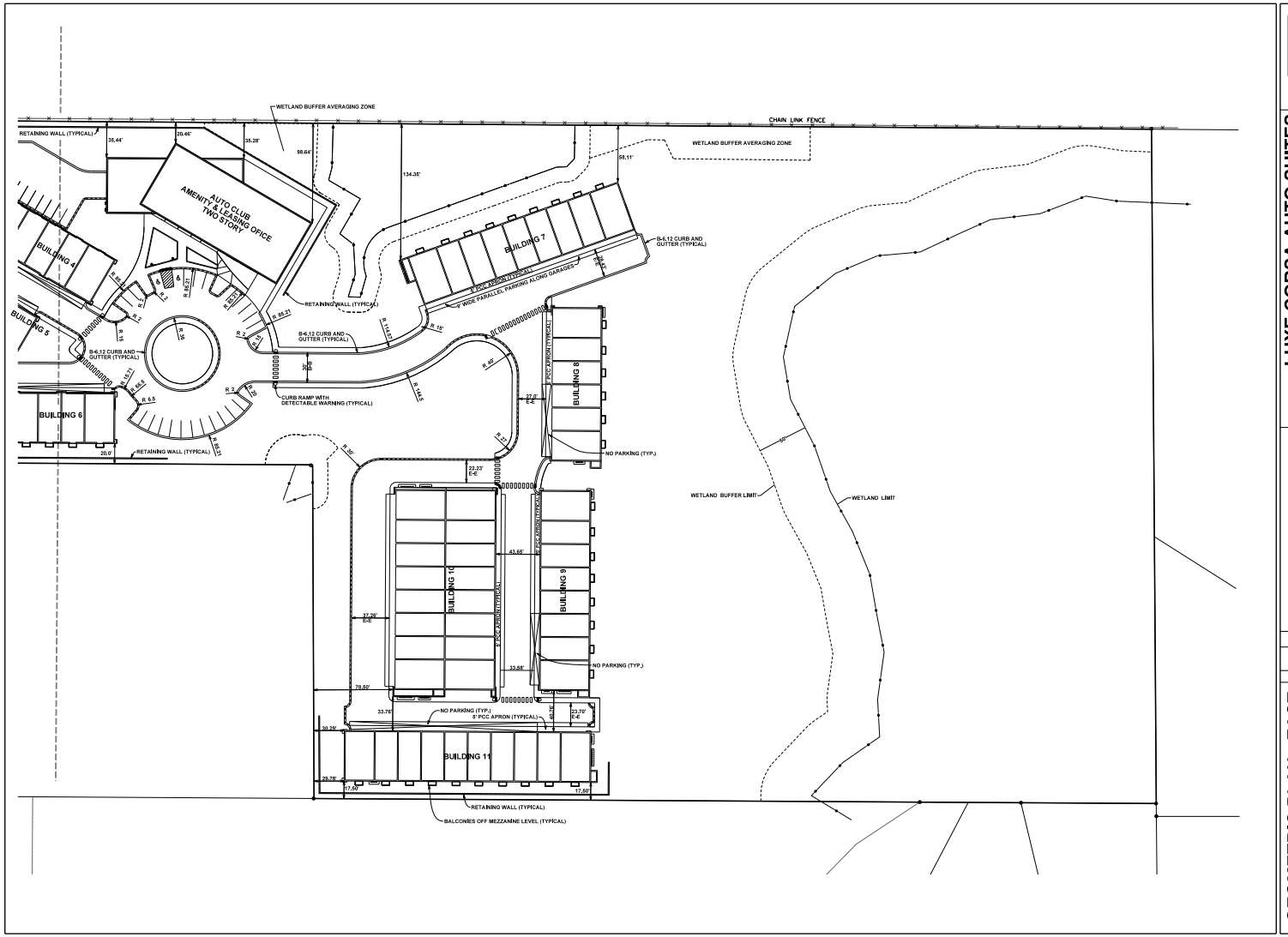
DATE	BY	DESCRIPTION
10/01/21	AFC	REVISED PER VILLAGE REVIEW COMMENTS

REVISIONS

GEOMETRIC PLAN - WEST

SHEET NUMBER **5** OF 25 SHEETS

JOB No. 3441



NORTH

SCALE: 1" = 40'

LUXE CORSA AUTO SUITES
24455 US ROUTE 12, LAKE ZURICH, ILLINOIS 60047

PEARSON,BROWN & ASSOCIATES,INC.
CONSULTING ENGINEERS
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DESIGNED BY: G.A.Z.
DRAWN BY: A.Z.
CHECKED BY: J.F.C.
ORIGINAL ISSUE: 07/16/15

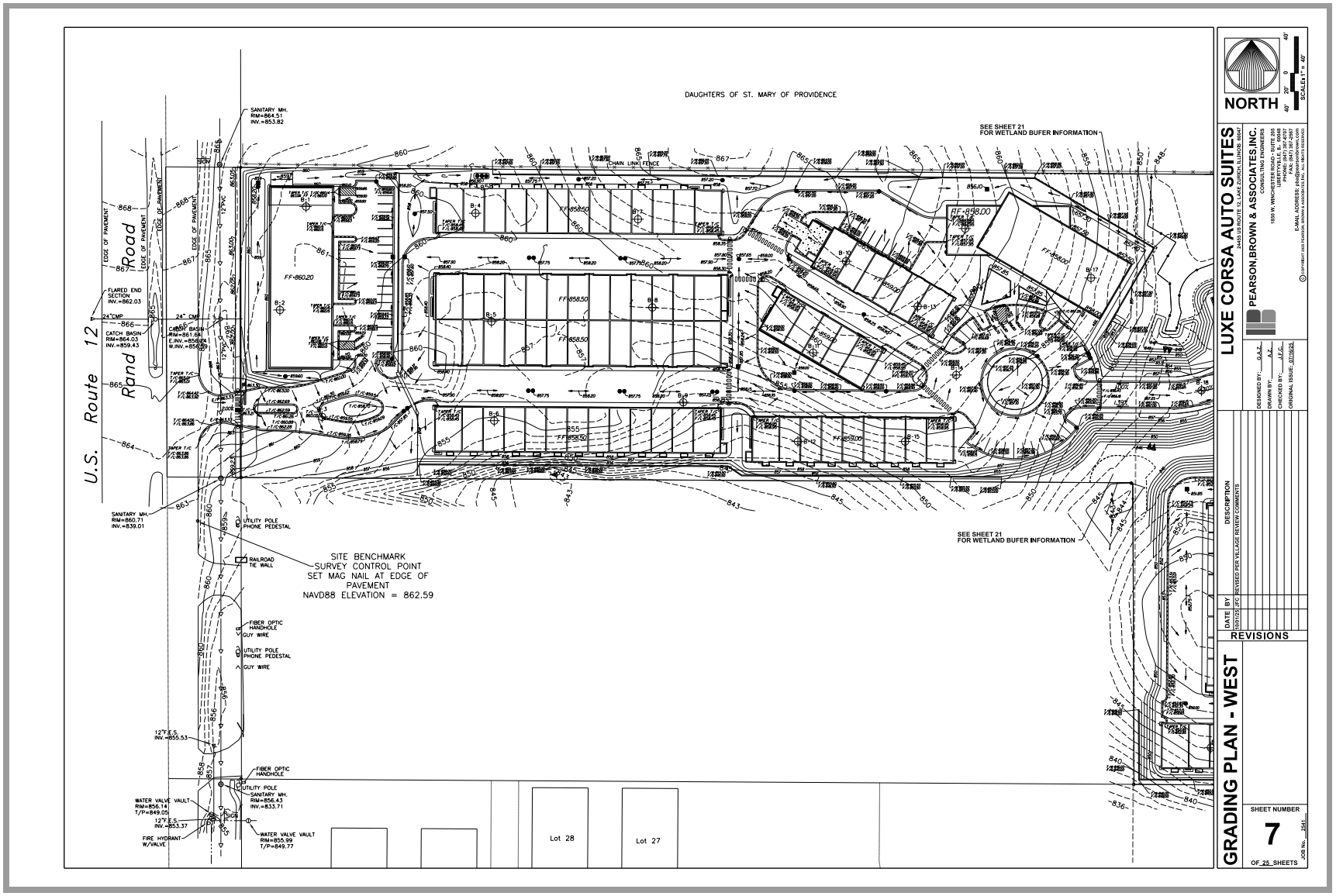
REVISIONS

DATE	BY	DESCRIPTION
10/01/15	JFC	REVISED PER VILLAGE REVIEW COMMENTS

GEOMETRIC PLAN - EAST

SHEET NUMBER **6** OF 25 SHEETS

JOB No. 3941


DAUGHTERS OF ST. MARY OF PROVIDENCE
SEE SHEET 21 FOR WETLAND BUFER INFORMATION
CHAIN LINK FENCE
U.S. Route 12
Rand Road
EDGE OF PAVEMENT
SANITARY MH. RIM=864.51 INV.=853.82
FLARED END SECTION INV.=862.03
24" CMP
CATCH BASIN RIM=864.03 INV.=859.43
CATCH BASIN RIM=861.6N E.INV.=856.04 W.INV.=856.04
SANITARY MH. RIM=860.71 INV.=839.01
UTILITY POLE PHONE PEDESTAL
RAILROAD TIE WALL
SITE BENCHMARK
SURVEY CONTROL POINT
SET MAG NAIL AT EDGE OF PAVEMENT
NAVD88 ELEVATION = 862.59
FIBER OPTIC HANDHOLE
GUY WIRE
UTILITY POLE
PHONE PEDESTAL
127" E.S. INV.=855.53
WATER VALVE VAULT RIM=856.14 T/P=849.05
FIRE HYDRANT W/VALVE
SANITARY MH. RIM=856.43 INV.=833.71
127" E.S. INV.=853.37
WATER VALVE VAULT RIM=855.99 T/P=849.77
FF=860.20
FF=858.50
FF=858.00
FF=859.00
B-1
B-2
B-3
B-4
B-5
B-6
B-8
B-9
B-11
B-12
B-13
B-15
B-17
Lot 28
Lot 27
NORTH
SCALE: 1" = 40'
LUXE CORSA AUTO SUITES
3465 US ROUTE 12, LAKE ZURICH, ILLINOIS 60047
PEARSON,BROWN & ASSOCIATES,INC.
CONSULTING ENGINEERS
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PHONE: (847) 367-4787
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DESIGNED BY: G.A.Z.
DRAWN BY: A.Z.
CHECKED BY: J.F.C.
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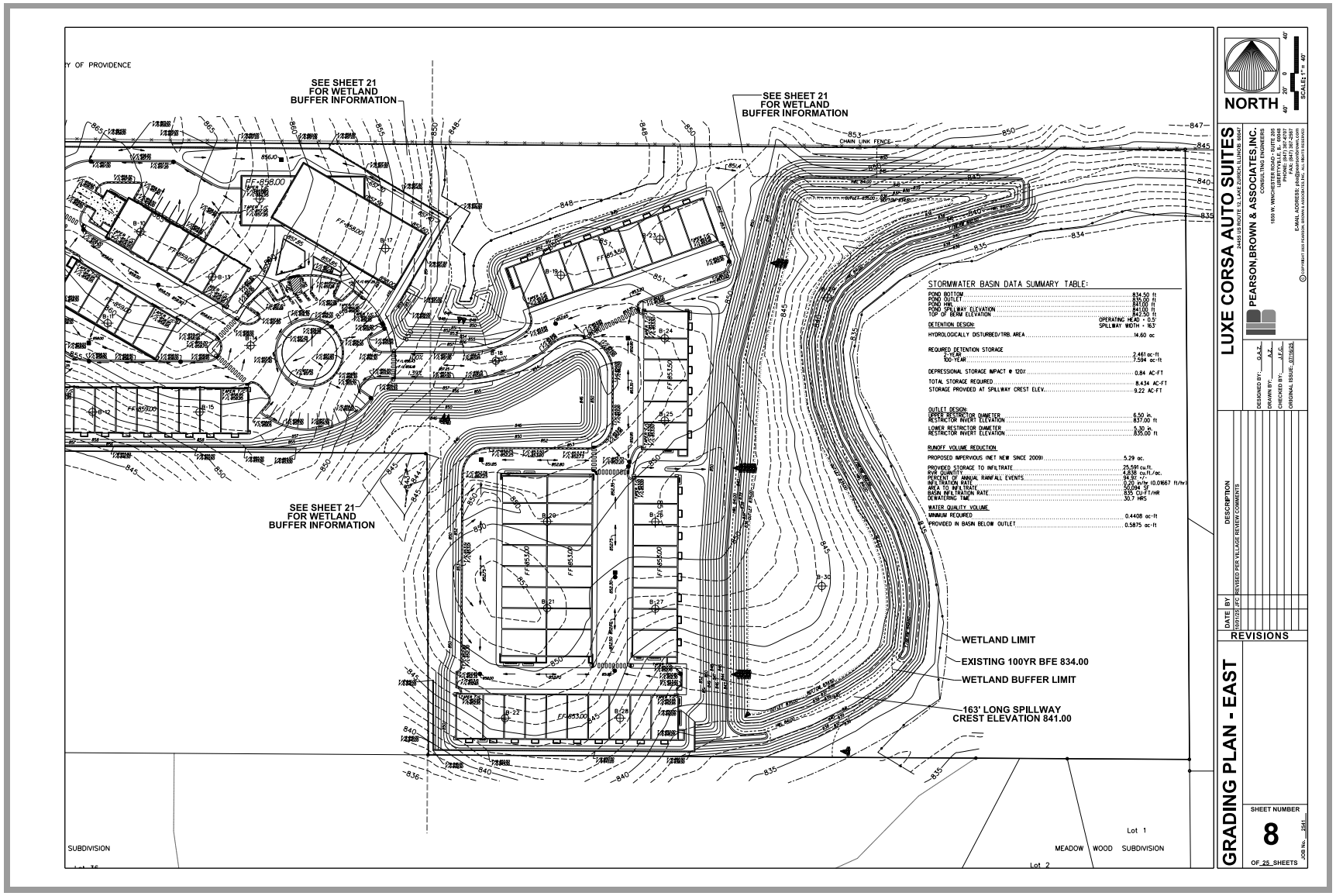
DATE BY DESCRIPTION
10/01/21 JFC REVISED PER VILLAGE REVIEW COMMENTS
REVISIONS
GRADING PLAN - WEST
SHEET NUMBER 7 OF 25 SHEETS
JOB No. 3441


SEE SHEET 21 FOR WETLAND BUFFER INFORMATION
SEE SHEET 21 FOR WETLAND BUFFER INFORMATION
SEE SHEET 21 FOR WETLAND BUFFER INFORMATION
CHAIN LINK FENCE
STORMWATER BASIN DATA SUMMARY TABLE:
POND BOTTOM 834.50 ft
POND OUTLET 835.00 ft
POND WIR 841.00 ft
POND SPILLWAY ELEVATION 841.00 ft
TOP OF BERM ELEVATION 842.50 ft
DETENTION DESIGN: OPERATING HEAD = 0.5'
SPILLWAY WIDTH = 163'
HYDROLOGICALLY DISTURBED/TRIB. AREA 14.60 ac
REQUIRED DETENTION STORAGE
2-YEAR 2.461 ac-ft
100-YEAR 7.594 ac-ft
DEPRESSIONAL STORAGE IMPACT @ 120% 0.84 AC-FT
TOTAL STORAGE REQUIRED 8.434 AC-FT
STORAGE PROVIDED AT SPILLWAY CREST ELEV. 9.22 AC-FT
OUTLET DESIGN:
ORIFICE RESTRICTOR DIAMETER 6.50 in
RESTRICTOR INVERT ELEVATION 837.00 ft
LOWER RESTRICTOR DIAMETER 5.90 in
RESTRICTOR INVERT ELEVATION 835.00 ft
RUNOFF VOLUME REDUCTION
PROPOSED IMPERVIOUS (NET NEW SINCE 2009) 5.29 ac.
PROVIDED STORAGE TO INFILTRATE 25,591 cu.ft.
RVR QUANTITY 4,838 cu.ft./ac.
PERCENT OF ANNUAL RAINFALL EVENTS 94.37 +/-
INFILTRATION RATE 0.70 in/hr (0.01667 ft/hr)
AREA TO INFILTRATE 52,094 SF
BASIN INFILTRATION RATE 835 CU-FT/HR
DEWATERING TIME 30.7 HRS
WATER QUALITY VOLUME
MINIMUM REQUIRED 0.4408 ac-ft
PROVIDED IN BASIN BELOW OUTLET 0.5875 ac-ft
WETLAND LIMIT
EXISTING 100YR BFE 834.00
WETLAND BUFFER LIMIT
163' LONG SPILLWAY CREST ELEVATION 841.00
SUBDIVISION
MEADOW WOOD SUBDIVISION
Lot 1
Lot 2
NORTH
SCALE: 1" = 40'
LUXE CORSA AUTO SUITES
PEARSON,BROWN & ASSOCIATES,INC.
CONSULTING ENGINEERS
1890 W. WINCHESTER ROAD - SUITE 205
LIBERTYVILLE, ILLINOIS 60048
PHONE: (847) 367-4787
E-MAIL ADDRESS: phil@pearsonbrown.com
DESIGNED BY: G.A.Z.
DRAWN BY: A.Z.
CHECKED BY: J.F.C.
ORIGINAL ISSUE: 07/16/21
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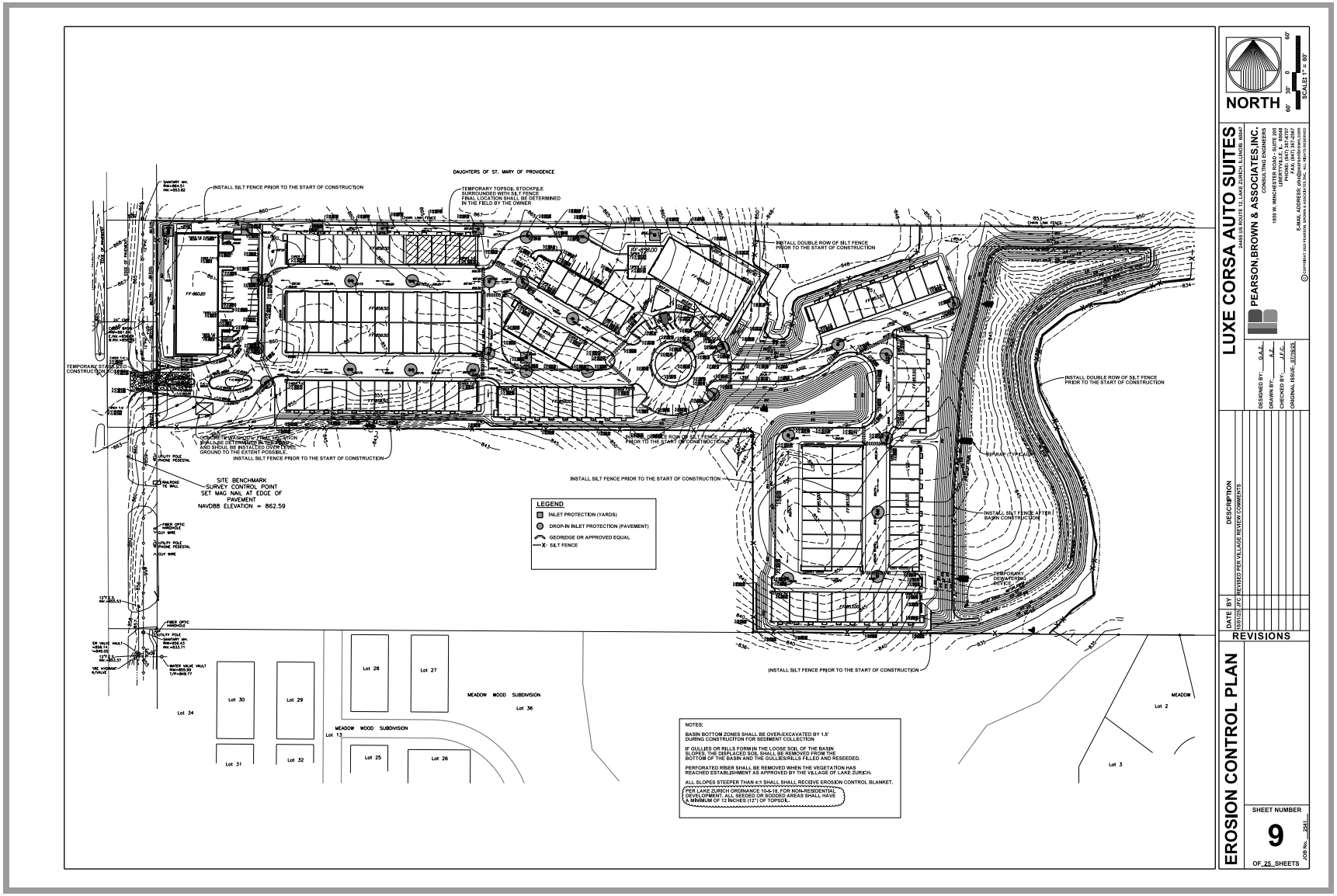
10/01/21 JFC REVISED PER VILLAGE REVIEW COMMENTS
REVISIONS
GRADING PLAN - EAST
SHEET NUMBER
8
OF 25 SHEETS
JOB No. 2041


DAUGHTERS OF ST. MARY OF PROVIDENCE
INSTALL SILT FENCE PRIOR TO THE START OF CONSTRUCTION
TEMPORARY TOPSOIL STOCKPILE SURROUNDED WITH SILT FENCE FINAL LOCATION SHALL BE DETERMINED IN THE FIELD BY THE OWNER
INSTALL DOUBLE ROW OF SILT FENCE PRIOR TO THE START OF CONSTRUCTION
INSTALL DOUBLE ROW OF SILT FENCE PRIOR TO THE START OF CONSTRUCTION
INSTALL SILT FENCE PRIOR TO THE START OF CONSTRUCTION
INSTALL SILT FENCE PRIOR TO THE START OF CONSTRUCTION
INSTALL SILT FENCE AFTER BARN CONSTRUCTION
INSTALL SILT FENCE PRIOR TO THE START OF CONSTRUCTION
SITE BENCHMARK
SURVEY CONTROL POINT
SET MAG NAIL AT EDGE OF PAVEMENT
NAVD88 ELEVATION = 862.59
LEGEND
INLET PROTECTION (YARDS)
DROP-IN INLET PROTECTION (PAVEMENT)
GEORIDGE OR APPROVED EQUAL
SILT FENCE
NOTES:
BASIN BOTTOM ZONES SHALL BE OVER-EXCAVATED BY 1.5' DURING CONSTRUCTION FOR SEDIMENT COLLECTION
IF GULLIES OR RILLS FORM IN THE LOOSE SOIL OF THE BASIN SLOPES, THE DISPLACED SOIL SHALL BE REMOVED FROM THE BOTTOM OF THE BASIN AND THE GULLIES/RILLS FILLED AND RESEEDED.
PERFORATED RISER SHALL BE REMOVED WHEN THE VEGETATION HAS REACHED ESTABLISHMENT AS APPROVED BY THE VILLAGE OF LAKE ZURICH.
ALL SLOPES STEEPER THAN 4:1 SHALL SHALL RECEIVE EROSION CONTROL BLANKET.
PER LAKE ZURICH ORDINANCE 10-6-18, FOR NON-RESIDENTIAL DEVELOPMENT, ALL SEEDED OR SODDED AREAS SHALL HAVE A MINIMUM OF 12 INCHES (12") OF TOPSOIL.
MEADOW WOOD SUBDIVISION
Lot 28
Lot 27
Lot 30
Lot 29
Lot 34
Lot 36
Lot 31
Lot 32
Lot 25
Lot 26
Lot 13
Lot 2
Lot 3
MEADOW
NORTH
SCALE: 1" = 60'
LUXE CORSA AUTO SUITES
3465 US ROUTE 12, LAKE ZURICH, ILLINOIS 60047
PEARSON,BROWN & ASSOCIATES,INC.
CONSULTING ENGINEERS
189 W. WINCHESTER ROAD - SUITE 205
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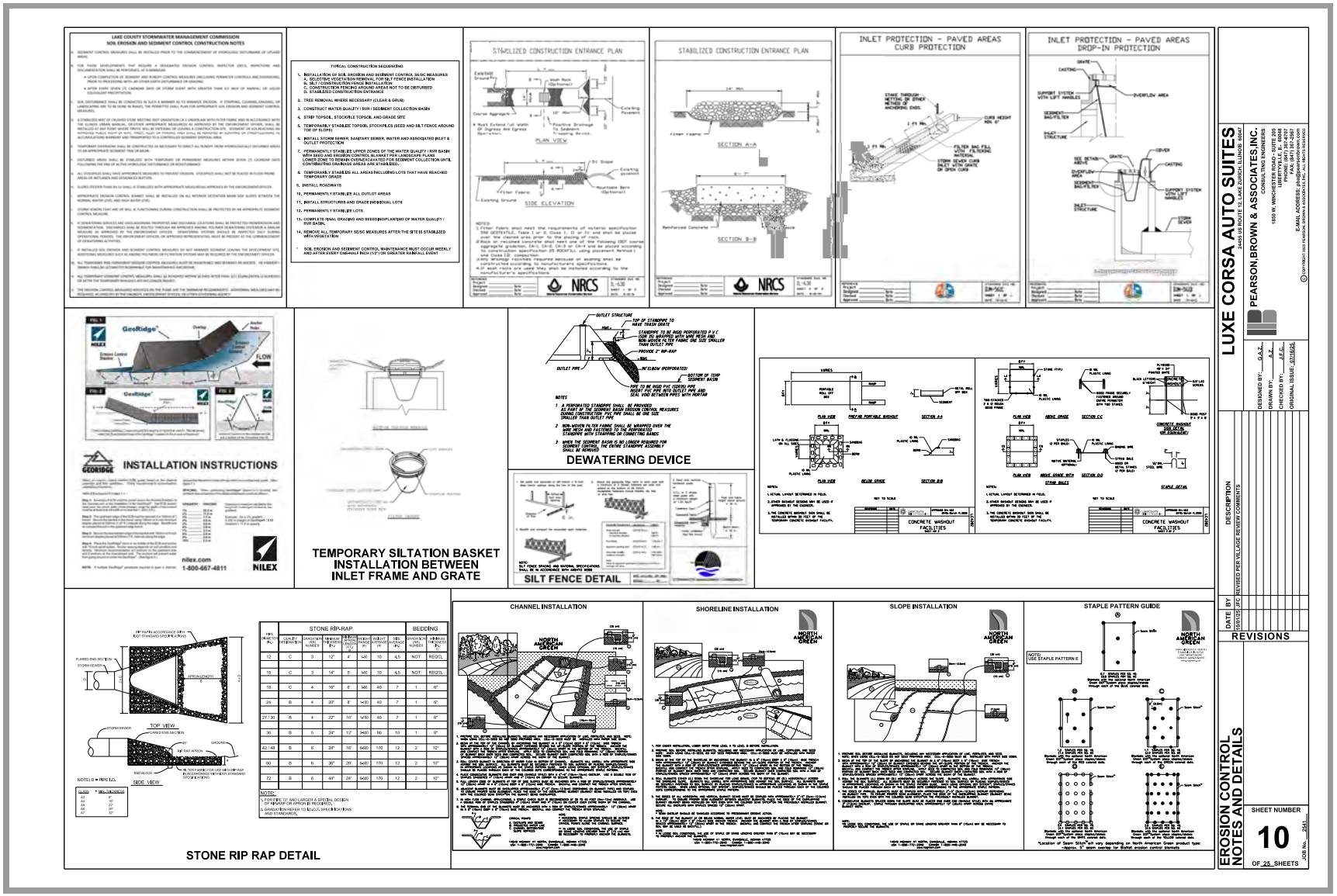
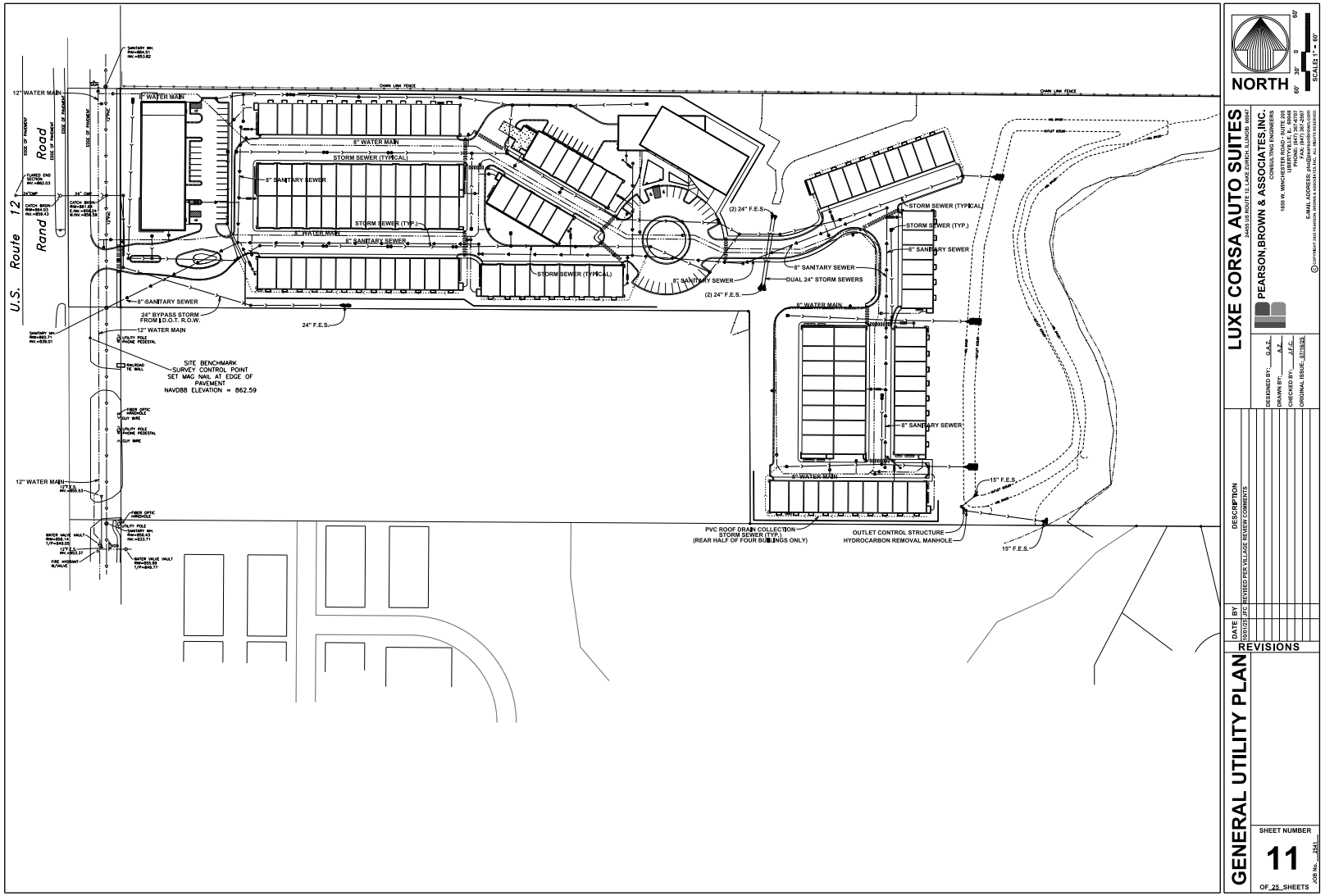
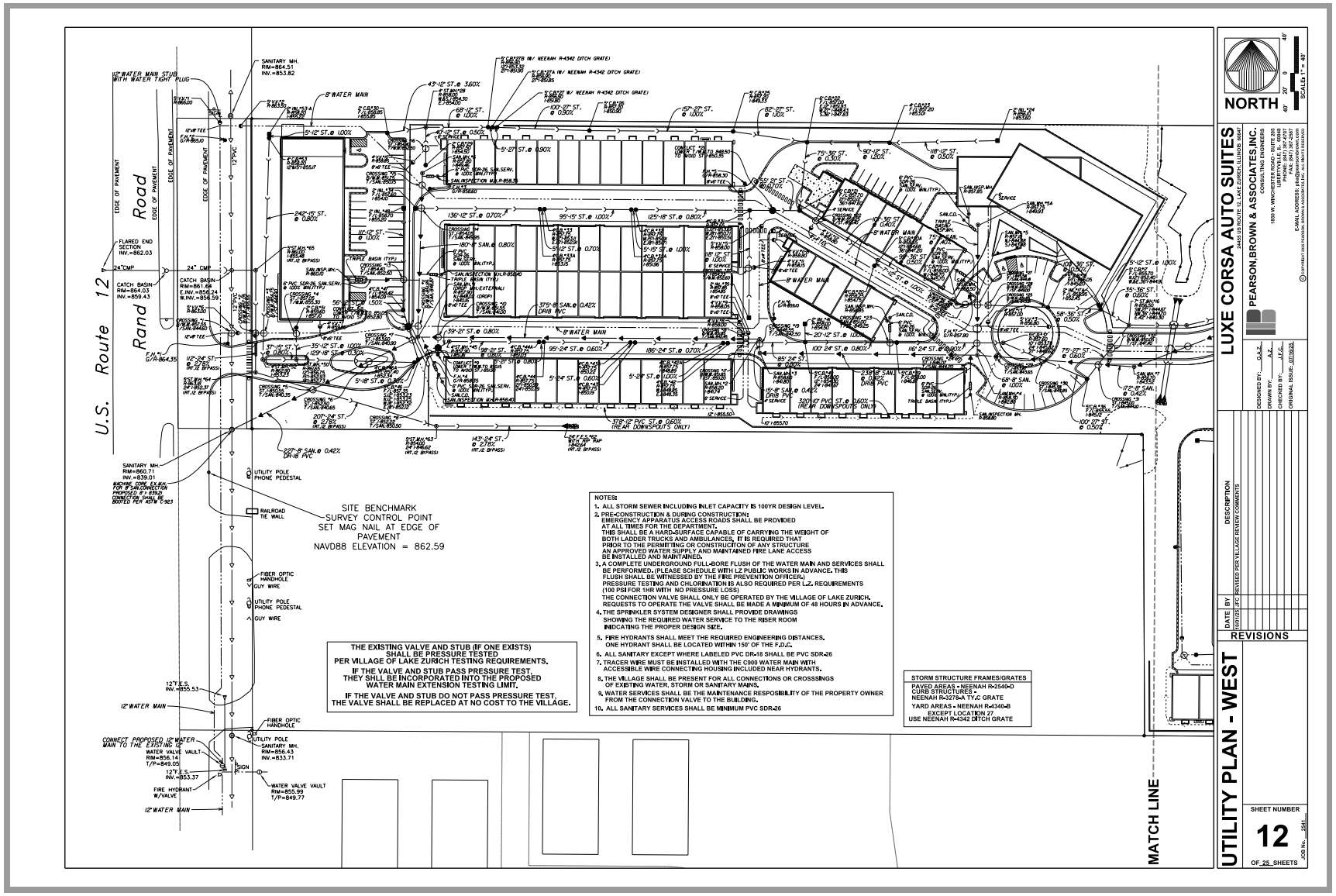
EROSION CONTROL PLAN
SHEET NUMBER
9
OF 25 SHEETS
JOB No. 3941


LAKE COUNTY STORMWATER MANAGEMENT COMMISSION
SOIL EROSION AND SEDIMENT CONTROL CONSTRUCTION NOTES
TYPICAL CONSTRUCTION SEQUENCING
STABILIZED CONSTRUCTION ENTRANCE PLAN
STABILIZED CONSTRUCTION ENTRANCE PLAN
INLET PROTECTION - PAVED AREAS CURB PROTECTION
INLET PROTECTION - PAVED AREAS DROP-IN PROTECTION
INSTALLATION INSTRUCTIONS
TEMPORARY SILTATION BASKET INSTALLATION BETWEEN INLET FRAME AND GRATE
DEWATERING DEVICE
SILT FENCE DETAIL
CONCRETE WASHOUT FACILITIES
STONE RIP RAP DETAIL
CHANNEL INSTALLATION
SHORELINE INSTALLATION
SLOPE INSTALLATION
STAPLE PATTERN GUIDE
LUXE CORSA AUTO SUITES
PEARSON,BROWN & ASSOCIATES,INC.
REVISIONS
EROSION CONTROL NOTES AND DETAILS
SHEET NUMBER 10 OF 25 SHEETS


U.S. Route 12
Rand Road
12" WATER MAIN
8" WATER MAIN
STORM SEWER (TYPICAL)
8" SANITARY SEWER
STORM SEWER (TYP.)
8" WATER MAIN
8" SANITARY SEWER
STORM SEWER (TYPICAL)
CHAIN LINK FENCE
(2) 24" F.E.S.
STORM SEWER (TYPICAL)
STORM SEWER (TYP.)
8" SANITARY SEWER
8" SANITARY SEWER
DUAL 24" STORM SEWERS
8" SANITARY SEWER
24" BYPASS STORM FROM I.D.O.T. R.O.W.
24" F.E.S.
12" WATER MAIN
SITE BENCHMARK
SURVEY CONTROL POINT
SET MAG NAIL AT EDGE OF PAVEMENT
NAVD88 ELEVATION = 862.59
8" WATER MAIN
8" SANITARY SEWER
12" WATER MAIN
8" WATER MAIN
15" F.E.S.
15" F.E.S.
PVC ROOF DRAIN COLLECTION STORM SEWER (TYP.) (REAR HALF OF FOUR BUILDINGS ONLY)
OUTLET CONTROL STRUCTURE HYDROCARBON REMOVAL MANHOLE
NORTH
SCALE: 1" = 60'
LUXE CORSA AUTO SUITES
PEARSON,BROWN & ASSOCIATES,INC.
CONSULTING ENGINEERS
DESIGNED BY: G.A.Z.
DRAWN BY: A.Z.
CHECKED BY: J.F.C.
ORIGINAL ISSUE: 07/16/21
DESCRIPTION
REVISIONS
GENERAL UTILITY PLAN
SHEET NUMBER
11
OF 25 SHEETS


U.S. Route 12
Rand Road
EDGE OF PAVEMENT
12" WATER MAIN STUB WITH WATER TIGHT PLUG
8" WATER MAIN
SANITARY MH. RIM=864.51 INV.=853.82
FLARED END SECTION INV.=862.03
24"CMP
CATCH BASIN RIM=861.64 E.INV.=854.24 W.INV.=854.59
CATCH BASIN RIM=864.03 INV.=859.43
SANITARY MH. RIM=860.71 INV.=839.01
UTILITY POLE PHONE PEDESTAL
RAILROAD TIE WALL
FIBER OPTIC HANDHOLE
GUY WIRE
12"F.E.S. INV.=855.53
12" WATER MAIN
CONNECT PROPOSED 12" WATER MAIN TO THE EXISTING 12"
WATER VALVE VAULT RIM=856.14 T/P=849.05
12"F.E.S. INV.=853.37
FIRE HYDRANT W/VALVE
SIGN
WATER VALVE VAULT RIM=855.99 T/P=849.77
SANITARY MH. RIM=856.43 INV.=853.71
MATCH LINE
SITE BENCHMARK
SURVEY CONTROL POINT
SET MAG NAIL AT EDGE OF PAVEMENT
NAVD88 ELEVATION = 862.59
THE EXISTING VALVE AND STUB (IF ONE EXISTS) SHALL BE PRESSURE TESTED PER VILLAGE OF LAKE ZURICH TESTING REQUIREMENTS.
IF THE VALVE AND STUB PASS PRESSURE TEST, THEY SHLL BE INCORPORATED INTO THE PROPOSED WATER MAIN EXTENSION TESTING LIMIT.
IF THE VALVE AND STUB DO NOT PASS PRESSURE TEST, THE VALVE SHALL BE REPLACED AT NO COST TO THE VILLAGE.
NOTES:
1. ALL STORM SEWER INCLUDING INLET CAPACITY IS 100YR DESIGN LEVEL.
2. PRE-CONSTRUCTION & DURING CONSTRUCTION: EMERGENCY APPARATUS ACCESS ROADS SHALL BE PROVIDED AT ALL TIMES FOR THE DEPARTMENT. THIS SHALL BE A HARD-SURFACE CAPABLE OF CARRYING THE WEIGHT OF BOTH LADDER TRUCKS AND AMBULANCES. IT IS REQUIRED THAT PRIOR TO THE PERMITTING OR CONSTRUCTION OF ANY STRUCTURE AN APPROVED WATER SUPPLY AND MAINTAINED FIRE LANE ACCESS BE INSTALLED AND MAINTAINED.
3. A COMPLETE UNDERGROUND FULL-BORE FLUSH OF THE WATER MAIN AND SERVICES SHALL BE PERFORMED. (PLEASE SCHEDULE WITH LZ PUBLIC WORKS IN ADVANCE. THIS FLUSH SHALL BE WITNESSED BY THE FIRE PREVENTION OFFICER.) PRESSURE TESTING AND CHLORINATION IS ALSO REQUIRED PER L.Z. REQUIREMENTS (100 PSI FOR 1HR WITH NO PRESSURE LOSS) THE CONNECTION VALVE SHALL ONLY BE OPERATED BY THE VILLAGE OF LAKE ZURICH. REQUESTS TO OPERATE THE VALVE SHALL BE MADE A MINIMUM OF 48 HOURS IN ADVANCE.
4. THE SPRINKLER SYSTEM DESIGNER SHALL PROVIDE DRAWINGS SHOWING THE REQUIRED WATER SERVICE TO THE RISER ROOM INDICATING THE PROPER DESIGN SIZE.
5. FIRE HYDRANTS SHALL MEET THE REQUIRED ENGINEERING DISTANCES. ONE HYDRANT SHALL BE LOCATED WITHIN 150' OF THE F.D.C.
6. ALL SANITARY EXCEPT WHERE LABELED PVC DR-18 SHALL BE PVC SDR-26
7. TRACER WIRE MUST BE INSTALLED WITH THE C900 WATER MAIN WITH ACCESSIBLE WIRE CONNECTING HOUSING INCLUDED NEAR HYDRANTS.
8. THE VILLAGE SHALL BE PRESENT FOR ALL CONNECTIONS OR CROSSSINGS OF EXISTING WATER, STORM OR SANITARY MAINS.
9. WATER SERVICES SHALL BE THE MAINTENANCE RESPOSIBILITY OF THE PROPERTY OWNER FROM THE CONNECTION VALVE TO THE BUILDING.
10. ALL SANITARY SERVICES SHALL BE MINIMUM PVC SDR-26
STORM STRUCTURE FRAMES/GRATES
PAVED AREAS - NEENAH R-2540-D CURB STRUCTURES - NEENAH R-3278-A TY.C GRATE
YARD AREAS - NEENAH R-4340-B EXCEPT LOCATION 27 USE NEENAH R-4342 DITCH GRATE
NORTH
SCALES: 1" = 40'
LUXE CORSA AUTO SUITES
PEARSON,BROWN & ASSOCIATES,INC.
CONSULTING ENGINEERS
189 W. WINCHESTER ROAD - SUITE 205
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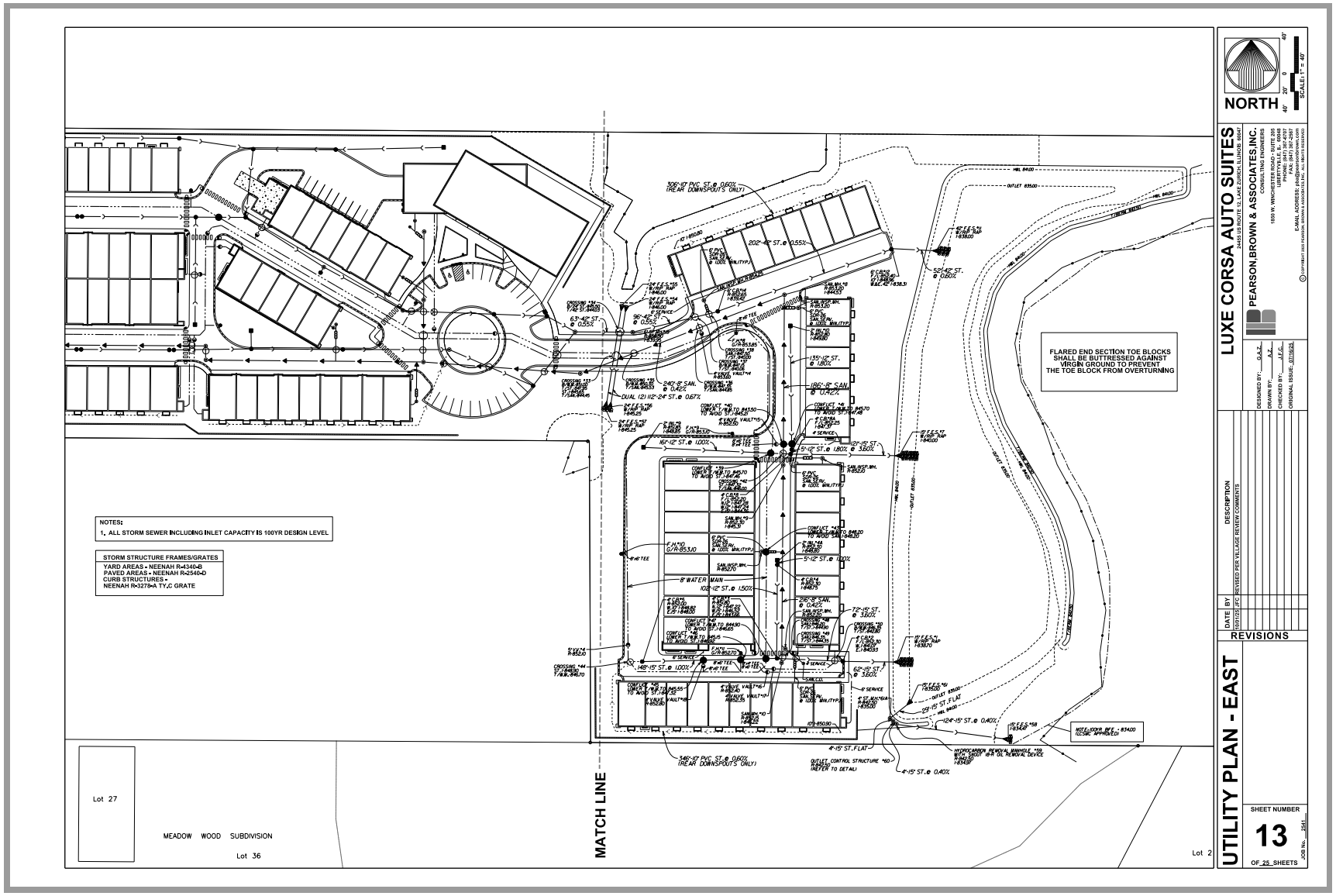
UTILITY PLAN - WEST
SHEET NUMBER 12 OF 25 SHEETS
JOB No. 2041


NOTES:
1. ALL STORM SEWER INCLUDING INLET CAPACITY IS 100YR DESIGN LEVEL
STORM STRUCTURE FRAMES/GRATES
YARD AREAS - NEENAH R-4340-B
PAVED AREAS - NEENAH R-2540-D
CURB STRUCTURES - NEENAH R-3279-A TY.C GRATE
FLARED END SECTION TOE BLOCKS SHALL BE BUTTRESSED AGAINST VIRGIN GROUND TO PREVENT THE TOE BLOCK FROM OVERTURNING
MATCH LINE
Lot 27
MEADOW WOOD SUBDIVISION
Lot 36
Lot 2
NORTH
SCALE: 1" = 40'
LUXE CORSA AUTO SUITES
3465 US ROUTE 12, LAKE ZURICH, ILLINOIS 60047
PEARSON,BROWN & ASSOCIATES,INC.
CONSULTING ENGINEERS
189 W. WINCHESTER ROAD - SUITE 205
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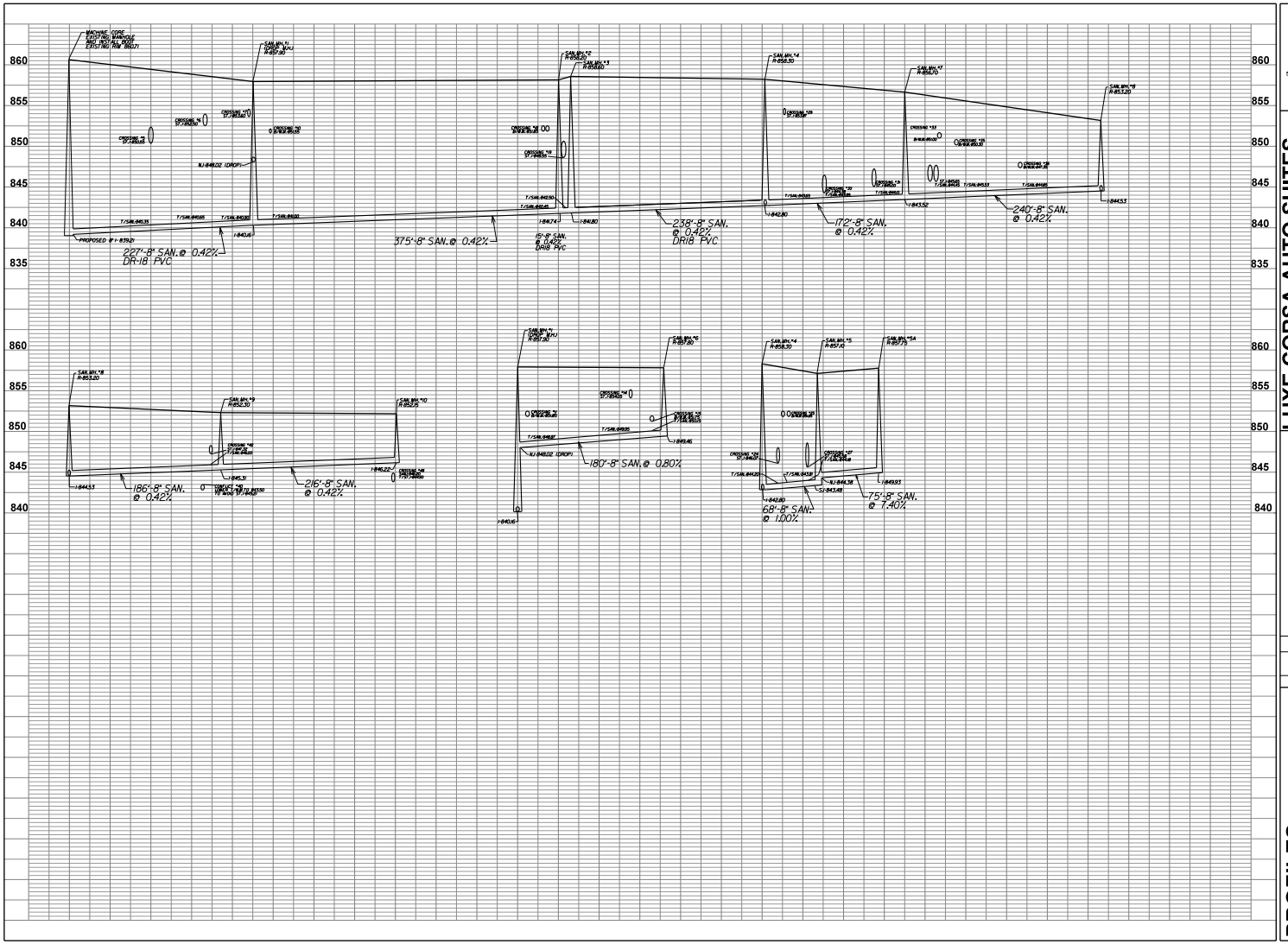
10/07/21 JFC REVISED PER VILLAGE REVIEW COMMENTS
REVISIONS
UTILITY PLAN - EAST
SHEET NUMBER 13
OF 25 SHEETS
JOB No. 2041



VERT. SCALE: 1"= 5'

HORIZ. SCALE: 1"= 50'

LUXE CORSA AUTO SUITES

LAKE ZURICH, ILLINOIS

PEARSON,BROWN & ASSOCIATES,INC.
CONSULTING ENGINEERS
1890 W. WINCHESTER ROAD - SUITE 205
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DRAWN BY: A.K.Z.
CHECKED BY: J.F.C.
ORIGINAL ISSUE: 07/16/25

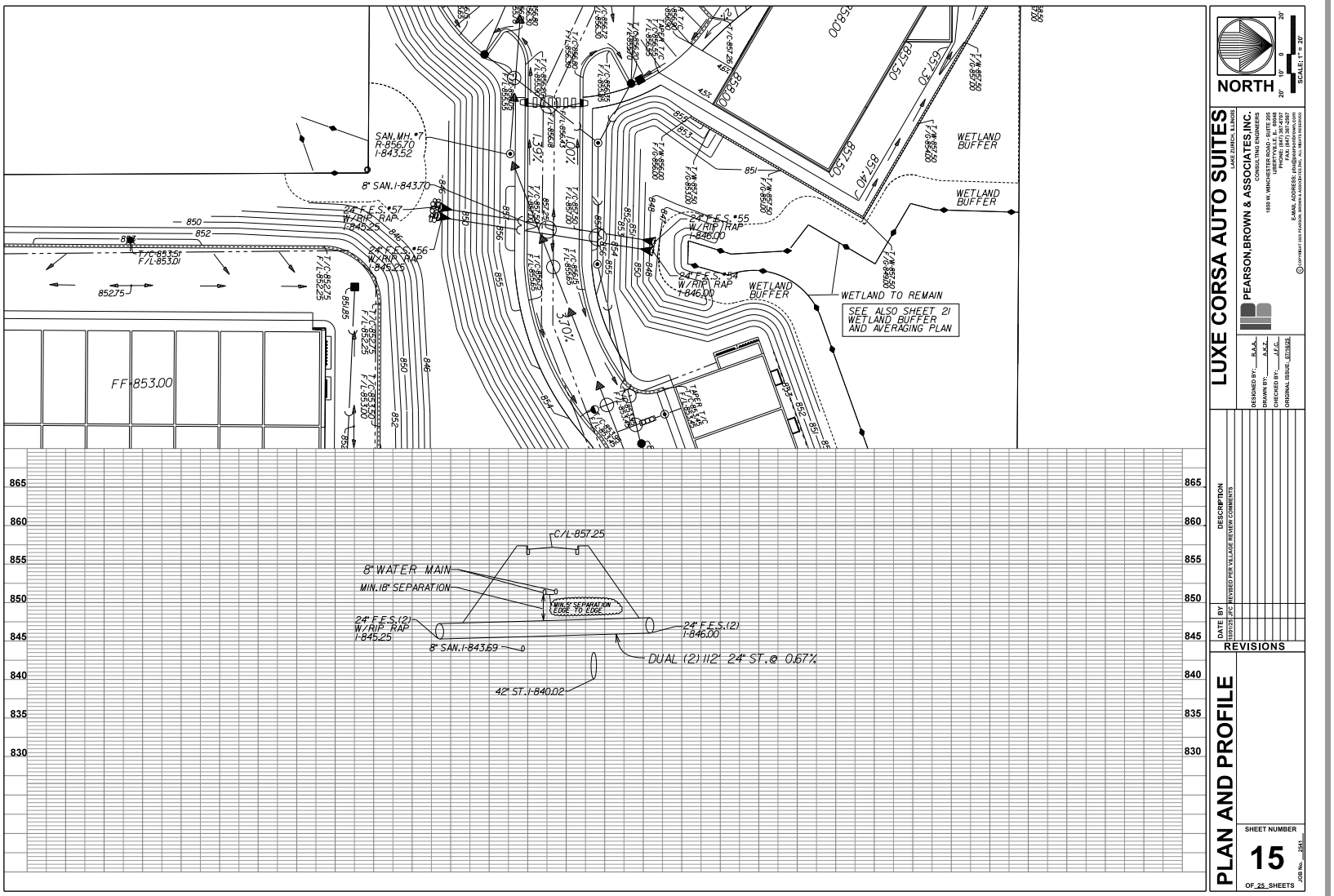
REVISIONS

DATE	BY	DESCRIPTION
10/01/25	JFC	REVISED PER VILLAGE REVIEW COMMENTS

PROFILES

SHEET NUMBER 14 OF 25 SHEETS

JOB No. 2441


SAN.MH.#7
R-856.70
I-843.52
8" SAN.I-843.70
24" F.E.S.#57
W/RIP RAP
I-845.25
24" F.E.S.#56
W/RIP RAP
I-845.25
24" F.E.S.#55
W/RIP RAP
I-846.00
24" F.E.S.#54
W/RIP RAP
I-846.00
WETLAND BUFFER
WETLAND TO REMAIN
SEE ALSO SHEET 21
WETLAND BUFFER
AND AVERAGING PLAN
FF=853.00
3.10%
C/L-857.25
8" WATER MAIN
MIN.18" SEPARATION
MIN.5' SEPARATION
EDGE TO EDGE
24" F.E.S.(2)
W/RIP RAP
I-845.25
8" SAN.I-843.69
24" F.E.S.(2)
I-846.00
DUAL (2) 112' 24" ST. @ 0.67%
42" ST.I-840.02
NORTH
SCALE: 1" = 20'
LUXE CORSA AUTO SUITES
PEARSON,BROWN & ASSOCIATES,INC.
CONSULTING ENGINEERS
1890 W. WINCHESTER ROAD - SUITE 205
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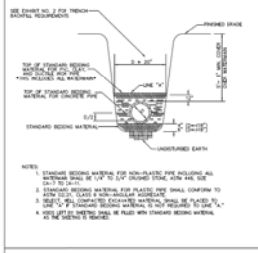
10/01/25 JFC REVISED PER VILLAGE REVIEW COMMENTS
REVISIONS
PLAN AND PROFILE
SHEET NUMBER
15
OF 25 SHEETS
JOB No. 2441

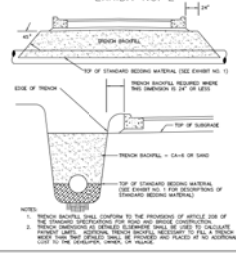
NOTE: DETAILS ARE NOT TO BE CHANGED IN ANY WAY. LEAVE ALL DETAILS ON SHEET EVEN IF THEY DO NOT APPLY TO CURRENT IMPROVEMENTS. CHANGING OF DETAILS DOES NOT CHANGE REQUIREMENTS.

EXHIBIT NO. 1



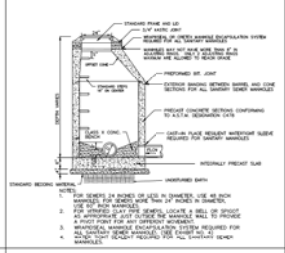
TYPICAL TRENCH AND STANDARD BEDDING

EXHIBIT NO. 2



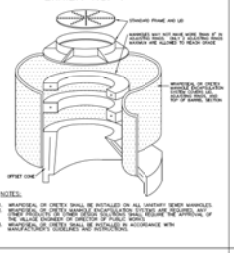
TRENCH BACKFILL

EXHIBIT NO. 3



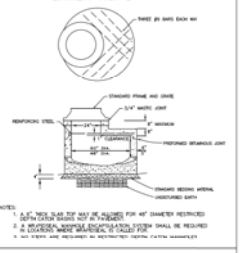
STANDARD MANHOLE

EXHIBIT NO. 4



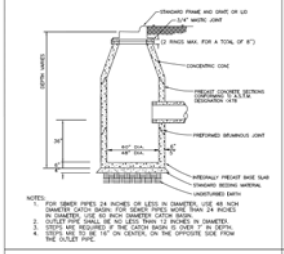
WRAPIDSEAL MANHOLE ENCAPSULATION SYSTEM

EXHIBIT NO. 5



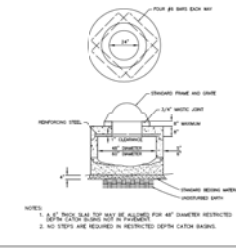
FLAT TOP FOR RESTRICTED DEPTH MANHOLE

EXHIBIT NO. 7



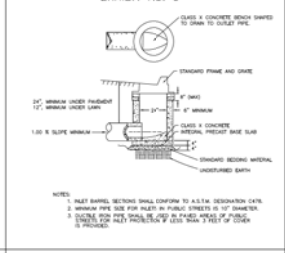
CATCH BASIN

EXHIBIT NO. 8



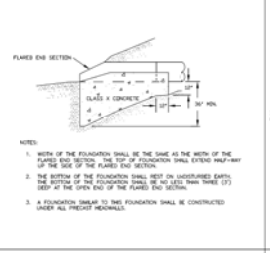
FLAT SLAB TOP FOR RESTRICTED DEPTH C.B.

EXHIBIT NO. 9



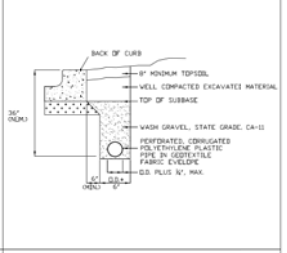
INLET

EXHIBIT NO. 10



FOUNDATION FOR FLARED END SECTION

EXHIBIT NO. 11



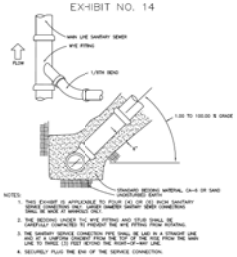
UNDERDRAIN

EXHIBIT NO. 12

STREET	PAVEMENT DESIGN
MAJOR	4" GRANULAR SUB-BASE 9" BITUMINOUS AGGREGATE MIXTURE 2" BITUMINOUS BINDER COURSE 1 1/2" BITUMINOUS SURFACE COURSE
COLLECTOR	3" GRANULAR SUB-BASE 6" BITUMINOUS AGGREGATE MIXTURE 2" BITUMINOUS BINDER COURSE 1 1/2" BITUMINOUS SURFACE COURSE
MINOR	6" AGGREGATE BASE COURSE BITUMINOUS AGGREGATE MIXTURE 3" BITUMINOUS BINDER COURSE 1 1/2" BITUMINOUS SURFACE COURSE
CUL-DE-SAC	SAME AS MINOR
MARGINAL ACCESS	SAME AS MINOR
IN BUSINESS AND INDUSTRIAL DISTRICTS	3" GRANULAR SUB-BASE 8" BITUMINOUS AGGREGATE MIXTURE 3" BITUMINOUS CONCRETE

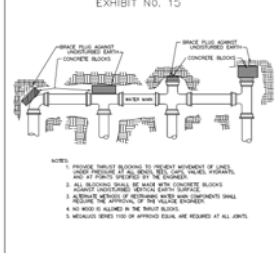
MINIMUM STANDARDS FOR STREET DESIGN

EXHIBIT NO. 14



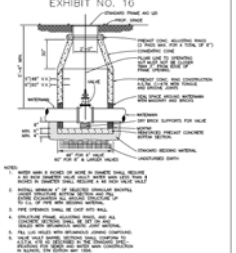
SANITARY SERVICE CONNECTION

EXHIBIT NO. 15



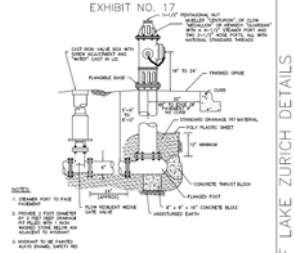
THRUST BLOCK

EXHIBIT NO. 16



VALVE VAULT

EXHIBIT NO. 17



FIRE HYDRANT

VILLAGE OF LAKE ZURICH
70 EAST MAIN STREET
LAKE ZURICH, IL 60047
(847) 540-1694

REVISIONS

VILLAGE OF LAKE ZURICH DETAILS

SHEET 1

PROJECT NO. DETAILS
DATE 1/19/01
SCALE NTS
DESIGNED BY DESIGN
DRAWN BY DTM
CHECKED BY EL

SHEET 1 OF 3

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VILLAGE OF LAKE ZURICH DETAILS

LUXE CORSA AUTO SUITES
24455 US ROUTE 12, LAKE ZURICH, ILLINOIS 60047

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DESIGNED BY: G.A.Z.
DRAWN BY: A.Z.
CHECKED BY: J.F.C.
ORIGINAL ISSUE: 07/19/01

DATE	BY	DESCRIPTION
10/01/01	JFC	REVISED PER VILLAGE REVIEW COMMENTS

REVISIONS

DETAILS

SHEET NUMBER 16 OF 25 SHEETS

JOB No. 2041

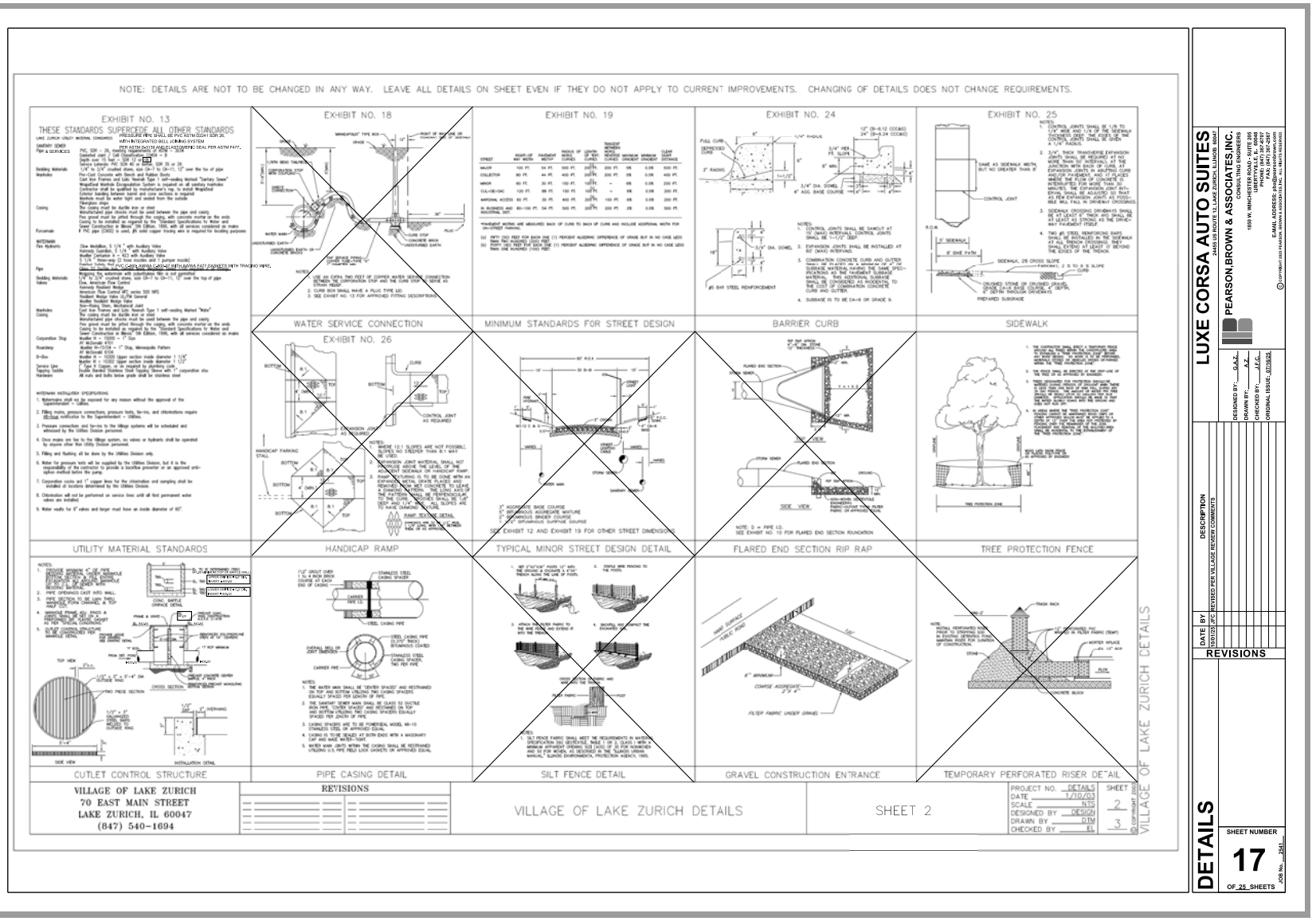
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EXHIBIT NO. 13
THESE STANDARDS SUPERCEDE ALL OTHER STANDARDS
EXHIBIT NO. 18
EXHIBIT NO. 19
EXHIBIT NO. 24
EXHIBIT NO. 25
WATER SERVICE CONNECTION
MINIMUM STANDARDS FOR STREET DESIGN
BARRIER CURB
SIDEWALK
EXHIBIT NO. 26
UTILITY MATERIAL STANDARDS
HANDICAP RAMP
TYPICAL MINOR STREET DESIGN DETAIL
FLARED END SECTION RIP RAP
TREE PROTECTION FENCE
CUTLET CONTROL STRUCTURE
PIPE CASING DETAIL
SILT FENCE DETAIL
GRAVEL CONSTRUCTION ENTRANCE
TEMPORARY PERFORATED RISER DETAIL
VILLAGE OF LAKE ZURICH
70 EAST MAIN STREET
LAKE ZURICH, IL 60047
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REVISIONS
VILLAGE OF LAKE ZURICH DETAILS
SHEET 2
PROJECT NO. DETAILS
DATE 1/10/03
SCALE NTS
DESIGNED BY DESIGN
DRAWN BY DTM
CHECKED BY EL
SHEET 2
3
VILLAGE OF LAKE ZURICH DETAILS
LUXE CORSA AUTO SUITES
24455 US ROUTE 12, LAKE ZURICH, ILLINOIS 60047
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DRAWN BY: A.Z.
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REVISIONS
DETAILS
SHEET NUMBER
17
OF 25 SHEETS
JOB No. 2041

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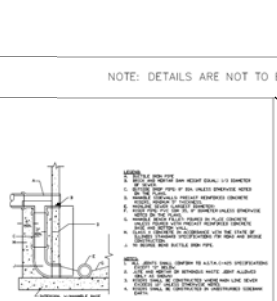
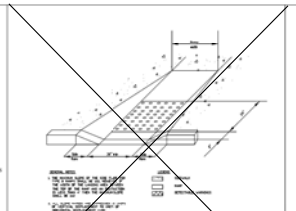
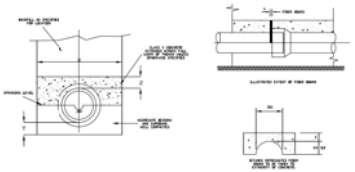


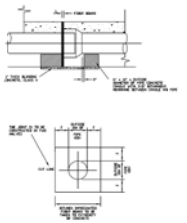
OUTSIDE DROP PIPE DETAIL



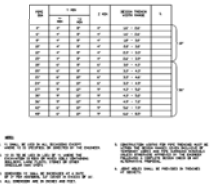
HANDICAP RAMP DETAIL



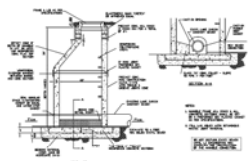
MASS CONCRETE ARCH



FLEXIBLE JOINT



BEDDING DETAILS: PIPES IN SINGLE TRENCHES



STANDARD MH CONSTRN. OVER EXSTG SEWER

VILLAGE OF LAKE ZURICH DETAILS

VILLAGE OF LAKE ZURICH
70 EAST MAIN STREET
LAKE ZURICH, IL 60047
(847) 540-1694

REVISIONS

VILLAGE OF LAKE ZURICH DETAILS

SHEET 3

PROJECT NO. DETAILS
DATE 7/31/03
SCALE NTS
DESIGNED BY RK
DRAWN BY RK
CHECKED BY EF

SHEET 3
3

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CHECKED BY: JFC
ORIGINAL ISSUE: 07/16/03

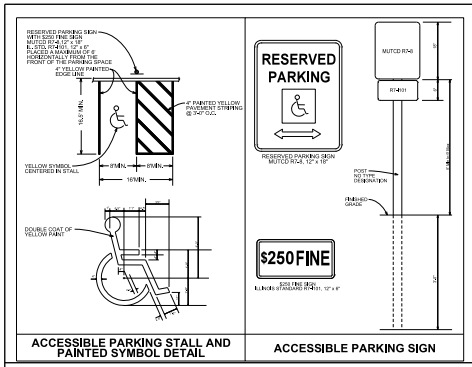
REVISIONS

DATE	BY	DESCRIPTION
10/01/03	JFC	REVISED PER VILLAGE REVIEW COMMENTS

DETAILS

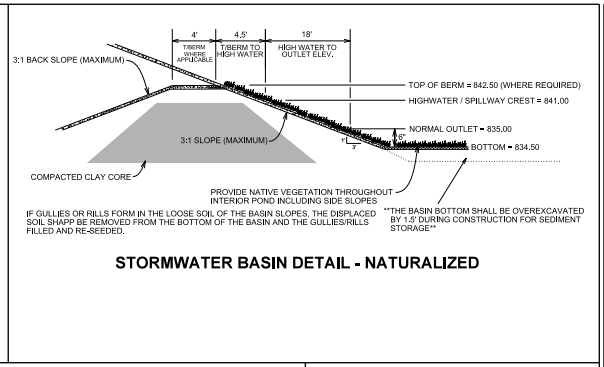
SHEET NUMBER
18
OF 25 SHEETS

JOB No. 3041

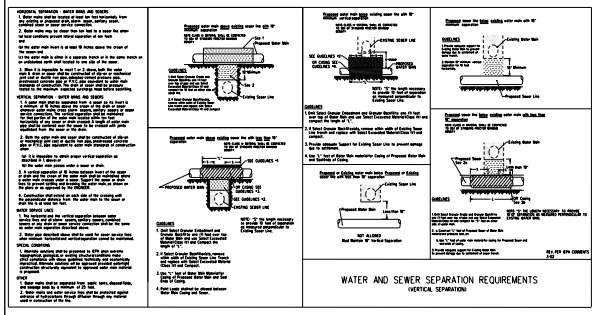


ACCESSIBLE PARKING STALL AND PAINTED SYMBOL DETAIL

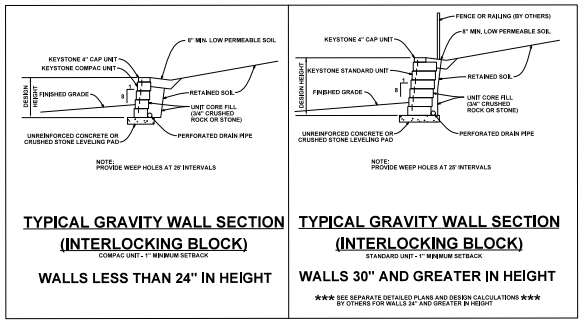
ACCESSIBLE PARKING SIGN



STORMWATER BASIN DETAIL - NATURALIZED



WATER AND SEWER SEPARATION REQUIREMENTS
(VERTICAL SEPARATION)



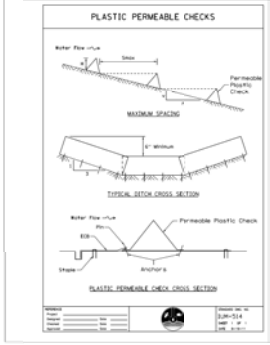
TYPICAL GRAVITY WALL SECTION (INTERLOCKING BLOCK)
COMPAC UNIT - 1" MINIMUM SETBACK

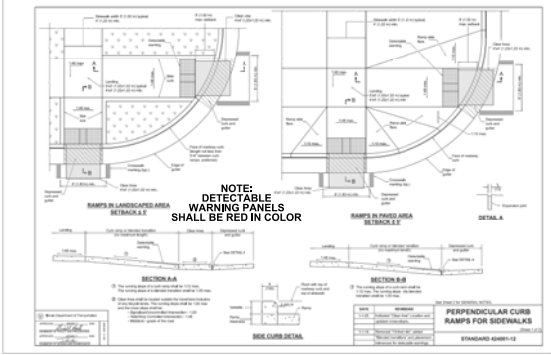
WALLS LESS THAN 24" IN HEIGHT

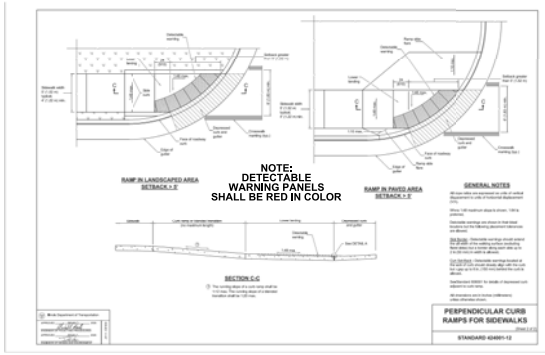
TYPICAL GRAVITY WALL SECTION (INTERLOCKING BLOCK)
STANDARD UNIT - 1" MINIMUM SETBACK

WALLS 30" AND GREATER IN HEIGHT

*** SEE SEPARATE DETAILED PLANS AND DESIGN CALCULATIONS *** BY OTHERS FOR WALLS 24" AND GREATER IN HEIGHT







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DRAWN BY: A.Z.
CHECKED BY: J.F.C.
ORIGINAL ISSUE: 07/16/25

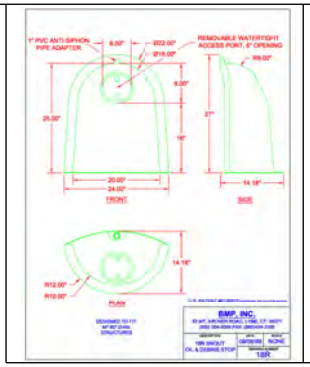
REVISIONS

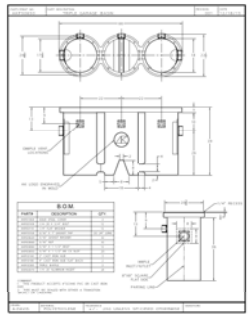
DATE	BY	DESCRIPTION
10/01/25	JFC	REVISED PER VILLAGE REVIEW COMMENTS

DETAILS

SHEET NUMBER 19 OF 25 SHEETS

JOB No. 2441



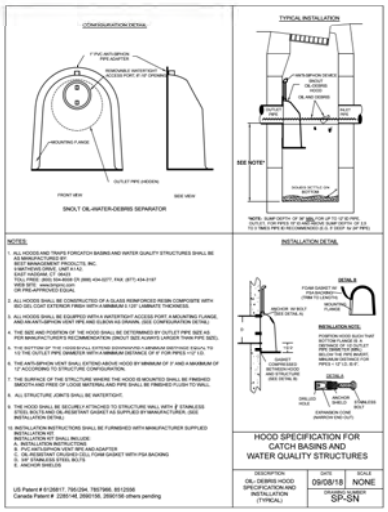


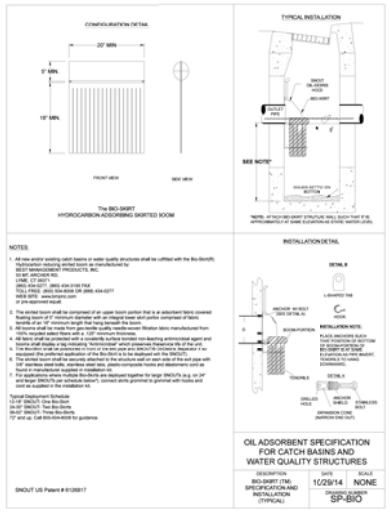
SANITARY SERVICE TRIPLE BASIN DETAIL

PAVEMENT LEGEND

ROADWAYS:
2" HMA SURFACE COURSE, MIX. D, N50
3" HMA BINDER COURSE, IL 19.0, N50
10" CRUSHED AGGREGATE BASE COURSE CA-6

TRASH ENCLOSURE AREA:
4000 PSI 6" PCC SLAB W/ 6X6 [10 / 10] W.W.M.
COMPACTED 4" CA-6 AGGREGATE BASE





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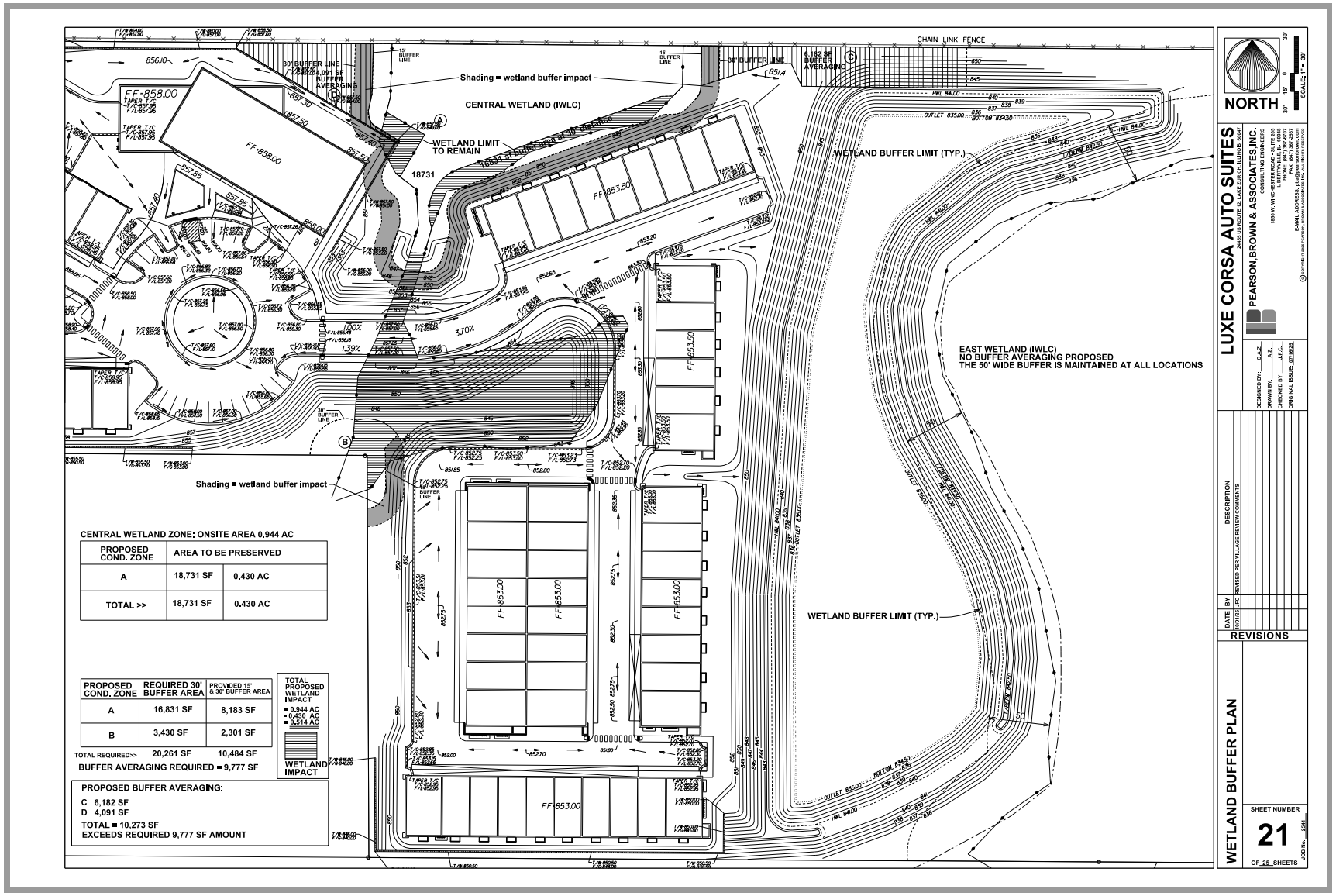
DATE	BY	DESCRIPTION
10/01/25	JFC	REVISED PER VILLAGE REVIEW COMMENTS

REVISIONS

DETAILS

SHEET NUMBER **20** OF 25 SHEETS

JOB No. 2441


Shading = wetland buffer impact
CENTRAL WETLAND (IWLC)
WETLAND LIMIT TO REMAIN
18731 sf buffer area at 30' distance
WETLAND BUFFER LIMIT (TYP.)
EAST WETLAND (IWLC)
NO BUFFER AVERAGING PROPOSED
THE 50' WIDE BUFFER IS MAINTAINED AT ALL LOCATIONS
CHAIN LINK FENCE
6,182 SF BUFFER AVERAGING
30' BUFFER LINE
15' BUFFER LINE
CENTRAL WETLAND ZONE: ONSITE AREA 0.944 AC
PROPOSED COND. ZONE | AREA TO BE PRESERVED
A | 18,731 SF | 0.430 AC
TOTAL >> | 18,731 SF | 0.430 AC
PROPOSED COND. ZONE | REQUIRED 30' BUFFER AREA | PROVIDED 15' & 30' BUFFER AREA
A | 16,831 SF | 8,183 SF
B | 3,430 SF | 2,301 SF
TOTAL REQUIRED>> 20,261 SF 10,484 SF
BUFFER AVERAGING REQUIRED = 9,777 SF
TOTAL PROPOSED WETLAND IMPACT
= 0.944 AC
= 0.430 AC
= 0.514 AC
WETLAND IMPACT
PROPOSED BUFFER AVERAGING:
C 6,182 SF
D 4,091 SF
TOTAL = 10,273 SF
EXCEEDS REQUIRED 9,777 SF AMOUNT
NORTH
SCALE: 1" = 30'
LUXE CORSA AUTO SUITES
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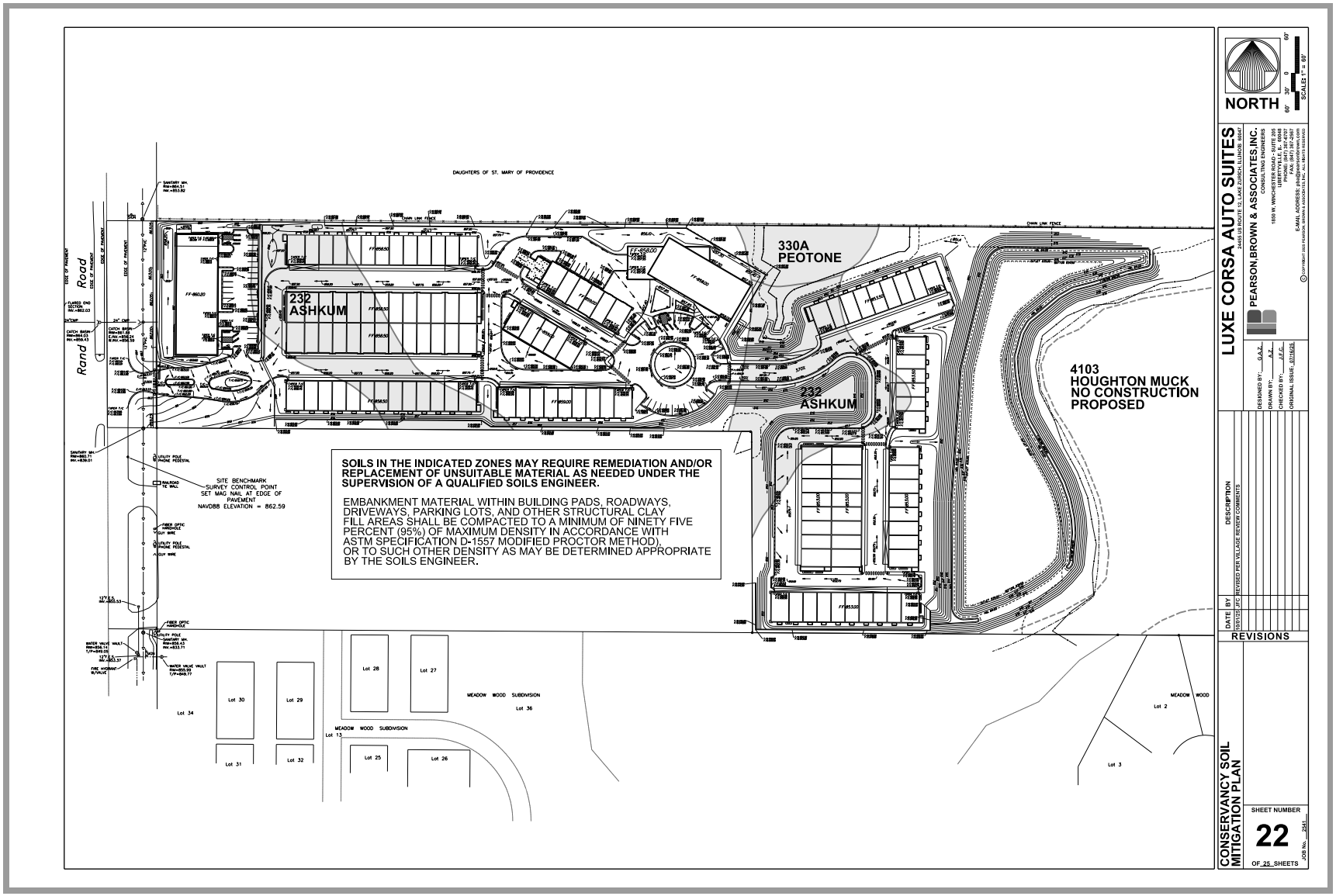
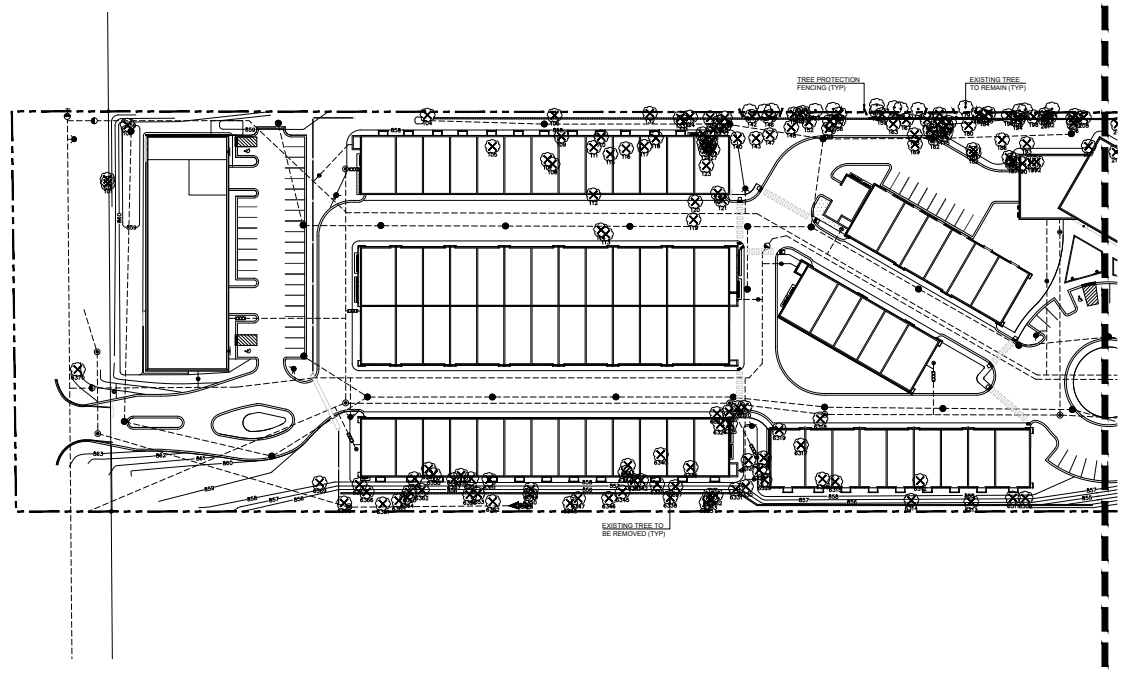
10/07/25 JFC REVISED PER VILLAGE REVIEW COMMENTS
REVISIONS
WETLAND BUFFER PLAN
SHEET NUMBER
21
OF 25 SHEETS
JOB No. 2341


DAUGHTERS OF ST. MARY OF PROVIDENCE
Rand Road
232 ASHKUM
330A PEOTONE
232 ASHKUM
4103 HOUGHTON MUCK NO CONSTRUCTION PROPOSED
SOILS IN THE INDICATED ZONES MAY REQUIRE REMEDIATION AND/OR REPLACEMENT OF UNSUITABLE MATERIAL AS NEEDED UNDER THE SUPERVISION OF A QUALIFIED SOILS ENGINEER.
EMBANKMENT MATERIAL WITHIN BUILDING PADS, ROADWAYS, DRIVEWAYS, PARKING LOTS, AND OTHER STRUCTURAL CLAY FILL AREAS SHALL BE COMPACTED TO A MINIMUM OF NINETY FIVE PERCENT (95%) OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM SPECIFICATION D-1557 MODIFIED PROCTOR METHOD), OR TO SUCH OTHER DENSITY AS MAY BE DETERMINED APPROPRIATE BY THE SOILS ENGINEER.
SITE BENCHMARK
SURVEY CONTROL POINT
SET MAG NAIL AT EDGE OF PAVEMENT
NAVD88 ELEVATION = 862.59
MEADOW WOOD SUBDIVISION
Lot 28
Lot 27
Lot 30
Lot 29
Lot 34
Lot 31
Lot 32
Lot 25
Lot 26
Lot 36
Lot 2
Lot 3
NORTH
SCALE: 1" = 60'
LUXE CORSA AUTO SUITES
PEARSON,BROWN & ASSOCIATES,INC.
CONSULTING ENGINEERS
DESIGNED BY: G.A.Z.
DRAWN BY: A.Z.
CHECKED BY: J.F.C.
ORIGINAL ISSUE: 07/16/21
DATE BY DESCRIPTION
10/07/21 JFC REVISED PER VILLAGE REVIEW COMMENTS
REVISIONS
CONSERVANCY SOIL MITIGATION PLAN
SHEET NUMBER 22
OF 25 SHEETS
JOB No. 2041



TREE PRESERVATION PLAN - WEST

SCALE: 1" = 40'-0"

N

0 20' 40' 80'

Kathryn Tahy

no.	revision description	initial	date
	SSMD TOK #2418	MT	07-11-25

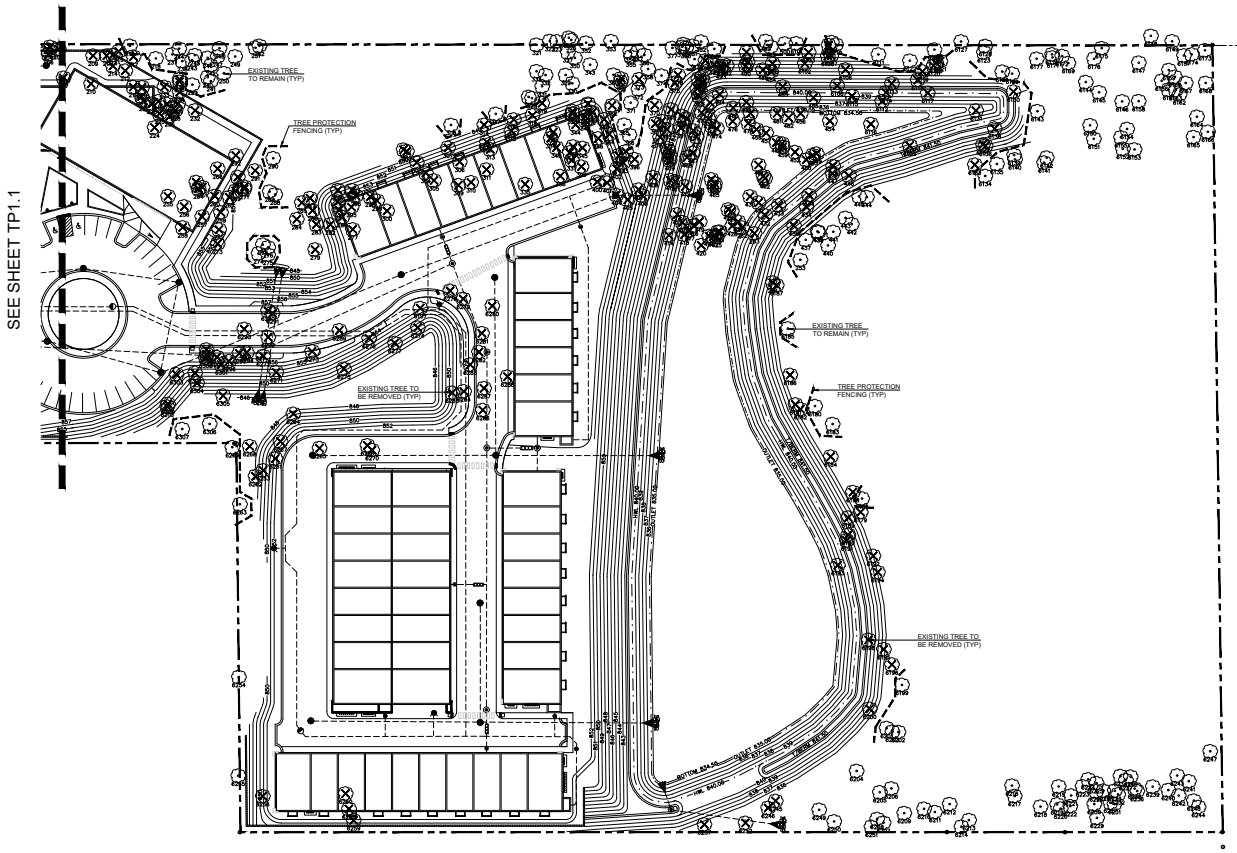
LAKE ZURICH
CAR CONDOS
LAKE ZURICH, ILLINOIS

TREE PRESERVATION PLAN
WEST

date 06.16.25
drawn KMP
checked MT

job no. 25210

sheet no. TP1.1



TREE PRESERVATION PLAN - EAST

SCALE: 1" = 40'-0"

N

0 20' 40' 80'

Kathryn Tahy

no.	revision description	initial	date
	SSMD TOK #2418	MF	07-11-25

LAKE ZURICH
CAR CONDOS
LAKE ZURICH, ILLINOIS

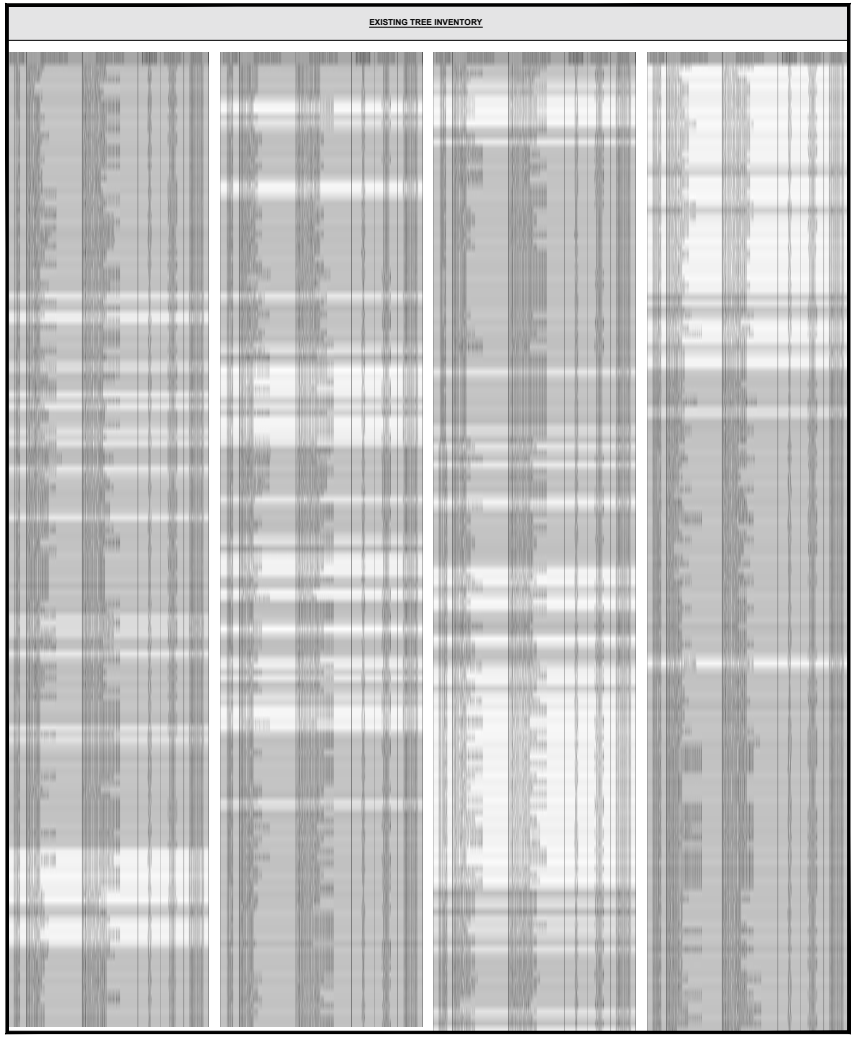
TREE PRESERVATION PLAN
EAST

date 06.18.25
drawn KMP
checked KMT

job no. 25210

sheet no. TP1.2

EXISTING TREE INVENTORY



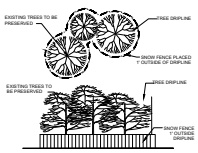
TREE REMOVAL SUMMARY

TREES TO BE REMOVED:	400	(4029")
HERITAGE TREES:	149	(1720")
LANDMARK TREES:	12	(129")
DESIRABLE TREES:	31	(422")
UNDESIRABLE TREES:	208	(1758")
WETLAND AREA:	182	(2093")
HERITAGE TREES:	96	(1353")
LANDMARK TREES:	3	(22")
DESIRABLE TREES:	3	(15")
UNDESIRABLE TREES:	80	(703")

NOTE: UNDESIRABLE AND DEAD TREE MANAGEMENT IN WETLAND ZONE TO BE COORDINATED WITH WETLAND CONSULTANT.

TREE PROTECTION NOTES

1. BEFORE ANY EXCAVATION, CALL TO LOCATE ANY EXISTING UTILITIES ON THE SITE. THE CONTRACTOR SHALL FAMILIARIZE HIM/HERSELF WITH THE LOCATIONS OF ALL BURIED UTILITIES IN THE AREAS OF WORK BEFORE STARTING OPERATIONS. THE CONTRACTOR SHALL BE LIABLE FOR THE COST OF REPAIRING OR REPLACING ANY BURIED CONDUITS, CABLES OR PIPING DAMAGED DURING THE INSTALLATION OF THIS WORK.
2. FOUR FOOT HIGH SNOW FENCING OR OTHER RIGID MATERIAL IS TO BE ERECTED AROUND THE DRIPLINE OF ALL TREES TO BE SAVED IN ACCORDANCE WITH THE LAKE ZURICH ZONING ORDINANCE.
3. A TREE REMOVAL PERMIT MUST BE OBTAINED FROM THE PLANNING OFFICE PRIOR TO ALL TREE REMOVAL ACTIVITY INVOLVING TREES FOUR (4) INCHES OR MORE D.B.H. IN ACCORDANCE WITH LAKE ZURICH ZONING ORDINANCE.
4. TREES TO BE REMOVED MUST BE MARKED IN THE FIELD WITH RED PAINT OR FLAGS AND INSPECTED BY THE LAKE ZURICH FORESTRY OFFICE PRIOR TO ANY TREES BEING REMOVED.
5. IF NECESSARY TO CONDUCT WORK OR DIGGING WITHIN THE ROOT ZONE OF TREES TO REMAIN, THE LANDSCAPE ARCHITECT MUST BE NOTIFIED AND ADDITIONAL PROTECTIVE MEASURES, SUCH AS ROOT PRUNING OR BRIDGING, MUST BE EMPLOYED BY A LICENSED TREE SERVICE.
6. PROTECT STRUCTURES, SIDEWALKS, PAVEMENTS AND UTILITIES TO REMAIN FROM DAMAGE CAUSED BY SETTLEMENT, LATERAL MOVEMENT, UNDERMINING, WASHOUTS AND OTHER HAZARDS CAUSED BY SITE IMPROVEMENT OPERATIONS.
7. CAREFULLY MAINTAIN PRESENT GRADE AT BASE OF ALL EXISTING TREES TO REMAIN. PREVENT ANY DISTURBANCE OF EXISTING TREES INCLUDING ROOT ZONES. USE TREE PROTECTION BARRICADES WHERE INDICATED. PROTECT EXISTING TREES TO REMAIN AGAINST UNNECESSARY CUTTING, BREAKING OR SKINNING OF ROOTS, BRUISING OF BARK OR SMOTHERING OF TREES. DRIVING, PARKING, DUMPING, STOCKPILING AND/OR STORAGE OF VEHICLES, EQUIPMENT, SUPPLIES, MATERIALS OR DEBRIS ON TOP THE ROOT ZONES AND/OR WITHIN THE DRIPLINE OF EXISTING TREES OR OTHER PLANT MATERIAL TO REMAIN IS STRICTLY PROHIBITED.
8. EXERCISE CAUTION WHEN WORKING AND DIGGING NEAR TREES LOCATED ON ADJACENT PROPERTY.
9. THE CONTRACTOR AT ALL TIMES SHALL KEEP THE PREMISES ON WHICH WORK IS BEING DONE, CLEAR OF RUBBISH AND DEBRIS. ALL PAVEMENT AND DEBRIS REMOVED FROM THE SITE SHALL BE DISPOSED OF LEGALLY.
10. ALL WORK AND OPERATIONS SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES AND ORDINANCES.
11. TREE INVENTORY CONDUCTED BY SAV-A-TREE LICENSED ARBORIST DEZIRAE GONZALES CERT ID: IL-9961A (1-630-473-8713)
12. EXISTING TREES HAVE BEEN LOCATED WITH GIS COORDINATES. LOCATIONS ARE APPROXIMATE BUT ACCURATE. FIELD VERIFICATION IS RECOMMENDED PRIOR TO REMOVAL ACTIVITY.



1 TREE FENCING DETAIL
SP1.0 SCALE: NO SCALE

Kathryn Eddy

no.	revision description	initial	date
	ISSUED FOR REVIEW	MP	07-11-25

LAKE ZURICH
CAR CONDOS
LAKE ZURICH, ILLINOIS

EXISTING TREE INVENTORY
TREE PROTECTION NOTES
TREE FENCING DETAIL

date: 08.18.25
drawn: DSP
checked: MP

job no. 25210

sheet no. TP2.0

2541

FINAL
STORMWATER MANAGEMENT REPORT

FOR

LUXE CORSA AUTO SUITES

LAKE ZURICH, ILLINOIS

PREPARED FOR:

Luxe Corsa Partners, LLC
601 Dundee Avenue
East Dundee, IL 60118

OCTOBER 1, 2025

PEARSON, BROWN & ASSOCIATES, INC.
CONSULTING ENGINEERS

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INTRODUCTION

Pearson, Brown and Associates, Inc. (PBA) prepared this final stormwater management report for the Luxe Corsa Auto Suites project in Lake Zurich (pending annexation), Illinois for Luxe Corsa Partners, LLC.

Exhibit A shows the project location.

Aerial imagery is provided on Exhibit B. Aerial imagery is also in the background on Exhibit D.

The property area is 20.33 acres (net).

The following Parcel Identification Number is involved.

PIN:
14-07-400-001

PROJECT UNDERSTANDING

121 car condo units are proposed in 11 buildings. A car dealership and a clubhouse are also proposed. General drainage in the western area of the site is to the east from Route 12 towards a central north south drainage way that runs through the middle of the site. In the far eastern area of the site there is a large wetland and floodplain area (unstudied FEMA Zone A) that is planned to be completely avoided. Pearson, Brown & Associates, Inc. has prepared a separate Base Flood Elevation study for the far eastern area that has been reviewed and approved by the Lake County Stormwater Management Commission since the tributary area exceeds 20 acres. The 100yr BFE for the Zone A zone at the east is 834.00.

The property drains to both the south and to the east. Drainage reaching the eastern floodplain and wetland areas then drains to the southwest from the FEMA Zone A area. Existing drainage reaching the centrally located north-south drainage way drains to the south offsite areas. This project is within the Flint Creek sub-watershed and the Flint Creek-Fox River main watershed.

Exhibit C depicts the existing site conditions.

Soil Code information for the site and nearby areas from the NRCS/USDA WEBSOIL Survey is shown on Exhibit D.

Representative soils are listed below.

Code	Name	Hydrologic Soil Group
530C	Ozaukee silt loam 4-6%	C
530C2	Ozaukee silt loam 4-6% (eroded)	C
530D	Ozaukee silt loam 6-12%	C
530D2	Ozaukee silt loam 6-12% (eroded)	C
530D3	Ozaukee silty clay loam 6-12% severely eroded	C
232A	Ashkum silty clay loam 0-2%	B/D
330A	Peotone silty clay loam 0-2%	B/D
4103A	Houghton Muck (ponded)	D
298B	Beecher silt loam 2-4%	C
23B	Blount silt loam 2-4%	C

Generally soils appear to be type C with some type B likely for the upland Peotone and Ashkum. The wetland and floodplain areas in the far east are the type D Houghton Muck.

FEMA FIRM panel information is included on an annotated Exhibit E. The current effective FIRM panel shows a Zone A SFHA in the eastern area of the property. As previously stated this area and the associated nearby wetlands are planned to be completely avoided with this project. Grading for the proposed stormwater basin is planned to begin above the 100yr Base Flood Elevation level (pending LCSMC approval of the elevation determined from our critical duration analysis).

Exhibit F shows USGS Flood of Record information from the Lake County G.I.S. Most of the indicated historic flooding is associated with the Zone A area in the east. Some, however, is associated with the central north-south drainage way. Along this route, there are two relatively small areas of existing depressional storage. The Lake County 2017 Lidar topo appears to show a centrally located summit along the drainage way between elevations 847 and 848 with more or less free flowing drainage to the southwest beyond that point.. Our ground-shot existing topography on Exhibit C also indicates a summit between 847 and 848 possibly as high as 848.80 and a potential

offsite depression right at the L shaped bend in the site property line. However, these computer-drawn "edge" contours may be incorrectly closed off and drainage is likely free flowing from the corner. Please refer to Exhibit F2 for the 2017 Lidar topo near the L shaped bend on the property.

As will be discussed later is this report, we performed a critical duration analysis of the tributary area associated with the north-south drainage way in order to size roadway culverts and to also determine depressional storage values.

Exhibit G depicts the USGS Hydrologic Atlas for this property and surrounding areas.

There is an existing 24" storm sewer from the Route 12 corridor that drains into the site and under the existing pole barn and then is routed to a location along the south property line. Refer to Exhibit C for the location. In the proposed condition, this sewer is being re-directed to the same location with 24" RCP storm sewer. The current owner (seller) of the property did confirm that they installed the sewer, not IDOT.

PROPOSED STORMWATER MANAGEMENT SUMMARY

A single, naturalized stormwater basin is proposed in the eastern area of the site upstream from the wetlands and floodplain zone. This basin will provide detention, runoff volume reduction and also water quality treatment.

To determine the required detention volume, the following methodology was employed. Please refer to Exhibit N that shows a proposed hydrologically disturbed area total of 14.60 acres. This area was used with HEC-HMS along with the total proposed impervious areas (Exhibit M) and pervious areas. Calculations are summarized below.

Proposed impervious area total is 8.09 acres (Exhibit M). The following values were then used to develop the composite curve number (CN) for the unit area method calculations.

Hydrologically disturbed area = 14.60 acres

Impervious 8.09 acres @ CN 98

Pervious 6.51 acres @ CN 80 (open space, good cond. soil type D)

Composite CN = [[8.09x98] + [6.51x80]] / 14.60 = 90

[These values are pre DVSF (Detention Volume Safety Factor) adjustment.]

Using HEC-HMS initially for the lower, 2yr restrictor design proceeded as follows. The onsite tributary area of 12.37 cfs was used along with the allowable 2yr release rate factor of 0.04 cfs per acre for a required detention design rate of 0.495 cfs.

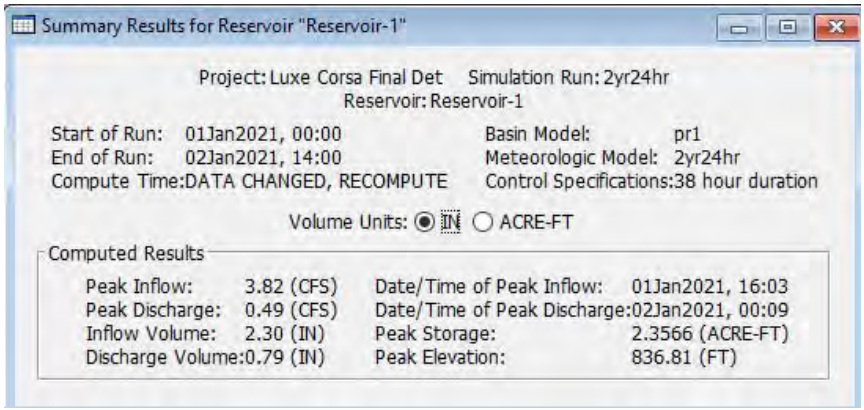
Initially the recommended minimum size 4" diameter rating was used as a starting point in HEC HMS running the 2yr, 24hr event. The stage-storage table for the basin is located further below in this section.

Rating of lower restrictor with 4" minimum size orifice:

LOWER:	
ORIFICE DIA. (IN)	4.00
AREA (SF)	0.087
COEF:	0.60
INVERT ELEVATION:	835.00

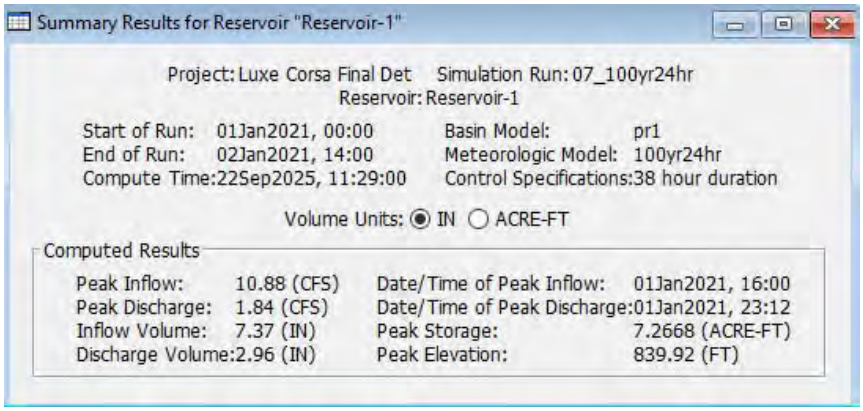
	STAGE	H (FT)	Q (CFS)
	835.00		0.000
	836.00	0.83	0.384
2YR HWL			
	837.00	1.83	0.569
	838.00	2.83	0.707
	839.00	3.83	0.823
	840.00	4.83	0.924
100yr HWL			
spillway crest	841.00	5.83	1.015

The first run shows the peak released rate (0.53 cfs) slightly exceeding the allowable rate (0.495 cfs). Next, a smaller restrictor size of 3.85 inches in diameter was used and this produced a peak outflow just below the allowable rate at 0.49 cfs. This effectively sets the pre-DVSF required detention volume at around 2.36 ac-ft. The actual proposed lower restrictor will be based on the total tributary area and this will be covered later in this discussion.



Next, to determine the required 100yr detention volume, various sizes of upper restrictors with inverts above the 2yr level were tested until the total release via both restrictors in the 100yr, 24hr event did not exceed the allowable.

A hypothetical 4.75" upper restrictor at an invert of 836.90 in conjunction with the previously determined lower restrictor yielded a peak rate of 1.84 cfs (just under the allowable), a corresponding peak storage or 7.27 ac-ft, and a peak stage of 839.92 in the basin. The output for the 100yr sizing run is shown below.



Detention Volume Safety Factor (DVSF) calculations:

Offsite and onsite tributary areas to the proposed stormwater basin are shown on Exhibits O & P, respectively. The offsite total is 11.02 acres (Exhibit O) and the onsite total is 12.37 acres (Exhibit P). Due to the offsite tributary the DVSF must be applied to the required volume totals. This is calculated as follows [1 plus 0.05 times the ratio of the offsite tributary area to the onsite tributary area]

1+0.05(11.02/12.37) = 1.0445

Applying the factor to the 2yr required volume yields 2.461 ac-ft

And

Applying the factor to the 100yr required volume yields 7.594 ac-ft

Stormwater Basin: Stage-Storage

	elev ft	area ac	avg ac	interval ft	vol ac-ft	total vol ac-ft
outlet	835	1.20	0.6			
	836	1.31	1.255	1	1.26	1.26
	837	1.42	1.365	1	1.37	2.62
	838	1.53	1.475	1	1.48	4.10
	839	1.65	1.59	1	1.59	5.69
	840	1.77	1.71	1	1.71	7.40
spillway crest	841	1.88	1.825	1	1.83	9.22

POST DVSF required volumes and stages:

2yr HWL = 836.88 [2.461 ac-ft level]

100yr HWL = 840.11 [7.594 ac-ft level]

Basin outlet control structure design information:

Proposed restrictors for this basin employ the standard Lake County WDO 2yr release rate of 0.04 cfs per acre and 0.15 cfs per acre for the 100yr. The allowable release rate for the actual restrictors to be constructed is based on the total tributary area of 23.39 acres [11.02 ac from offsite and 12.37 ac from onsite.

A 5.30 inch lower restrictor is proposed at the outlet elevation (835.00) to control the 2yr allowable rate.

A 6.50 inch upper restrictor is proposed at elevation 837.00 to allow for the 100yr allowable rate to be released via both restrictors when the basin is at the 100yr HWL of 840.11.

PROPOSED SYSTEM DUAL RESTRICTOR CALCS FOR REQUIRED DETENTION VOLUMES ONLY - PROPOSED RESTRICTORS BASED ON TOTAL TRIB.

23.39 **AC TOTAL DESIGN TRIB. [11.02 AC OFFSITE, 12.37 AC ONSITE]**

100YR	allowable release based on 0.15 cfs/ac >>>	3.509	cfs
2YR	allowable release based on 0.04 cfs/ac >>>	0.936	cfs

LOWER:		UPPER:	
ORIFICE DIA. (IN)	5.30	ORIFICE DIA. (IN)	6.50
AREA (SF)	0.153	AREA (SF)	0.230
COEF:	0.60	COEF:	0.60
INVERT ELEVATION:	835.00	INVERT ELEVATION:	837.00

	STAGE	H (FT)	Q (CFS)	STAGE	H (FT)	Q (CFS)	TOTAL (CFS)
	835.00		0.000	835.00		0.00	0.000
	836.00	0.78	0.651	836.00		0.00	0.651
2YR HWL	836.81	1.59	0.930	836.81		0.00	0.930
	837.00	1.78	0.984	837.00	-0.27	0.00	0.984
	838.00	2.78	1.230	838.00	0.73	0.95	2.177
	839.00	3.78	1.434	839.00	1.73	1.46	2.893
	840.00	4.78	1.613	840.00	2.73	1.83	3.446
100YR HWL	840.11	4.89	1.631	840.11	2.84	1.87	3.501
spillway crest	841.00	5.78	1.773	841.00	3.73	2.14	3.916

RUNOFF VOLUME REDUCTION (RVR) & WATER QUALITY

RUNOFF VOLUME REDUCTION (RVR)

RUNOFF VOLUME REDUCTION HIERARCHY

Runoff Volume Reduction (RVR) standards described in Section 503 of the WDO apply to this development.

Article 5, Section 503.01 of the WDO requires that all development be designed in accordance with the Runoff Volume Reduction (RVR) Hierarchy listed in that section. The hierarchy has been applied to the design of the development as follows:

- *Preservation and enhancement of the stormwater management benefits of the natural resource features of the development site (e.g., areas of Hydrologic Soil Groups A and B, floodplains, Waters of the United States, Isolated Waters of Lake County, channels, drainageways, prairies, savannas, and woodlands);*

  The proposed site plan intentionally will not disturb any of the wetland or floodplain areas in the far eastern area of the property. Also, approximately 0.43 acres of the 0.944 acre central wetland zone is planned to be preserved. Areas along the existing north south drainageway are being preserved to the extent possibly due to the needed roadway crossing.

- *Minimization or disconnection of impervious surfaces;*

  Impervious area is a function of the overlying community zoning. Runoff from portions of the site is directed to the native planted basin and open vegetated swales where possible. Most of the project downspouts are also planned to splash at grade rather than directly connect to storm sewers.

- *Enhancement of the infiltration and storage characteristics of the development site using appropriate best management practices;*

  The bottom 6 inches [0.50' below the outlet elevation] of the stormwater basin is designed to hold runoff and allow it to infiltrate.

- *The use of open channels with native vegetation to convey stormwater runoff;*

  Runoff is directed to open vegetated swales where possible. The stormwater basin will be planted in native vegetation to promote stabilization, infiltration, and water quality.

- *Structural measures that provide water quality and volume reduction;*

  No structural measures are proposed.

- *Structural measures that provide only volume reduction or other rainwater harvesting practices;*

  No structural measures are proposed.

- *Measures that provide water quality and quantity control;*

  The stormwater basin will be planted in native vegetation to better absorb and infiltrate runoff and provide water quality by acting as a filter for the first flush rain events by capturing pollutants.

- *Measures that provide only quantity control.*

  As stated above, the basin is designed to capture, hold, and allow the bottom 6" of runoff to infiltrate. Water quality volume is also provided in this zone.

The new impervious area (created after April 1, 2009) for the onsite development areas tributary to the proposed basin system is 5.29 ac [determined by subtracting the 2.80 ac pre-existing total from the proposed 8.09 acre value].

Storage volume proposed in the bottom 6" zone below the outlet is calculated as follows.

Outlet Elevation 835 contour area: 1.20 ac

Bottom Elevation 834.50 contour area: 1.15 ac

Average Contour area: 1.175 ac

Depth = 0.50'

Volume = (0.50')(1.175 ac) = 0.5875 ac-ft = 25,591 cubic feet

The soil types present in the area of the basin infiltration zone are all Ozaukee silt loam [HSG C].

The USDA recommends values of 0.2-0.4 for loamy soils (see next page). As these are silty loams, we will use the lowest value in the range, 0.20 in/hr.

RVR Design Summary:	
Proposed Impervious [net-new] (ac)	**5.29**
Provided Storage to Infiltrate (cf)	**25591**
RVR Quantity (cf/ac)	**4838**
Percent of Annual Rainfall Events (%)	**94.9% +/-**
Infiltration Rate* (in/hr)	**0.20**
Area to Infiltrate (sf)	**50094**
System Infiltration Rate (cf/hr)	**835**
Dewatering Time (hrs)	**30.7**

USDA Natural Resources Conservation Service

Indicator P | Test F | Function W

Soil Quality Indicators

Infiltration

Infiltration is the downward entry of water into the soil. The velocity at which water enters the soil is infiltration rate. Infiltration rate is typically expressed in inches per hour. Water from rainfall or irrigation must first enter the soil for it to be of value.

Factors Affecting

Inherent - Infiltration rate is dependent on soil texture (percentage of sand, silt, and clay) and clay mineralogy. Water moves more quickly through the large pore spaces in a sandy soil than it does through the small pores of a clayey soil, especially if the clay is compacted and has little or no structure or aggregation (see Table 1).

Depending on the amount and type of clay minerals, many clayey soils develop shrinkage cracks as they dry, creating a direct conduit for water to enter the soil. These clay soils have high infiltration capacities as water moves into the shrinkage cracks, although at other times, when cracks are not present, their infiltration rate is characteristically slow.

Dynamic - A reflection of climate and landscape position, as well as management practices and crop demand, existing soil water content affects the ability of the soil to pull additional water into it. Pores and cracks are generally open in a dry soil. Many of them are filled in by water or swelled shut as the soil becomes wet, so infiltration rate is generally highest when the soil is dry. As the soil becomes wet, the infiltration rate slows to the rate at which water moves through the most restrictive layer, such as a compacted layer or a layer of dense clay.

Infiltration is affected by crop and land management practices that affect surface crusting, compaction, and soil organic matter. Without the protective benefits of vegetative or residue cover, bare soil is subjected to the direct impact and erosive forces of raindrops that dislodge soil particles. Dislodged soil particles fill in and block surface pores, contributing to the development of surface crusts that restrict water movement into the soil.

Compaction results from livestock and equipment traffic, especially on wet soils, and continuous plowing to the same depth, e.g. the creation of a plow pan below the tillage depth. Compacted or impervious soil layers have reduced pore space and restricted water movement through the soil profile.

A one inch layer of water is added to a six inch diameter ring to measure infiltration rate.

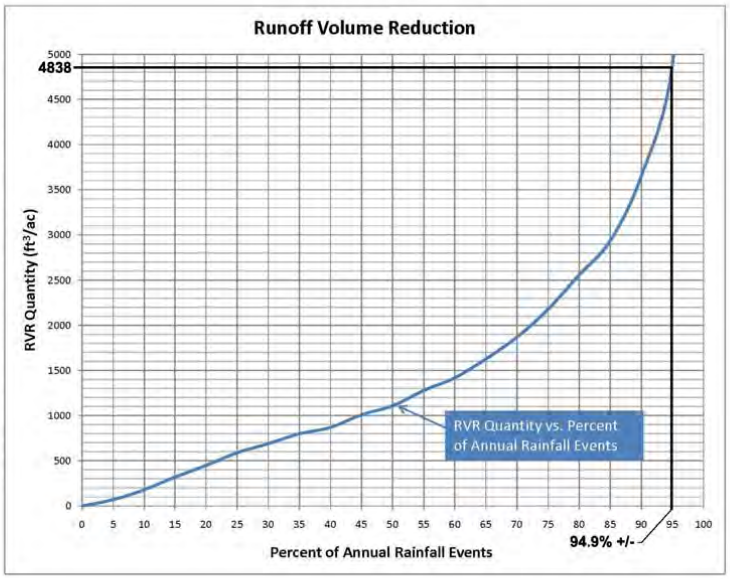
Soil organic matter affects infiltration through its positive affect on the development of stable soil aggregates, or crumbs. Highly aggregated soil has increased pore space and infiltration. Soils high in organic matter also provide good habitat for soil biota, such as earthworms, that through their burrowing activities, increase pore space and create continuous pores linking surface to subsurface soil layers.

Management that reduces soil cover, disrupts continuous poor space, compacts soil, or reduces soil organic matter negatively impacts infiltration. Since tillage negatively affects all of these properties, it plays an important role in a soil's infiltration rate.

Table 1. Steady infiltration rates for general soil texture groups in very deeply wetted soil. (Hillel, D. 1982. Introduction to soil physics. Academic Press, San Diego, CA)

Soil Type	Steady Infiltration Rate (in/hr)
Sands	> 0.8
Loams	0.2 - 0.4
Clays	0.04 - 0.2

Percent of Annual Rainfall Events	100% impervious values	
	Runoff Depth (in)	RVR Quantity ft^3/ac new impervious
0	0	0
5	0.02	70
10	0.05	180
15	0.09	320
20	0.12	450
25	0.16	590
30	0.19	690
35	0.22	800
40	0.24	870
45	0.28	1010
50	0.30	1110
55	0.35	1280
60	0.39	1420
65	0.45	1630
70	0.51	1870
75	0.60	2180
80	0.70	2560
85	0.81	2940
90	1.01	3660
95	1.35	4900
99	2.41	8760



WATER QUALITY

The WDO requires that all development divert and detain at least the first 0.01 inches of runoff for every 1% of net new impervious surface for the development with a minimum volume equal to 0.2 inches of runoff or provide an equivalent level of treatment suitable to the Enforcement Officer. The pond bottoms are designed to temporarily retain water in order to achieve the water quality requirement. The total net new impervious surface area for the development area tributary to the basin is 5.29 acres and requires 0.4408 acre-feet of water quality volume.

The proposed basin provides 0.5875 ac-ft of storage below the outlet elevation.

Downstream Capacity:

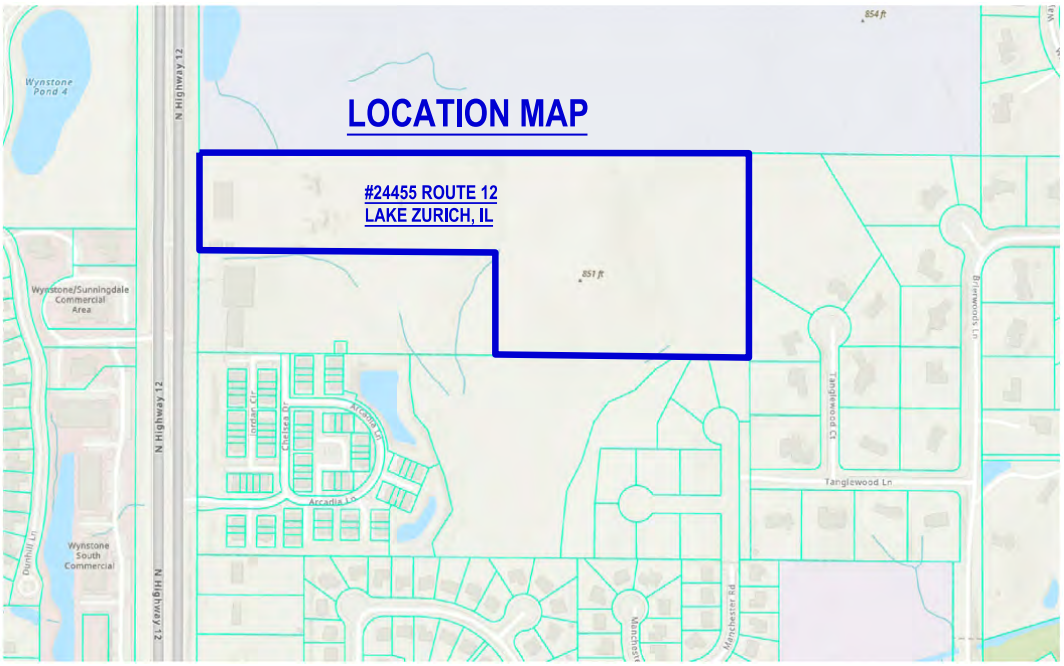
Per the Lake County Watershed Development Ordinance, adequate downstream capacity may be demonstrated if the system can be shown to store or convey up to and including the 100yr stormwater runoff without increasing damage to adjoining properties.

In the existing case, all onsite runoff from the 14.60 acres of planned hydrologic disturbance is largely directly tributary to downstream areas without significant attenuation.

However, in the proposed condition, the vast majority of this area is diverted first to the proposed stormwater basin that has capacity in excess of the 100yr event. Outflow rates from the basin are greatly reduced compared to existing conditions by the proposed restrictors in the outlet control structure. Due to this condition, we maintain that the potential for damage from stormwater runoff from the property will not be increased by the proposed development and that adequate downstream capacity has been demonstrated.

Conclusions:

The proposed naturalized basin will provide detention, water quality treatment, runoff volume reduction, and also additional available volume accessed in all tributary area models to compensate accordingly for existing depressional storage for the project. The basin also has an emergency overflow spillway sized for at least the peak unattenuated inflow from 100yr critical duration analyses performed on the tributary areas.



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NORTH

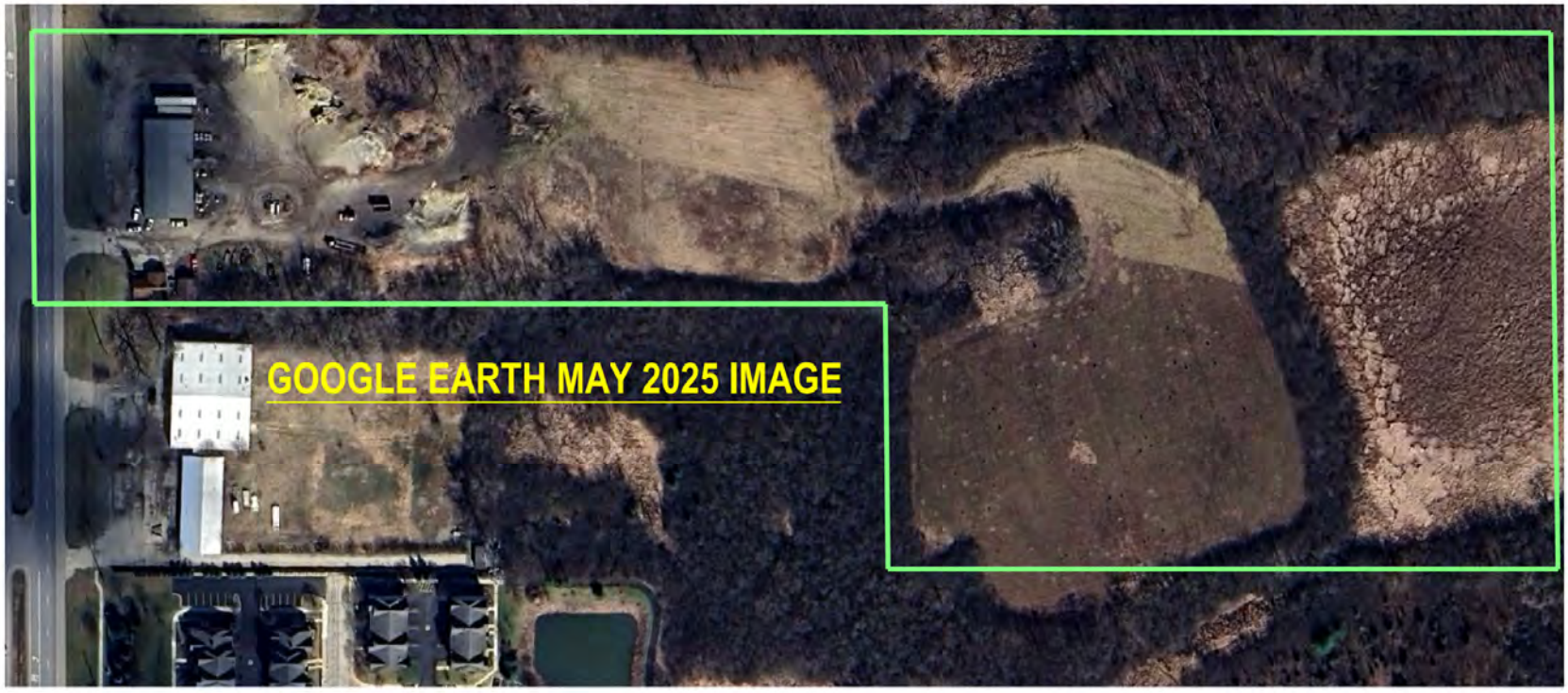
N.T.S.

TITLE: LOCATION MAP

PROJECT: LUXE CORSA AUTO SUITES
24455 US ROUTE 12
LAKE ZURICH, IL
PROJECT NO.: 2541

EXHIBIT
A

DATE: 10/01/25



PEARSON, BROWN & ASSOCIATES, INC.
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LIBERTYVILLE, IL. 60048
PHONE: (847) 367-4707
FAX: (847) 367-2567
E-MAIL ADDRESS: pba@pearsonbrown.com

NORTH

0 60' 120'

SCALE: 1" = 120'

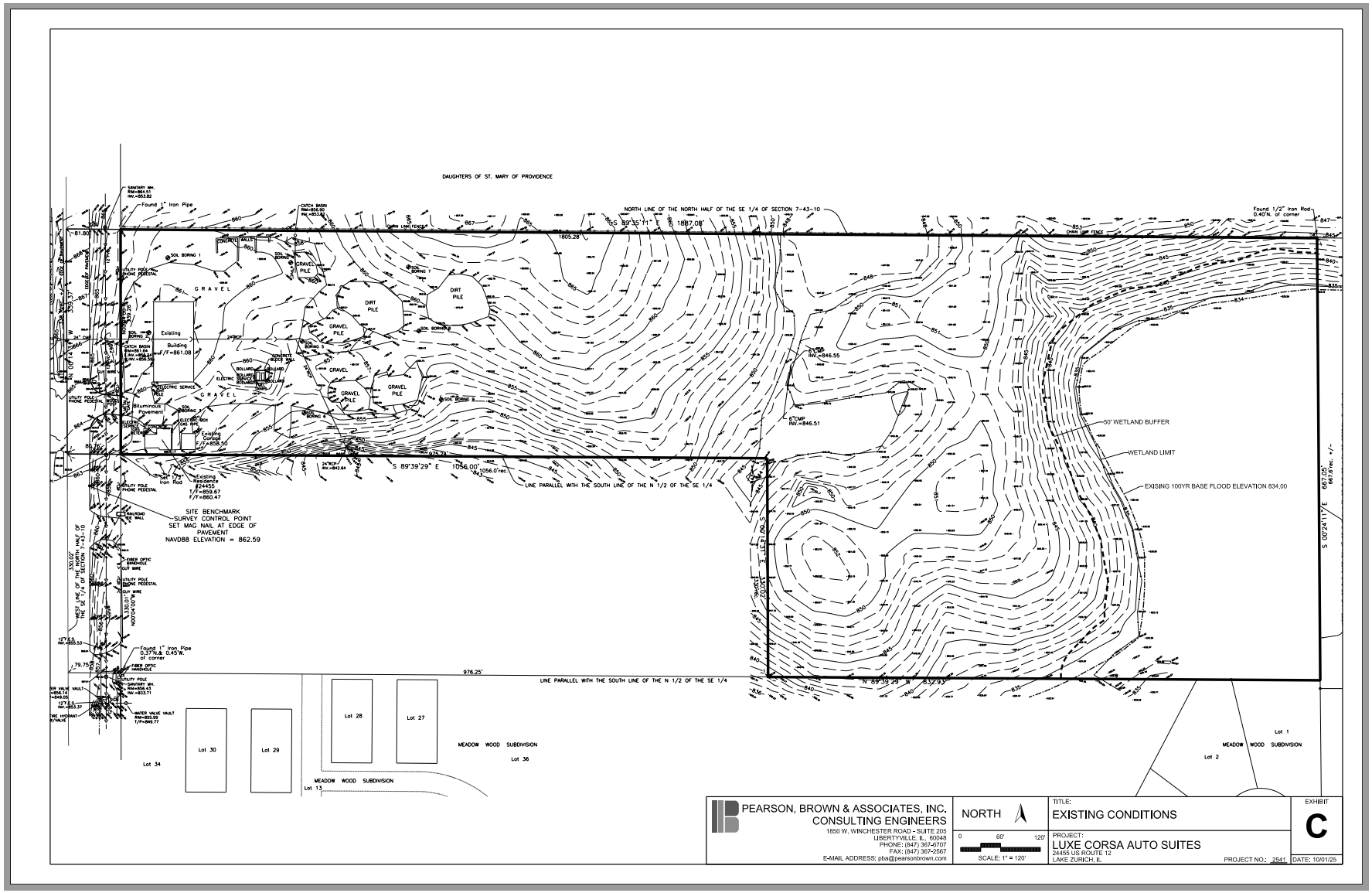
TITLE: AERIAL PHOTO

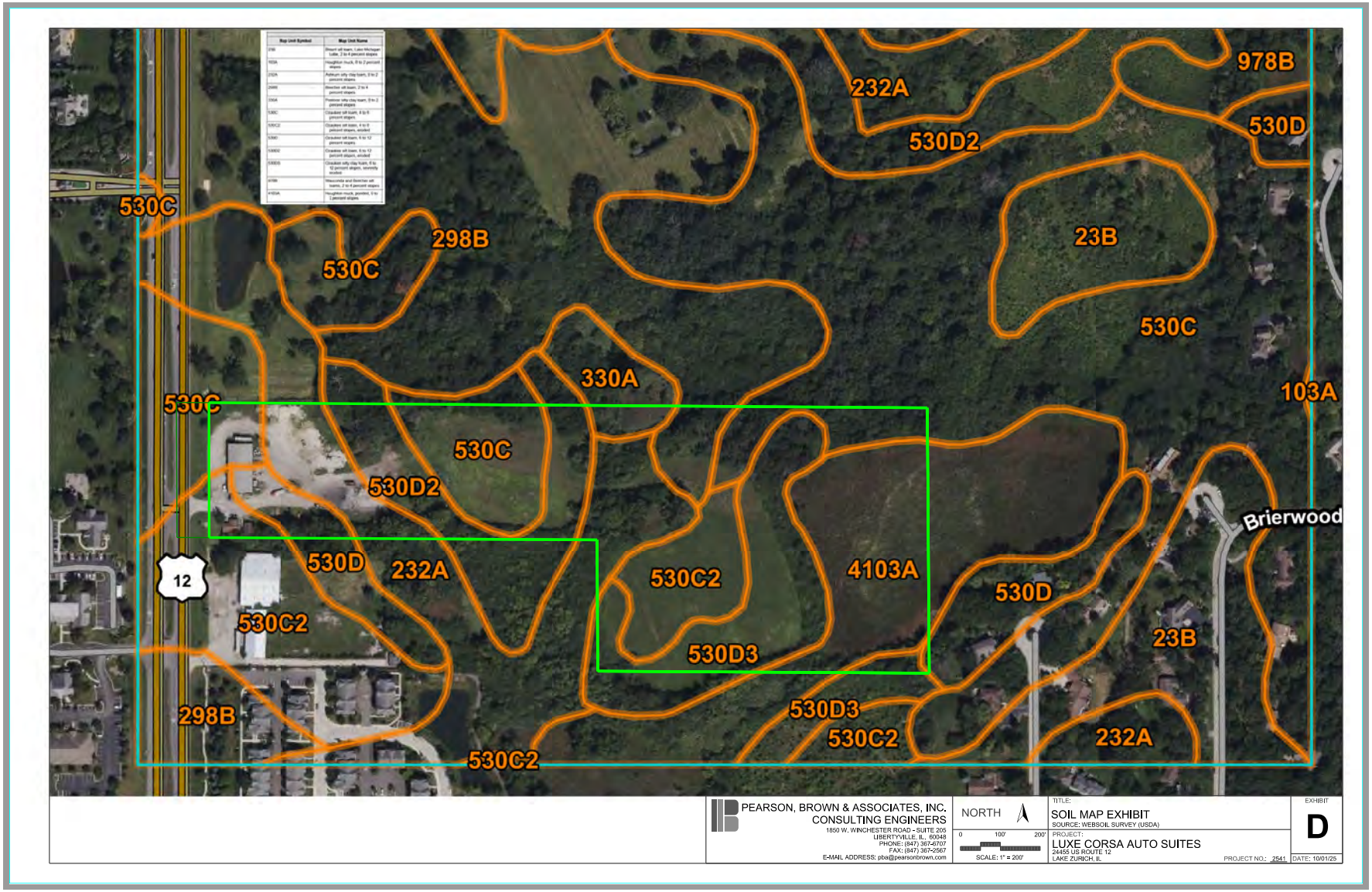
PROJECT: LUXE CORSA AUTO SUITES
24455 US ROUTE 12
LAKE ZURICH, IL

PROJECT NO.: 2541

EXHIBIT B

DATE: 10/01/25


DAUGHTERS OF ST. MARY OF PROVIDENCE
NORTH LINE OF THE NORTH HALF OF THE SE 1/4 OF SECTION 7-43-10
S 89°35'11" E 1887.08'
1805.28'
Found 1/2" Iron Rod 0.40'N. of corner
Found 1" Iron Pipe
Existing Building F/F=861.08
GRAVEL
DIRT PILE
GRAVEL PILE
SOIL BORING 1
SOIL BORING 2
SOIL BORING 3
SOIL BORING 4
SOIL BORING 5
SOIL BORING 6
SOIL BORING 7
SOIL BORING 8
Bituminous Pavement
Existing Residence #24455 T/F=859.67 F/F=860.47
Existing Corral F/F=858.50
SITE BENCHMARK
SURVEY CONTROL POINT
SET MAG NAIL AT EDGE OF PAVEMENT
NAVD88 ELEVATION = 862.59
S 89°39'29" E 1056.00'
1056.0'rec.
LINE PARALLEL WITH THE SOUTH LINE OF THE N 1/2 OF THE SE 1/4
S 00°24'11"E 667.05'
667.0'rec. +/-
50' WETLAND BUFFER
WETLAND LIMIT
EXISING 100YR BASE FLOOD ELEVATION 834.00
976.25'
LINE PARALLEL WITH THE SOUTH LINE OF THE N 1/2 OF THE SE 1/4
N 89°39'29" W 832.93'
Found 1" Iron Pipe 0.57'N.& 0.45'W. of corner
Lot 30
Lot 29
Lot 28
Lot 27
Lot 34
Lot 36
Lot 13
Lot 1
Lot 2
MEADOW WOOD SUBDIVISION
PEARSON, BROWN & ASSOCIATES, INC.
CONSULTING ENGINEERS
1850 W. WINCHESTER ROAD - SUITE 205
LIBERTYVILLE, IL. 60048
PHONE: (847) 367-4707
FAX: (847) 367-2567
E-MAIL ADDRESS: pba@pearsonbrown.com
NORTH
SCALE: 1" = 120'
TITLE:
EXISTING CONDITIONS
EXHIBIT
C
PROJECT:
LUXE CORSA AUTO SUITES
24455 US ROUTE 12
LAKE ZURICH, IL
PROJECT NO.: 2541
DATE: 10/01/25


978B
232A
530D
530D2
530C
298B
530C
23B
530C
330A
103A
530C
530C
530D2
Brierwood
12
530D
232A
530C2
4103A
530D
530C2
23B
530D3
298B
530D3
530C2
232A
530C2
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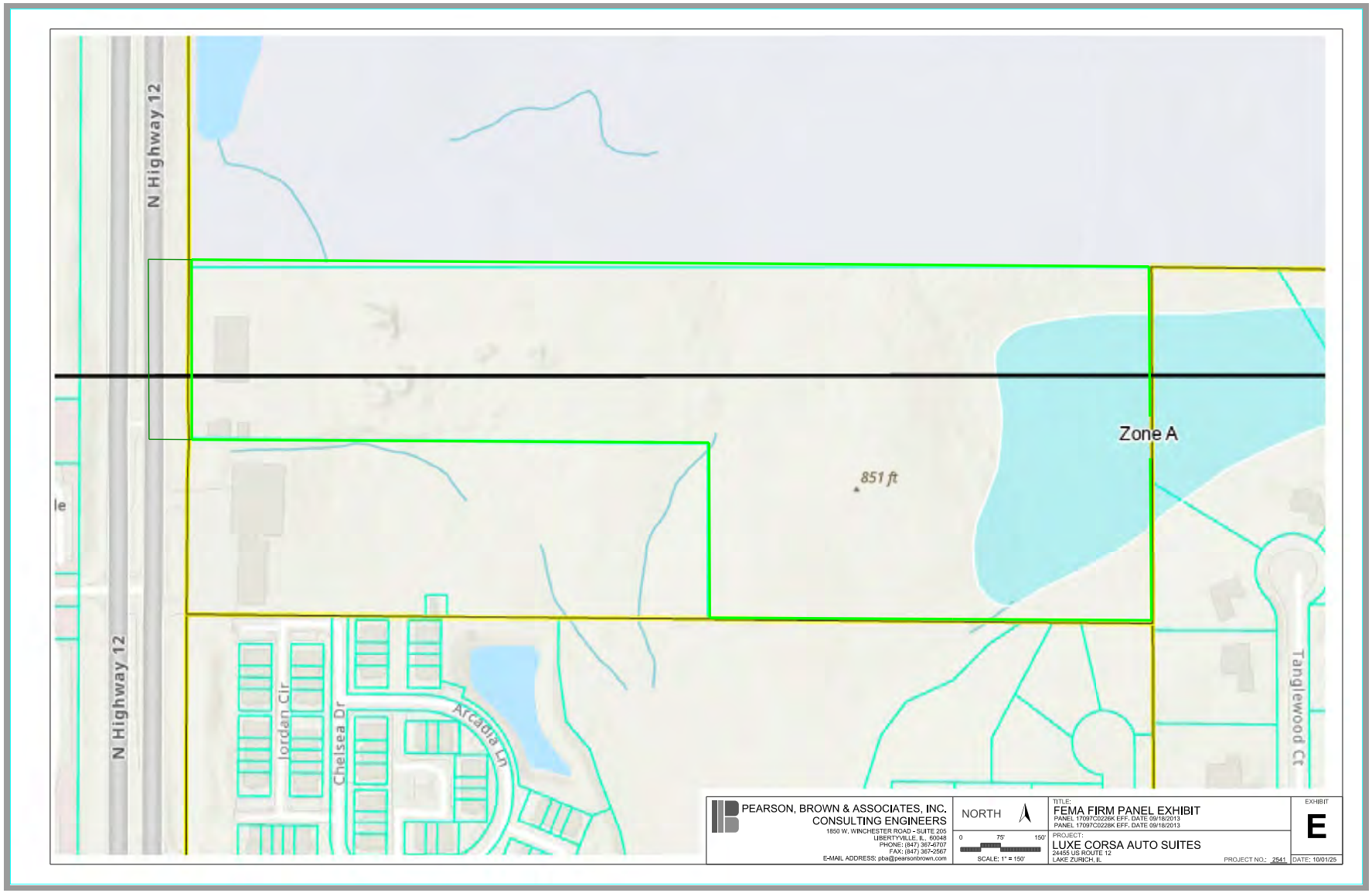
PHONE: (847) 367-4707
FAX: (847) 367-2567
E-MAIL ADDRESS: pba@pearsonbrown.com
NORTH
0
100'
200'
SCALE: 1" = 200'
TITLE:
SOIL MAP EXHIBIT
SOURCE: WEBSOIL SURVEY (USDA)
PROJECT:
LUXE CORSA AUTO SUITES
24455 US ROUTE 12
LAKE ZURICH, IL
PROJECT NO.: 2541
EXHIBIT
D
DATE: 10/01/25


N Highway 12
N Highway 12
Zone A
851 ft
Jordan Cir
Chelsea Dr
Arcadia Ln
Tanglewood Ct
PEARSON, BROWN & ASSOCIATES, INC.
CONSULTING ENGINEERS
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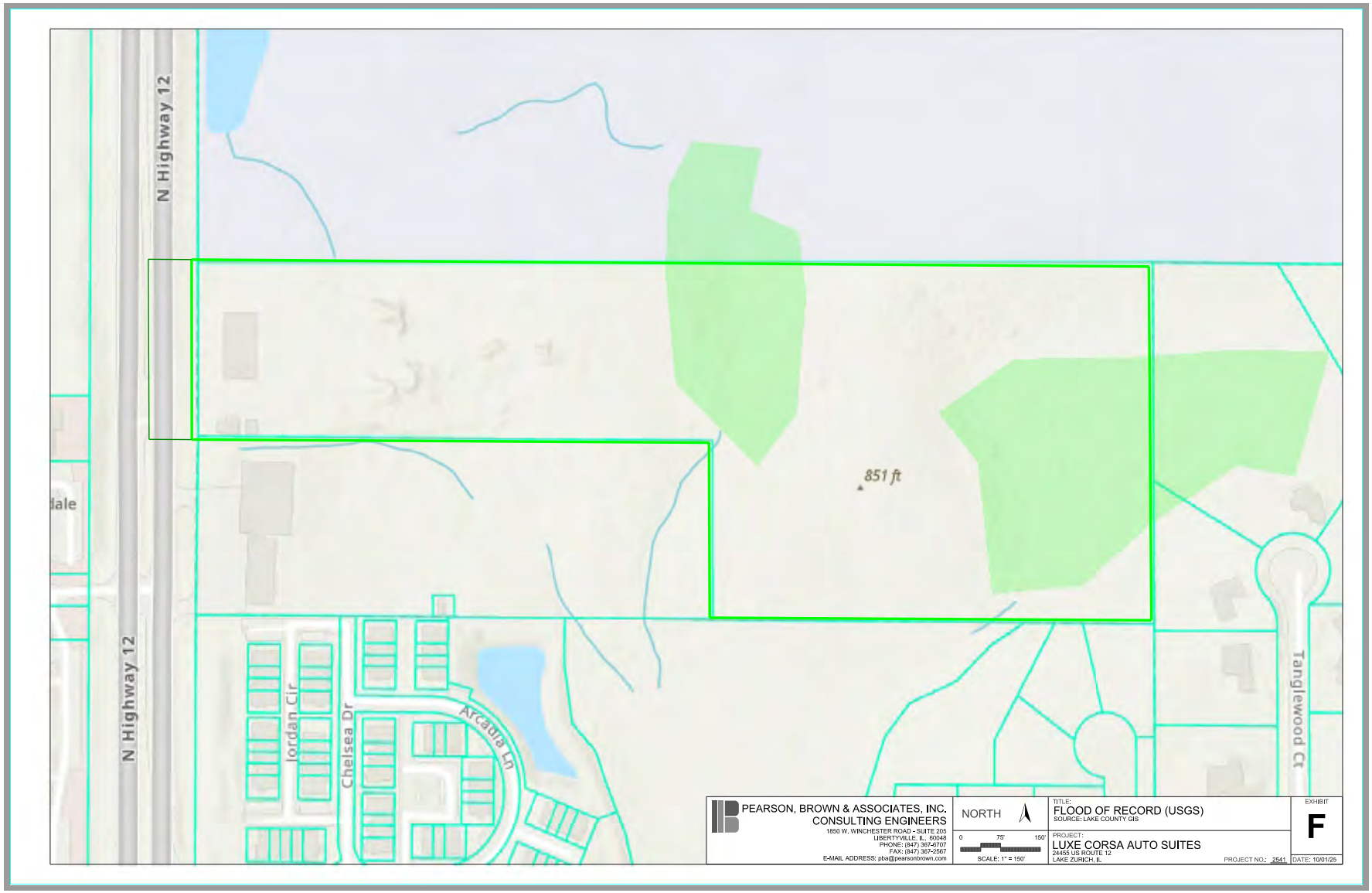
LIBERTYVILLE, IL. 60048
PHONE: (847) 367-4707
FAX: (847) 367-2567
E-MAIL ADDRESS: pba@pearsonbrown.com
NORTH
0 75' 150'
SCALE: 1" = 150'
TITLE:
FEMA FIRM PANEL EXHIBIT
PANEL 17097C0226K EFF. DATE 09/18/2013
PANEL 17097C0228K EFF. DATE 09/18/2013
PROJECT:
LUXE CORSA AUTO SUITES
24455 US ROUTE 12
LAKE ZURICH, IL
PROJECT NO.: 2541
EXHIBIT
E
DATE: 10/01/25


N Highway 12
N Highway 12
851 ft
Jordan Cir
Chelsea Dr
Arcadia Ln
Tanglewood Ct
PEARSON, BROWN & ASSOCIATES, INC.
CONSULTING ENGINEERS
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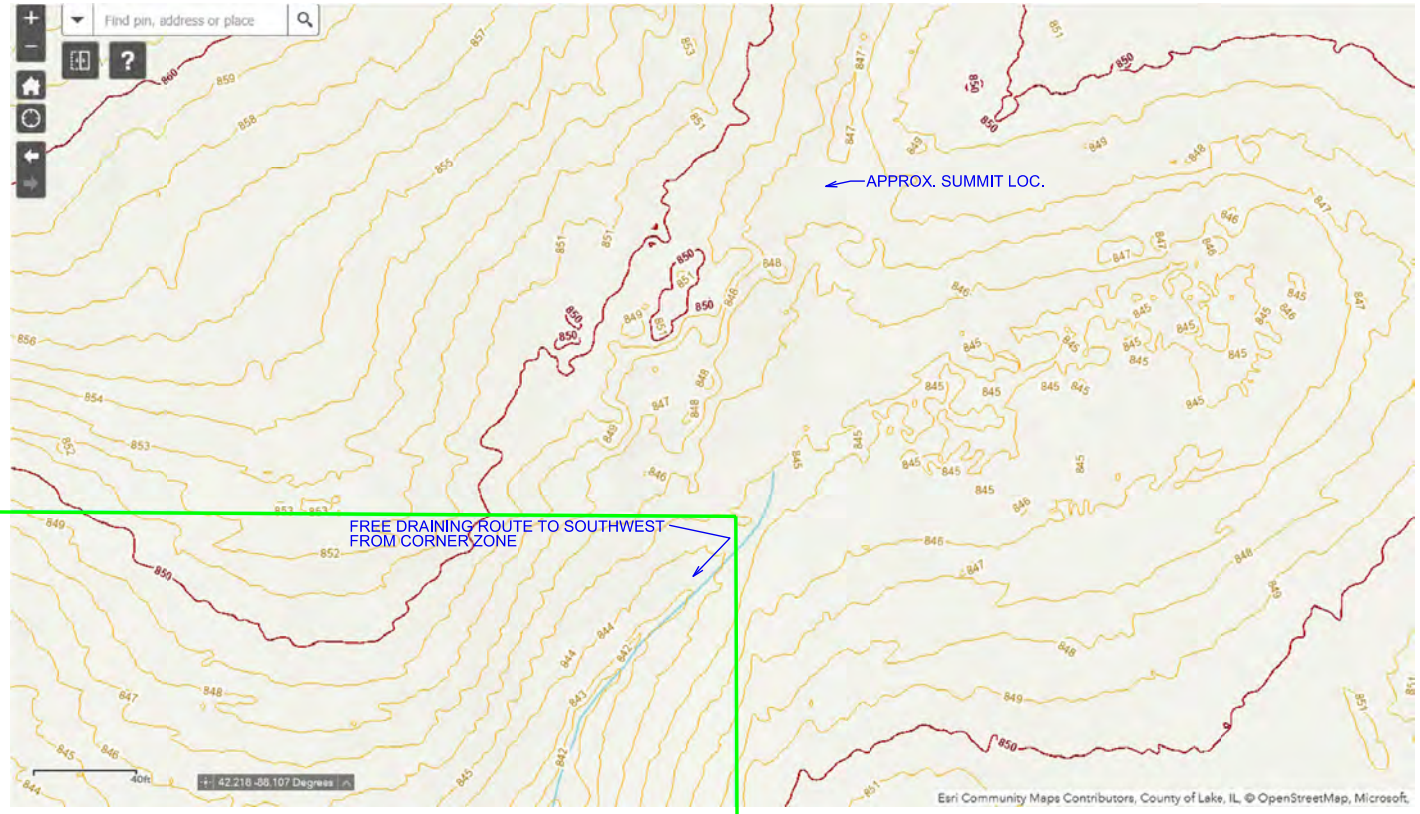
LIBERTYVILLE, IL. 60048
PHONE: (847) 367-4707
FAX: (847) 367-2567
E-MAIL ADDRESS: pba@pearsonbrown.com
NORTH
0 75' 150'
SCALE: 1" = 150'
TITLE:
FLOOD OF RECORD (USGS)
SOURCE: LAKE COUNTY GIS
PROJECT:
LUXE CORSA AUTO SUITES
24455 US ROUTE 12
LAKE ZURICH, IL
PROJECT NO.: 2541
EXHIBIT
F
DATE: 10/01/25



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PHONE: (847) 367-4707
FAX: (847) 367-2567
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NORTH
0 20' 40'
SCALE: 1" = 40'

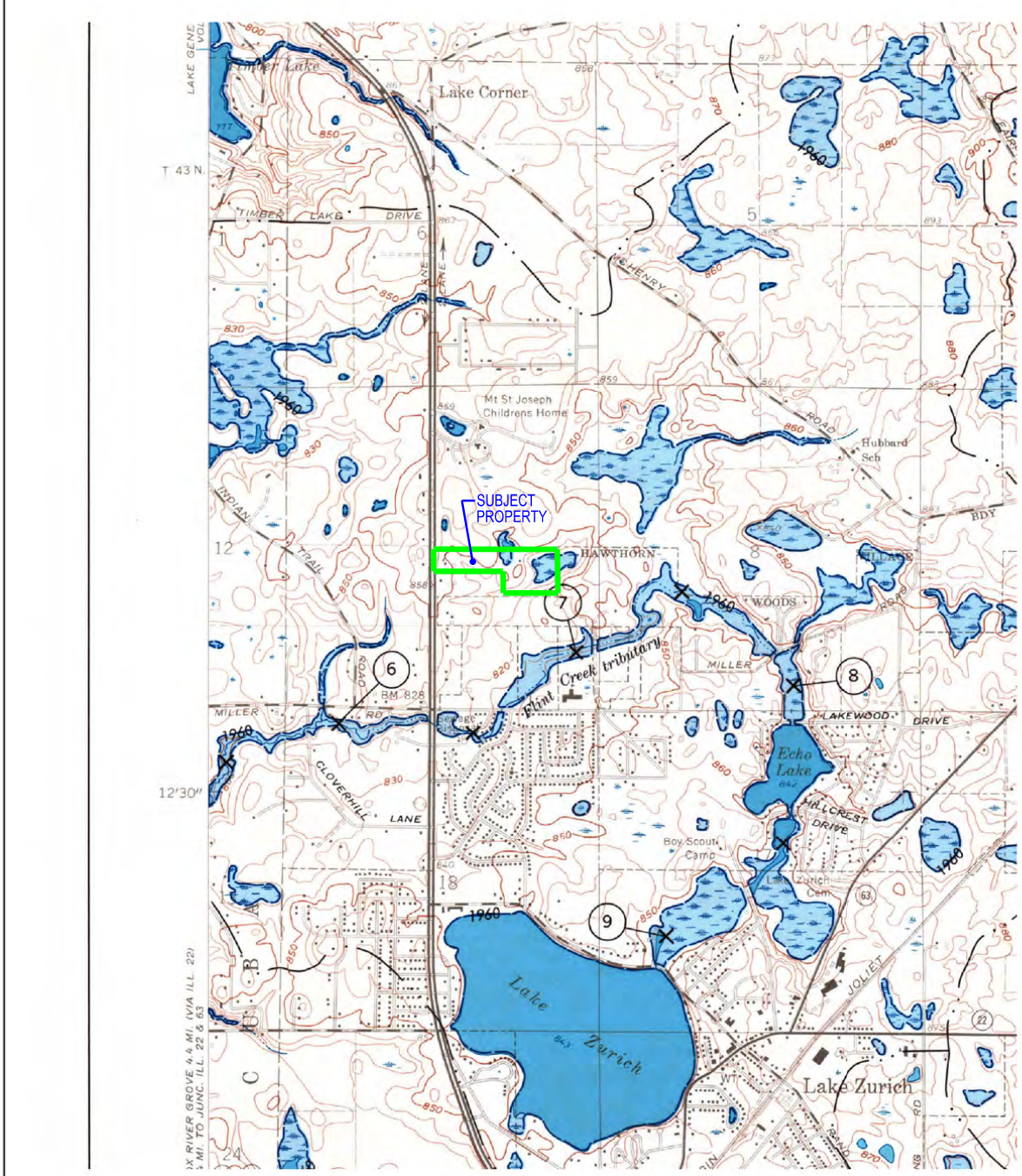
TITLE:
2017 LIDAR TOPOGRAPHY ALONG CENTRAL DRAINAGE WAY
SOURCE: LAKE COUNTY G.I.S.

PROJECT:
LUXE CORSA AUTO SUITES
24455 US ROUTE 12
LAKE ZURICH, IL

PROJECT NO.: 2541

EXHIBIT
F2

DATE: 10/01/25



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NORTH

0 1000' 2000'
SCALE: 1" = 2000'

TITLE:
USGS HA EXHIBIT
LAKE ZURICH HA-208 (1966)

PROJECT:
LUXE CORSA AUTO SUITES
24455 US ROUTE 12
LAKE ZURICH, IL

PROJECT NO.: 2541

EXHIBIT
G

DATE: 10/01/25

Time of Concentration Calculations

Pearson, Brown & Associates Inc.
Libertyville, IL 60048

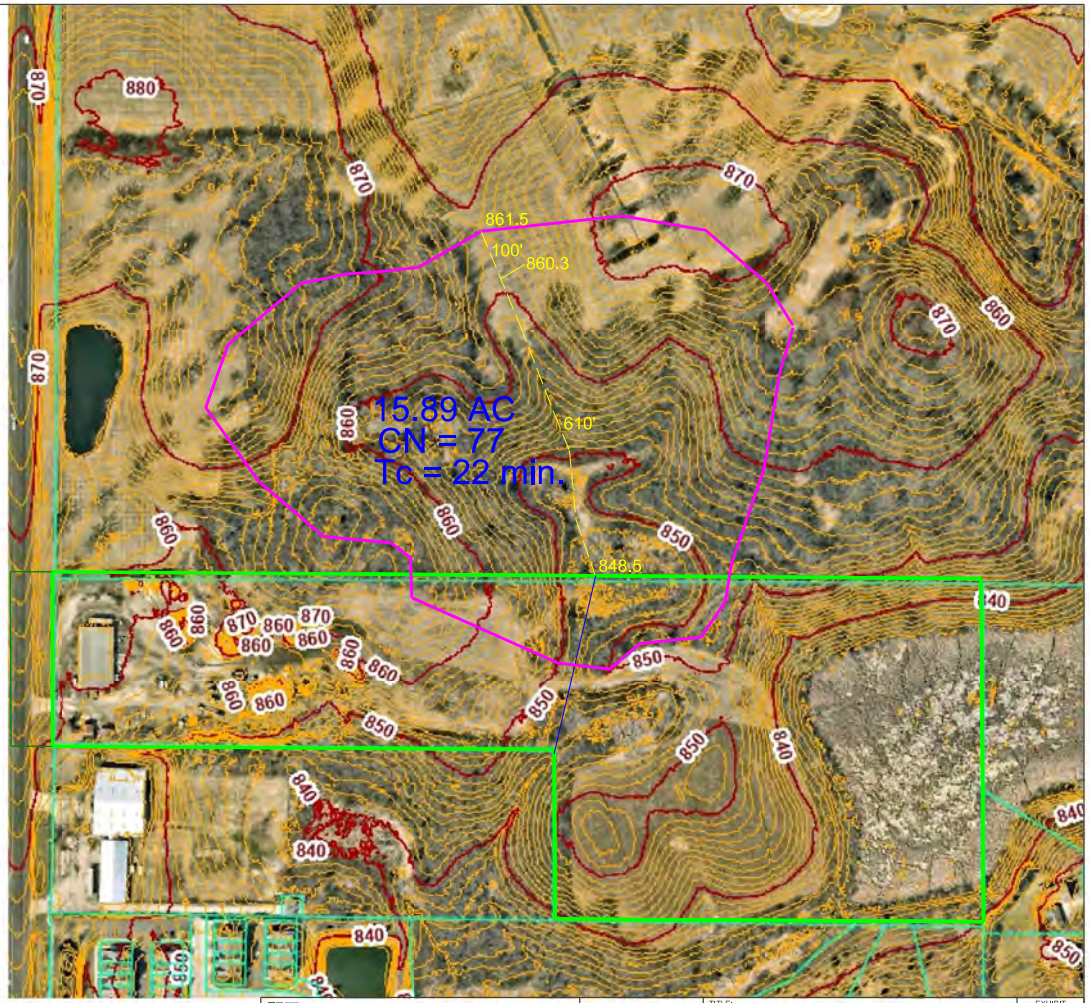
sheet flow roughness coefs - paved = 0.011 grassy = 0.240
maximum sheet flow segment length = 100

Surface Flow Time Calculations - SCS Methods: 2yr, 24hr rainfall depth = 3.34" (LAKE CO.) (Used for SCS Flow Chart)

North Tributary to N-S Drainage way	FLOW TYPE	DESCRIPTION	COEF. n	LENGTH L	SLOPE s	AVG. CHV CONCENTRATED VELOCITY (FT/SEC)	TIME hours	TIME min	TIME USED min
	Sheet Flow	grassy	0.240	100	6.0%		0.29	17	
	Shallow Concentrated	unpaved	N/A	636	6.0%	2.241	0.08	5	
						total	0.38	22	22

COMPOSITE CN DETERMINATION FOR 15.89 AC

AREA (AC)	DESCRIPTION	CN	MULT.
9.90	WOODED, FAIR COND. TY. C SOIL	73	722.7
1.88	OPEN SPACE, GOOD COND. TY. C SOIL	74	139.12
4.11	BRUSH, WEEDS, FAIR CONDITION . TY. D	77	316.47
		TOTAL >>	1178.29
	COMPOSITE CN (TOTAL / 15.89) >>>>>	74	



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LIBERTYVILLE, IL. 60048
PHONE: (847) 367-4707
FAX: (847) 367-2567
E-MAIL ADDRESS: pba@pearsonbrown.com

NORTH
0 100' 200'
SCALE: 1" = 200'

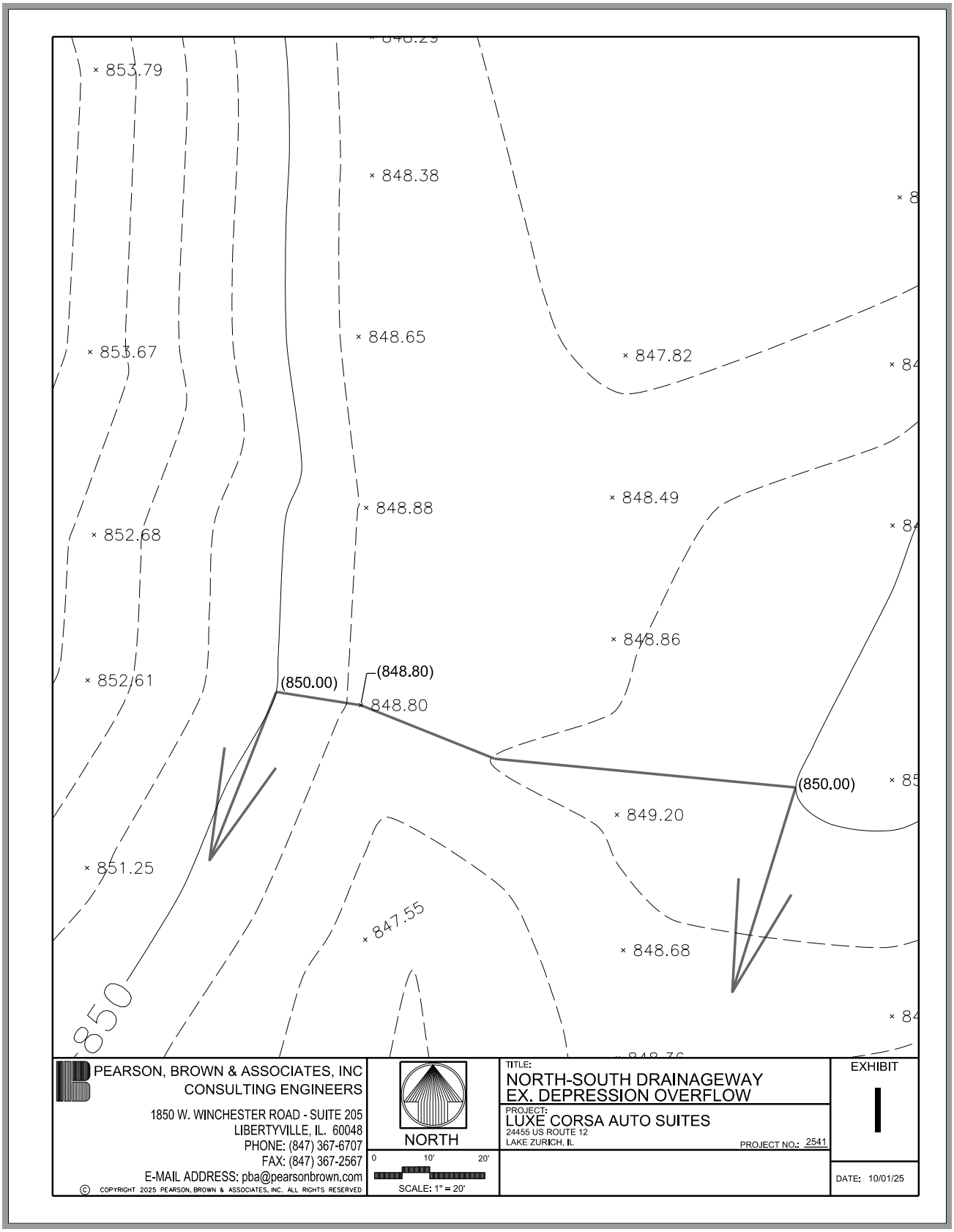
TITLE:
CENTRAL NORTH-SOUTH DRAINAGEWAY TRIBUTARY AREA

PROJECT:
LUXE CORSA AUTO SUITES
24455 US ROUTE 12
LAKE ZURICH, IL

PROJECT NO.: 2541

EXHIBIT
H

DATE: 10/01/25


× 853.79
× 848.38
× 848.65
× 853.67
× 847.82
× 848.88
× 848.49
× 852.68
× 848.86
× 852.61
(850.00)
(848.80)
848.80
(850.00)
× 849.20
× 851.25
× 847.55
× 848.68
850
PEARSON, BROWN & ASSOCIATES, INC
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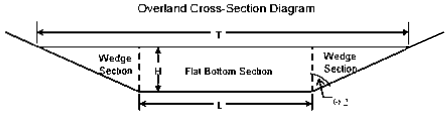
NORTH
0 10' 20'
SCALE: 1" = 20'
TITLE:
NORTH-SOUTH DRAINAGEWAY
EX. DEPRESSION OVERFLOW
PROJECT:
LUXE CORSA AUTO SUITES
24455 US ROUTE 12
LAKE ZURICH, IL
PROJECT NO.: 2541
EXHIBIT
I
DATE: 10/01/25

Flow Capacity - Weir Section

Overland Cross-Section Diagram



Weir Data

C =	3.00 coef	Θ/2 =	88.57 deg
H =	0.20 feet	T =	16.05 feet
Avg. Side Slopes =	40.12 H:V	Weir Elevation =	848.80 feet
L =	0.00 feet	W.S.E. =	849.00

Flow From Wedge Sections
Q=C*H^(5/2)*TAN(Θ/2)

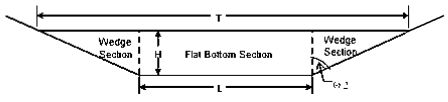
Q = 2.15 cfs

Capacity = **2.15 cfs**

Location: Existing Zone A overflow - Rating 2 - H = 0.70

Flow Capacity - Weir Section

Overland Cross-Section Diagram



Weir Data

C =	3.00 coef	Θ/2 =	88.57 deg
H =	0.70 feet	T =	56.17 feet
Avg. Side Slopes =	40.12 H:V	Weir Elevation =	848.80 feet
L =	0.00 feet	W.S.E. =	849.50

Flow From Wedge Sections
Q=C*H^(5/2)*TAN(Θ/2)

Q = 49.34 cfs

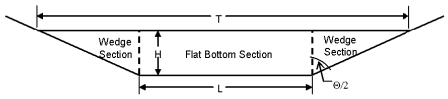
Capacity = **49.34 cfs**

ELEVATION:	FLOW (CFS)
848.80	0.00
849.00	2.15
849.50	49.34
850.00	189.96

Location: Existing Zone A overflow - Rating 3 - H = 1.20

Flow Capacity - Weir Section

Overland Cross-Section Diagram



Weir Data

C =	3.00 coef.	Θ/2 =	88.57 deg
H =	1.20 feet	T =	96.29 feet
Avg. Side Slopes =	40.12 H:V	Weir Elevation =	848.80 feet
L =	0.00 feet	W.S.E. =	850.00

Flow From Wedge Sections
Q=C*H^(5/2)*TAN(Θ/2)

Q = 189.86 cfs

Capacity = **189.86 cfs**

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FAX: (847) 367-2567
E-MAIL ADDRESS: pba@pearsonbrown.com
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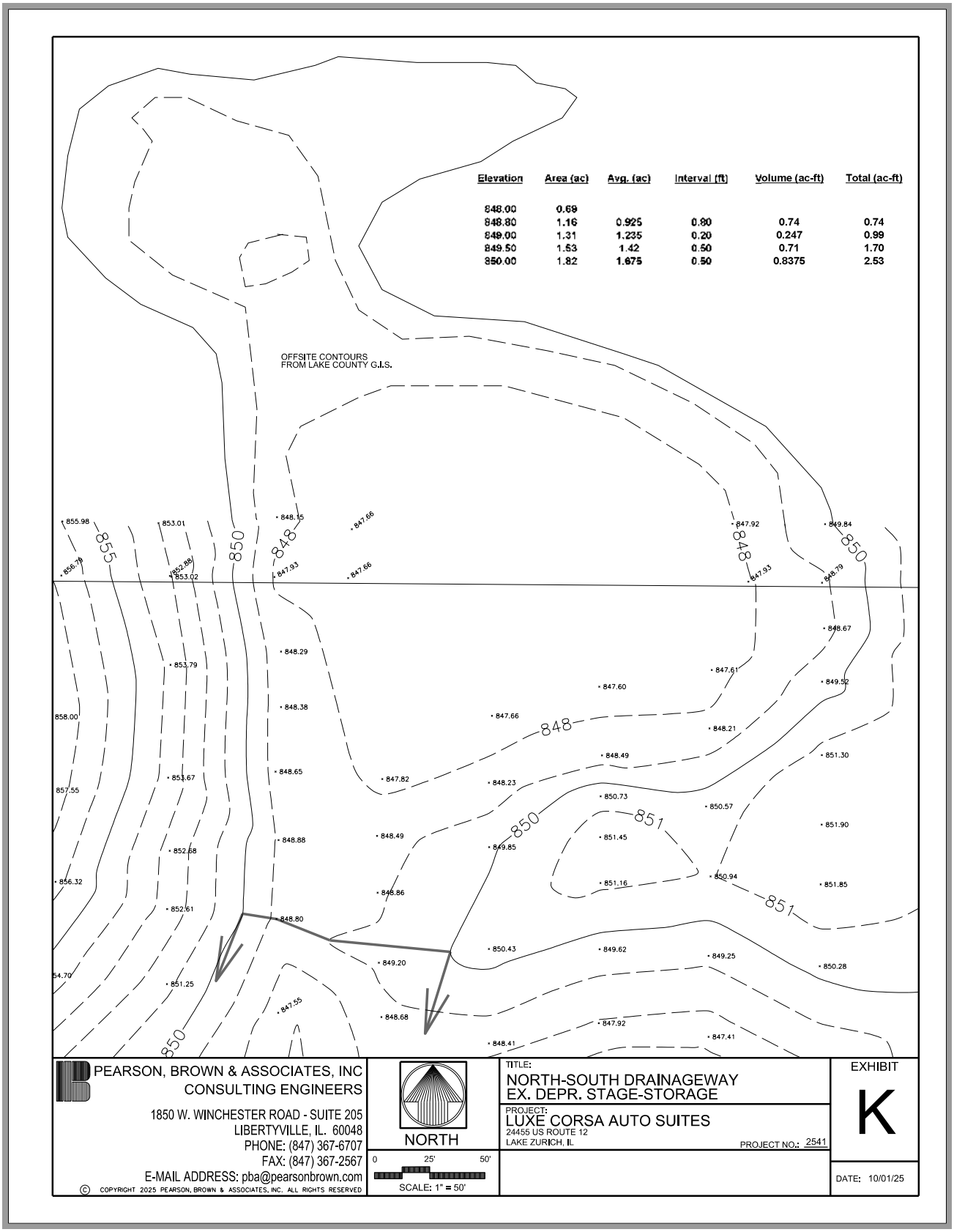
TITLE:
NORTH-SOUTH DRAINAGEWAY
EX. DEPRESSION OVERFLOW

PROJECT:
LUXE CORSA AUTO SUITES
24455 US ROUTE 12
LAKE ZURICH, IL
PROJECT NO.: 2541

EXHIBIT
J

DATE: 10/01/25


Elevation | Area (ac) | Avg. (ac) | Interval (ft) | Volume (ac-ft) | Total (ac-ft)
848.00 | 0.69
848.80 | 1.16 | 0.925 | 0.80 | 0.74 | 0.74
849.00 | 1.31 | 1.235 | 0.20 | 0.247 | 0.99
849.50 | 1.53 | 1.42 | 0.50 | 0.71 | 1.70
850.00 | 1.82 | 1.675 | 0.50 | 0.8375 | 2.53
OFFSITE CONTOURS
FROM LAKE COUNTY G.I.S.
PEARSON, BROWN & ASSOCIATES, INC
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FAX: (847) 367-2567
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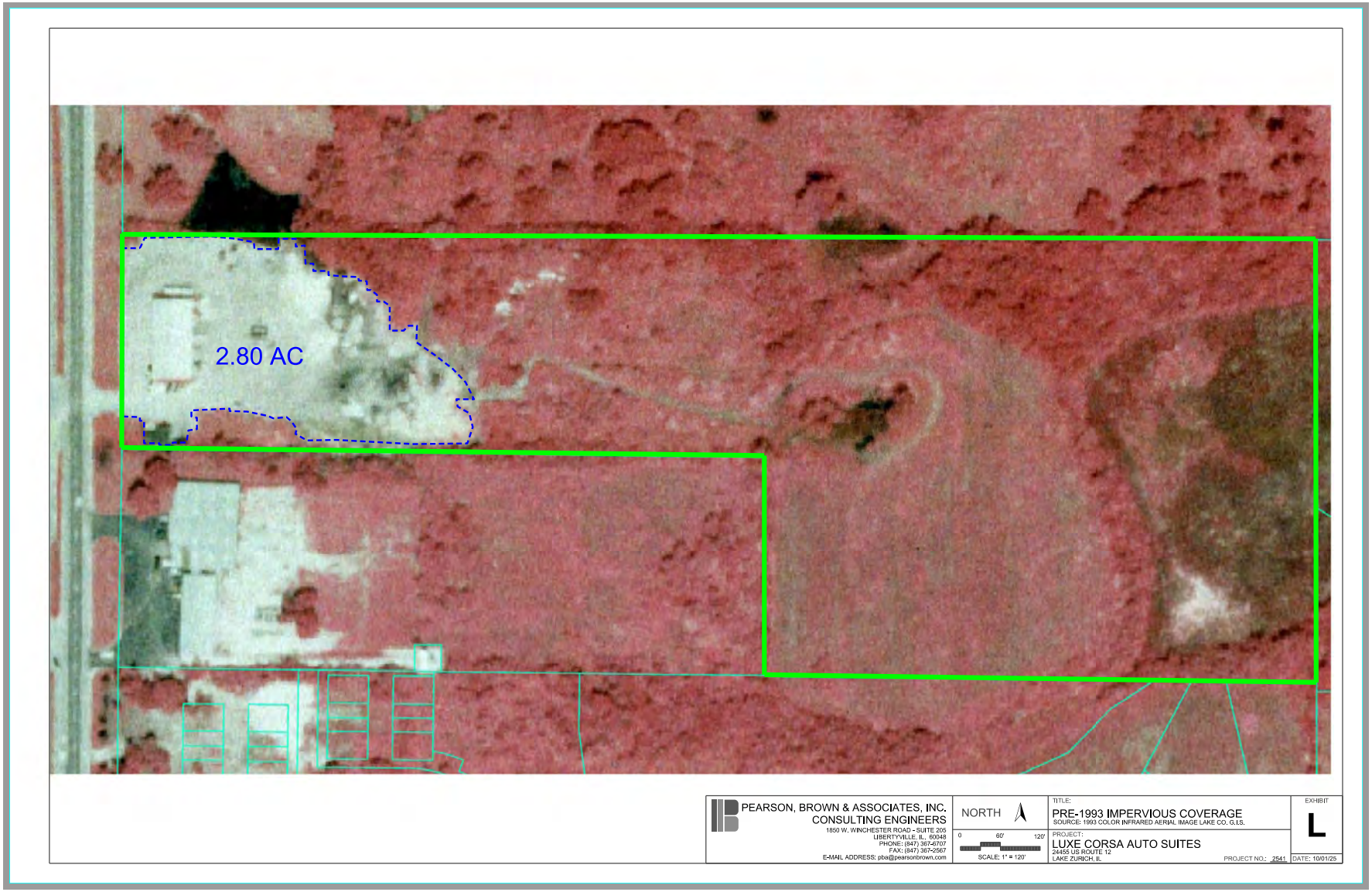
NORTH
0 25' 50'
SCALE: 1" = 50'
TITLE:
NORTH-SOUTH DRAINAGEWAY
EX. DEPR. STAGE-STORAGE
PROJECT:
LUXE CORSA AUTO SUITES
24455 US ROUTE 12
LAKE ZURICH, IL
PROJECT NO.: 2541
EXHIBIT
K
DATE: 10/01/25


2.80 AC
PEARSON, BROWN & ASSOCIATES, INC.
CONSULTING ENGINEERS
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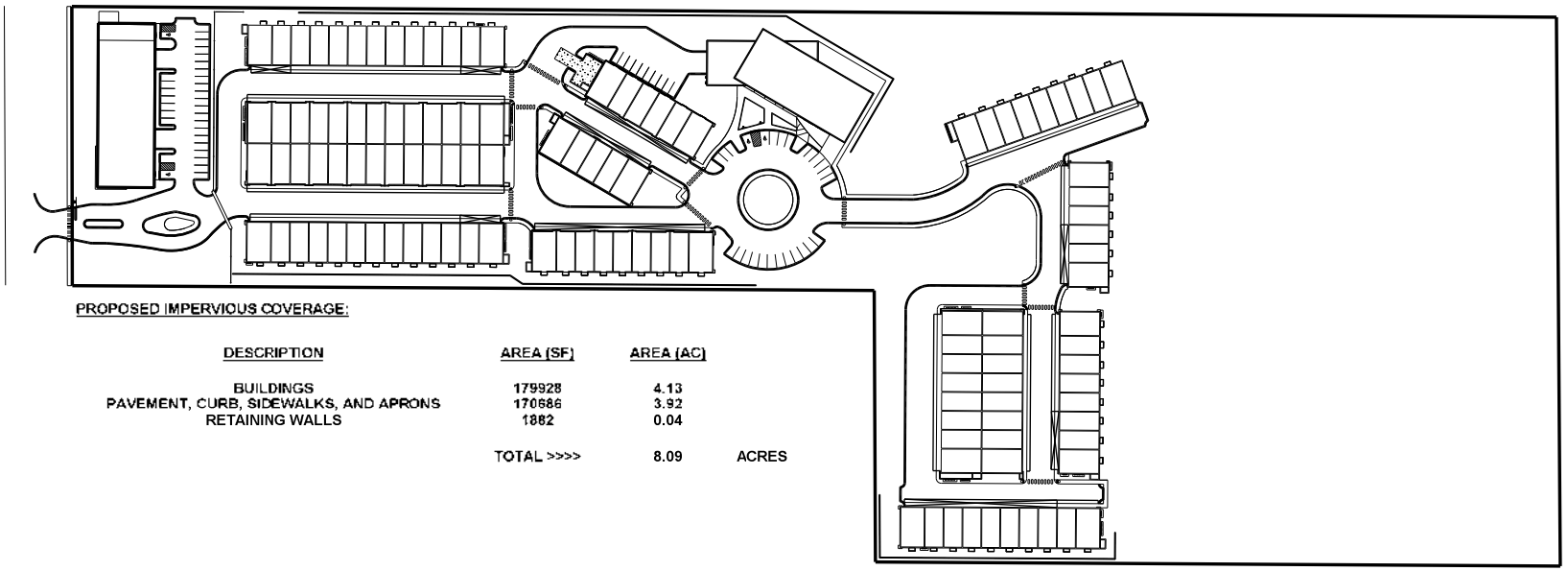
LIBERTYVILLE, IL. 60048
PHONE: (847) 367-4707
FAX: (847) 367-2567
E-MAIL ADDRESS: pba@pearsonbrown.com
NORTH
0
60'
120'
SCALE: 1" = 120'
TITLE:
PRE-1993 IMPERVIOUS COVERAGE
SOURCE: 1993 COLOR INFRARED AERIAL IMAGE LAKE CO. G.I.S.
PROJECT:
LUXE CORSA AUTO SUITES
24455 US ROUTE 12
LAKE ZURICH, IL
PROJECT NO.: 2541
EXHIBIT
L
DATE: 10/01/25



PROPOSED IMPERVIOUS COVERAGE:

DESCRIPTION	AREA (SF)	AREA (AC)	
BUILDINGS	179928	4.13	
PAVEMENT, CURB, SIDEWALKS, AND APRONS	170686	3.92	
RETAINING WALLS	1882	0.04	
	TOTAL >>>>	8.09	ACRES

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FAX: (847) 367-2567
E-MAIL ADDRESS: pba@pearsonbrown.com

NORTH

0 60' 120'
SCALE: 1" = 120'

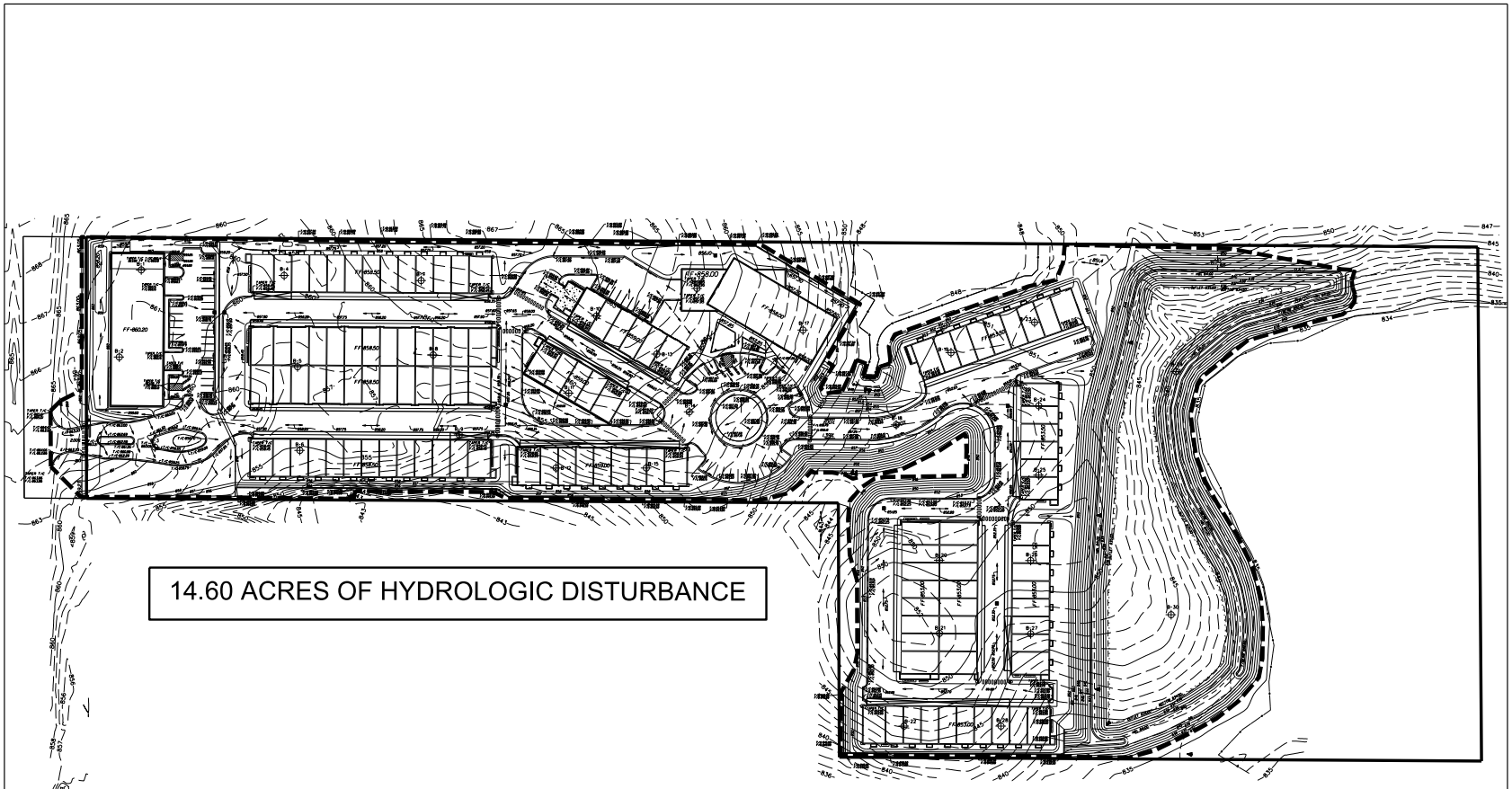
TITLE: PROPOSED IMPERVIOUS COVERAGE

EXHIBIT M

PROJECT: LUXE CORSA AUTO SUITES
24455 US ROUTE 12
LAKE ZURICH, IL

PROJECT NO.: 2541

DATE: 10/01/25



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LIBERTYVILLE, IL. 60048
PHONE: (847) 367-4707
FAX: (847) 367-2567
E-MAIL ADDRESS: pba@pearsonbrown.com

NORTH

0 60' 120'
SCALE: 1" = 120'

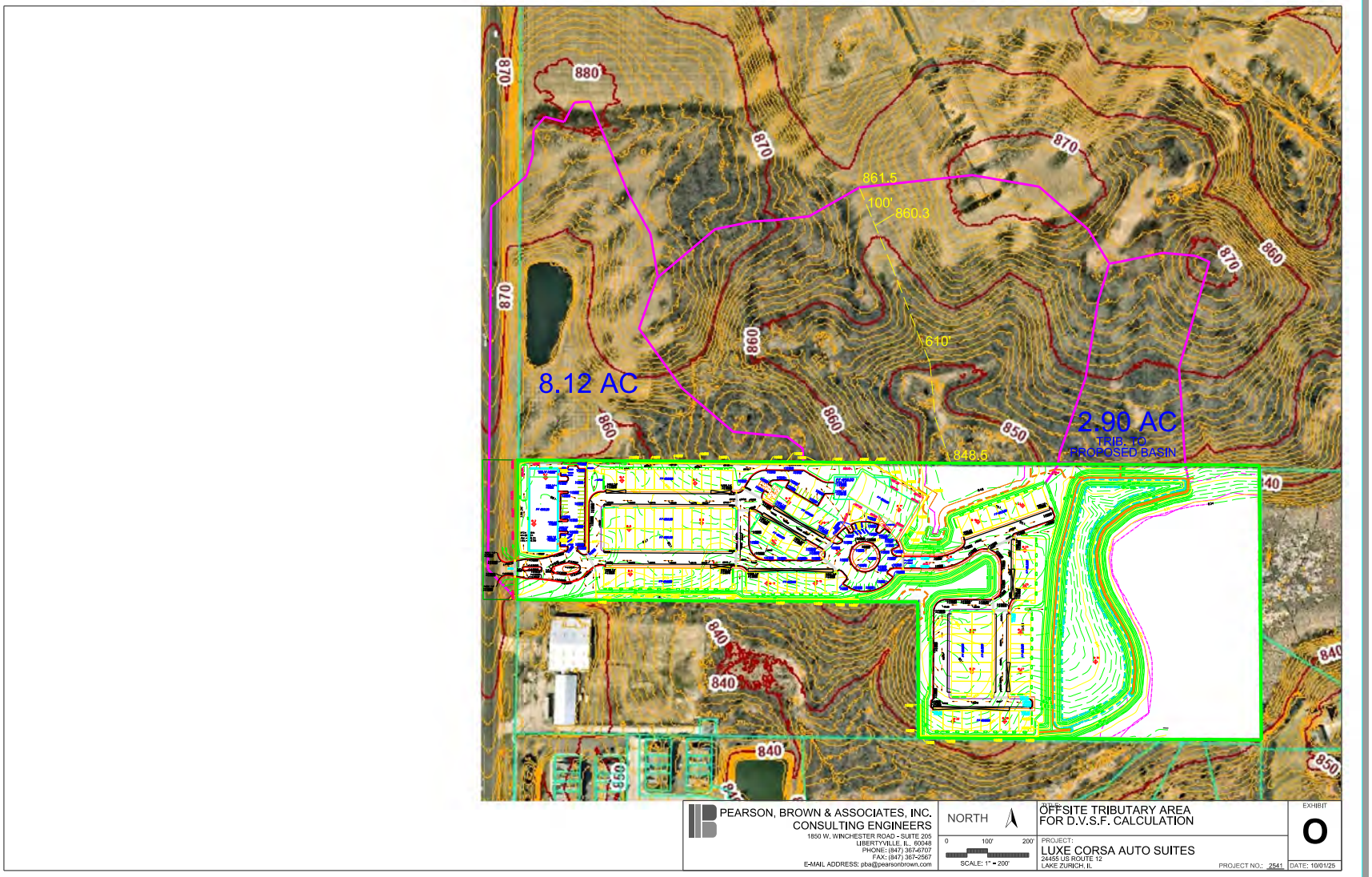
TITLE:
HYDROLOGICALLY DISURBED AREA

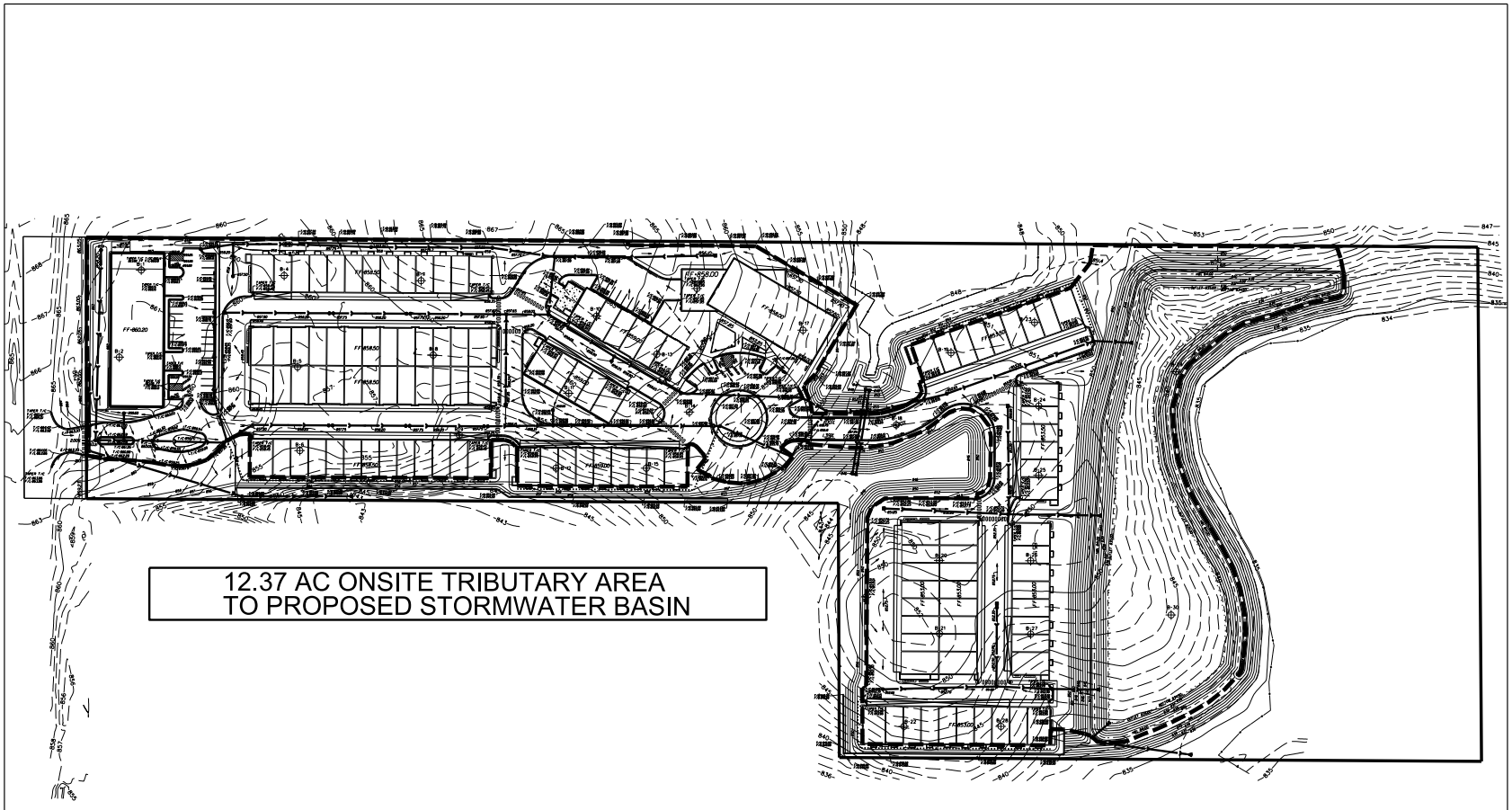
PROJECT:
LUXE CORSA AUTO SUITES
24455 US ROUTE 12
LAKE ZURICH, IL

PROJECT NO.: 2541

EXHIBIT
N

DATE: 10/01/25


880
870
861.5
100'
860.3
870
860
870
610'
8.12 AC
860
860
850
2.90 AC
TRIB. TO
PROPOSED BASIN
848.5
840
840
840
850
PEARSON, BROWN & ASSOCIATES, INC.
CONSULTING ENGINEERS
1850 W. WINCHESTER ROAD - SUITE 205
LIBERTYVILLE, IL. 60048
PHONE: (847) 367-4707
FAX: (847) 367-2567
E-MAIL ADDRESS: pba@pearsonbrown.com
NORTH
0
100'
200'
SCALE: 1" = 200'
TITLE:
OFFSITE TRIBUTARY AREA
FOR D.V.S.F. CALCULATION
PROJECT:
LUXE CORSA AUTO SUITES
24455 US ROUTE 12
LAKE ZURICH, IL
PROJECT NO.: 2541
EXHIBIT
O
DATE: 10/01/25



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LIBERTYVILLE, IL. 60048
PHONE: (847) 367-4707
FAX: (847) 367-2567
E-MAIL ADDRESS: pba@pearsonbrown.com

NORTH

0 60' 120'
SCALE: 1" = 120'

TITLE: ONSITE TRIBUTARY AREA

PROJECT: LUXE CORSA AUTO SUITES
24455 US ROUTE 12
LAKE ZURICH, IL

PROJECT NO.: 2541

EXHIBIT P

DATE: 10/01/25

Appendix 1

C-Factors

Time of Concentration

Tributary Area Map

Storm Sewer Design Calculations

All proposed storm sewer for the project is designed using **ISWS Bulletin 75 rainfall intensities at the 100yr design level.**

C-Factor calculations in this report are based on using 0.35 for pervious and 0.95 for impervious areas.

INDIVIDUAL SUB-AREA RUNOFF FACTOR DETERMINATION

Date: 10-01-2025

Area		Acres	Factor	Multiple
To Structure #3	***total area***	**0.33**		
Grassy		0.00	**0.35**	0.0000
Impervious		0.33	**0.95**	0.3135
Total		0.33		0.3135
Sub area c-factor				**0.95**

Area		Acres	Factor	Multiple
To Structure #6	***total area***	**0.14**		
Grassy		0.00	**0.35**	0.0000
Impervious		0.14	**0.95**	0.1330
Total		0.14		0.1330
Sub area c-factor				**0.95**

Area		Acres	Factor	Multiple
To Structure #4	***total area***	**0.25**		
Grassy		0.00	**0.35**	0.0000
Impervious		0.25	**0.95**	0.2375
Total		0.25		0.2375
Sub area c-factor				**0.95**

Area		Acres	Factor	Multiple
To Structure #8	***total area***	**0.36**		
Grassy		0.00	**0.35**	0.0000
Impervious		0.36	**0.95**	0.3420
Total		0.36		0.3420
Sub area c-factor				**0.95**

Area		Acres	Factor	Multiple
To Structure #5	***total area***	**0.36**		
Grassy		0.00	**0.35**	0.0000
Impervious		0.36	**0.95**	0.3420
Total		0.36		0.3420
Sub area c-factor				**0.95**

Area		Acres	Factor	Multiple
To Structure #9	***total area***	**0.27**		
Grassy		0.00	**0.35**	0.0000
Impervious		0.27	**0.95**	0.2565
Total		0.27		0.2565
Sub area c-factor				**0.95**

Area		Acres	Factor	Multiple
To Structure #10	***total area***	**0.12**		
Grassy		0.00	**0.35**	0.0000
Impervious		0.12	**0.95**	0.1140
Total		0.12		0.1140
Sub area c-factor				**0.95**

Area		Acres	Factor	Multiple
To Structure #14	***total area***	**0.28**		
Grassy		0.00	**0.35**	0.0000
Impervious		0.28	**0.95**	0.2660
Total		0.28		0.2660
Sub area c-factor				**0.95**

Area		Acres	Factor	Multiple
To Structure #12	***total area***	**0.16**		
Grassy		0.00	**0.35**	0.0000
Impervious		0.16	**0.95**	0.1520
Total		0.16		0.1520
Sub area c-factor				**0.95**

Area		Acres	Factor	Multiple
To Structure #17	***total area***	**0.83**		
Grassy		0.17	**0.35**	0.0595
Impervious		0.66	**0.95**	0.6270
Total		0.83		0.6865
Sub area c-factor				**0.83**

Area		Acres	Factor	Multiple
To Structure #13	***total area***	**0.13**		
Grassy		0.00	**0.35**	0.0000
Impervious		0.13	**0.95**	0.1235
Total		0.13		0.1235
Sub area c-factor				**0.95**

Area		Acres	Factor	Multiple
To Structure #20	***total area***	**0.15**		
Grassy		0.00	**0.35**	0.0000
Impervious		0.15	**0.95**	0.1425
Total		0.15		0.1425
Sub area c-factor				**0.95**

Area		Acres	Factor	Multiple
To Structure #21	***total area***	**0.15**		
Grassy		0.01	**0.35**	0.0035
Impervious		0.14	**0.95**	0.1330
Total		0.15		0.1365
Sub area c-factor				**0.91**

Area		Acres	Factor	Multiple
To Structure #24	***total area***	**0.42**		
Grassy		0.21	**0.35**	0.0735
Impervious		0.21	**0.95**	0.1995
Total		0.42		0.2730
Sub area c-factor				**0.65**

Area		Acres	Factor	Multiple
To Structure #22	***total area***	**0.30**		
Grassy		0.21	**0.35**	0.0735
Impervious		0.09	**0.95**	0.0855
Total		0.30		0.1590
Sub area c-factor				**0.53**

Area		Acres	Factor	Multiple
To Structure #25	***total area***	**0.28**		
Grassy		0.23	**0.35**	0.0805
Impervious		0.05	**0.95**	0.0475
Total		0.28		0.1280
Sub area c-factor				**0.46**

Area		Acres	Factor	Multiple
To Structure #23	***total area***	**0.20**		
Grassy		0.00	**0.35**	0.0000
Impervious		0.20	**0.95**	0.1900
Total		0.20		0.1900
Sub area c-factor				**0.95**

Area		Acres	Factor	Multiple
To Structure #26	***total area***	**0.20**		
Grassy		0.13	**0.35**	0.0455
Impervious		0.07	**0.95**	0.0665
Total		0.20		0.1120
Sub area c-factor				**0.56**

Area		Acres	Factor	Multiple
To Structure #27	***total area***	**7.20**		
Grassy		6.30	**0.35**	2.2050
Impervious		0.90	**0.95**	0.8550
Total		7.20		3.0600
Sub area c-factor				**0.43**

Area		Acres	Factor	Multiple
To Structure #31	***total area***	**0.28**		
Grassy		0.00	**0.35**	0.0000
Impervious		0.28	**0.95**	0.2660
Total		0.28		0.2660
Sub area c-factor				**0.95**

Area		Acres	Factor	Multiple
To Structure #29	***total area***	**0.06**		
Grassy		0.06	**0.35**	0.0210
Impervious		0.00	**0.95**	0.0000
Total		0.06		0.0210
Sub area c-factor				**0.35**

Area		Acres	Factor	Multiple
To Structure #32	***total area***	**0.27**		
Grassy		0.00	**0.35**	0.0000
Impervious		0.27	**0.95**	0.2565
Total		0.27		0.2565
Sub area c-factor				**0.95**

Area		Acres	Factor	Multiple
To Structure #30	***total area***	**0.08**		
Grassy		0.01	**0.35**	0.0035
Impervious		0.07	**0.95**	0.0665
Total		0.08		0.0700
Sub area c-factor				**0.88**

Area		Acres	Factor	Multiple
To Structure #33	***total area***	**0.27**		
Grassy		0.00	**0.35**	0.0000
Impervious		0.27	**0.95**	0.2565
Total		0.27		0.2565
Sub area c-factor				**0.95**

Area		Acres	Factor	Multiple
To Structure #34	***total area***	**0.24**		
Grassy		0.02	**0.35**	0.0070
Impervious		0.22	**0.95**	0.2090
Total		0.24		0.2160
Sub area c-factor				**0.90**

Area		Acres	Factor	Multiple
To Structure #38	***total area***	**0.13**		
Grassy		0.00	**0.35**	0.0000
Impervious		0.13	**0.95**	0.1235
Total		0.13		0.1235
Sub area c-factor				**0.95**

Area		Acres	Factor	Multiple
To Structure #35	***total area***	**0.06**		
Grassy		0.00	**0.35**	0.0000
Impervious		0.06	**0.95**	0.0570
Total		0.06		0.0570
Sub area c-factor				**0.95**

Area		Acres	Factor	Multiple
To Structure #39	***total area***	**0.19**		
Grassy		0.04	**0.35**	0.0140
Impervious		0.15	**0.95**	0.1425
Total		0.19		0.1565
Sub area c-factor				**0.82**

Area		Acres	Factor	Multiple
To Structure #36	***total area***	**0.25**		
Grassy		0.04	**0.35**	0.0140
Impervious		0.21	**0.95**	0.1995
Total		0.25		0.2135
Sub area c-factor				**0.85**

Area		Acres	Factor	Multiple
To Structure #40	***total area***	**0.11**		
Grassy		0.00	**0.35**	0.0000
Impervious		0.11	**0.95**	0.1045
Total		0.11		0.1045
Sub area c-factor				**0.95**

Area		Acres	Factor	Multiple
To Structure #41	***total area***	**0.15**		
Grassy		0.07	**0.35**	0.0245
Impervious		0.08	**0.95**	0.0760
Total		0.15		0.1005
Sub area c-factor				**0.67**

Area		Acres	Factor	Multiple
To Structure #44	***total area***	**0.27**		
Grassy		0.00	**0.35**	0.0000
Impervious		0.27	**0.95**	0.2565
Total		0.27		0.2565
Sub area c-factor				**0.95**

Area		Acres	Factor	Multiple
To Structure #42	***total area***	**0.19**		
Grassy		0.00	**0.35**	0.0000
Impervious		0.19	**0.95**	0.1805
Total		0.19		0.1805
Sub area c-factor				**0.95**

Area		Acres	Factor	Multiple
To Structure #46	***total area***	**0.62**		
Grassy		0.04	**0.35**	0.0140
Impervious		0.58	**0.95**	0.5510
Total		0.62		0.5650
Sub area c-factor				**0.91**

Area		Acres	Factor	Multiple
To Structure #43	***total area***	**0.27**		
Grassy		0.00	**0.35**	0.0000
Impervious		0.27	**0.95**	0.2565
Total		0.27		0.2565
Sub area c-factor				**0.95**

Area		Acres	Factor	Multiple
To Structure #47	***total area***	**0.12**		
Grassy		0.01	**0.35**	0.0035
Impervious		0.11	**0.95**	0.1045
Total		0.12		0.1080
Sub area c-factor				**0.90**

Area		Acres	Factor	Multiple
To Structure #48	***total area***	**0.25**		
Grassy		0.01	**0.35**	0.0035
Impervious		0.24	**0.95**	0.2280
Total		0.25		0.2315
Sub area c-factor				**0.93**

Area		Acres	Factor	Multiple
To Structure #53	***total area***	**1.07**		
Grassy		0.55	**0.35**	0.1925
Impervious		0.52	**0.95**	0.4940
Total		1.07		0.6865
Sub area c-factor				**0.64**

Area		Acres	Factor	Multiple
To Structure #49	***total area***	**0.18**		
Grassy		0.00	**0.35**	0.0000
Impervious		0.18	**0.95**	0.1710
Total		0.18		0.1710
Sub area c-factor				**0.95**

Area		Acres	Factor	Multiple
To Structure #51	***total area***	**0.06**		
Grassy		0.06	**0.35**	0.0210
Impervious		0.00	**0.95**	0.0000
Total		0.06		0.0210
Sub area c-factor				**0.35**

Time of Concentration Calculations

Pearson, Brown & Associates Inc.
Libertyville, IL 60048

sheet flow roughness coefs - paved = 0.011, grassy = 0.240
maximum sheet flow segment length = 100'

Job #: 2541
Prepared by: AKZ
Date: 10/01/2025

Surface Flow Time Calculations - SCS Methods…2yr, 24hr rainfall depth = 3.34" [LAKE CO.] (Used for SCS flow time eqn…)

FLOW TO STRUCTURE	FLOW TYPE	DESCRIPTION	COEF. n	LENGTH L	SLOPE s	SHALLOW CONCENTRATED VELOCITY (FT/SEC)		TIME hours	TIME min	TIME USED min
17	Sheet Flow	grassy	0.240	82	0.0100			0.26	16	
	Shallow Concentrated	paved	*N/A*	160	0.0105	2.083		0.02	1	
							total	0.28	17	17
22	Sheet Flow	grassy	0.240	100	0.0300			0.20	12	
	Shallow Concentrated	unpaved	*N/A*	0	0.0100	1.613		0.00	0	
							total	0.20	12	12
24	Sheet Flow	grassy	0.240	100	0.0100			0.31	18	
	Shallow Concentrated	unpaved	*N/A*	100	0.0100	1.613		0.02	1	
							total	0.32	19	19
25	Sheet Flow	grassy	0.240	80	0.0275			0.17	10	
	Shallow Concentrated	unpaved	*N/A*	0	0.0100	1.613		0.00	0	
							total	0.17	10	10
26	Sheet Flow	grassy	0.240	100	0.0400			0.18	11	
	Shallow Concentrated	unpaved	*N/A*	25	0.0400	3.227		0.00	0	
							total	0.18	11	11
27	Sheet Flow	grassy	0.240	100	0.0190			0.24	14	
	Shallow Concentrated	unpaved	*N/A*	215	0.0190	2.224		0.03	2	
							total	0.26	16	16
53	Sheet Flow	grassy	0.240	100	0.0100			0.31	18	
	Shallow Concentrated	unpaved	*N/A*	80	0.0100	1.613		0.01	1	
							total	0.32	19	19

ALL REMAIINING LOCATIONS EMPLOY 5 MINUTES FOR INLET TIMES

Page 1 of 1

STORM SEWER DESIGN CALCULATIONS - 100 YEAR STORM DESIGN

Pearson, Brown & Associates Inc.
Libertyville, IL 60048

Job #: 25121
Prepared by: AKZ
Date: 09/19/2025

From	To	Individual Sub-area Pickup (ac.)	Area Total (ac.)	Individual Sub-area Runoff Factor	C*A Multiple	Sum of C*A to segment	Wieghted C-factor (sum of C*A div. by area total)	Time of Concentration Inlet	Channel	Total	Intensity (in./hr.)	Q=CIA Flow (cfs)	Diameter (in.)	Minimum Required Slope (ft./ft.)	PLAN Design Slope (ft./ft.)	Capacity (cfs)	Velocity (ft/sec)
6	5	0.14	0.14	0.95	0.13	0.13	0.95	5	0	5	12.36	1.64	10	0.0056	0.0060	1.70	3.12
5	3	0.36	0.50	0.95	0.34	0.48	0.95	5	1	6	11.84	5.62	15	0.0076	0.0100	6.48	5.28
4	3	0.25	0.25	0.95	0.24	0.24	0.95	5	0	5	12.36	2.94	12	0.0068	0.0100	3.57	4.55
3	1	0.33	1.08	0.95	0.31	1.03	0.95	5	1	7	11.47	11.77	15	0.0332	0.0360	12.29	10.01
10	8	0.12	0.12	0.95	0.11	0.11	0.95	5	0	5	12.36	1.41	12	0.0016	0.0100	3.57	4.55
9	8	0.27	0.27	0.95	0.26	0.26	0.95	5	0	5	12.36	3.17	12	0.0079	0.0100	3.57	4.55
8	7	0.36	0.75	0.95	0.34	0.71	0.95	5	1	6	11.84	8.44	15	0.0171	0.0360	12.29	10.01
53	50	1.07	1.07	0.64	0.68	0.68	0.64	19	0	19	8.02	5.49	15	0.0072	0.0080	5.79	4.72
51	50	0.06	0.06	0.35	0.02	0.02	0.35	5	0	5	12.36	0.26	12	0.0001	0.0100	3.57	4.55
50	46	0.00	1.13	0.00	0.00	0.71	0.62	0	1	20	7.79	5.50	18	0.0027	0.0030	5.77	3.26
49	46	0.18	0.18	0.95	0.17	0.17	0.95	5	0	5	12.36	2.11	12	0.0035	0.0060	2.77	3.52
48	47	0.25	0.25	0.93	0.23	0.23	0.93	5	0	5	12.36	2.87	12	0.0065	0.0100	3.57	4.55
47	46	0.12	0.37	0.90	0.11	0.34	0.92	5	0	5	12.36	4.21	12	0.0140	0.0150	4.38	5.57
46	44	0.62	2.30	0.91	0.56	1.78	0.77	5	0	20	7.79	13.88	21	0.0077	0.0080	14.21	5.91
44	43	0.27	2.57	0.95	0.26	2.04	0.79	5	0	20	7.79	15.88	24	0.0049	0.0060	17.57	5.59
43	42	0.27	2.84	0.95	0.26	2.29	0.81	5	1	21	7.58	17.39	24	0.0059	0.0070	18.98	6.04
42	40	0.19	3.03	0.95	0.18	2.48	0.82	5	0	21	7.58	18.76	24	0.0069	0.0080	20.29	6.46
41	40	0.06	0.06	0.67	0.04	0.04	0.67	5	0	5	12.36	0.50	12	0.0002	0.0100	3.57	4.55
40	39	0.11	3.20	0.95	0.10	2.62	0.82	5	0	21	7.58	19.86	24	0.0077	0.0080	20.29	6.46
39	37	0.19	3.39	0.82	0.16	2.78	0.82	5	1	22	7.39	20.51	24	0.0082	0.0090	21.52	6.85
38	37	0.13	0.13	0.95	0.12	0.12	0.95	5	0	5	12.36	1.53	10	0.0049	0.0060	1.70	3.12
37	36	0.00	3.52	0.00	0.00	2.90	0.82	0	0	22	7.39	21.42	27	0.0048	0.0050	21.96	5.52
36	16	0.25	3.77	0.85	0.21	3.11	0.83	0	0	22	7.39	22.99	27	0.0055	0.0060	24.05	6.05
34	33	0.24	0.24	0.90	0.22	0.22	0.90	5	0	5	12.36	2.67	12	0.0056	0.0070	2.99	3.81
33	32	0.27	0.51	0.95	0.26	0.47	0.93	5	0	5	12.36	5.84	15	0.0082	0.0100	6.48	5.28
32	31	0.27	0.78	0.95	0.26	0.73	0.93	5	1	6	11.84	8.63	18	0.0068	0.0080	9.42	5.33
35	31	0.06	0.06	0.95	0.06	0.06	0.95	5	0	5	12.36	0.70	12	0.0004	0.0100	3.57	4.55
31	21	0.28	1.12	0.95	0.27	1.05	0.94	5	0	6	11.84	12.46	21	0.0062	0.0070	13.29	5.53
30	28	0.08	0.08	0.88	0.07	0.07	0.88	5	0	5	12.36	0.87	12	0.0006	0.0360	6.78	8.63
29	28	0.06	0.06	0.35	0.02	0.02	0.35	5	0	5	12.36	0.26	12	0.0001	0.0050	2.53	3.22
28	27	0.00	0.14	0.00	0.00	0.09	0.65	0	0	5	12.36	1.13	12	0.0010	0.0100	3.57	4.55
27	26	7.20	7.34	0.43	3.10	3.19	0.43	16	0	16	8.88	28.30	27	0.0084	0.0090	29.46	7.41
26	25	0.20	7.54	0.56	0.11	3.30	0.44	11	0	16	8.88	29.30	27	0.0089	0.0100	31.05	7.81
25	22	0.28	7.82	0.46	0.13	3.43	0.44	10	0	16	8.88	30.44	27	0.0097	0.0110	32.57	8.19
24	23	0.42	0.42	0.65	0.27	0.27	0.65	19	0	19	8.02	2.19	12	0.0038	0.0050	2.53	3.22
23	22	0.20	0.62	0.95	0.19	0.46	0.75	5	0	19	8.02	3.71	12	0.0109	0.0120	3.91	4.98
22	21	0.30	8.74	0.53	0.16	4.05	0.46	12	0	19	8.02	32.48	36	0.0024	0.0030	36.63	5.18
21	20A	0.15	10.01	0.91	0.14	5.24	0.52	5	1	20	7.79	40.81	36	0.0037	0.0040	42.30	5.98
20	20A	0.15	0.15	0.95	0.14	0.14	0.95	5	0	5	7.79	1.11	12	0.0010	0.0100	3.57	4.55
20A	17	0.15	10.16	0.95	0.14	5.52	0.54	5	1	21	7.58	41.87	36	0.0039	0.0050	47.29	6.69
17	16	0.83	10.99	0.83	0.69	6.21	0.57	17	0	21	7.58	47.09	36	0.0050	0.0060	51.80	7.33
16	14	0.00	14.76	0.00	0.00	9.32	0.63	0	1	21	7.58	70.68	42	0.0049	0.0055	74.82	7.78
14	12	0.28	15.04	0.95	0.27	9.59	0.64	5	1	22	7.39	70.87	42	0.0050	0.0055	74.82	7.78
13	12	0.13	0.13	0.95	0.12	0.12	0.95	5	0	5	12.36	1.53	10	0.0049	0.0060	1.70	3.12
12	11	0.16	15.33	0.95	0.15	9.87	0.64	5	0	22	7.39	72.91	42	0.0053	0.0060	78.14	8.12

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STORM SEWER INLET CAPACITY CALCULATIONS - VALLEY LOCATIONS

Pearson, Brown & Associates Inc.
Libertyville, IL 60048

Job # 2541
Prepared by: AKZ
Date: 10/01/2025

STORM SEWER INLET CAPACITY CALCULATIONS - VALLEY LOCATIONS

"CURB" VALLEY LOCATIONS: NEENAH R-3278-A TY. C GRATE 1.20 S.F. OPEN AREA weir periemter = 4.6 feet
"LAWN" Areas >>>>>> Neenah R-4340-B 1.10 SF OPEN AREA weir permiter = 6.0 feet **LOCATION 27 USES NEENAH R-4342 DITCH GRATE W/ 2.0 SF OPEN AREA, WEIR PERIMETER = 6.0'
"PAVED" VALLEY LOCATIONS - NEENAH R-2540-D 1.10 SF OPEN AREA, weir perimter = 4.9 feet

Section 1: Weir Flow: ** LOW HEAD ON GRATES, LESS THAN 0.30' WEIR FLOW CONTROLS ** ** CHECK ORIFICE FLOW DEPTHS ON GRATES FOR INDICATED DEPTHS OVER 0.30' ** - SECTION 2 Orifice Flow Calculations Below

WEIR COEF. PER NEENAH 3.30 Q=CLH^(3/2)

Flow to Structure #	Individual Sub-area Pickup (ac.)	Individual Sub-area Runoff Factor	Time of Concentration Inlet Time Only	100YR Intensity (in./hr.)	DIRECT FLOW Q=CIA Flow (cfs)	UPSTREAM FLOW (cfs)	TOTAL REQUIRED FLOW (cfs)	LOCATION "PAVED", "CURB", OR "LAWN"	WEIR COEF. C	WEIR PERIMETER (lf) "L"	HEAD ON GRATE "H" (ft)	SINGLE STRUCTURE INLET CAPACITY (cfs)	# OF STRUCTURES	TOTAL INLET CAPACITY (cfs)
3	0.33	0.95	5	12.36	3.87	0.00	3.87	PAVED	3.30	4.90	0.39	3.94	1	3.94
4	0.25	0.95	5	12.36	2.94	0.00	2.94	PAVED	3.30	4.90	0.21	1.56	2	3.11
5	0.36	0.95	5	12.36	4.23	0.00	4.23	PAVED	3.30	4.90	0.41	4.25	1	4.25
8	0.36	0.95	5	12.36	4.23	0.00	4.23	CURB	3.30	4.60	0.27	2.13	2	4.26
9	0.27	0.95	5	12.36	3.17	0.00	3.17	PAVED	3.30	4.90	0.34	3.21	1	3.21
10	0.12	0.95	5	12.36	1.41	0.00	1.41	PAVED	3.30	4.90	0.20	1.45	1	1.45
12	0.16	0.95	5	12.36	1.88	0.00	1.88	CURB	3.30	4.60	0.25	1.90	1	1.90
14	0.28	0.95	5	12.36	3.29	0.00	3.29	PAVED	3.30	4.90	0.35	3.35	1	3.35
17	0.83	0.95	17	8.56	6.75	0.00	6.75	CURB	3.30	4.60	0.37	3.42	2	6.83
20	0.15	0.95	5	12.36	1.76	0.00	1.76	PAVED	3.30	4.90	0.23	1.78	1	1.78
21	0.15	0.91	5	12.36	1.69	0.00	1.69	CURB	3.30	4.60	0.24	1.78	1	1.78
22	0.30	0.53	12	10.02	1.59	0.00	1.59	CURB	3.30	4.60	0.23	1.67	1	1.67
23	0.20	0.95	5	12.36	2.35	0.00	2.35	CURB	3.30	4.60	0.29	2.37	1	2.37
24	0.42	0.65	5	12.36	3.37	0.00	3.37	LAWN	3.30	6.00	0.31	3.42	1	3.42
25	0.28	0.46	10	10.80	1.39	0.00	1.39	LAWN	3.30	6.00	0.17	1.39	1	1.39
26	0.20	0.56	11	10.37	1.16	0.00	1.16	LAWN	3.30	6.00	0.16	1.27	1	1.27
27	7.20	0.43	16	8.88	27.49	0.00	27.49	LAWN	3.30	6.00	0.79	13.90	2	27.81
29	0.06	0.35	5	12.36	0.26	0.00	0.26	LAWN	3.30	6.00	0.06	0.29	1	0.29
30	0.08	0.88	5	12.36	0.87	0.00	0.87	CURB	3.30	4.60	0.15	0.88	1	0.88
31	0.28	0.95	5	12.36	3.29	0.00	3.29	PAVED	3.30	4.90	0.35	3.35	1	3.35
32	0.27	0.95	5	12.36	3.17	0.00	3.17	PAVED	3.30	4.90	0.22	1.67	2	3.34
33	0.27	0.95	5	12.36	3.17	0.00	3.17	PAVED	3.30	4.90	0.22	1.67	2	3.34
34	0.24	0.90	5	12.36	2.67	0.00	2.67	CURB	3.30	4.60	0.32	2.75	1	2.75
35	0.06	0.95	5	12.36	0.70	0.00	0.70	PAVED	3.30	4.90	0.13	0.76	1	0.76
36	0.25	0.85	5	12.36	2.63	0.00	2.63	CURB	3.30	4.60	0.32	2.75	1	2.75
39	0.19	0.82	5	12.36	1.93	0.00	1.93	CURB	3.30	4.60	0.26	2.01	1	2.01
40	0.11	0.95	5	12.36	1.29	0.00	1.29	CURB	3.30	4.60	0.20	1.36	1	1.36
41	0.15	0.67	5	12.36	1.24	0.00	1.24	LAWN	3.30	6.00	0.16	1.27	1	1.27
42	0.19	0.95	5	12.36	2.23	0.00	2.23	PAVED	3.30	4.90	0.17	1.13	2	2.27
43	0.27	0.95	5	12.36	3.17	0.00	3.17	PAVED	3.30	4.90	0.22	1.67	2	3.34
44	0.27	0.95	5	12.36	3.17	0.00	3.17	PAVED	3.30	4.90	0.22	1.67	2	3.34
46	0.62	0.91	5	12.36	6.97	0.00	6.97	CURB	3.30	4.60	0.38	3.56	2	7.11
47	0.12	0.90	5	12.36	1.33	0.00	1.33	CURB	3.30	4.60	0.20	1.36	1	1.36
48	0.25	0.93	5	12.36	2.87	0.00	2.87	CURB	3.30	4.60	0.33	2.88	1	2.88
51	0.06	0.35	5	12.36	0.26	0.00	0.26	LAWN	3.30	6.00	0.06	0.29	1	0.29
53	1.07	0.64	19	8.02	5.49	0.00	5.49	LAWN	3.30	6.00	0.27	2.78	2	5.56

Flow to Structure #	Individual Sub-area Pickup (ac.)	Individual Sub-area Runoff Factor	Time of Concentration Inlet Time Only	100YR Intensity (in./hr.)	DIRECT FLOW Q=CIA Flow (cfs)	UPSTREAM FLOW (cfs)	TOTAL REQUIRED FLOW (cfs)	LOCATION "PAVED", "CURB", OR "LAWN"	WEIR COEF. C	WEIR PERIMETER (lf) "L"	HEAD ON GRATE "H" (ft)	SINGLE STRUCTURE INLET CAPACITY (cfs)	# OF STRUCTURES	TOTAL INLET CAPACITY (cfs)

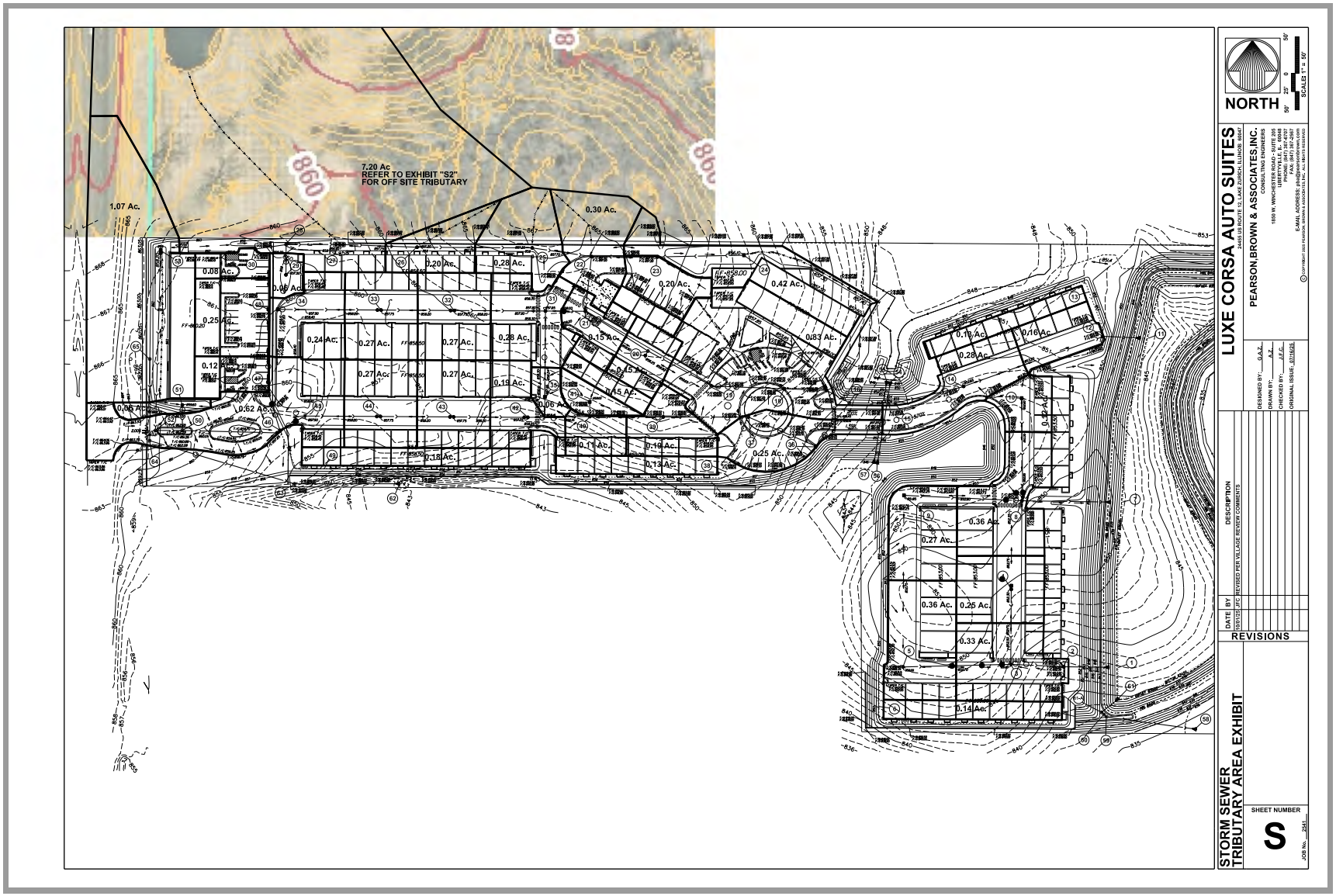
**LOCATION 27 USES NEENAH R-4342 DITCH GRATE W/ 2.0 SF OPEN AREA, WEIR PERIMETER = 6.0'

Section 2: Orifice Flow:

ORIFICE FLOW COEF. 0.60 USED

Q=CA(2GH)^0.5

Flow to Structure #	Individual Sub-area Pickup (ac.)	Individual Sub-area Runoff Factor	Time of Concentration Inlet Time Only	100YR Intensity (in./hr.)	DIRECT FLOW Q=CIA Flow (cfs)	UPSTREAM FLOW (cfs)	TOTAL REQUIRED FLOW (cfs)	LOCATION "PAVED", "CURB", OR "LAWN"	ORIF. COEF. C	OPEN AREA (SF) "A"	HEAD ON GRATE "H" (ft)	SINGLE STRUCTURE INLET CAPACITY (cfs)	# OF STRUCTURES	TOTAL INLET CAPACITY (cfs)
3	0.33	0.95	5	12.36	3.87	0.00	3.87	PAVED	0.60	1.10	0.54	3.89	1	3.89
4	0.25	0.95	5	12.36	2.94	0.00	2.94	PAVED	0.60	1.10	0.21	2.43	2	4.85
5	0.36	0.95	5	12.36	4.23	0.00	4.23	PAVED	0.60	1.10	0.64	4.24	1	4.24
8	0.36	0.95	5	12.36	4.23	0.00	4.23	CURB	0.60	1.20	0.27	3.00	2	6.00
9	0.27	0.95	5	12.36	3.17	0.00	3.17	PAVED	0.60	1.10	0.36	3.18	1	3.18
10	0.12	0.95	5	12.36	1.41	0.00	1.41	PAVED	0.60	1.10	0.20	2.37	1	2.37
12	0.16	0.95	5	12.36	1.88	0.00	1.88	CURB	0.60	1.20	0.25	2.89	1	2.89
14	0.28	0.95	5	12.36	3.29	0.00	3.29	PAVED	0.60	1.10	0.39	3.31	1	3.31
17	0.83	0.95	17	8.56	6.75	0.00	6.75	CURB	0.60	1.20	0.35	3.42	2	6.84
20	0.15	0.95	5	12.36	1.76	0.00	1.76	PAVED	0.60	1.10	0.23	2.54	1	2.54
21	0.15	0.91	5	12.36	1.69	0.00	1.69	CURB	0.60	1.20	0.24	2.83	1	2.83
22	0.30	0.53	12	10.02	1.59	0.00	1.59	CURB	0.60	1.20	0.23	2.77	1	2.77
23	0.20	0.95	5	12.36	2.35	0.00	2.35	CURB	0.60	1.20	0.29	3.11	1	3.11
24	0.42	0.65	5	12.36	3.37	0.00	3.37	LAWN	0.60	1.10	0.41	3.39	1	3.39
25	0.28	0.46	10	10.80	1.39	0.00	1.39	LAWN	0.60	1.10	0.17	2.18	1	2.18
26	0.20	0.56	11	10.37	1.16	0.00	1.16	LAWN	0.60	1.10	0.16	2.12	1	2.12
27	7.20	0.43	16	8.88	27.49	0.00	27.49	LAWN	0.60	2.00	0.91	9.19	3	27.56
29	0.06	0.35	5	12.36	0.26	0.00	0.26	LAWN	0.60	1.10	0.06	1.30	1	1.30
30	0.08	0.88	5	12.36	0.87	0.00	0.87	CURB	0.60	1.20	0.15	2.24	1	2.24
31	0.28	0.95	5	12.36	3.29	0.00	3.29	PAVED	0.60	1.10	0.39	3.31	1	3.31
32	0.27	0.95	5	12.36	3.17	0.00	3.17	PAVED	0.60	1.10	0.22	2.48	2	4.97
33	0.27	0.95	5	12.36	3.17	0.00	3.17	PAVED	0.60	1.10	0.22	2.48	2	4.97
34	0.24	0.90	5	12.36	2.67	0.00	2.67	CURB	0.60	1.20	0.32	3.27	1	3.27
35	0.06	0.95	5	12.36	0.70	0.00	0.70	PAVED	0.60	1.10	0.13	1.91	1	1.91
36	0.25	0.85	5	12.36	2.63	0.00	2.63	CURB	0.60	1.20	0.32	3.27	1	3.27
39	0.19	0.82	5	12.36	1.93	0.00	1.93	CURB	0.60	1.20	0.26	2.95	1	2.95
40	0.11	0.95	5	12.36	1.29	0.00	1.29	CURB	0.60	1.20	0.20	2.58	1	2.58
41	0.15	0.67	5	12.36	1.24	0.00	1.24	LAWN	0.60	1.10	0.16	2.12	1	2.12
42	0.19	0.95	5	12.36	2.23	0.00	2.23	PAVED	0.60	1.10	0.17	2.18	2	4.37
43	0.27	0.95	5	12.36	3.17	0.00	3.17	PAVED	0.60	1.10	0.22	2.48	2	4.97
44	0.27	0.95	5	12.36	3.17	0.00	3.17	PAVED	0.60	1.10	0.22	2.48	2	4.97
46	0.62	0.91	5	12.36	6.97	0.00	6.97	CURB	0.60	1.20	0.38	3.56	2	7.12
47	0.12	0.90	5	12.36	1.33	0.00	1.33	CURB	0.60	1.20	0.20	2.58	1	2.58
48	0.25	0.93	5	12.36	2.87	0.00	2.87	CURB	0.60	1.20	0.33	3.32	1	3.32
51	0.06	0.35	5	12.36	0.26	0.00	0.26	LAWN	0.60	1.10	0.06	1.30	1	1.30
53	1.07	0.64	19	8.02	5.49	0.00	5.49	LAWN	0.60	1.10	0.27	2.75	2	5.50


7.20 Ac
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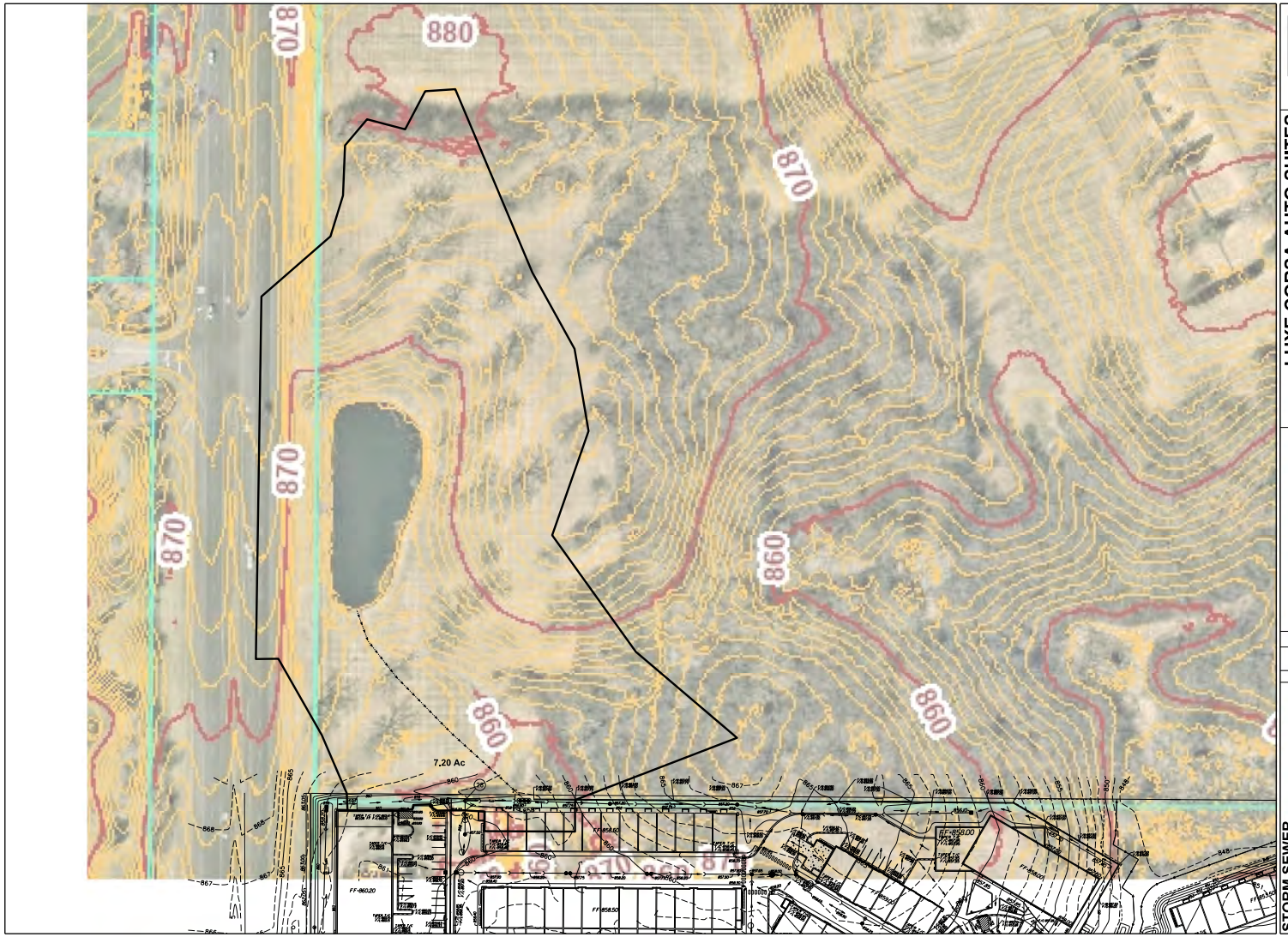
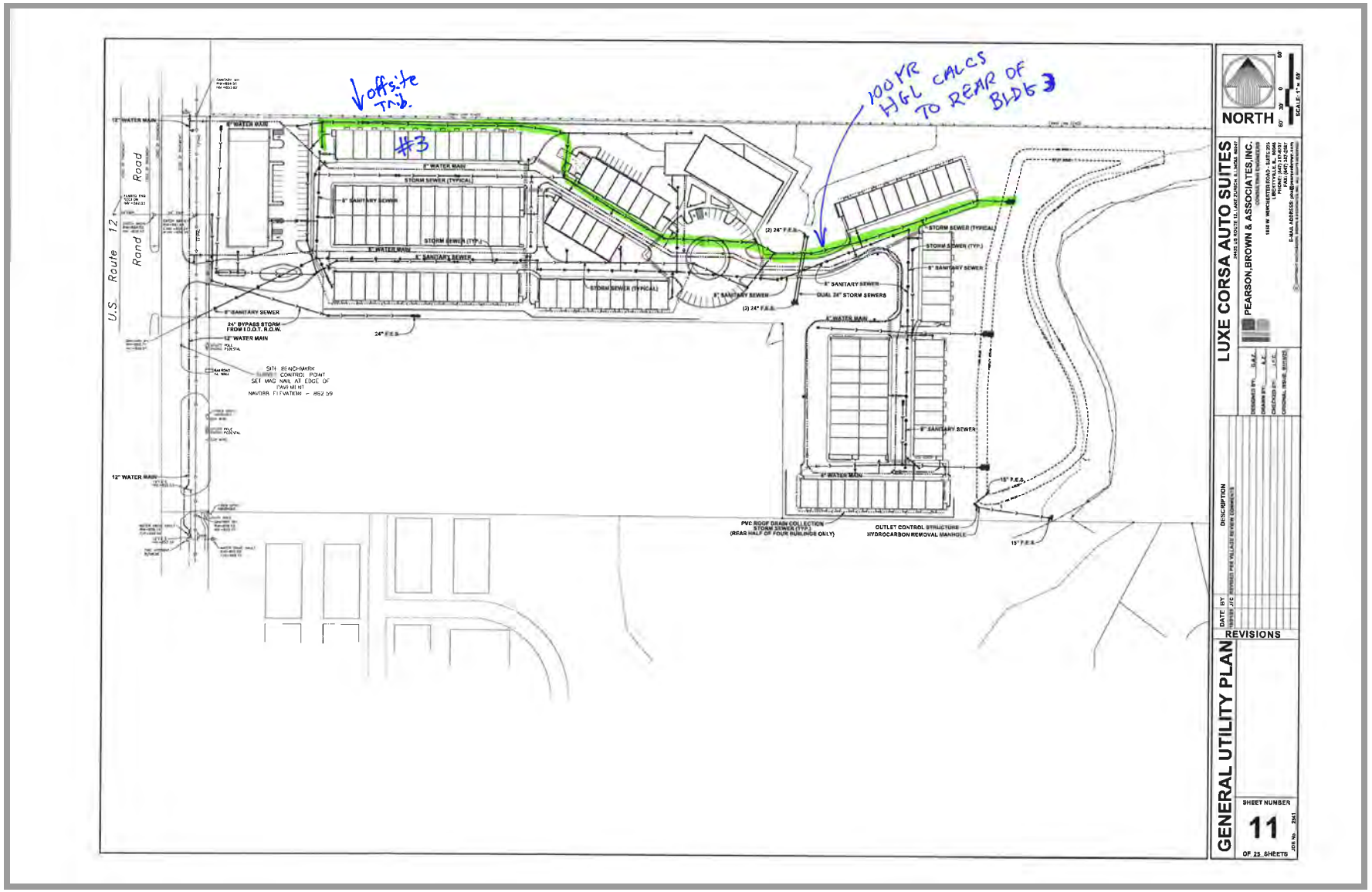
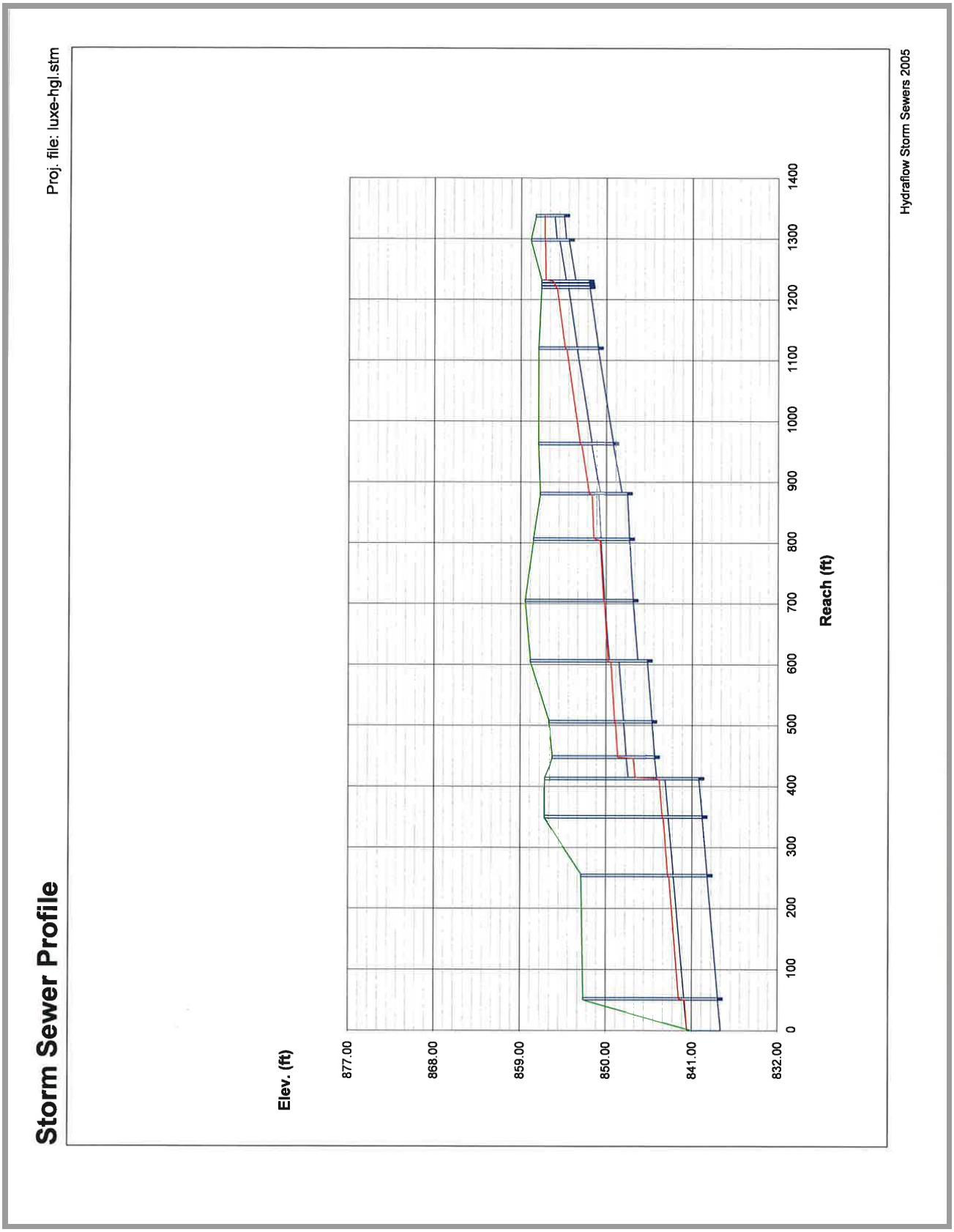
FOR OFF SITE TRIBUTARY
1.07 Ac.
0.30 Ac.
NORTH
SCALE: 1" = 50'
LUXE CORSA AUTO SUITES
PEARSON,BROWN & ASSOCIATES,INC.
CONSULTING ENGINEERS
DESIGNED BY: G.A.Z.
DRAWN BY: A.Z.
CHECKED BY: J.F.C.
ORIGINAL ISSUE: 07/16/21
DATE BY DESCRIPTION
10/07/21 JFC REVISED PER VILLAGE REVIEW COMMENTS
REVISIONS
STORM SEWER
TRIBUTARY AREA EXHIBIT
SHEET NUMBER
S
JOB No. 2041


880
870
870
870
860
860
860
7.20 Ac
NORTH
SCALE: 1" = 50'
LUXE CORSA AUTO SUITES
3469 US ROUTE 12, LAKE ZURICH, ILLINOIS 60047
PEARSON,BROWN & ASSOCIATES,INC.
CONSULTING ENGINEERS
189 W. WINCHESTER ROAD - SUITE 205
LIBERTYVILLE, ILLINOIS 60048
PHONE: (847) 367-4787
FAX: (847) 367-4789
E-MAIL ADDRESS: phil@pearsonbrown.com
DESIGNED BY: GAZ
DRAWN BY: AZ
CHECKED BY: JFC
ORIGINAL ISSUE: 07/16/25
DATE BY DESCRIPTION
10/01/25 JFC REVISED PER VILLAGE REVIEW COMMENTS
REVISIONS
STORM SEWER TRIBUTARY AREA EXHIBIT
SHEET NUMBER
S2
JOB No. 2341


Offsite TRIB.
#3
100 YR HGL CALCS TO REAR OF BLDG 3
U.S. Route 12
Rand Road
12" WATER MAIN
8" WATER MAIN
8" WATER MAIN
STORM SEWER (TYPICAL)
8" SANITARY SEWER
8" WATER MAIN
8" SANITARY SEWER
STORM SEWER (TYP.)
STORM SEWER (TYPICAL)
8" SANITARY SEWER
(2) 24" F.E.S.
8" SANITARY SEWER
DUAL 24" STORM SEWERS
(2) 24" F.E.S.
8" SANITARY SEWER
24" BYPASS STORM FROM I.D.O.T. R.O.W.
12" WATER MAIN
24" F.E.S.
SITE BENCHMARK
CONTROL POINT
SET MAG NAIL AT EDGE OF PAVEMENT
NAVD88 ELEVATION = 862.59
12" WATER MAIN
8" SANITARY SEWER
8" WATER MAIN
15" F.E.S.
15" F.E.S.
PVC ROOF DRAIN COLLECTION STORM SEWER (TYP.) (REAR HALF OF FOUR BUILDINGS ONLY)
OUTLET CONTROL STRUCTURE HYDROCARBON REMOVAL MANHOLE
NORTH
SCALE: 1" = 60'
LUXE CORSA AUTO SUITES
PEARSON,BROWN & ASSOCIATES,INC.
DESIGNED BY: S.A.C.
DRAWN BY: A.C.
CHECKED BY: J.T.C.
ORIGINAL ISSUE: 8/31/21
DESCRIPTION
DATE BY
REVISIONS
GENERAL UTILITY PLAN
SHEET NUMBER
11
OF 25 SHEETS
JOB No. 2541


Storm Sewer Profile
Proj. file: luxe-hgl.stm
Hydraflow Storm Sewers 2005
Elev. (ft)
877.00
868.00
859.00
850.00
841.00
832.00
Reach (ft)
0
100
200
300
400
500
600
700
800
900
1000
1100
1200
1300
1400

Storm Sewer Tabulation

Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line		Incr	Total		Incr	Total	Inlet	Syst					Size	Slope	Up	Dn	Up	Dn	Up	Dn	
		(ft)	(ac)	(ac)	(C)			(min)	(min)	(in/hr)	(cfs)	(cfs)	(ft/s)	(in)	(%)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	
1	End	52.0	0.00	0.00	0.00	0.00	0.00	0.0	5.8	0.0	72.91	77.68	7.59	42	0.60	838.31	838.00	841.75	841.50	852.40	841.00	12-11
2	1	202.0	0.00	0.00	0.00	0.00	0.00	0.0	5.3	0.0	70.87	74.58	7.37	42	0.55	839.42	838.31	843.37	842.37	852.65	852.40	14-12
3	2	96.0	0.00	0.00	0.00	0.00	0.00	0.0	5.1	0.0	70.68	74.76	7.35	42	0.55	839.95	839.42	843.98	843.50	856.50	852.65	15-14
4	3	63.0	0.00	0.00	0.00	0.00	0.00	0.0	5.0	0.0	70.68	74.99	7.35	42	0.56	840.30	839.95	844.42	844.10	856.50	856.50	16-15
5	4	35.0	0.00	0.00	0.00	0.00	0.00	0.0	4.9	0.0	47.09	51.66	8.29	36	0.60	844.91	844.70	847.16	846.95	855.70	856.50	17-16
6	5	58.0	0.00	0.00	0.00	0.00	0.00	0.0	4.7	0.0	41.87	47.16	5.92	36	0.50	845.20	844.91	849.04	848.82	856.05	855.70	18-17
7	6	100.0	0.00	0.00	0.00	0.00	0.00	0.0	4.4	0.0	41.87	47.16	5.92	36	0.50	845.70	845.20	849.52	849.13	858.00	856.05	19-18
8	7	99.0	0.00	0.00	0.00	0.00	0.00	0.0	4.2	0.0	41.87	47.40	5.92	36	0.51	847.20	846.70	850.20	849.85	858.55	858.00	20A-19
9	8	101.0	0.00	0.00	0.00	0.00	0.00	0.0	3.9	0.0	40.81	41.97	5.77	36	0.40	847.60	847.20	850.68	850.31	857.70	858.55	21-20A
10	9	75.0	0.00	0.00	0.00	0.00	0.00	0.0	3.6	0.0	32.48	36.94	4.60	36	0.31	847.83	847.60	851.53	851.35	857.00	857.70	22-21
11	10	82.0	0.00	0.00	0.00	0.00	0.00	0.0	3.4	0.0	30.44	32.44	7.66	27	1.10	849.33	848.43	852.65	851.86	857.20	857.00	25-22
12	11	157.0	0.00	0.00	0.00	0.00	0.00	0.0	3.1	0.0	29.30	30.97	7.37	27	1.00	850.90	849.33	854.23	852.83	857.20	857.20	26-25
13	12	100.0	0.00	0.00	0.00	0.00	0.00	0.0	2.8	0.0	28.30	29.38	7.12	27	0.90	851.80	850.90	855.25	854.41	856.90	857.20	27-26
14	13	5.0	0.00	0.00	0.00	0.00	0.00	0.0	2.8	0.0	28.30	30.96	7.12	27	1.00	851.85	851.80	855.41	855.37	856.90	856.90	27A-27
15	14	5.0	0.00	0.00	0.00	0.00	0.00	0.0	2.8	0.0	28.30	30.98	7.12	27	1.00	851.90	851.85	855.57	855.53	856.90	856.90	27B-27A
16	15	68.0	0.00	0.00	0.00	0.00	0.00	0.0	2.0	0.0	1.13	3.56	1.44	12	1.00	854.00	853.32	856.51	856.44	858.00	856.90	28-27B
17	16	40.0	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.26	2.52	0.33	12	0.50	854.50	854.30	856.58	856.58	857.50	858.00	29-28

luxe hgl | Number of lines: 17 | Run Date: 09-30-2025

NOTES: Intensity = 127.16 / (Inlet time + 17.80) ^ 0.82; Return period = 100 Yrs.

Hydraflow Storm Sewers 2005

Hydraulic Grade Line Computations

Line	Size	Q	Downstream								Len	Upstream								Check		JL coeff	Minor loss
	(in)	(cfs)	Invert elev (ft)	HGL elev (ft)	Depth (ft)	Area (sqft)	Vel (ft/s)	Vel head (ft)	EGL elev (ft)	Sf (%)	(ft)	Invert elev (ft)	HGL elev (ft)	Depth (ft)	Area (sqft)	Vel (ft/s)	Vel head (ft)	EGL elev (ft)	Sf (%)	Ave Sf (%)	Enrgy loss (ft)	(K)	(ft)
1	42	72.91	838.00	841.50	3.50	9.62	7.58	0.89	842.39	n/a	52.0	838.31	841.75	3.44	9.59	7.60	0.90	842.65i	n/a	n/a	-0.639	0.15	n/a
2	42	70.87	838.31	842.37	3.50	9.62	7.37	0.84	843.21	0.496	202	839.42	843.37	3.50	9.62	7.37	0.84	844.22	0.496	0.496	1.003	0.15	0.13
3	42	70.68	839.42	843.50	3.50	9.62	7.35	0.84	844.34	0.494	96.0	839.95	843.98	3.50	9.62	7.35	0.84	844.82	0.494	0.494	0.474	0.15	0.13
4	42	70.68	839.95	844.10	3.50	9.62	7.35	0.84	844.94	0.494	63.0	840.30	844.42	3.50	9.62	7.35	0.84	845.25	0.494	0.494	0.311	0.43	0.36
5	36	47.09	844.70	846.95	2.25*	5.69	8.28	1.07	848.02	n/a	35.0	844.91	847.16	2.25	5.68	8.29	1.07	848.23i	n/a	n/a	-0.860	0.43	n/a
6	36	41.87	844.91	848.82	3.00	7.07	5.92	0.55	849.36	0.394	58.0	845.20	849.04	3.00	7.07	5.92	0.55	849.59	0.394	0.394	0.229	0.15	0.08
7	36	41.87	845.20	849.13	3.00	7.07	5.92	0.55	849.67	0.394	100	845.70	849.52	3.00	7.07	5.92	0.55	850.07	0.394	0.394	0.394	0.60	0.33
8	36	41.87	846.70	849.85	3.00	7.07	5.92	0.55	850.39	0.394	99.0	847.20	850.20	3.00	7.07	5.92	0.55	850.74	0.384	0.389	0.385	0.15	0.08
9	36	40.81	847.20	850.31	3.00	7.07	5.77	0.52	850.82	0.375	101	847.60	850.68	3.00	7.07	5.77	0.52	851.20	0.374	0.375	0.378	0.92	0.48
10	36	32.48	847.60	851.35	3.00	7.07	4.60	0.33	851.68	0.237	75.0	847.83	851.53	3.00	7.07	4.59	0.33	851.86	0.237	0.237	0.178	1.00	0.33
11	27	30.44	848.43	851.86	2.25	3.98	7.66	0.91	852.77	n/a	82.0	849.33	852.65	2.25	3.98	7.66	0.91	853.56i	n/a	n/a	-0.119	0.15	n/a
12	27	29.30	849.33	852.83	2.25	3.98	7.37	0.84	853.67	0.896	157	850.90	854.23	2.25	3.98	7.37	0.84	855.08	0.895	0.896	1.406	0.15	0.13
13	27	28.30	850.90	854.41	2.25	3.98	7.12	0.79	855.20	0.836	100	851.80	855.25	2.25	3.98	7.12	0.79	856.04	0.835	0.835	0.835	0.15	0.12
14	27	28.30	851.80	855.37	2.25	3.98	7.12	0.79	856.16	0.836	5.0	851.85	855.41	2.25	3.98	7.12	0.79	856.20	0.835	0.835	0.042	0.15	0.12
15	27	28.30	851.85	855.53	2.25	3.98	7.12	0.79	856.32	0.836	5.0	851.90	855.57	2.25	3.98	7.12	0.79	856.36	0.835	0.835	0.042	0.15	0.12
16	12	1.13	853.32	856.44	1.00	0.79	1.44	0.03	856.48	0.101	68.0	854.00	856.51	1.00	0.79	1.44	0.03	856.55	0.101	0.101	0.068	1.00	0.03
17	12	0.26	854.30	856.58	1.00	0.79	0.33	0.00	856.58	0.005	40.0	854.50	856.58	1.00	0.79	0.33	0.00	856.58	0.005	0.005	0.002	1.00	0.00

luxe hgl | Number of lines: 17 | Run Date: 09-30-2025

Notes: * Normal depth assumed.

Hydraflow Storm Sewers 2005

Appendix 2 – Spillway Emergency Overflow Calculations

Stormwater Basin Spillway Design Capacity

Spillway Crest >>> 841.00 ft

Top of Berm >>> 842.50 ft

Operating Head maintaining 1' freeboard to top of berm >>> 0.5 ft

Proposed Spillway Width >>> 163 ft

Capcacity based on standard weir equation Q = CLH^(3/2) w/c=3.0, L=163, H=0.5 >> 172.89 cfs

Operating Head Elevation >>>> 841.50 ft

Freeboard to T/B >>>> 1 ft

Based on the basin tributary area including offsite, the 173 +/- cfs capacity is in excess of the peak unattenuated inflow rate (104 cfs) from the combined peak flow rates from the 12.37 acre onsite tributary areas and the offsite 11.02 acres from a critical duration analysis.

Event Duration (hr)	Peak Combined Inflow (cfs)
1	**104**
2	**90**
3	**74**
6	**49**
12	**29**
18	**21**
24	**17**
48	**12**
72	**8**

Appendix 3

Central North-South Drainageway Calculations

We performed a critical duration analysis on the 15.89 acre tributary area for the existing north-south drainageway that runs through the central area of the property. Please refer to Exhibit H for the time of concentration [22 min] calculations, and composite curve number [74] (CN) determination. HEC-HMS was used for the models.

As discussed earlier in the report, Exhibit F2 shows some detail on the overflow route along the drainageway. Exhibits I, and J, detail the rating of the overflow location. The existing stage-storage for the depression upstream of the overflow is shown on Exhibit K.

The combined rating employed for the HEC-HMS analysis is listed below:

Elevation (ft)	Volume (ac-ft)	Discharge (cfs)
848.00	0.00	0.00
848.80	0.74	0.00
849.00	0.99	2.15
849.50	1.70	49.34
850.00	2.53	189.96

Event Duration (hr)	Peak Inflow (cfs)	Peak Stage	Peak Release (cfs)
1	**36.99**	**849.20**	**21.16**
2	**36.07**	**849.22**	**22.45**
3	**31.65**	**849.21**	**22.23**
6	**22.19**	**849.19**	**19.71**
12	**15.37**	**849.14**	**15.00**
18	**12.46**	**849.11**	**12.39**
24	**10.14**	**849.08**	**10.10**
48	**7.09**	**849.05**	**7.08**
72	**5.08**	**849.03**	**5.08**

The 2hr duration is critical with a peak stage of 849.22. The storage indicated in the model output is 1.30 acre feet so this zone is regulatory floodplain.

In proposed conditions two 24" RCP culverts are proposed at the roadway crossing. These are set up so the BFE will not be increased including at offsite areas if the peak unattenuated inflow is required to be conveyed.

North-South Drainageway - Proposed Culvert Design…

Required Flow = 36.99 cfs

Need two culverts, each with minimum 18.5 cfs capacity

Diameter (in.)	Design Slope (ft./ft.)	Capacity (cfs)	Velocity (ft/sec)
24	0.0067	18.57	5.91

USE TWO 24" DIA. RCP STORM CULVERTS @ 0.67% SLOPE EACH

Pipe pressure flow calculations...

HEAD = ELEV. DIFFERENCE U/S WSE - D/S WSE...

Entrance and Exit Submer
both the exit and entrance are sub
21.38), the culvert flows full, and the
independent of the slope. This is norm
and is easily solved by using the
Darcy-Weisbach formula for frictio
(21.33d) or (21.30j). From the Bernoulli
the entrance and exit, and the Manni
for friction loss, the following equation

$$H = (1 + K_e)\frac{V^2}{2g} + \frac{V^2 n^2 L}{2.21R^{4/3}} \quad (21.72)$$

Solution for the velocity of flow yields

$$V = \sqrt{\frac{H}{(1+K_e/2g)+(n^2L/2.21R^{4/3})}} \quad (21.73)$$

H = elevation difference between headwater and tailwater, ft
V = velocity in culvert, ft/s
g = acceleration due to gravity, 32.2 ft/s²
K_e = entrance-loss coefficient (Art. 21.20)
n = Manning's roughness coefficient
L = length of culvert, ft
R = hydraulic radius of culvert, ft

Source: Handbook of Civil Engineers
Merritt (1996)

		Ke=0.15	pipe (proj.)					single pipe capacity	dual pipe capacity
H	L	N	D	A	P	R	velocity	Q	Q
1.40	112	0.013	24	3.142	6.283	0.50	5.96	18.72	37.43
feet	feet	roughness	inch	sq. ft.	ft	ft	ft/sec	cfs	cfs

Upstream Crown of 24" Storm = 848.00
Upstream Invert of 24" Storm = 846.00

Downstream Crown of 30" Storm = 847.25
Downstream Invert of 30" Storm = 845.25

Rating 1: Upstream WSE from upstream crown and higher
H = Difference Betwwen Upstream WSE and downstream crown (downstream WSE)

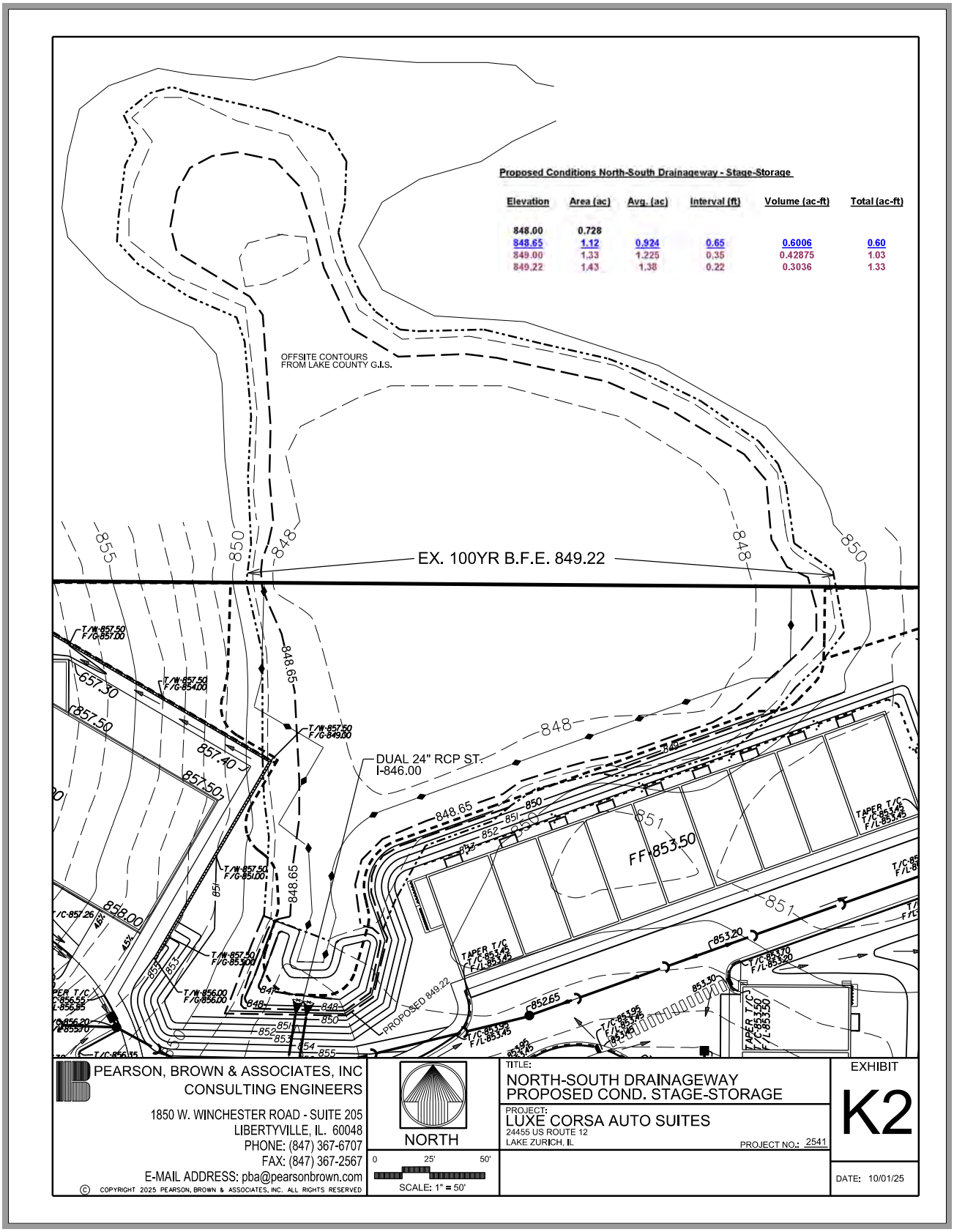
Upstream WSE	Downstream WSE	H = US-DS	Dual Pipe Q (CFS)	
848.00	847.25	0.75	27.40	
848.25	847.25	1.00	31.64	
848.50	847.25	1.25	35.37	
848.65	847.25	1.40	37.43	Exceeds minimum capacity of 37 cfs at elevation 848.65...

The dual 24" RCP storm sewers will limit the proposed conditions peak stage along the route to 848.65 based on a submerged flow culvert analysis of the configuration.

Exhibit K2 in this appendix shows the proposed conditions stage-storage. Storage at elevation 848.65 is 0.60 ac-ft if the storage floor is considered at 848.00. (While not needed to convey the existing conditions peak flow rate, a total of 1.33 ac-ft is available up to the existing base flood elevation of 849.22. This value is very close to the 1.30 ac-ft provided below 849.22 in the existing case. Therefore, the available storage below the existing BFE is being maintained)

Comparing the 0.60 ac-ft total accessed at 848.65 to the amount accessed in the existing case shows a net "fill" (loss of storage accessed) of 0.70 ac-ft. Multiplying 0.0.70 ac-ft by the required 1.20 factor yields a compensatory storage requirement of 0.84 ac-ft.

There is sufficient additional volume in the proposed stormwater basin to compensate for the proposed fill. Runoff from both the central north-south drianageway and from the pond outlet are tributary to the same location downstream of the site to the south. Given that there are over 11 acres of offsite tributary to the basin, at least one of the durations from an overall critical duration analysis will access the additional volume in the basin.


Proposed Conditions North-South Drainageway - Stage-Storage
Elevation | Area (ac) | Avg. (ac) | Interval (ft) | Volume (ac-ft) | Total (ac-ft)
848.00 | 0.728
848.65 | 1.12 | 0.924 | 0.65 | 0.6006 | 0.60
849.00 | 1.33 | 1.225 | 0.35 | 0.42875 | 1.03
849.22 | 1.43 | 1.38 | 0.22 | 0.3036 | 1.33
OFFSITE CONTOURS FROM LAKE COUNTY G.I.S.
EX. 100YR B.F.E. 849.22
DUAL 24" RCP ST. I-846.00
PROPOSED 849.22
FF 853.50
PEARSON, BROWN & ASSOCIATES, INC
CONSULTING ENGINEERS
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NORTH
0 25' 50'
SCALE: 1" = 50'
TITLE:
NORTH-SOUTH DRAINAGEWAY
PROPOSED COND. STAGE-STORAGE
PROJECT:
LUXE CORSA AUTO SUITES
24455 US ROUTE 12
LAKE ZURICH, IL
PROJECT NO.: 2541
EXHIBIT
K2
DATE: 10/01/25

Appendix 4
Wetland Hydrology

Two zones associated with the project require an indirect wetland impact analysis (80/150). The first is an Isolated Wetland of Lake County that will partially remain in the central portion of the site. The second is the Isolated Wetland of Lake County that is not being disturbed in the far eastern area of the site.

Each of these zones was analyzed to determine the 2yr, 24hr ISWS Bul. 75 runoff volume to the wetland for both the existing and proposed conditions.

Accordingly per LCSMC rules, the wetland areas being analyzed are excluded for both cases and onsite tributary areas only are involved. Refer also to the EC-WH Existing conditions wetland hydrology exhibit in this appendix.

The 80-150 volume range calculations are included here for each zone.

CENTRAL WETLAND:

COMPOSITE CURVE NUMBER CALCULATION - WETLAND HYDROLOGY
CENTRAL WETLAND

Total Tributary Area to Wetland (incl. east wetland)	4.90	ac.		
Area of Eastern Wetland	0.94	ac.		
Total Tributary Area Outside of Eastern Wetland	3.96	ac.		
EXISTING COMPOSITE CN				
	CN	Area (ac)	CN x Area	
Agriculture SR+CR	82	2.35	192.7	
Woods	73	1.61	117.53	
Total		3.96	310.23	
Weighted CN			78.341	**USE 78**
PROPOSED COMPOSITE CN				
Total Impervious	98	0.01	0.98	
Open Space	80	0.68	54.4	
Total		0.69	55.38	
Weighted CN			80.261	**USE 80**

Technical Release 55 (TR-55)

Runoff Depth for 80/150

Subbasin Name	Project Number
Central Wetland	2541
Project Name	**Project Location**
Luxe Corsa Auto	Lake Zurich, IL

Prepared By	Date
AZ	09/24/25
Checked By	**Date**
JFC	09/24/25
Revised By	**Date**

80/150 Analysis - Central Wetland

EXISTING CONDITIONS

Existing Wetland Area (acres) =	0.94
Existing Tributary Area (acres) =	3.96
Existing Conditions Curve Number =	78

Event	Rainfall (in)	CN	Runoff (in)	Runoff Volume (ac-ft)
2-Year 24 Hour	3.34	78	1.377	0.45

80/150 Compliance

Proposed Wetland Impact (acres) =	0.51
Proposed Wetland Area (acres) =	0.43

Event	Existing Runoff Volume (ac-ft)	Unit Runoff Volume (ac-ft/ac)	Existing Runoff Volume Prorated * (ac-ft)	80% of Prorated Volume (ac-ft)	150% of Prorated Volume (ac-ft)
2-Year 24 Hour	0.45	0.115	0.208	0.17	0.31

* Total existing runoff volume has been prorated based on the remaining wetland area

PROPOSED CONDITIONS

Proposed Tributary Area (acres) =	0.69
Proposed Conditions Curve Number =	80

Event	Rainfall (in)	CN	Runoff (in)	Runoff Volume (ac-ft)	Percent of Prorated Volume
2-Year 24 Hour	3.34	80	1.510	0.09	42%

The current configuration delivers less than 80% of the existing runoff to the central wetland in the proposed condition. The calculations on the next page show the potential indirect wetland impact area that would be needed to achieve a level slightly above the 80% value. 0.21 acres of additional "indirect" impact would be needed to achieve just over the required 80% value.

Technical Release 55 (TR-55)

Runoff Depth for 80/150

Subbasin Name	Project Number
Central Wetland	2541
Project Name	**Project Location**
Luxe Corsa Auto	Lake Zurich, IL

Prepared By	Date
AZ	09/24/25
Checked By	**Date**
JFC	09/24/25
Revised By	**Date**

80/150 Analysis - Central Wetland (For Theoretical Impact)

EXISTING CONDITIONS

Existing Wetland Area (acres) = 0.94
Existing Tributary Area (acres) = 3.96
Existing Conditions Curve Number = 78

Event	Rainfall (in)	CN	Runoff (in)	Runoff Volume (ac-ft)
2-Year 24 Hour	3.34	78	1.377	0.45

80/150 Compliance

Proposed Wetland Impact (acres) = 0.72
Proposed Wetland Area (acres) = 0.22

Event	Existing Runoff Volume (ac-ft)	Unit Runoff Volume (ac-ft/ac)	Existing Runoff Volume Prorated * (ac-ft)	80% of Prorated Volume (ac-ft)	150% of Prorated Volume (ac-ft)
2-Year 24 Hour	0.45	0.115	0.106	0.09	0.16

* Total existing runoff volume has been prorated based on the remaining wetland area

PROPOSED CONDITIONS

Proposed Tributary Area (acres) = 0.69
Proposed Conditions Curve Number = 80

Event	Rainfall (in)	CN	Runoff (in)	Runoff Volume (ac-ft)	Percent of Prorated Volume
2-Year 24 Hour	3.34	80	1.510	0.09	82%

EASTERN WETLAND:

The entire site including all tributary area from offsite drains to the south of the property to a downstream wetland complex that the far eastern wetland connects to. For this reason, the analysis for the eastern wetland is based on the entire site tributary areas excluding the eastern wetland area itself.

COMPOSITE CURVE NUMBER CALCULATION - WETLAND HYDROLOGY
EASTERN WETLAND

Total Tributary Area to Wetland (incl. east wetland)	20.33	ac.		
Area of Eastern Wetland	4.09	ac.		
Total Tributary Area Outside of Eastern Wetland	16.24	ac.		
EXISTING COMPOSITE CN				
	CN	Area (ac)	CN x Area	
Agriculture SR+CR	82	7.1	582.2	
Woods	73	6.06	442.38	
Central Wetland Area	85	0.94	79.9	
Impervious	98	2.14	209.72	
Total		16.24	1314.2	
Weighted CN			80.924	**USE 81**
PROPOSED COMPOSITE CN				
Total Impervious	98	8.09	792.82	
Central Wetland Area	85	0.43	36.55	
Woodlands	73	0.64	46.72	
Native Planted Area (including Pond)	74	3.24	239.76	
Open Space	80	3.84	307.2	
Total		16.24	1423.05	
Weighted CN			87.62623	**USE 88**

Technical Release 55 (TR-55)

Runoff Depth for 80/150

Subbasin Name	Project Number
Eastern Wetland	2541
Project Name	**Project Location**
Luxe Corsa Auto	Lake Zurich

Prepared By	Date
AZ	07/15/25
Checked By	**Date**
JFC	07/15/25
Revised By	**Date**

80/150 Analysis - Eastern Wetland

EXISTING CONDITIONS

Existing Tributary Area (acres) = 16.24
Existing Conditions Curve Number = 81

Event	Rainfall (in)	CN	Runoff * (in)	Runoff Volume (ac-ft)
2-Year 24 Hour	3.34	81	1.580	2.138

80/150 Compliance

Proposed Tributary Area (acres) = 16.24

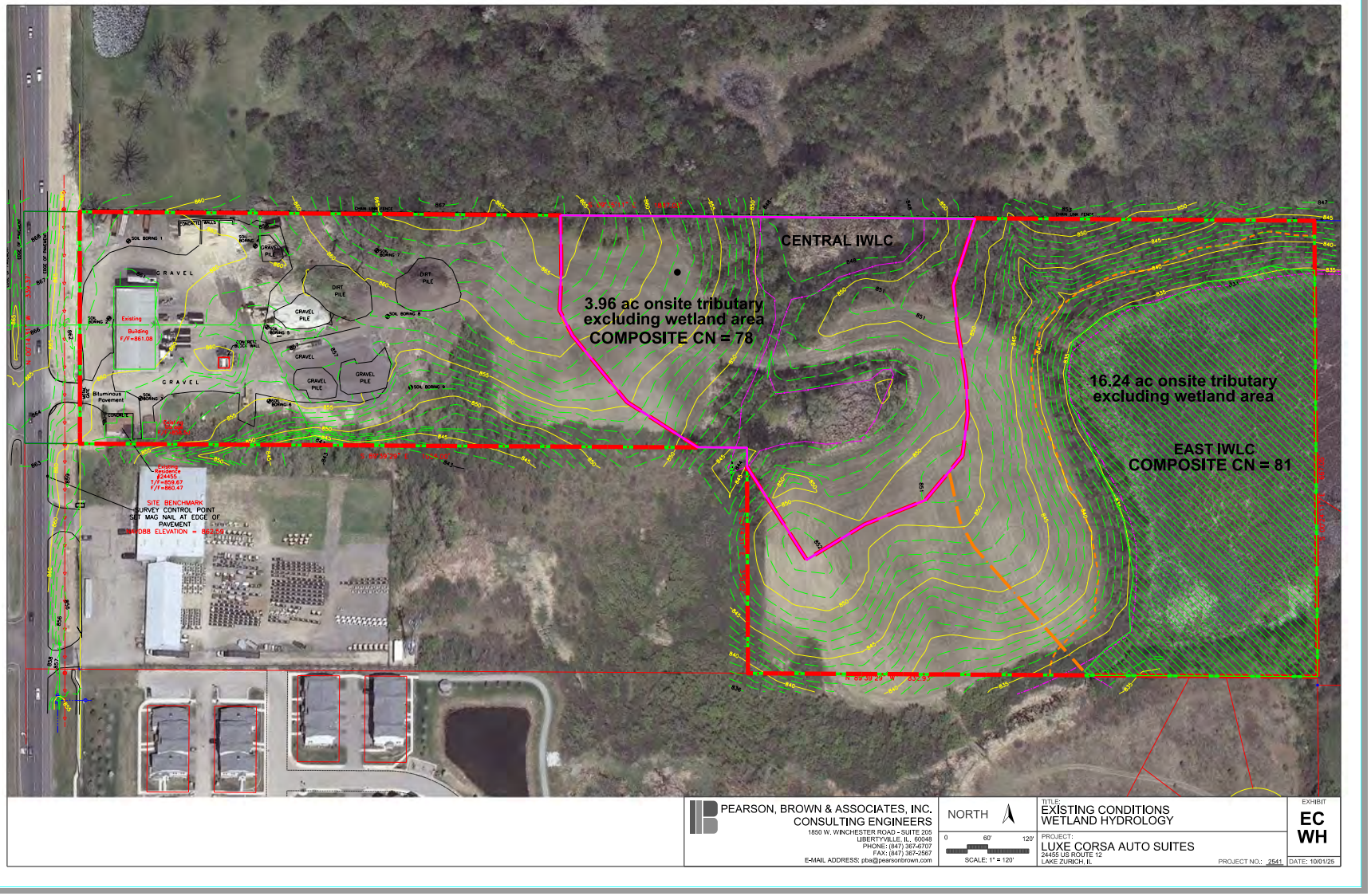
Event	Existing Runoff Volume (ac-ft)	Unit Runoff Volume (ac-ft/ac)	80% of Existing Volume (ac-ft)	150% of Existing Volume (ac-ft)
2-Year 24 Hour	2.138	0.132	1.711	3.207

PROPOSED CONDITIONS

Proposed Tributary Area (acres) = 16.24
Proposed Conditions Curve Number = 88

Event	Rainfall (in)	CN	Runoff* (in)	Runoff Volume (ac-ft)	Percent of Existing Volume
2-Year 24 Hour	3.34	88	2.123	2.874	134%

* Estimated Runoff is calculated using the TR55 method using the following equations:
S = (1000/CN) - 10
Ia = 0.2 x S
Runoff = [(P - Ia)^2]/[(P - Ia)+S]


CENTRAL IWLC
3.96 ac onsite tributary excluding wetland area
COMPOSITE CN = 78
16.24 ac onsite tributary excluding wetland area
EAST IWLC
COMPOSITE CN = 81
GRAVEL
DIRT PILE
GRAVEL PILE
SOIL BORING 1
SOIL BORING 2
SOIL BORING 3
SOIL BORING 4
SOIL BORING 5
SOIL BORING 6
SOIL BORING 7
SOIL BORING 8
SOIL BORING 9
CONCRETE BLOCK WALL
CHAIN LINK FENCE
Existing Building F/F=861.08
Bituminous Pavement
CONCRETE
SITE BENCHMARK
SURVEY CONTROL POINT
SET MAG NAIL AT EDGE OF PAVEMENT
ELEVATION = 862.09
PEARSON, BROWN & ASSOCIATES, INC.
CONSULTING ENGINEERS
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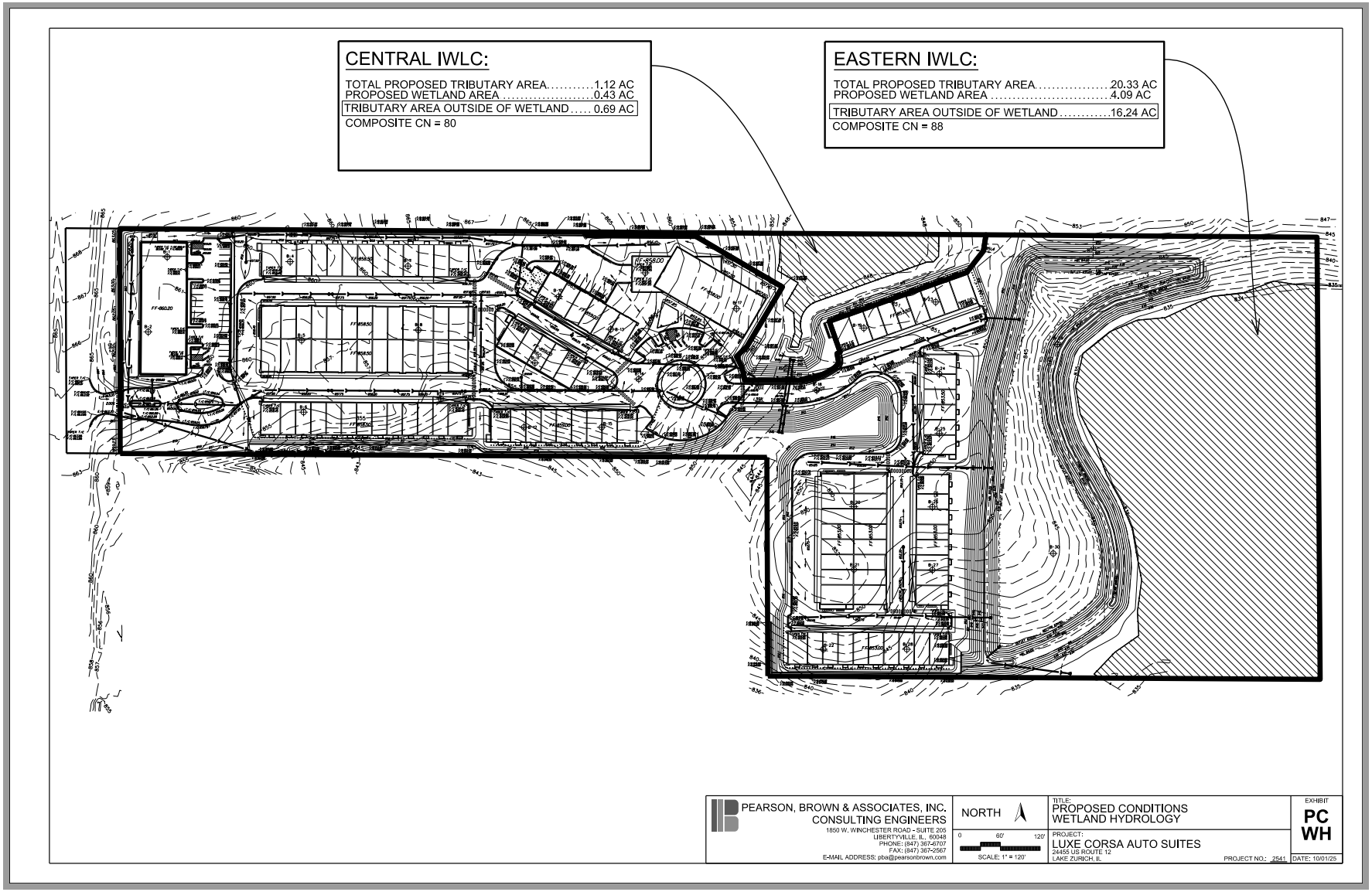
LIBERTYVILLE, IL. 60048
PHONE: (847) 367-4707
FAX: (847) 367-2567
E-MAIL ADDRESS: pba@pearsonbrown.com
NORTH
0 60' 120'
SCALE: 1" = 120'
TITLE:
EXISTING CONDITIONS
WETLAND HYDROLOGY
PROJECT:
LUXE CORSA AUTO SUITES
24455 US ROUTE 12
LAKE ZURICH, IL
PROJECT NO.: 2541
EXHIBIT
EC
WH
DATE: 10/01/25


CENTRAL IWLC:
TOTAL PROPOSED TRIBUTARY AREA.....1.12 AC
PROPOSED WETLAND AREA.....0.43 AC
TRIBUTARY AREA OUTSIDE OF WETLAND..... 0.69 AC
COMPOSITE CN = 80
EASTERN IWLC:
TOTAL PROPOSED TRIBUTARY AREA.....20.33 AC
PROPOSED WETLAND AREA.....4.09 AC
TRIBUTARY AREA OUTSIDE OF WETLAND.....16.24 AC
COMPOSITE CN = 88
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TITLE:
PROPOSED CONDITIONS
WETLAND HYDROLOGY
PROJECT:
LUXE CORSA AUTO SUITES
24455 US ROUTE 12
LAKE ZURICH, IL
PROJECT NO.: 2541
EXHIBIT
PC
WH
DATE: 10/01/25

STORMWATER MANAGEMENT SYSTEM MAINTENANCE PLAN
FOR
LUXE CORSA AUTO SUITES, LAKE ZURICH, ILLINOIS

October 1, 2025

PURPOSE AND OBJECTIVE

The stormwater management facilities have been designed to prevent damage to property and to minimize the impact on the environment. The only way to keep the system operating as designed is with proper maintenance. Maintenance items can typically be broken down into short-term and long-term maintenance tasks but all tasks should be conducted on an as-needed basis if necessary.

Short Term Maintenance Program – Significant Elements and Aspects provided as an attachment hereto. Please note that the attachment is not intended to cover all possible maintenance issues, only those most common. **The "Short-Term" Maintenance items are intended for the construction phase of the project until the site is final stabilized. After construction is completed and final site stabilization has occurred, the "Long Term" Maintenance Program commences. The "Long Term" Maintenance program continues in perpetuity. Note also that some items included in the "Short-Term" program may need to be implemented post construction such as after periods of significant rainfall or high wind events.**

Long Term Maintenance Program – Significant elements and aspects are provided as an attachment hereto. The maintenance is supplemented by repair as required or replacement as the case may be, depending on the wear and tear of the components of the drainage system. Please note that the attachment is not intended to cover all possible maintenance issues, only those most common.

The Final Plat and Final Engineering for the project shall illustrate all stormwater management areas including the storm sewer system and deed restricted areas such as wetland buffer areas and stormwater basin areas.

RESPONSIBILITIES

Adequate provisions for Short Term and Long Term Maintenance are an essential aspect for continued proper operation of the stormwater management system.

Responsibility for the short and long term overall maintenance of the stormwater management system is put on the Owner's Association. Responsibility for the maintenance of the stormwater management system shall include the pipes, and other structures within the property. Responsibility for both the short term and long-term maintenance of the grassy surface areas (including native vegetation) within the property designated for stormwater management shall be the specific responsibility of the Owner's Association.

VEGETATIVE GROWTH:

Vegetative Growth: The project plans call for native vegetation to be planted within the stormwater basin and also in the wetland buffer zone.

The native vegetation cover should be a thick and vigorous growth to stabilize soils and prevent erosion from occurring.

One of the most common maintenance problems is that of dying vegetation. The responsible party shall determine the cause of problem and correct it either by modifying the environment so the selected vegetation can grow or changing the type of vegetation planted to meet environmental requirements.

Many native species have deep roots that help prevent erosion and also remove nutrients and other impurities from the stormwater runoff helping to minimize impacts to surface waters including streams, rivers and lakes. Native vegetation is not like turf grass and should be maintained as follows:

Native Vegetation Management Activities:
Weed management during the growing season should be conducted both before and after seed installation activities to help promote the establishment of native species. Both mechanical and chemical weed control methods will be performed according to site needs. After seeding activities have been completed, spot treatments should be made with appropriate herbicides to effectively control weeds commonly associated with disturbed areas. Persons performing herbicide treatments during the execution of this plan must have obtained a current herbicide applicator s/operator s license and possess adequate experience in weedy or non-native species identification and management. All herbicides will be applied in strict accordance with label restrictions. Mowing and/or weed whipping may be conducted on several occasions throughout the growing season to help suppress the development of short-lived invasive species. Mowing should be performed at no less than 6 inches from the ground and under conditions that reduce the possibility of soil disturbances. Management activities shall be by qualified personnel with experience with native vegetation establishment.

Native Vegetation Monitoring:
Monitoring shall be by a qualified ecological firm that has experience with vegetation monitoring protocols. A plant meander search should be performed during two occasions during each growing season, spring (May/June) and fall (August/September). Plant species observed will be analyzed using the Chicago FQA program to provide qualitative vegetation statistics including native FQI and native mean C. Determinations for dominance or cover will be by visual estimation only. The naturalized planting areas will have the following performance standards: The seeded/planted areas will meet the following annual standards for the presence of native, non-invasive perennial species (as measured by aerial coverage): Year 1 10%, Year 2 25%, Year 3 75% (does not apply to emergent zones)

Once Native plants cover 75% of the basin and buffer areas with no bare areas greater than 2 square feet, the areas can be considered to be established.

Annual maintenance thereafter should include invasive removals, clean up of trash and debris.

1. At the end of Year 3, none of the three most dominant species within the seeded/planted areas will be invasive or nonnative species. These will typically include, but are not limited to, the following: Cattail (Typha spp.), Reed Canary Grass (Phalaris arundinacea), Purple Loosestrife (Lythrum salicaria), Common Reed (Phragmites australis), Canadian Thistle (Cirsium arvense), Sandbar Willow (Salix interior), Kentucky Blue Grass (Poa pratensis), Yellow Sweet-Clover (Melilotus officinalis), Teasel (Dipsacus spp.), Japanese-Knotweed (Reynoutria japonica), and Asian Bittersweet (Celastrus orbiculatus).

2. No area over the entire native vegetation area greater than 2 square feet will be devoid of vegetation, as measured by aerial coverage, unless specified on approved plans. This standard does not apply to emergent communities.

3. At the end of Year 3, the native FQI will have a value of 20.00 or greater for all communities combined.

4. At the end of Year 3, the native mean C will have a value of 3.00 or greater for all communities combined. Soil erosion and sediment control measures shall be regularly maintained. Routine inspections should include on-going attention to any recurrent erosion or sediment problems. The risk of any such problems lessens as site vegetative cover increases and matures. Repairs should be conducted promptly to prevent small erosion problems from becoming larger problems. Minor grading, supplemental seeding or planting, and the use of appropriate erosion control blanket will be needed in any areas where erosion persists.

MAINTENANCE OF DRAINAGE SYSTEM

Cleaning and repairing storm sewers, outflow pipes, inlets, catch basins and manholes are particularly important because these elements are not visually obvious, as are the surface area elements. If these subsurface elements become clogged, then water may flood the pavement surface and may cause extensive erosion damage or water flow blockage. Cleaning of culverts, outflow pipes, inlets, catch basins, snouts and manholes must be made a routine maintenance activity scheduled for several times a year and on an as needed basis. Cleaning and repairing of overland flow routes and swales is important to preserve surface drainage and protect the subdivision from flooding. Experience will show the required cleaning frequencies for specific drainage items.

Cost Considerations: Maintenance and replacement needs and costs should be part of the economic analysis. All maintenance costs will be the responsibility of the Owner's Association. Keep records of all maintenance costs in order to determine typical annual costs that would be the basis for the annual maintenance fund. Frequent maintenance program work execution will lead to less frequent and less costly long term maintenance and repair, possibly requiring replacement. The attached short term and long term maintenance provisions may need to be adjusted based on experience recorded over the initial period of occupancy.

Surface/Subsurface Drainage: As previously mentioned, cleaning and repairing overland flow routes, swales, culverts, outflow pipes, inlets, catch basins, drain tile connection structures, snouts and manholes is particularly important because flooding is likely if they are obstructed. Frequent walk-through inspections should be conducted to see if any obstructions are present including garbage, wood, branches, cut grass, dirt, leaves, etc. Remember that these drainage structures were placed there for a reason and they can only operate as designed if they are properly maintained.

RECORD KEEPING

Separate and distinct records shall be maintained by the Association to record the specific activities and costs thereof for the Short Term and Long Term Maintenance Plan implementation. The records shall include the dates of maintenance inspections and the specific work performed. The records can be used to document maintenance history and as a basis for annual budgeting.

CONCLUSION

The stormwater management plan for this development was designed to convey stormwater runoff without damage to structures or the environment. The only way the stormwater management system can operate as designed is if it is maintained properly over time. Failure to properly maintain the system can result in flooding, poor aesthetics, increased pest populations and poor water quality leaving the site.

Long Term Maintenance Program – Significant Elements and Aspects[1]

Stormwater Conveyance Elements	Periodic Inspections	Significant Aspects	Repair Work
Grassy areas – Swales, Other Erosion Prone Areas	Annually	Erosion	Seed or Sod, Ditch Checks to reduce flow velocities or plant native vegetation
Grassy areas – Periphery	Annually, 5 year intervals	Erosion	Groom Seed
Tree Trimming	5 year intervals	Prescribed Management	Cut back
Native Vegetation Areas	As described in Vegetative Growth Section Above	As described in Vegetative Growth Section Above	As described in Vegetative Growth Section Above
Controlled Burn of Native Vegetation Areas	2 to 3 year intervals	Prescribed Management	Controlled Burn
At Culvert and Swales Outfalls, Stormwater Ponds / Basins	5 year intervals	Flooding, Erosion	Remove Siltation, Re-seed, Restore Riprap
Outlet Control Structure Pipes	5 year intervals	Flooding, Erosion	Restore/Replace Inflow & Outflow Openings
Storm Structures, water quality Snouts within structures and Pond Outlet Control Structure	As needed basis	Decrease storm sewer capacity	Remove blockage, Repair as needed
Basin side slopes	Annually	Surface Erosion Seepage Cracks, Settlement Slumps/Slides Animal Burrows Piping (Leakage) Vegetation	Repair as Needed
Basin Storage	5 year intervals 5 year intervals	Detention / Comp. Storage Volume Sediment Volume	Re-grade Basin as required Remove Sediment
Drain Tile Connection Structures (If present)	Annually	Check for blockage	Clean out accordingly, Repair as needed

[1] Long range maintenance activities are those required that are typically conducted every several years. The maintenance intervals stated are typical but all are on an as-needed basis as well. This list is to be used as an example only and is not intended to be all inclusive.

Short Term Maintenance Program – Significant Elements and Aspects[2]

Stormwater Conveyance Elements	Periodic Inspection	Significant Aspects	Repair Work
General – All Areas	March through November	Disturbed surface areas	Seed Area with grass or native vegetation Mulch to Protect
Residential Lot Areas	Weekly	Floatable Items that could wash into stormwater system	Dispose of Refuse Store Useable Items
Swales on site	March & June & October	Branches & Leaves/Trash	Collect & Dispose
Culverts under Roads	March through November	Branches & Leaves/Trash Pipe Condition	Collect & Dispose Repair/Replace
Emergency Outflow Structure/Weir	March through November	Branches & Leaves/Trash Pipe or Weir Condition	Collect & Dispose Repair/Replace
Manholes Including Snouts within structures	March & June & October	Branches & Leaves/Trash Manhole Condition	Collect & Dispose Repair/Replace
Stormwater Storage Area	March, June, July, Aug., Sept., Oct., & Nov.	Mow non-native vegetation	Remove/Dispose Refuse/Grass clippings
Roadway Drainage System	Public Works Department	Standard procedure	Prescribed Process

Source: Modified Sample Maintenance Plan from Lake County Stormwater Management Commission.

[2] Maintenance of Grassy Areas shall require application of fertilizer and related treatment to assure substantial grass growth and avoidance of soil erosion of barren or sparsely grassed soil surface areas. The prescribed periodic inspections for the short term maintenance program are to be supplemented by additional inspections and maintenance work on an as-need basis such as at times following periods of substantial rainfall or storm activities, such as high winds.

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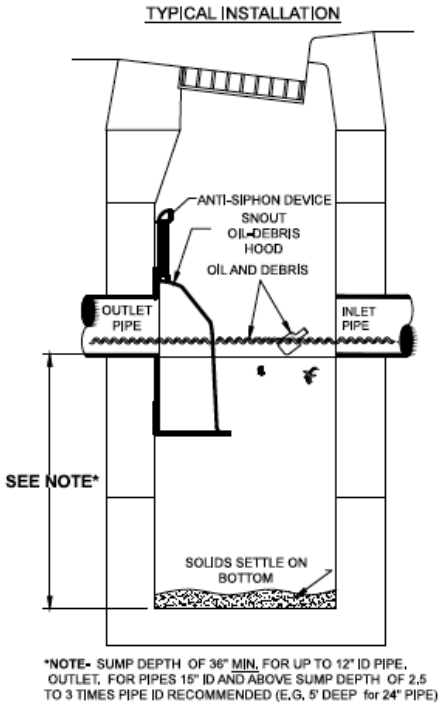
Maintenance Recommendations:

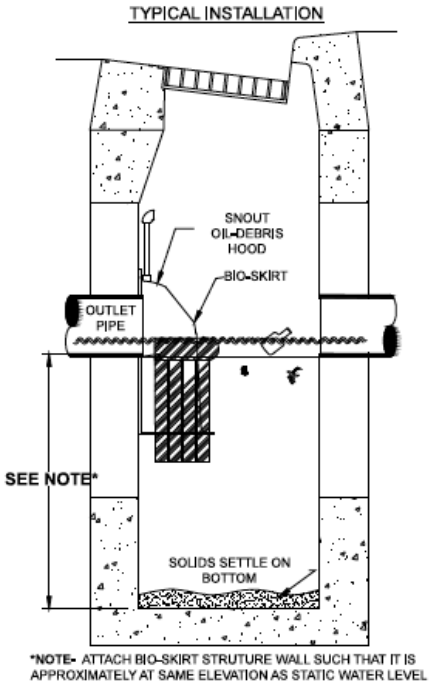
- Monthly monitoring for the first year of a new installation after the site has been stabilized is a recommended practice.
- Measurements should be taken after each rain event of .5 inches or more, or monthly, as determined by local weather conditions.
- Checking sediment depth and noting the surface pollutants in the structure will be helpful in planning maintenance.
- The pollutants collected in SNOUT equipped structures will consist of floatable debris and oils on the surface of the captured water, and grit and sediment on the bottom of the structure.
- It is best to schedule maintenance based on the solids collected in the sump.
- Optimally, the structure should be cleaned when the sump is half full (e.g. when 2 feet of material collects in a 4 foot sump, clean it out).
- Structures should also be cleaned if a spill or other incident causes a larger than normal accumulation of pollutants in a structure.
- Maintenance is best done with a vacuum truck.
- If Bio-Skirts are being used in the structure to enhance hydrocarbon capture, they should be checked on a monthly basis for the first year, and serviced or replaced when more than 2/3 of the boom is submerged, indicating a nearly saturated state. Assuming a typical pollutant-loading environment exists, Bio-Skirts should be serviced* annually or replaced as necessary.
- In the case of an oil spill, the structure should be checked and serviced and Bio-Skirts (if present) replaced or serviced immediately.
- All collected wastes must be handled and disposed of according to local environmental requirements.
- To maintain the SNOUT hoods, an annual inspection of the anti-siphon vent and access hatch are recommended. A simple flushing of the vent, or a gentle rodding with a flexible wire are all that's typically needed to maintain the anti-siphon properties. Opening and closing the access hatch once a year ensures a lifetime of trouble-free service.

*To extend the service life of a Bio-Skirt, the unit may be "wrung out" to remove oils and washed in an industrial washing machine with warm water. The Bio-Skirt may then be re-deployed if the material maintains it's structural integrity. A maintained Bio-Skirt can last for several years. Each Bio-Skirt can hold about one gallon of oils.

SNOUT
INSTALLATION:



BIO-SKIRT INSTALLATION:



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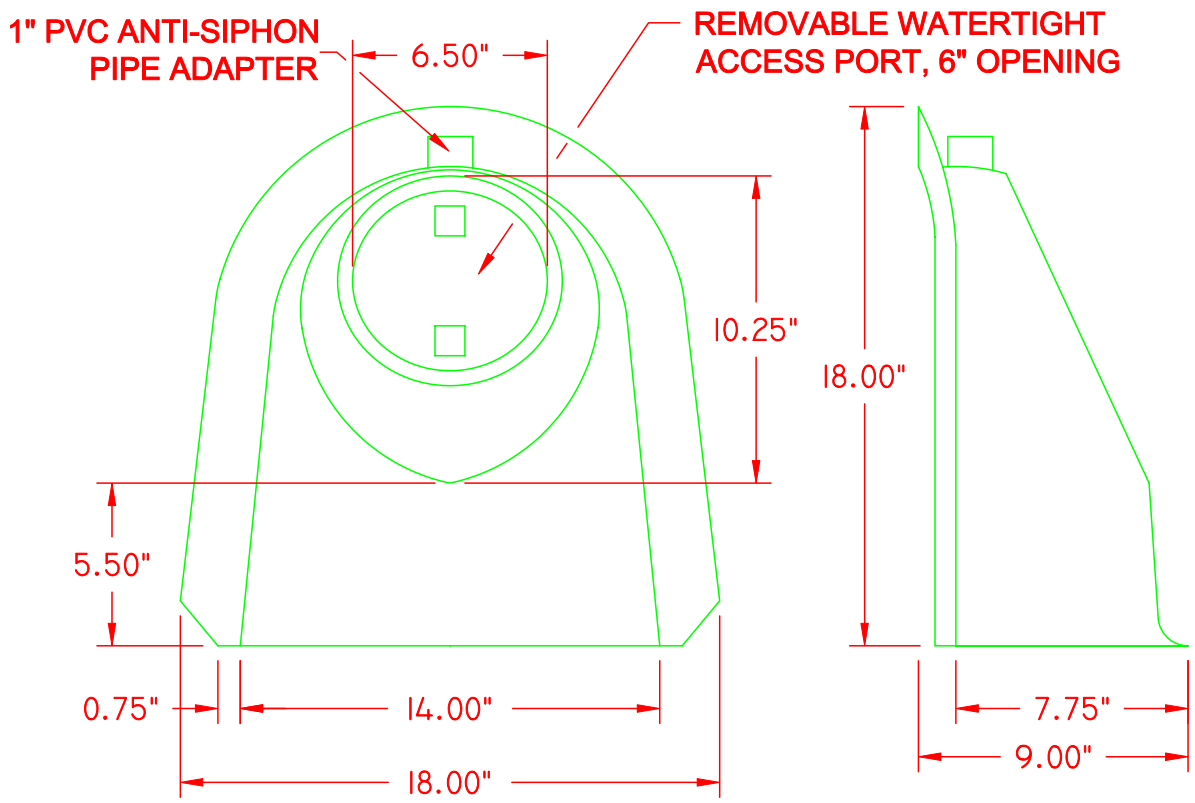

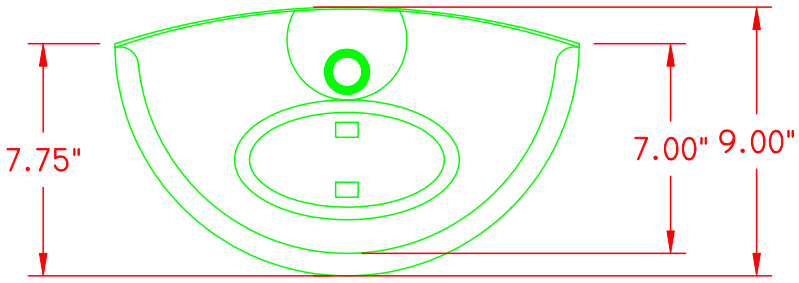

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TRUSTED CARE OF LAND & WATER

WETLAND DELINEATION REPORT

24455 N. Highway 12, Lake Zurich, IL

Prepared For: Caroline Cerbus-Kapudija
Prepared By: Eric Mollahan & Sandy Kubillus
Date: Revised November 26, 2024

Wetland Delineation Report

24455 N. Highway 12., Lake Zurich, IL

Project Name:	Cerbus-Kapudija Properties
Project Manager:	Shelby Serritella
Date:	10/25/2024 – Field visit, revised 11/26/2024

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TRUSTED CARE OF LAND & WATER

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Acronyms

CWA	Clean Water Act
DBH	Diameter at Breast Height
DGPS	Differential Global Positioning System
EPA	Environmental Protection Agency
FAC	Facultative Plants
FACU	Facultative Upland Plants
FACW	Facultative Wetland Plants
FQA	Floristic Quality Assessment
FWS	United States Fish and Wildlife Service
GPS	Global Positioning System
IDNR	Illinois Department of Natural Resources
IEPA	Illinois Environmental Protection Agency
ISIS	Illinois State Water Survey
NRCS	U.S. Department of Agriculture Natural Resources Conservation Service
NTCHS	National Technical Committee for Hydric Soils
NWI	National Wetland Inventory
NWPL	National Wetland Plant List
OBL	Obligate Plants
OHWM	Ordinary High Water Mark
PBD	Planning, Building & Development
SWANCC	Solid Waste Agency of Northern Cook County
TNW	Traditionally Navigable Water
UPL	Upland Plants
USACE	U.S. Army Corps of Engineers
USDA	United Stated Department of Agriculture
USGS	United States Geological Survey
WAAS	Wide Area Augmentation System
WOTUS	Water of the United States

1. Introduction

ILM was contracted to perform a wetland delineation and assessment of waters of the United States (WOTUS) located at 24455 N. Highway 12 in Lake Zurich, IL. The site included several wetlands and former farm fields. The site is within the southeast quarter of Section 7, Township 43N, Range 10E, in unincorporated Lake County, Illinois, on Property Index number 14-07-400-001. The study area is located within the Flint Creek sub-watershed within the Flint Creek-Fox River watershed.

The total size of the study area was approximately 20 acres.

Based on field investigations conducted by ILM on October 25, 2024, there are two wetlands that join off-site to the south. The wetland boundaries were flagged in the field by ILM.

This report identifies the jurisdictional status of the study area based on ILM's best professional understanding and interpretation of the Corps of Engineers' Wetland Delineation Manual (Environmental Laboratory, 1987) and U.S. Army Corps of Engineers' (USACE) guidance documents and regulations. Jurisdictional determinations for other WOTUS were made based on definitions and guidance found in 33 CFR 328.3, USACE Regulatory Guidance Letters, and the wetland delineation manual. The USACE administers Section 404 of the Clean Water Act (CWA), which regulates the discharge of fill or dredged material into all 'waters of the U.S', and is the regulatory authority that must make the final determination as to the jurisdictional status of features identified within the study area.

2. Regulatory Definitions

2.1 Waters of the United States

WOTUS are within the jurisdiction of the USACE under the CWA. WOTUS is a broad term, which includes waters that are used or could be used for interstate commerce. This includes wetlands, ponds, lakes, territorial seas, rivers, tributary streams including any definable intermittent waterways, and some ditches below the ordinary high-water mark (OHWM). Also included are manmade water bodies such as quarries and ponds, which are no longer actively being mined or constructed and are connected to other 'waters'. Wetlands, mudflats, vegetated shallows, riffle and pool complexes, coral reefs, sanctuaries, and refuges are all considered special aquatic sites which involve more rigorous regulatory permitting requirements. A specific, detailed definition of WOTUS can be found in the Federal Register (33 CFR 328.3).

2.2 Isolated Wetlands

'Isolated wetlands' are most wetlands that are not adjacent to, or contiguous with, any other WOTUS via a surface drain such as a swale, ditch, or stream. 'Waters of the U.S' are restricted to navigable waters, their tributaries, and their adjacent wetlands. Isolated wetlands are thus no longer under the jurisdiction of the USACE. This determination was defined in the 2001 U.S. Supreme Court case, Solid Waste Agency of Northern Cook County (SWANCC) v. U.S. Army Corps of Engineers (No. 99-1178).

2.3 Wetlands

Wetlands are a category of WOTUS for which a specific identification methodology has been developed. As described in detail in the Corps of Engineers Wetland Delineation Manual (Environmental Laboratory, 1987), wetland boundaries are delineated using three criteria: hydrophytic vegetation, hydric soils, and wetland hydrology. In addition to the criteria defined in the 1987 Manual, the procedures described in the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region Version 2.0 (Environmental Laboratory, 2010) is used to evaluate the site for the presence of wetlands. WOTUS are based on definitions and guidance found in 33 CFR 328.3, USACE Regulatory Guidance Letters, the USACE Wetland Delineation Manual and applicable Regional Supplements. The USACE administers Section 404 of the Clean Water Act which regulates the discharge of fill or dredged material into all 'waters of the U.S.', and is the regulatory authority that must make the final determination as to the jurisdictional status of the site.

2.3.1 Hydrophytic Vegetation

On June 1, 2012, the National Wetland Plant List (NWPL), formerly called the National List of Plant Species that Occur in Wetlands (Reed 1988), went into effect after being released by the U.S. Army Corps of Engineers (USACE) as part of an interagency effort with the U.S. Fish and Wildlife Service (FWS), the U.S. Environmental Protection Agency (EPA), and the U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) (Lichvar and Kartesz, 2009). The NWPL, along with the information implied by its wetland plant species status ratings, provides general botanical information about wetland plants and is used extensively in wetland delineation, restoration, and mitigation efforts. The NWPL consists of a comprehensive list of wetland plant species that occur within the United States along with their respective wetland indicator statuses by region. An indicator status reflects the likelihood that a particular plant species occurs in a wetland or upland (Lichvar et al. 2012). Definitions of the five indicator categories are presented below.

OBL (Obligate Wetland Plants): almost always occur in wetlands. With few exceptions, these plants (herbaceous or woody) are found in standing water or seasonally saturated soils (14 or more consecutive days) near the surface. These plants are of four types: submerged, floating, floating-leaved, and emergent.

FACW (Facultative Wetland Plants): usually occur in wetlands, but may occur in non-wetlands. These plants predominately occur with hydric soils, often in geomorphic settings where water saturates the soils or floods the soil surface at least seasonally.

FAC (Facultative Plants): occur in wetlands and non-wetlands. These plants can grow in hydric, mesic, or xeric habitats. The occurrence of these plants in different habitats represents responses to a variety of environmental variables other than just hydrology, such as shade tolerance, soil pH, and elevation, and they have a wide tolerance of soil moisture conditions.

FACU (Facultative Upland Plants): usually occur in non-wetlands, but may occur in wetlands. These plants predominately occur on drier or more mesic sites in geomorphic settings where water rarely saturates the soils or floods the soil surface seasonally.

UPL (Upland Plants): almost never occur in wetlands. These plants occupy mesic to xeric non-wetland habitats. They almost never occur in standing water or saturated soils. Typical growth forms include herbaceous, shrubs, woody vines, and trees.

According to the USACE's Midwest Regional Supplement, plants that are rated as FAC, FACW, or OBL are classified as wetland plant species. The percentage of dominant wetland species in each of the four vegetation strata (tree, shrub/sapling, herbaceous, and woody vine) in the sample area determines the hydrophytic (wetland) status of the plant community. Dominant species are chosen independently from each stratum of the community. In general, dominants are the most abundant species that individually or collectively account for more than 50 percent of the total coverage of vegetation in the stratum, plus any other species that, by itself, accounts for at least 20 percent of the total.

For the purposes of determining dominant plant species, the four vegetation strata are defined. Trees consist of woody species 3 inches or greater in diameter at breast height (DBH). Shrubs and saplings are woody species that are over 1 meter in height and less than 3 inches DBH. Herbaceous species consist of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants less than 1 meter tall. Woody vines consist of vine species greater than 1 meter in height, such as wild grapes.

2.3.2 Hydric Soils

Hydric soils are defined as soils that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part. In general, hydric soils are flooded, ponded, or saturated for a week or more during the growing season when soil temperatures are above 32 degrees Fahrenheit. The anaerobic conditions created by repeated or prolonged saturation or flooding result in permanent changes in soil color and chemistry, which are used to differentiate hydric from non-hydric soils.

In this report, soil colors are described using the Munsell notation system. This method of describing soil color consists of separate notations for hue, value, and chroma that are combined in that order to form the color designation. The hue notation of a color indicates its relation to red, yellow, green, blue, and purple; the value notation indicates its lightness, and the chroma notation indicates its strength or departure from a neutral of the same lightness.

The symbol for hue consists of a number from 1 to 10, followed by the letter abbreviation of the color. Within each letter range, the hue becomes more yellow and less red as the numbers increase. The notation for value consists of numbers from 0 for absolute black, to 10 for absolute white. The notation for chroma consists of numbers beginning with /0 for neutral grays and increasing at equal intervals. A soil described as 10YR 3/1 soil is more gray than a soil designated 10YR 3/6.

2.3.3 Wetland Hydrology

Wetland hydrology is defined as the presence of water for a significant period of time at or near the surface (within the root zone) during the growing season. Wetland hydrology is present only seasonally in many cases and is often inferred by indirect evidence. Hydrology is controlled by such factors as seasonal and long-term rainfall patterns, local geology and topography, soil type, local water table conditions, and drainage. Primary indicators of hydrology are inundation, soil saturation in the upper 12 inches of the soil, watermarks, sediment deposits, and drainage patterns. Secondary indicators such as oxidized root

channels in the upper 12 inches of the soil, water-stained leaves, local soil survey data, and the FAC-neutral vegetation test are sometimes used to identify hydrology. A primary indicator or two or more secondary indicators are required to establish a positive indication of hydrology.

2.3.4 Wetland Definition Summary

In general, an area must meet all three criteria to be classified as a wetland. In certain problem areas such as seasonal wetlands, which are not wet at all times, or in recently disturbed (atypical) situations, areas may be considered a wetland if only two criteria are met. In special situations, an area that meets the wetland definition may not be within the USACE's jurisdiction due to a specific regulatory exemption.

3. Background Information

Sources of reference information that were consulted to identify potential wetlands and hydric soil units on the study area are listed below.

- United States Geological Survey (USGS) Topographical Map (Figure 1)
- Lake County Topographic Map (Figure 2)
- USFWS National Wetlands Inventory (NWI) Map (Figure 3)
- Lake County Wetlands Inventory (LCWI) Maps (Figure 4)
- Floodplain and Flood of Record Map (FEMA FIRM) (Figure 5)
- USDA-NRCS Web Soil Survey for Lake County, Illinois (Figure 6)
- Topographic Wetness Index (Figure 7)
- Drought Status Maps (Figure 8)

These maps were used to identify potential wetlands and wetland soil units on the site. The USGS topographic map was developed from remotely sensed digital topography and high altitude photography. The National Wetland Inventory Map and the LCWI maps were prepared from high altitude photography and in most cases were not field checked. Because of this, wetlands and their boundaries are sometimes erroneously identified, missed, or misidentified. Additionally, the criteria used in identifying these wetlands were different from those currently used by the USACE. The FEMA FIRM was developed from digital hydrologic and hydraulic modeling of the watershed to identify the elevation and extent of flooding during the 100-year and 500-year storm interval. The digital model utilizes remotely sensed digital topography, and in most cases is not field verified for accuracy. The county soil maps were developed from high altitude photography. Soil mapping units are often generalized based on topography and many mapping units contain inclusions of other soil types for up to 15 percent of the area of the unit. The USACE does not accept the use of these maps to make wetland determinations.

3.1 United States Geological Survey (USGS) Topographical Map

The Lake Zurich Quadrangle (Figure 1) identifies several wetlands in the eastern portion of the property. The on-site field assessment confirmed topography and observed that the study area drained to the south.

The Lake County Topographic Map (Figure 2) shows the terrain in more detail with 1-foot contour lines. The on-site field assessment confirmed the topography and showed that both wetlands converge south of the property and drain to the southwest.

3.2 National Wetland Inventory

The NWI map of the site (Figure 3) identifies two features within the property, although they do not quite agree with the field locations. Table 3-1 lists the symbol and description of the feature identified on the NWI map.

Table 3-1 NWI Features Within the Study Area

Symbol	Description
PEMC	Palustrine, emergent, seasonally flooded
PEMF	Palustrine, emergent, semi-permanently flooded

3.3 Lake County Wetland Inventory

The LCWI (2002) was produced as a joint effort by the USDA Soil Conservation Service, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, and Lake County Agencies. This map identifies wetlands, farmed wetlands, constructed wetlands, and ADID wetlands (advanced identification). ADID wetlands are of very high floristic quality and are essentially considered unmitigable by the Corps of Engineers.

The LCWI map of the study area (Figure 4) identified wetlands 1 & 2. It did not show the swale as wetland.

The LCWI map identifies a wetland on the western side of the property near the existing development. This has been determined by Lake County Stormwater Management staff as pre-existing fill prior to regulations.

3.4 Floodplain and Flood of Record Map

The FEMA Flood Insurance Rate Map (Figure 5) has panel number 17097C0228K & 17097C0226K effective 9/18/2013. Wetland 2, on the eastern end of the site is shown within Zone A, or within the 100-year flood zone.

The flood of record is shown in green which includes most of wetlands 1 and 2.

3.5 Soil Survey

The NRCS *Soil Survey of Lake County* identified four soil series in the study area (Figure 6). Table 3-1 identifies the soil unit symbol, soil unit name, and if the soil type contains components that meet the hydric soil criteria.

Table 3-1 Soil Types Within the Study Area

Symbol	Soil Unit Name	Hydric	Hydric Inclusions
530C, C2, D, D2, D3	Ozaukee silt loam	No	Yes - Ashkum
232A	Ashkum silty clay loam	Yes	
298B	Beecher silt loam	No	Yes - Ashkum
330A	Peotone silty clay loam	Yes	
4103A	Houghton muck, ponded	Yes	

3.6 Topographic Wetness Index

The topographic wetness is a model to estimate where water will accumulate in an area with elevation differences. The index is a function of both the slope and the upstream contributing area.

Figure 7 shows sections of wetlands 1 and 2 as having a topographic wetland index. It also identifies some sections in the western portion of the property, within the developed area as having a topographic wetness index. An area near the swale has a topographic wetness index.

3.7 Drought Status Maps

The Illinois State Climatologist provides weather and climate data, maps, and information for Illinois using the U.S. Drought Monitor for Illinois are provided. The study area is currently experiencing a moderate drought (D1).

3.8 Historic Aerial Photos

- 1939 – The property is mostly farmed except for the eastern portion (wetland 2). A scattering of trees occur in the western section. Wetland 1 is farmed.
- 1961 – A building occurs in the western portion. Wetland 2 is visible and the rest is farmed. Wetland 1 may be starting to be visible between the farm fields.
- 1993 – Larger building along Rt. 12. Woodlands occur on the north and near wetland 2. Wetland 1 is still not clearly defined.
- 2010 – Site appears as it does now. The western portion of the site near the building is disturbed. Wetland 1 is wooded between the two farm fields.
- 2022 – Area is still farmed. Wetland 2 is visible. Wetland 1 is heavily wooded. The western portion of the site is disturbed.

4. Site Investigation and Description

4.1 Investigation Methodology

4.1.1 Non-Agricultural Lands

The delineation of wetlands and other WOTUS on the site were based on the methodology described in the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region* Version 2.0 (Environmental Laboratory, 2010) as required by current USACE policy.

Prior to the field work, the background information was reviewed to establish the probability and potential location of wetlands on the study area. Next, a general reconnaissance of the study area was conducted to determine site conditions. The study area was then walked with the specific intent of determining wetland boundaries. Data points were established at locations within and near the wetland areas to document soil characteristics, evidence of hydrology and dominant vegetation.

Note that no attempt was made to examine a full soil profile to confirm any soil series designations. However, soils were examined to a depth of at least 16 inches to assess soil characteristics and hydrology. Complete descriptions of typical soil series can be found in the soil survey for this county.

4.1.2 Agricultural Lands

The subject property was still farmed in 2022. Since this is less than five years ago, a farmed wetland determination was completed for the study area (Appendix D) using the Lake County Stormwater Management Commission April 12, 2022, methodology. The farmed areas are now planted with native vegetation.

Aerial photos were collected from the Barrington Climate Station (IL0442) for the farmed wetland investigation. The dates of these aerial photos included three years with normal precipitation (primary) and two wet years. Availability of the slides was limited from the McHenry-Lake Soil and Water Conservation District.

Wetland signatures were mapped and labeled. Several areas were observed and photographed. They did not meet the status of potential farmed wetland areas.

4.2 Study Area Photographs

Photographs of the study area are located in Appendix B. These photographs are the visual documentation of study area conditions at the time of inspection. The photographs are intended to provide representative visual samples of any wetlands or other special features found in the study area.

4.3 Delineation Data Sheets

Where data points represent a wetland boundary they are presented as paired data points, one each, documenting the wetland and upland sides of the wetland boundary. The routine wetland delineation data sheets used in the wetland delineation process are located in Appendix B. These forms are the written documentation of how representative sample stations meet or do not meet each of the wetland criteria. Plant species, which are included on the NWPL, follow the NWPL naming protocol; additional sources listed in the bibliography are used for plants that are not listed in the NWPL.

4.4 Survey of Wetland Boundary

The wetland delineation map (Figure 9) reflects the wetland boundaries marked in the field and described below. The Chicago Region USACE typically requires an official survey be completed by a Professional Land Surveyor or Professional Engineer in order to verify the delineation boundaries for impact and regulatory purposes.

4.5 Naturally Problematic and Significantly Disturbed Wetlands

The Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0), 2010 identifies several situations under which conventional indicators of wetland vegetation, hydrology, or hydric soils are difficult or impossible to observe as a result of natural conditions (Naturally Problematic) or recent/historic site disturbance (Significantly Disturbed). The USACE outlines procedures allowed for determining wetland boundaries under these Significantly Disturbed situations.

4.6 General Site Conditions

ILM conducted a field survey of the study area on October 25, 2024 after approximately a one inch rain event. The 20-acre study area is located at 24455 N. Highway 12 in Lake Zurich, IL. The site included several wetlands and former farm fields. The site is surrounded by woods and the western boundary is Highway 12. A warehouse and home exist near the highway. The western portion of the property contained many gravel piles. Two former farm fields exist in the center of the property. According to aerial photos, they were still farmed in 2022, although currently they are covered with native vegetation.

Vegetation on the site consists mostly of forested/scrub/shrub vegetation with sections of wet prairie. Upland prairie occurs in the former farmed areas. Based on historical imagery, this property has never been developed.

Based on field investigations and a review of related resource maps, it is our professional opinion that there are two wetlands, one in the center and one along the eastern property boundary. These two wetlands join south of the property. A description of the wetland areas follows:

4.6.1 Wetland 1 (± 1.0 acres)

Wetland 1 occurs in the center of the property and separates the two farm fields. A channel occurs in the middle and is piped under a farm access road. The wetland then spreads out before forming a channel when it leaves the property along the southern property boundary.

The wetland is dominated by floodplain shrubs along with periodic sections of wet prairie. Dominant vegetation included buckthorn (*Rhamnus cathartica,* FAC), phragmites (*Phragmites australis,* FACW) and reed canary grass (*Phalaris arundinacea*, FACW). The soil at the wetland data points met hydric soil criteria. Wetland hydrology indicators were observed at the data points and throughout the wetland.

Wetland 1 extends off the study area to the north and south. It joins Wetland 2 offsite to the south. The total area of Wetland 1, including offsite areas is greater than 10 acres.

Documentation of vegetation, wetland hydrology, hydric soils and other site conditions are described in the data sheet at W1-wet in Appendix B. Representative photographs of this wetland and corresponding data points are provided in Appendix A.

Transitions into uplands are characterized by topographic breaks (rises in ground elevation), transitional or upland plant species, and an absence of wetland hydrology. Upland conditions are described in the data sheet at W1-up in Appendix B.

4.6.2 Wetland 2 (± 4.3 acres)

Wetland 2 occurs along the eastern property boundary and extends offsite to the east. It joins wetland 1 offsite to the south. The total area of Wetland 2, including offsite areas is around 25 acres.

The wetland is dominated by a wet prairie vegetation with a wooded fringe dominated by buckthorn and cattails. The soil at the wetland data points met hydric soil criteria. Wetland hydrology indicators were observed at the data points and throughout the wetland.

Documentation of vegetation, wetland hydrology, hydric soils and other site conditions are described in the data sheet at W2-wet in Appendix B. Representative photographs of this wetland and corresponding data points are provided in Appendix A.

Transitions into uplands are characterized by topographic breaks (rises in ground elevation), transitional or upland plant species, and an absence of wetland hydrology. Upland conditions are described in the data sheet at W2-up in Appendix B.

4.6.3 Other Areas Investigated

4.6.3.1 Pt 1

Pt 1 occurs in an area that was marked on the Lake County Wetlands Inventory Map although it was surrounded by fill material. This fill area occurred prior to Lake County wetland regulations, so is no longer considered wetland. The area was dominated by cottonwood saplings (*Populus deltoides*, FAC, and green foxtail (*Setaria viridis*, upland). Hydric soil was found, but had a restrictive layer 8 inches below the surface. No hydrologic indicators were found. It did not meet the criteria for being a wetland.

4.6.3.2 Pt 2

Pt 2 occurs directly east of the fill piles and did not contain fill material. The area was dominated by phragmites and reed canary grass. Hydric soil was found, but had a restrictive layer 12 inches below the surface. No hydrologic indicators were found. It did not meet the criteria for being a wetland.

4.6.3.3 Pt 3

A swale containing pooled water and phragmites occurs in the western center of the property. It is approximately 75 feet long and 4 feet wide (~ 0.007) acres. A data point showed fill material due to nearby construction activities. Approximately 0.25 inches of standing water was likely due to the rain event the previous night. Since the area did not meet hydric soil criteria it was not flagged as a wetland although it was noted during the provisional jurisdictional determination as potentially a wetland by the Lake County wetland specialist.

4.7 Floristic Quality Assessment (FQA)

The overall quality of the wetland is determined by using a natural area index called the coefficient of conservatism *(C* value*)* as described in Plants of the Chicago Region by Swink and Wilhelm (1994). Non-native species are not ranked. Low quality, "weedy" species are given a rank of 0 and species that only exist in intact native communities are ranked 10. An area of high natural quality would have a diverse population of plant species and the *C* value would average about 5. A mean *C* value of 3.5 or more is considered to have at least marginal natural area quality (Swink & Wilhelm, 1994). However, most areas in the Chicago area have been highly disturbed and the mean *C* value is usually around 2-3.

Plants of the Chicago Region also describe a Floristic Quality Assessment (*I* value) which uses the coefficient of conservatism. The *I* value is found by multiplying the square root of the number of native species (*N*) by the *C* value.

$$I = \overline{C}\sqrt{N}$$

The *I* value determines the overall quality of the plant community, not the frequency or density of individual species. Since the calculation for the *I* value uses the number of native species present, it is a better indicator of the quality of the community than is the *C* value alone. For example: a plant community consisting of one

dominant species with a *C* value of 3, would have an *I* value of 3. While a community containing 5 species with an average *C* value of 3, would have an *I* value of 6.7. This indicates that the second community has a higher floristic quality than the first group.

ILM inventoried plant species within the wetlands identified within the project area and completed a Floristic Quality Assessment (FQA). The FQA summary is provided in Appendix C. A summary of the FQA is provided in Table 4-1.

Table 4-1 Floristic Quality Assessment

Wetland ID	Native Species[1]	Total Species	Coefficient of Conservatism Native Mean (C-value)	Coefficient of Conservatism w/Adventives	Native FQI (*I* - value)	FQI w/Adventives	High Quality Aquatic Resource (FQI > 20, Mean C-Value > 3.5)[2]
1	36	47	3.58	2.74	21.5	18.82	Yes
2	14	23	4.64	2.83	17.37	13.55	Yes

1 Native to the L6Chicago/Northwest Indiana Region
2 Army Corps of Engineers Chicago District Definitions
* Wetlands with a Native Floristic Quality Index of 20 or greater or a Mean C-Value of 3.5 or greater: Reference Plants of the Chicago Region (F. Swink and G. Wilhelm, 4th edition, Indianapolis: Indiana Academy of Science, 1994).

5. Jurisdictional Analysis

On August 29, 2023, the U.S, Environmental Protection Agency (EPA) and Department of the Army issued a final rule that conforms the definition of “waters of the United States” to the U.S. Supreme Court’s May 25, 2023, decision in the case of *Sackett v. Environmental Protection Agency*.

5.1 USACE

The USACE has authority over the discharge of fill or dredged material into ‘waters of the US.’ This includes authority over any filling, mechanical land clearing, or other construction activities that occur within the boundaries of any WOTUS.

Starting on February 25, 2022, the Chicago District adopted the Nationwide Permit (NWP) Program in its entirety and transitioned out of the Illinois Regional Permit Program when it expired on April 1, 2022.

The NWP Program is designed to provide effective protection for wetlands and other aquatic resources while being administratively efficient. The NWPs include specific project limitations and conditions to ensure that adverse environmental effects are no more than minimal, and that the aquatic environment is protected. If a permit applicant designs a project to meet these limitations and conditions, the Corps can provide a simplified and expedited review.

A permit must be obtained from the Chicago District USACE before any of these activities occur. Permits have been developed for projects that meet specific criteria and generally require 60 to 180 days for processing, depending on the type of permit. Individual Permits are required for projects that do not fall under the NWP or are deemed to have potentially significant environmental impacts. These permits are

much more difficult to obtain and receive a higher level of regulatory agency and public scrutiny, and usually require more time for processing.

The USACE-Chicago District's current regulatory program typically requires a minimum compensatory mitigation acreage replacement ratio of 1.5 acres for every 1.0-acre (i.e., 1.5:1 ratio) for WOTUS impacts exceeding 0.1 acre (greater than 0.25 acre for single-family lot). The Corps typically requires a higher mitigation ratio for proposed impacts to WOTUS that qualify as high quality aquatic resources (HQAR), after-the-fact mitigation, and enhancement and preservation of existing wetlands.

5.2 Other Agencies

The Illinois Environmental Protection Agency (IEPA) is responsible for issuing Clean Water Act Section 401 permits known as Water Quality Certification (WQC) in conjunction with the USACE 404 permits. Most Regional Permits have been pre-approved for WQC, but for all Individual and some Regional Permits a separate application for WQC must be submitted directly to the IEPA.

The Illinois Department of Natural Resources (IDNR) is responsible for administering the Interagency Wetland Policy Act of 1989 [20 ILCS830] (effective May 6, 1996). If financial assistance is administered or provided by any agency of the State of Illinois for a project associated with this site, and the project proposes impacts to on- site wetlands, then the project will be subject to the Interagency Wetland Policy Act of 1989.

Isolated Waters of Lake County are regulated by different agencies depending on if they are on properties that are incorporated or unincorporated. Lake County Stormwater Management Commission oversees the incorporated areas, and Lake County Planning, Building and Development oversees the unincorporated areas. Lake County Stormwater Management Commission may require a Watershed Development Permit to develop the property. The current Watershed Development Ordinance (2020) regulates isolated wetlands that the Army Corps determines as non-jurisdictional.

Mitigation Requirements

- Mitigation is required within Lake County for Isolated Waters of Lake County wetland impacts greater than or equal to ¼ (0.25) acres on single lot, single family residential lots. All other properties require mitigation for wetland impacts greater than 0.10 acres.

- Mitigation shall provide for the 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 as defined in Appendix L of the Watershed Development Ordinance (WDO).
    4. Mitigation requirements for on-site and off-site wetland replacement are listed in the WDO.

- The WDO (Watershed Development Ordinance) requires mitigation within Lake County, Illinois, for all WOTUS impacts occurring in Lake County that exceed the mitigation threshold of the USACE's regulatory

program, with first priority being within the same major watershed in the county (Des Plaines River, Fox River, North Branch-Chicago River, and Lake Michigan).

5.3 Buffer Areas

Buffer areas shall be required for all areas defined as either Waters of the United States or Isolated Waters of Lake County. Buffer areas are divided into two types, linear buffers and water body buffers.

For water body buffers - The buffer width shall be determined as follows:

- For all water bodies or wetlands with a total surface area greater than one-third (1/3) acre but less than one (1) acre, a minimum buffer width of thirty (30) feet shall be established.
- For all water bodies or wetlands with a total surface area greater than or equal to one (1) acre but less than two and one-half (2.5) acres, a minimum buffer width of forty (40) feet shall be established.
- For all water bodies or wetlands with a total surface area greater than or equal to two and one-half (2.5) acres, a minimum buffer width of fifty (50) feet shall be established.
- Non-linear high-quality aquatic resources shall have a minimum buffer width of one hundred (100) feet.

5.3 Jurisdictional Analysis

Based on findings of the field investigation and our review of available resource materials, we have determined that two wetlands of approximately 1.0 and 4.3 acres occurs within the property. A breakdown of the jurisdictional analysis for the wetland area is listed in Table 5-1. The PJD was completed on 10/28/24 by Lake County Stormwater Management wetland specialists.

Table 5-1 Jurisdictional Analysis

Wetland ID	Feature Class	Hydrologic Connection	Potential Jurisdictional Status	Area (acres)
1	Forested/scrub	none	IWLC	1.0
2	Emergent wetland & forested/scrub	none	IWLC	4.3

6. Summary and Conclusion

ILM was contracted to perform a wetland delineation and assessment of WOTUS, including any wetlands and streams which are located at 24455 N. Highway 12 in Lake Zurich, IL. The total size of the site is 20 acres. Vegetation within the study area consisted mostly of shrubs, floodplain trees, and emergent vegetation.

Based on field investigations conducted by ILM on October 25, 2024, and our review of related resource maps, it is our professional opinion that there are two wetlands of approximately 1.0 acres and 4.3 acres that connect offsite. Wetland boundaries were flagged in the field by ILM.

A permit will be required prior to any filling, dredging, or mechanical land clearing that occurs within the boundaries of any Isolated Waters of Lake County (IWLC) or Waters of the U.S. (WOTUS). While this report represents our best professional judgment based on our knowledge and experience, it is important to note that the Chicago District of the USACE has final discretionary authority over all jurisdictional determinations to determine if they qualify as WOTUS or isolated wetlands. It is therefore recommended that a copy of this report be furnished to either Lake County Stormwater Management or the Chicago District USACE to perform a jurisdictional determination to confirm the results of our findings.

6.1 Next steps:

ILM can complete the paperwork and meet the reviewing agencies onsite for these next steps if needed.

1. Field boundary verifications (BVs) of the delineated wetland-water body boundaries are strongly recommended before the boundaries are surveyed to avoid the possible need for re-survey, if adjustments are requested by the regulatory agencies (SMC) or the IWLC-certified community, based on field observations.
    - SMC may perform a requested IWLC (Isolated Waters of Lake County) BV for areas under their jurisdiction during a separate site visit prior to filing a permit application.
        - The BV request form has been submitted to SMC.

2. An engineer would need to develop site plans for development of the property.
    a. Note the wetland buffer requirements are 100 ft. since both wetlands on this site were determined as high quality aquatic resources. Buffer averaging may be allowed.

3. A permit application will need to be submitted for any wetland impacts and site development. This would involve the Watershed Development permit application (WDO).

7. References

Environmental Laboratory. 1987. *U.S. Army Corps of Engineers' Wetland Delineation Manual*, Technical Report Y-87-1, U.S. Waterways Experiment Station, Vicksburg, MS.

Environmental Laboratory. 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (version 2.0)*, ERDC/EL TR-10-16, U.S. Army Engineer Research and Development Center, Vicksburg, MS.

Gleason, H.A. and A. Cronquist. 1991. *Manual of Vascular Plants of Northeastern United States and Adjacent Canada*. 2nd Edition. The New York Botanical Garden. Bronx, NY.

Lichvar, R., Melvin, N.C., Butterwick, M.L. and Kirchner, W.N. 2012. *National Wetland Plant List Indicator Rating Definitions.* ERDC/CRREL TN-12-1. Hanover, NH: U.S. Army Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory.
https://www.fws.gov/wetlands/documents/national-wetland-plant-list-indicator-rating-definitions.pdf

U.S. Army Corps. National Wetland Plant List
https://cwbi-app.sec.usace.army.mil/nwpl_static/v34/home/home.html

24455 N. Highway 12., Lake Zurich, IL

FIGURES

1-9

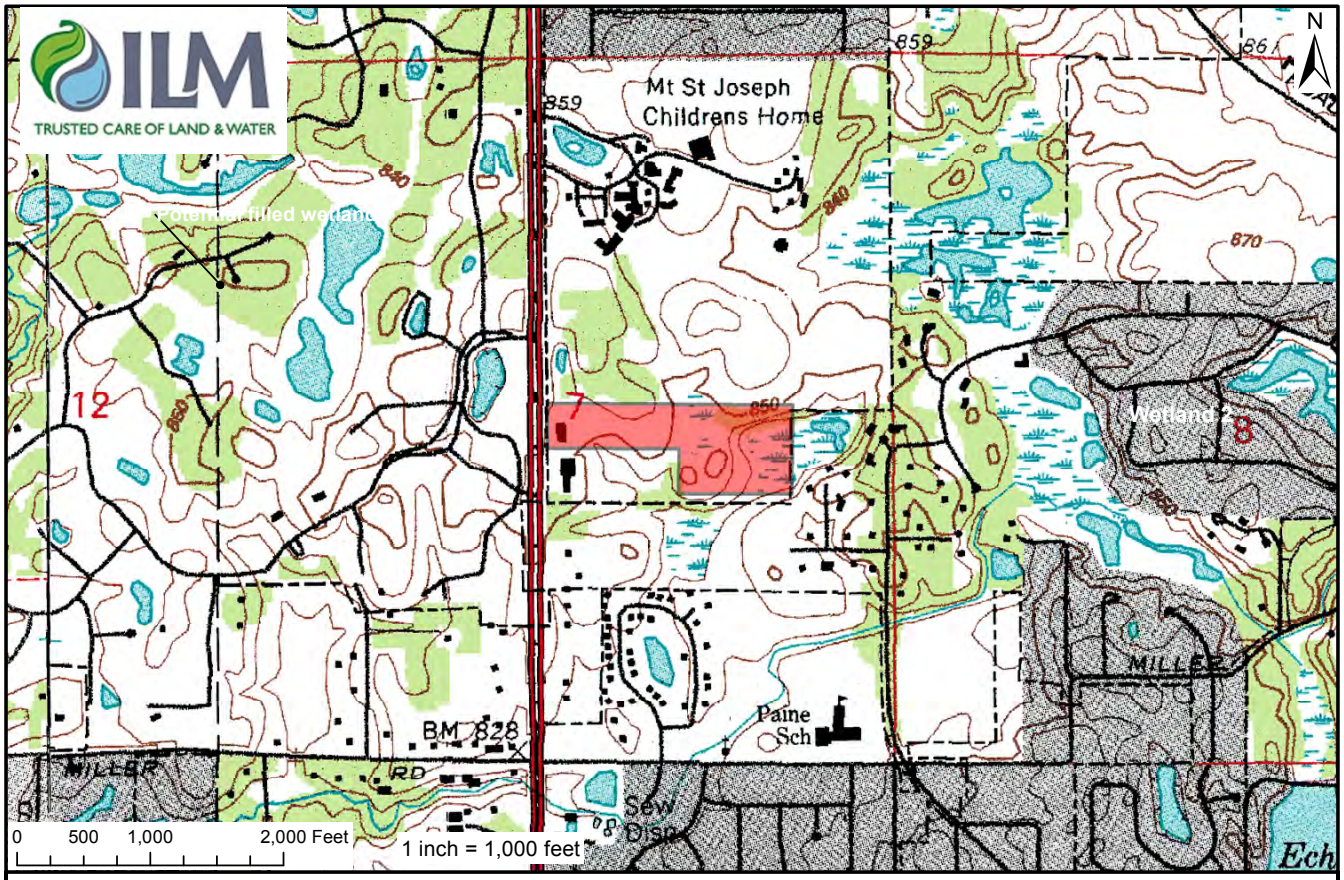


Figure 1: Location Map
24455 N. Highway 12, Lake Zurich

October 25, 2024

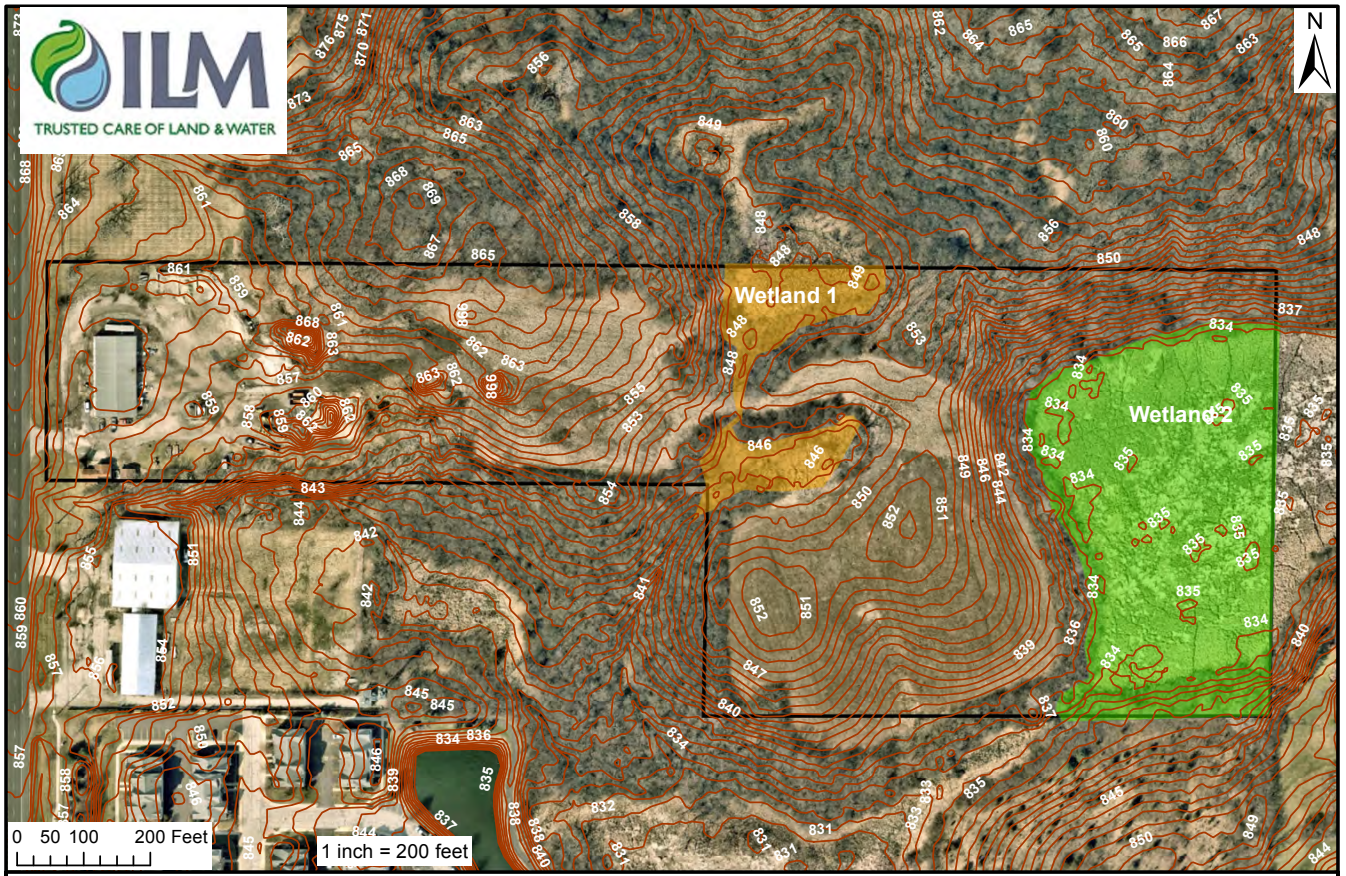


Figure 2: Topographic Map
24455 N. Highway 12, Lake Zurich

October 25, 2024 - Revised 11/26/24

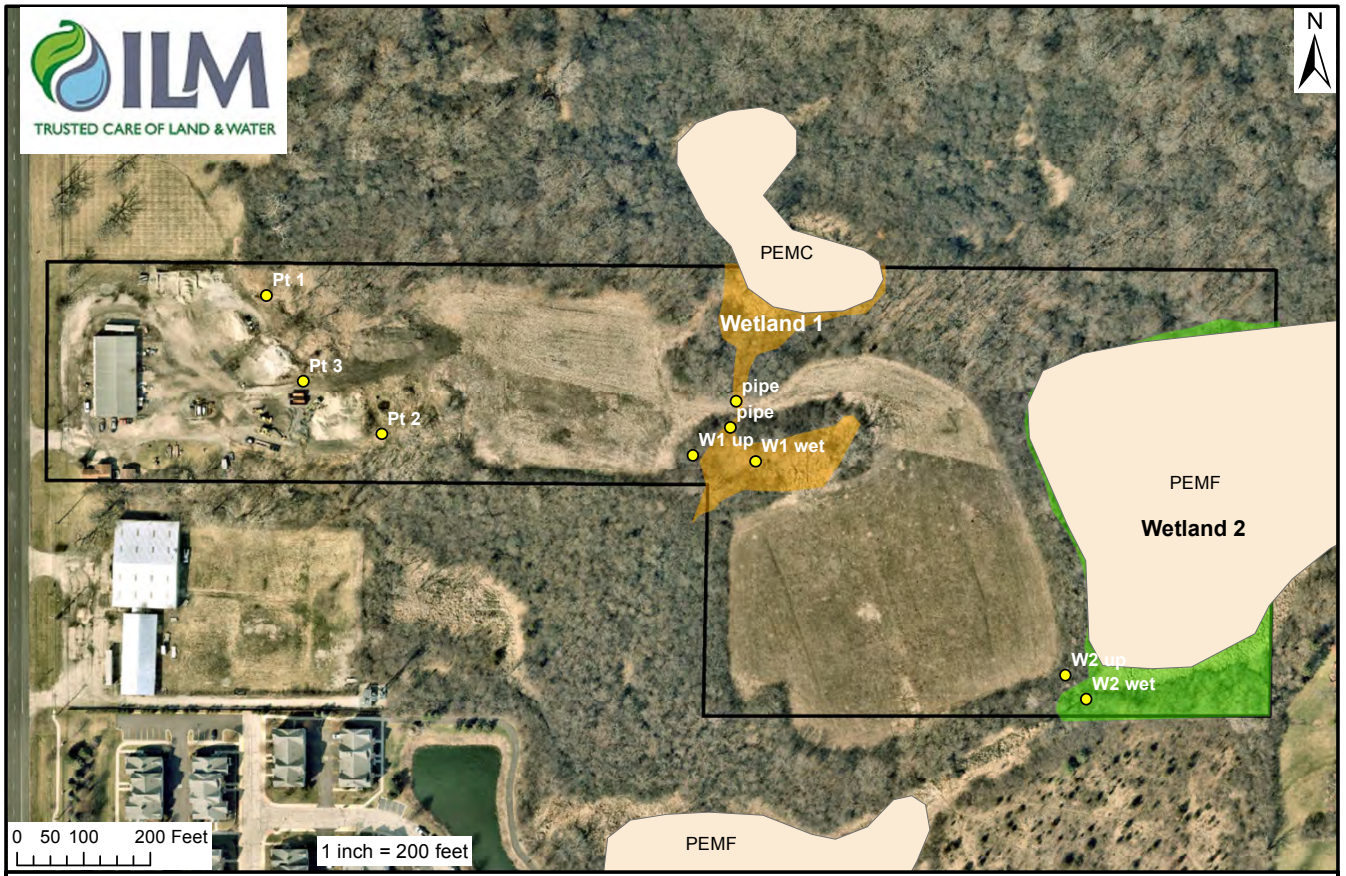


Figure 3: National Wetlands Inventory Map
24455 N. Highway 12, Lake Zurich

October 25, 2024 - Revised 11/26/24

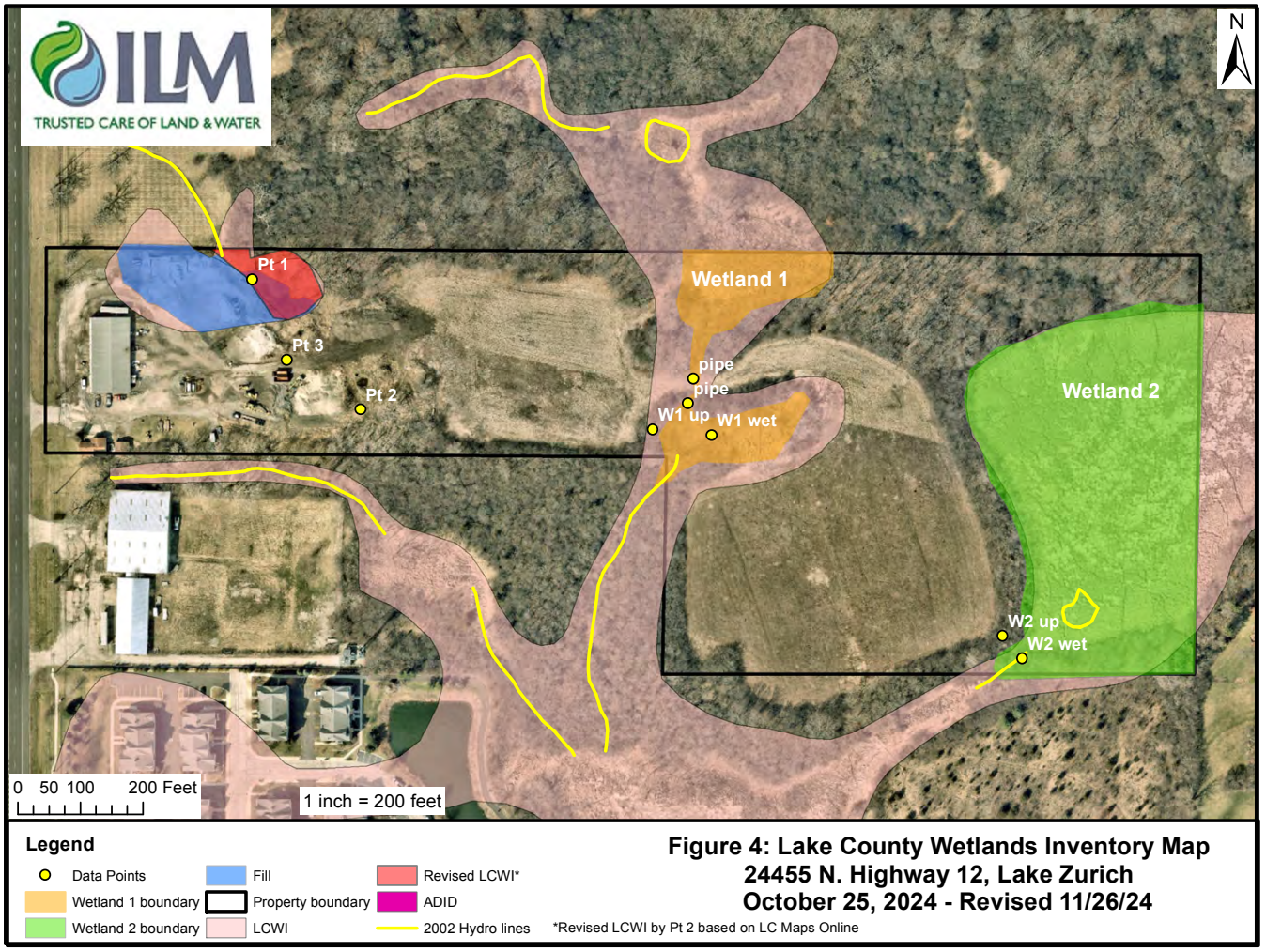
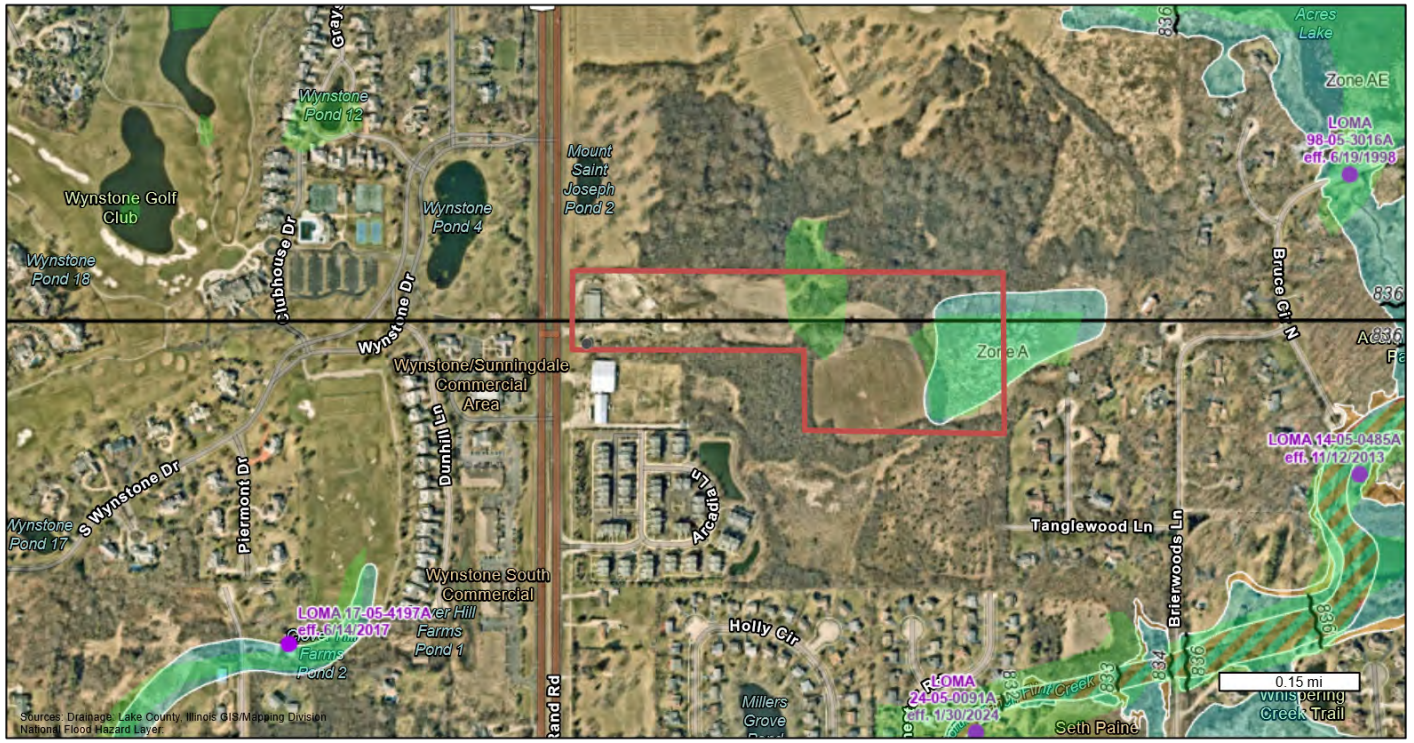


Figure 4: Lake County Wetlands Inventory Map
24455 N. Highway 12, Lake Zurich
October 25, 2024 - Revised 11/26/24

Figure 5: Floodplain Map & Flood of Record



Lake County, Illinois

LakeCounty

Map Printed on 10/29/2024

N

- Override 1
- USGS Flood of Record
- LOMAs
- Effective
- Water Areas
- FIRM Panels

Flood Hazard Zones

- 1% Annual Chance Flood Hazard
- 0.2% Annual Chance Flood Hazard
- Regulatory Floodway
- Area Of Minimal Flood Hazard
- Open Water

Flood Hazard Boundaries

- Limit Lines
- SFHA / Flood Zone Boundary

General Structures

- Flood Structure
- Flood Structure
- Bridge
- Flood Structure
- Dam, Weir, Jetty
- Other Structures
- Other Structures
- Other Structures
- Dam, Weir, Jetty
- Base Flood Elevations

Disclaimer: The selected feature may not occur anywhere in the current map extent. A Registered Land Surveyor should be consulted to determine the precise location of property boundaries on the ground. This map does not constitute a regulatory determination and is not a base for engineering design. This map is intended to be viewed and printed in color.

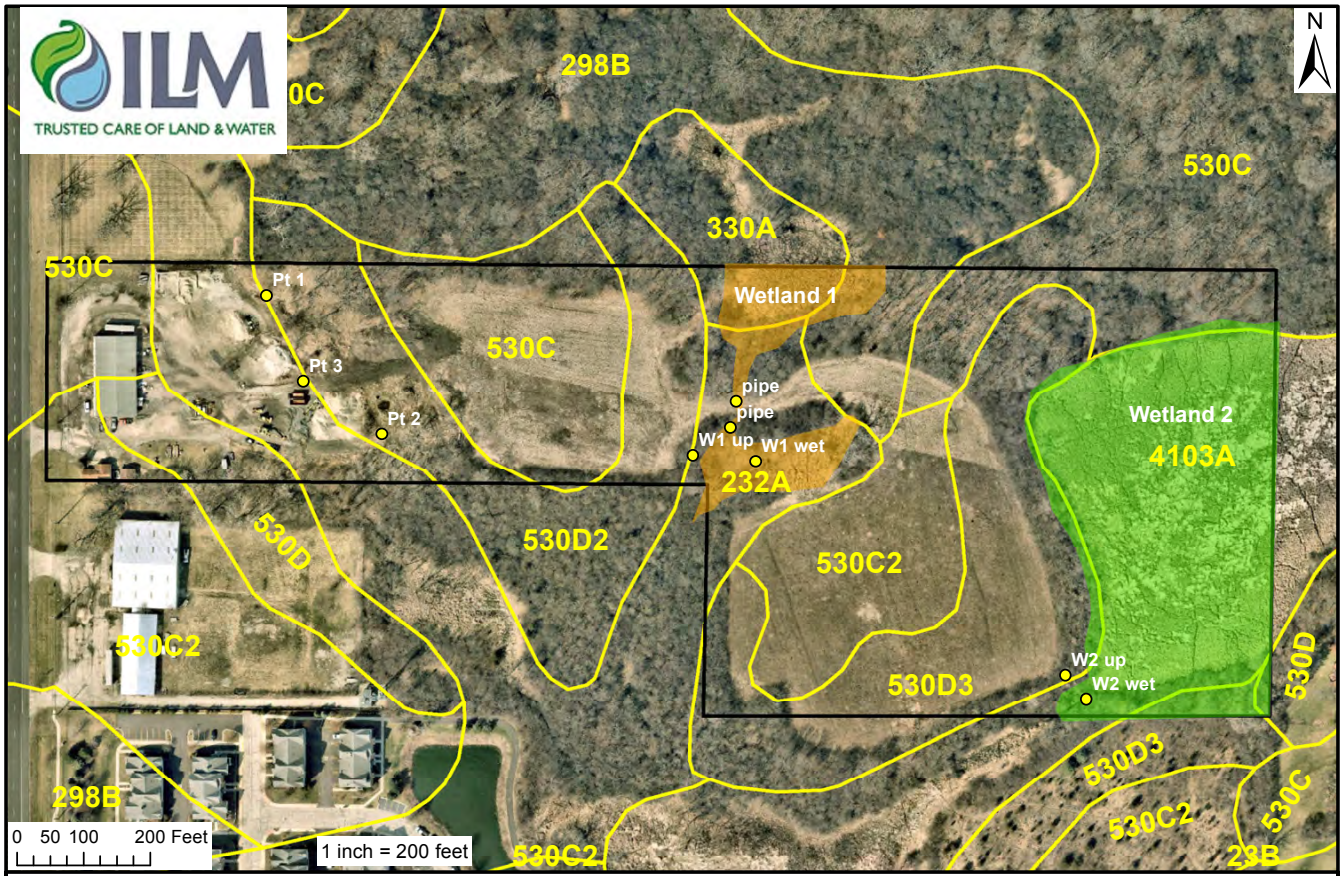
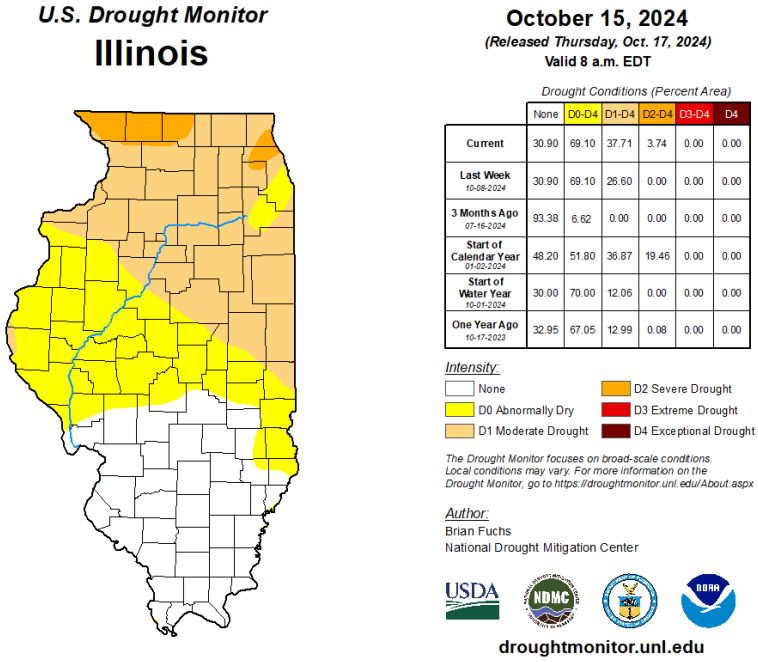
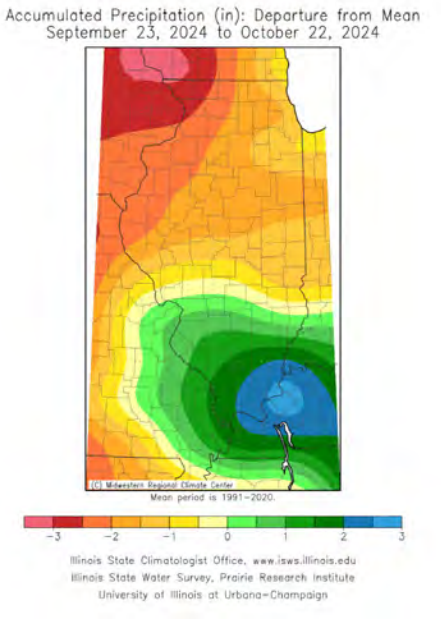

ILM
TRUSTED CARE OF LAND & WATER
N
298B
530C
330A
530C
Pt 1
Wetland 1
530C
Pt 3
pipe
pipe
Pt 2
W1 up
W1 wet
Wetland 2
4103A
232A
530D
530D2
530C2
530C2
W2 up
W2 wet
530D3
530D
298B
530D3
530C2
530C
23B
530C2
0 50 100 200 Feet
1 inch = 200 feet
Legend
Data Points
Property boundary
Wetland 1 boundary
Soils
Wetland 2 boundary
Figure 6: Lake County Soils Map
24455 N. Highway 12, Lake Zurich
October 25, 2024 - Revised 11/26/24

Figure 7: Topographic Wetness Index

Figure 8: Drought Status Maps





Data from:

https://stateclimatologist.web.illinois.edu/drought-in-illinois/

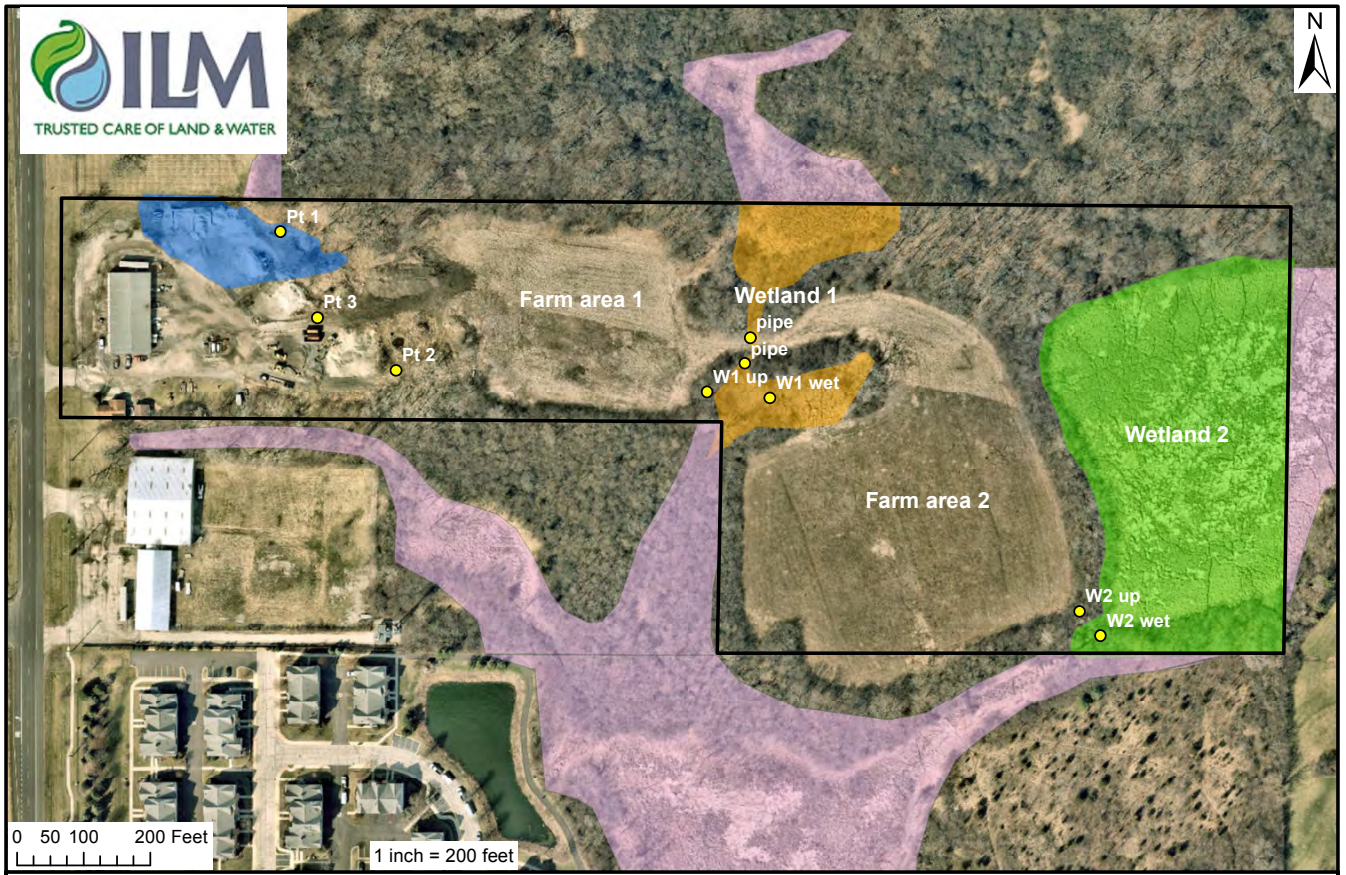


Figure 9: Wetland Delineation Map
24455 N. Highway 12, Lake Zurich

October 25, 2024 Revised 11/26/24

1939 Aerial

Override 1

Lake County, Illinois

LakeCounty

Map Printed on 10/24/2024

N

Disclaimer: The selected feature may not occur anywhere in the current map extent. A Registered Land Surveyor should be consulted to determine the precise location of property boundaries on the ground. This map does not constitute a regulatory determination and is not a base for engineering design. This map is intended to be viewed and printed in color.

1961 Aerial

Override 1

Lake County, Illinois

LakeCounty

N

Map Printed on 10/24/2024

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1993 Aerial

Override 1

Lake County, Illinois

LakeCounty

Map Printed on 10/24/2024

N

Disclaimer: The selected feature may not occur anywhere in the current map extent. A Registered Land Surveyor should be consulted to determine the precise location of property boundaries on the ground. This map does not constitute a regulatory determination and is not a base for engineering design. This map is intended to be viewed and printed in color.

2010 Aerial

Override 1

Lake County, Illinois

LakeCounty

N

Map Printed on 10/24/2024

Disclaimer: The selected feature may not occur anywhere in the current map extent. A Registered Land Surveyor should be consulted to determine the precise location of property boundaries on the ground. This map does not constitute a regulatory determination and is not a base for engineering design. This map is intended to be viewed and printed in color.

2022 Aerial

Override 1

Lake County, Illinois

LakeCounty

N

Map Printed on 10/24/2024

Disclaimer: The selected feature may not occur anywhere in the current map extent. A Registered Land Surveyor should be consulted to determine the precise location of property boundaries on the ground. This map does not constitute a regulatory determination and is not a base for engineering design. This map is intended to be viewed and printed in color.

24455 N. Highway 12., Lake Zurich, IL

APPENDIX

A

SITE PHOTOGRAPHS

Photo 1: Offsite drainage ditch along the SW boundary (10/25/24).

Photo 2: West end of property has numerous fill piles.

Photo 3: Pt2 soil pit did not meet wetland criteria.

Photo 4: Pt 3 swale did not meet wetland criteria (10/28/24).

Photo 5: Farm area 1 did not meet wetland criteria (10/25/24).

Photo 6: Pipe under farm trail connecting north and south sections of Wetland 1.

Photo 7: W1 wet soil pit (10/25/24).

Photo 8: W1 up soil pit.

Photo 9: Swale within Wetland 1

Photo 10: Drainage ditch for Wetland 1 at south boundary.

Photo 11: Farm area 2 did not meet wetland criteria.

Photo 12: W2 wet soil pit.

Photo 23: W2 up soil pit (10/25/24).

Photo 14: Drainage swale near W2 wetland point.

Photo 15: Offsite wetland south of Wetland 2.

24455 N. Highway 12., Lake Zurich, IL

APPENDIX

B

WETLAND DELINEATION DATA SHEETS – MIDWEST REGION

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: 24455 N. Highway 12 City/County: Lake Zurich / Lake Sampling Date: 10/25/24
Applicant/Owner: Caroline Cerbus-Kapudija State: IL Sampling Point: W1 wet
Investigator(s): Eric Mollahan & Sandy Kubillus Section, Township, Range: SE quarter of Section 7, T43N R10E
Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): concave
Slope (%): 1% Lat: 42.218549 Long: -88.10731 Datum:
Soil Map Unit Name: 232A Ashkum silty clay loam NWI classification: none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No X
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 ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? **Yes** X **No** ____

Remarks:
Moderate drought

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	25	Yes	FACW
2.			
3.			
4.			
5.			
	25	=Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1. *Rhamnus cathartica*	25	Yes	FAC
2. *Frangula alnus*	3	No	FACW
3.			
4.			
5.			
	28	=Total Cover	
Herb Stratum (Plot size: ____)			
1. *Phalaris arundinacea*	50	Yes	FACW
2. *Sium suave*	5	No	OBL
3. *Typha angustifolia*	50	Yes	OBL
4. *Plantago major*	10	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
	115	=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: 4 (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	55	x 1 =	55
FACW species	78	x 2 =	156
FAC species	35	x 3 =	105
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	168 (A)		316 (B)

Prevalence Index = B/A = 1.88

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.)

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SOIL

Sampling Point: W1 wet

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
0-24	10YR 2/1	98	10YR 4/4	2	C	M	Loamy/Clayey	Distinct redox concentrations

[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)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 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)
- ___ 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:

ENG FORM 6116-7, FEB 2024 Midwest – Version 2.0

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: 24455 N. Highway 12 City/County: Lake Zurich / Lake Sampling Date: 10/25/24
Applicant/Owner: Caroline Cerbus-Kapudija State: IL Sampling Point: W1 up
Investigator(s): Eric Mollahan & Sandy Kubillus Section, Township, Range: SE quarter of Section 7, T43N R10E
Landform (hillside, terrace, etc.): slope Local relief (concave, convex, none): concave
Slope (%): 1% Lat: 42.218575 Long: -88.107658 Datum:
Soil Map Unit Name: 232A Ashkum silty clay loam NWI classification: none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No X
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 ____
Hydric Soil Present? Yes ____ No X
Wetland Hydrology Present? Yes ____ No X

Is the Sampled Area within a Wetland? **Yes** ____ **No** X

Remarks:
Moderate drought

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	60	Yes	FAC
2.			
3.			
4.			
5.			
	60	=Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1. *Rhamnus cathartica*	75	Yes	FAC
2. *Lonicera tatarica*	25	Yes	FACU
3.			
4.			
5.			
	100	=Total Cover	
Herb Stratum (Plot size: ____)			
1. *Prunella vulgaris*	10	Yes	FAC
2. *Symphyotrichum pilosum*	3	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	13	=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: 5 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 60.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	145	x 3 =	435
FACU species	28	x 4 =	112
UPL species	0	x 5 =	0
Column Totals:	173 (A)		547 (B)

Prevalence Index = B/A = 3.16

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.)

ENG FORM 6116-7, FEB 2024 Midwest – Version 2.0

SOIL

Sampling Point: W1 up

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
0-24	10YR 2/1	100					Loamy/Clayey	

[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]:

- ___ 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:

ENG FORM 6116-7, FEB 2024 Midwest – Version 2.0

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: 24455 N. Highway 12 City/County: Lake Zurich / Lake Sampling Date: 10/25/24
Applicant/Owner: Caroline Cerbus-Kapudija State: IL Sampling Point: W2 wet
Investigator(s): Eric Mollahan & Sandy Kubillus Section, Township, Range: SE quarter of Section 7, T43N R10E
Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): concave
Slope (%): 1% Lat: 42.217566 Long: -88.10548 Datum:
Soil Map Unit Name: 4103A Houghton muck, ponded NWI classification: near PEMF
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No X
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 ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? **Yes** X **No** ____

Remarks:
Moderate drought

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Prunus serotina*	25	Yes	FACU
2.			
3.			
4.			
5.			
	25	=Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1. *Rhamnus cathartica*	25	Yes	FAC
2.			
3.			
4.			
5.			
	25	=Total Cover	
Herb Stratum (Plot size: ____)			
1. *Acorus calamus*	80	Yes	OBL
2. *Glyceria striata*	10	No	OBL
3. *Ranunculus sceleratus*	5	No	OBL
4.			
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: 2 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	95	x 1 =	95
FACW species	0	x 2 =	0
FAC species	25	x 3 =	75
FACU species	25	x 4 =	100
UPL species	0	x 5 =	0
Column Totals:	145 (A)		270 (B)

Prevalence Index = B/A = 1.86

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.)

ENG FORM 6116-7, FEB 2024 Midwest – Version 2.0

SOIL

Sampling Point: W2 wet

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
0-3	10YR 2/1	100					Loamy/Clayey	
3-8	10YR 2/1	98	10YR 4/6	2	C	M	Loamy/Clayey	Prominent redox concentrations
8-12	10YR 2/1	95	10YR 4/6	5	C	M	Loamy/Clayey	Prominent redox concentrations
12-30	10YR 3/1	95	10YR 4/6	5	C	M	Loamy/Clayey	Prominent redox concentrations

[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)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 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)
- ___ 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:

ENG FORM 6116-7, FEB 2024 Midwest – Version 2.0

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: 24455 N. Highway 12 City/County: Lake Zurich / Lake Sampling Date: 10/25/24
Applicant/Owner: Caroline Cerbus-Kapudija State: IL Sampling Point: W2 up
Investigator(s): Eric Mollahan & Sandy Kubillus Section, Township, Range: SE quarter of Section 7, T43N R10E
Landform (hillside, terrace, etc.): terrace Local relief (concave, convex, none): concave
Slope (%): 1% Lat: 42.217666 Long: -88.105595 Datum:
Soil Map Unit Name: 530D3 Ozaukee silt loam NWI classification: none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No X
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
Hydric Soil Present? Yes ____ No X
Wetland Hydrology Present? Yes ____ No X

Is the Sampled Area within a Wetland? **Yes** ____ **No** X

Remarks:
Moderate drought

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. *Rhamnus cathartica*	75	Yes	FAC
2. *Lonicera tatarica*	25	Yes	FACU
3.			
4.			
5.			
	100 =Total Cover		
Herb Stratum (Plot size: ____)			
1. *Penstemon digitalis*	3	Yes	FAC
2. *Geum urbanum*	3	Yes	UPL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	6 =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	0	x 2 =	0
FAC species	78	x 3 =	234
FACU species	25	x 4 =	100
UPL species	3	x 5 =	15
Column Totals:	106 (A)		349 (B)
Prevalence Index = B/A =			3.29

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.)

ENG FORM 6116-7, FEB 2024 Midwest – Version 2.0

SOIL

Sampling Point: W2 up

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
0-14	10YR 2/1	100					Loamy/Clayey	
14-20	10YR 3/3	70					Loamy/Clayey	

[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]:

- ___ 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:

ENG FORM 6116-7, FEB 2024 Midwest – Version 2.0

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: 24455 N. Highway 12 City/County: Lake Zurich / Lake Sampling Date: 10/25/24
Applicant/Owner: Caroline Cerbus-Kapudija State: IL Sampling Point: Pt 1
Investigator(s): Eric Mollahan & Sandy Kubillus Section, Township, Range: SE quarter of Section 7, T43N R10E
Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): concave
Slope (%): 1% Lat: 42.219239 Long: -88.11002 Datum:
Soil Map Unit Name: 530D2 Ozaukee silt loam NWI classification: none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No X
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
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes ____ No X

Is the Sampled Area within a Wetland? **Yes** ____ **No** X

Remarks:
Moderate drought

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus deltoides*	25	Yes	FAC
2.			
3.			
4.			
5.			
	25	=Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
		=Total Cover	
Herb Stratum (Plot size: ____)			
1. *Setaria viridis*	25	Yes	UPL
2. *Ambrosia artemisiifolia*	15	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	40	=Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
		=Total Cover	

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	25	x 3 =	75
FACU species	15	x 4 =	60
UPL species	25	x 5 =	125
Column Totals:	65 (A)		260 (B)
Prevalence Index = B/A =			4.00

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.)

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SOIL

Sampling Point: Pt 1

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
0-3	10YR 2/1	98	10YR 4/6	2	C	M	Loamy/Clayey	Prominent redox concentrations
3-8	10YR 3/1	98	10YR 4/4	2	C	M	Loamy/Clayey	Distinct redox concentrations

[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)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 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: gravel

Depth (inches): 8

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)
- ___ 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:

ENG FORM 6116-7, FEB 2024 Midwest – Version 2.0

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: 24455 N. Highway 12 City/County: Lake Zurich / Lake Sampling Date: 10/25/24
Applicant/Owner: Caroline Cerbus-Kapudija State: IL Sampling Point: Pt 2
Investigator(s): Eric Mollahan & Sandy Kubillus Section, Township, Range: SE quarter of Section 7, T43N R10E
Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): concave
Slope (%): 1% Lat: 42.218666 Long: -88.109383 Datum:
Soil Map Unit Name: 530D2 Ozaukee silt loam NWI classification: none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No X
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 ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes ____ No X

Is the Sampled Area within a Wetland? **Yes** ____ **No** X

Remarks:
Moderate drought

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. *Dipsacus fullonum*	15	No	FACU
2. *Phragmites australis*	30	Yes	FACW
3. *Phalaris arundinacea*	40	Yes	FACW
4.			
5. *Euthamia graminifolia*	3	No	FACW
6. *Verbena urticifolia*	7	No	FAC
7. *Apocynum cannabinum*	5	No	FAC
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: 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	73	x 2 =	146
FAC species	12	x 3 =	36
FACU species	15	x 4 =	60
UPL species	0	x 5 =	0
Column Totals:	100 (A)		242 (B)

Prevalence Index = B/A = 2.42

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: Pt 2

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	Prominent redox concentrations
6-12	10YR 3/1	98	10YR 4/4	2	C	M	Loamy/Clayey	Distinct redox concentrations

[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)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 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: gravel

Depth (inches): 12

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)
- ___ 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:

ENG FORM 6116-7, FEB 2024 Midwest – Version 2.0

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: 24455 N. Highway 12 City/County: Lake Zurich / Lake Sampling Date: 10/25/24
Applicant/Owner: Caroline Cerbus-Kapudija State: IL Sampling Point: Pt 3
Investigator(s): Eric Mollahan & Sandy Kubillus Section, Township, Range: SE quarter of Section 7, T43N R10E
Landform (hillside, terrace, etc.): swale Local relief (concave, convex, none): concave
Slope (%): 1% Lat: 42.218886 Long: -88.109817 Datum:
Soil Map Unit Name: 530C2 Ozaukee silt loam NWI classification: none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)
Are Vegetation Y , Soil Y , or Hydrology Y significantly disturbed? Are "N X Yes ____ No X
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 ____
Hydric Soil Present? Yes ____ No X
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? **Yes** ____ **No** X

Remarks:
Area contains fill material. Moderate drought

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. *Phragmites australis*	100	Yes	FACW
2.			
3.			
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: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (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 100	x 2 = 200
FAC species 0	x 3 = 0
FACU species 0	x 4 = 0
UPL species 0	x 5 = 0
Column Totals: 100 (A)	200 (B)
Prevalence Index = B/A =	2.00

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.)

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SOIL

Sampling Point: Pt 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-1	10YR 5/4	60						gravel restrictive layer

[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]:

- ___ 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: gravel

Depth (inches): 1

Hydric Soil Present? **Yes** ___ **No** X

Remarks:
Gravel restrictive layer has altered the soil

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X 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)
- ___ Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No ___ Depth (inches): 0.25

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 0

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Standing water due to recent rain

ENG FORM 6116-7, FEB 2024 Midwest – Version 2.0

24455 N. Highway 12., Lake Zurich, IL

APPENDIX

C

FLORISTIC QUALITY ASSESSMENT (FQA)

SITE: 24455 N. Hwy 12, Lake Zurich 10/25/2024
LOCALE: Wetland 1
BY: Eric Mollahan
NOTES:

CONSERVATISM-BASED METRICS		ADDITIONAL METRICS	
MEAN C (NATIVE SPECIES)	3.58	SPECIES RICHNESS (ALL)	47
MEAN C (ALL SPECIES)	2.74	SPECIES RICHNESS (NATIVE)	36
MEAN C (NATIVE TREES)	2.25	% NON-NATIVE	0.23
MEAN C (NATIVE SHRUBS)	1.00	WET INDICATOR (ALL)	-0.36
MEAN C (NATIVE HERBACEOUS)	4.19	WET INDICATOR (NATIVE)	-0.47
FQAI (NATIVE SPECIES)	21.50	% HYDROPHYTE (MIDWEST)	0.70
FQAI (ALL SPECIES)	18.82	% NATIVE PERENNIAL	0.72
ADJUSTED FQAI	31.36	% NATIVE ANNUAL	0.04
% C VALUE 0	0.32	% ANNUAL	0.06
% C VALUE 1-3	0.26	% PERENNIAL	0.94
% C VALUE 4-6	0.34		
% C VALUE 7-10	0.09		

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
AGEALT	Ageratina altissima	Eupatorium rugosum	White Snakeroot	3	FACU	FACU	1	Forb	Perennial	Native
AGRSTR	Agrimonia striata	Agrimonia striata	Woodland Grooveburr	3	FACU	FACU	1	Forb	Perennial	Native
ANEVIR	Anemone virginiana	Anemone virginiana	Tall Thimbleweed	5	FACU	FACU	1	Forb	Perennial	Native
BIDFRO	Bidens frondosa	Bidens frondosa	Devil's-Pitchfork	1	FACW	FACW	-1	Forb	Annual	Native
CALCAN	canadensis	Calamagrostis canadensis	Bluejoint	6	OBL	OBL	-2	Grass	Perennial	Native
CXTRIB	Carex tribuloides	Carex tribuloides	Blunt Broom Sedge	7	OBL	FACW	-2	Sedge	Perennial	Native
CIRARV	Cirsium arvense	CIRSIUM ARVENSE	Canadian Thistle	0	FACU	FACU	1	Forb	Perennial	Adventive
CORRAC	Cornus racemosa	Cornus racemosa	Gray Dogwood	1	FAC	FAC	0	Shrub	Perennial	Native
DACGLO	Dactylis glomerata	DACTYLIS GLOMERATA	Orchard Grass	0	FACU	FACU	1	Grass	Perennial	Adventive
EPICOL	Epilobium coloratum	Epilobium coloratum	Purple-Leaf Willowherb	3	OBL	OBL	-2	Forb	Perennial	Native
EUPPER	Eupatorium perfoliatum	Eupatorium perfoliatum	Common Boneset	4	OBL	FACW	-2	Forb	Perennial	Native
EUPPUR	Eutrochium purpureum	Eupatorium purpureum	Sweet-Scented Joe-Pye-Weed	6	FAC	FAC	0	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
GALASP	Galium asprellum	Galium asprellum	Rough Bedstraw	10	OBL	OBL	-2	Forb	Perennial	Native
GERMAC	Geranium maculatum	Geranium maculatum	Spotted Crane's-Bill	5	FACU	FACU	1	Forb	Perennial	Native
GEUURB	Geum urbanum	GEUM URBANUM	City Avens	0	UPL	UPL	2	Forb	Perennial	Adventive
GLYSTR	Glyceria striata	Glyceria striata var. stricta	Fowl Manna Grass	4	OBL	OBL	-2	Grass	Perennial	Native
HACVIR	Hackelia virginiana	Hackelia virginiana	Beggar's-Lice	1	FACU	FACU	1	Forb	Perennial	Native
HELGRO	Helianthus	Helianthus grosseserratus	Saw-Tooth Sunflower	4	FACW	FACW	-1	Forb	Perennial	Native
HYPPUN	Hypericum punctatum	Hypericum punctatum	Spotted St. John's-Wort	4	FAC	FAC	0	Forb	Perennial	Native
LAPCAN	Laportea canadensis	Laportea canadensis	Canadian Wood-Nettle	5	FACW	FACW	-1	Forb	Perennial	Native
LEEORY	Leersia oryzoides	Leersia oryzoides	Rice Cut Grass	3	OBL	OBL	-2	Grass	Perennial	Native
LYTSAL	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adventive
MALFLO	Malus floribunda	MALUS FLORIBUNDA	Japanese Flowering Crab Apple	0	UPL	UPL	2	Tree	Perennial	Native
ONOSEN	Onoclea sensibilis	Onoclea sensibilis	Sensitive Fern	5	FACW	FACW	-1	Fern	Perennial	Native
PENDIG	Penstemon digitalis	Penstemon digitalis	Foxglove Beardtongue	4	FAC	FAC	0	Forb	Perennial	Native
PHACAN	Phalaris canariensis	PHALARIS CANARIENSIS	Common Canary Grass	0	FACU	FACU	1	Grass	Annual	Adventive
PHRAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adventive
PLAMAJ	Plantago major	PLANTAGO MAJOR	Great Plantain	0	FAC	FACU	0	Forb	Perennial	Adventive
POPDEL	Populus deltoides	Populus deltoides	Eastern Cottonwood	0	FAC	FAC	0	Tree	Perennial	Native
PRUVULL	Prunella vulgaris ssp. lanceolata	Prunella vulgaris lanceolata	Common Selfheal	1	FAC	FAC	0	Forb	Perennial	Native
QUEMAC	Quercus macrocarpa	Quercus macrocarpa	Burr Oak	5	FAC	FACU	0	Tree	Perennial	Native
RANSCE	Ranunculus sceleratus	Ranunculus sceleratus	Cursed Buttercup	4	OBL	OBL	-2	Forb	Annual	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
SIUSUA	Sium suave	Sium suave	Hemlock Water-Parsnip	7	OBL	OBL	-2	Forb	Perennial	Native
SOLCAN	Solidago canadensis	Solidago canadensis	Canadian Goldenrod	1	FACU	FACU	1	Forb	Perennial	Native
SOLRUG	Solidago rugosa	Solidago rugosa	Wrinkle-Leaf Goldenrod	6	FAC	FAC	0	Forb	Perennial	Native
SYMCOR	Symphyotrichum cordifolium	Aster cordifolius	Heart-Leaf Aster	7	UPL	UPL	2	Forb	Perennial	Native
SYMPIL	Symphyotrichum pilosum	Aster pilosus	White Oldfield American-Aster	0	FACU	FACU	1	Forb	Perennial	Native
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adventive
ULMAME	Ulmus americana	Ulmus americana	American Elm	3	FACW	FACW	-1	Tree	Perennial	Native
VITRIP	Vitis riparia	Vitis riparia var. syrticola	River-Bank Grape	1	FACW	FAC	-1	Vine	Perennial	Native

SITE: 24455 N. Highway 12, Lake Zurich 10/25/2024
LOCALE: Wetland 2
BY: Eric Mollahan
NOTES:

CONSERVATISM-BASED METRICS		ADDITIONAL METRICS	
MEAN C (NATIVE SPECIES)	4.64	SPECIES RICHNESS (ALL)	23
MEAN C (ALL SPECIES)	2.83	SPECIES RICHNESS (NATIVE)	14
MEAN C (NATIVE TREES)	4.33	% NON-NATIVE	0.39
MEAN C (NATIVE SHRUBS)	0.00	WET INDICATOR (ALL)	-0.91
MEAN C (NATIVE HERBACEOUS)	5.20	WET INDICATOR (NATIVE)	-1.07
FQAI (NATIVE SPECIES)	17.37	% HYDROPHYTE (MIDWEST)	0.78
FQAI (ALL SPECIES)	13.55	% NATIVE PERENNIAL	0.57
ADJUSTED FQAI	36.22	% NATIVE ANNUAL	0.04
% C VALUE 0	0.43	% ANNUAL	0.04
% C VALUE 1-3	0.13	% PERENNIAL	0.91
% C VALUE 4-6	0.30		
% C VALUE 7-10	0.13		

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
ACOCAL	Acorus calamus	Acorus calamus	Single-Vein Sweetflag	0	OBL	OBL	-2	Forb	Perennial	Adventive
ANEVIR	Anemone virginiana	Anemone virginiana	Tall Thimbleweed	5	FACU	FACU	1	Forb	Perennial	Native
DIPSYL	Dipsacus fullonum	DIPSACUS SYLVESTRIS	Fuller's Teasel	0	FACU	FACU	1	Forb	Biennial	Adventive
EPICOL	Epilobium coloratum	Epilobium coloratum	Purple-Leaf Willowherb	3	OBL	OBL	-2	Forb	Perennial	Native
EQUFLU	Equisetum fluviatile	Equisetum fluviatile	Water Horsetail	8	OBL	OBL	-2	Fern	Perennial	Native
GALASP	Galium asprellum	Galium asprellum	Rough Bedstraw	10	OBL	OBL	-2	Forb	Perennial	Native
GLYSTR	Glyceria striata	Glyceria striata var.	Fowl Manna Grass	4	OBL	OBL	-2	Grass	Perennial	Native
IRIVIR	Iris virginica var. shrevei	Iris virginica shrevei	Virginia Blueflag	5	OBL	OBL	-2	Forb	Perennial	Native
LAPCAN	Laportea canadensis	Laportea canadensis	Canadian Wood-Nettle	5	FACW	FACW	-1	Forb	Perennial	Native
LONTAT	Lonicera tatarica	LONICERA TATARICA	Twinsisters	0	FACU	FACU	1	Shrub	Perennial	Adventive
LYTSAL	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adventive
PHAARU	Phalaris arundinacea	PHALARIS ARUNDINACEA	Reed Canary Grass	0	FACW	FACW	-1	Grass	Perennial	Adventive
PHRAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adventive
PLAMAJ	Plantago major	PLANTAGO MAJOR	Great Plantain	0	FAC	FACU	0	Forb	Perennial	Adventive
PRUSER	Prunus serotina	Prunus serotina	Black Cherry	0	FACU	FACU	1	Shrub	Perennial	Native
QUEMAC	Quercus macrocarpa	Quercus macrocarpa	Burr Oak	5	FAC	FACU	0	Tree	Perennial	Native
RANSCE	Ranunculus sceleratus	Ranunculus sceleratus	Cursed Buttercup	4	OBL	OBL	-2	Forb	Annual	Native
RHACAT	Rhamnus cathartica	RHAMNUS CATHARTICA	European Buckthorn	0	FAC	FAC	0	Shrub	Perennial	Adventive
SALNIG	Salix nigra	Salix nigra	Black Willow	5	OBL	OBL	-2	Tree	Perennial	Native
SIUSUA	Sium suave	Sium suave	Hemlock Water-Parsnip	7	OBL	OBL	-2	Forb	Perennial	Native
SOLCAN	Solidago canadensis	Solidago canadensis	Canadian Goldenrod	1	FACU	FACU	1	Forb	Perennial	Native
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adventive
ULMAME	Ulmus americana	Ulmus americana	American Elm	3	FACW	FACW	-1	Tree	Perennial	Native

24455 N. Highway 12., Lake Zurich, IL

APPENDIX D

FARMED WETLAND EVALUATION

Farmed Wetland Evaluation
24455 N. US Highway 12
Ela Township, IL
October 25, 2024

According to the Lake County Stormwater Management Commission (SMC) Guidance for Agricultural Land Wetland Determinations, dated April 12, 2022, the following steps were followed.

A. Office Review of Wetland Inventory
The NRCS procedures require a review of various inventories to identify wetland signatures on a development site, including but not limited to the U.S. Fish & Wildlife Service's National Wetland Inventory (NWI) maps and a minimum of five (5) years of aerial imagery for designated years with approximate "normal precipitation" during the early growing season period (April-June), based on long-term precipitation averages.

If wetland signatures are identified in 3 or more of the 5 normal precipitation years of aerial imagery reviewed (>50%), the area is a potential farmed wetland, subject to field confirmation. Designation of an area as a wetland/farmed wetland on the NWI map or the Lake County Wetland Inventory (LCWI) map also constitutes one year of wetland signature.

B. Field Investigation
A minimum of one field data point in each potential farmed wetland area within the development site limits needs to be located to determine if hydric soil is present. The field data point(s) are to be "representative" of the potential farmed wetland area. The data then needs to be recorded on the standard Wetland Determination Data Form. If any hydric soil indicator(s) occur in the representative data point or if representative data point meets the definition of a hydric soil, the area is confirmed as a farmed wetland. The field investigation may result in mapping additional small farmed wetlands missed by the office review.

C. Reporting
The Farmed Wetland Determination Report includes the following:

i. A location map with the development site boundaries outlined, scaled to show nearby major crossroads;
ii. A summary table of wetland signatures identified, based on review of the aerial imagery, NWI map, and LCWI map;
iii. A color copy of each year of aerial imagery reviewed with the approximate boundaries of that year's wetland signature(s) delineated;
iv. A recent aerial photograph exhibit (scale: 1"=400' or larger) showing the approximate boundary and estimated acreage of each confirmed farmed wetland, along with locations of field data points. Note: the approximate boundary of each farmed wetland should be the average of all its wetland signature polygons. If farmed wetland boundaries extend off-site, show the approximate boundaries within 100' of the development site limits;
v. Copies of field data point forms;
vi. Copies of reference maps reviewed: NWI, LCWI, NRCS Soil Survey, and Topographic Wetness Index with development site boundaries outlined; and
vii. An Antecedent Precipitation Tool (APT) graphic printout (or table) showing 30-year-average conditions of site for field investigation dates.

Agricultural Land Wetland Determination Summary Table

Site Name:	24455 N. US Highway 12	Date:	October 25, 2024
Location:	24455 N. US Highway 12, Lake Zurich, IL	Prepared by:	Sandy Kubillus
		CWS #	C-005

Imagery Date	Source	Annual Precipitation Condition	Wetland Signature Assessment	
			1	2
6/26/2016	Google Earth	Normal, primary	Not observed	Not observed
2014	FSA slide	Wet primary	Not observed	Not observed
2011	FSA slide	Wet, secondary	Not observed	Not observed
2006	FSA slide	Normal, primary	Not observed	Not observed
2004	FSA slide	Normal, primary	Yes, 0.2 acres	Yes, 5 acres
Number of Normal Years – only maps available		3		
		ID on NWI or LCWI (Y/N)	Not on either map	Not on either map
		Potential FW	No, no longer farmed	No, no longer farmed
		Field Verified Hydric Soil (Y/N)	N	N
		Qualifies as FW	No, area not farmed	No, area not farmed

This site is no longer farmed and is planted with native vegetation.

Figure 1: 6/26/2016 Aerial photo from Google Earth showing the project area in red. No wetland signatures were observed. Site is no longer farmed. Photo is of a normal precipitation year.

Figure 2: 2014 Farmed Wetland Slide. Project area is marked in red. No wetland signatures were observed. Photo is of a wet primary year.

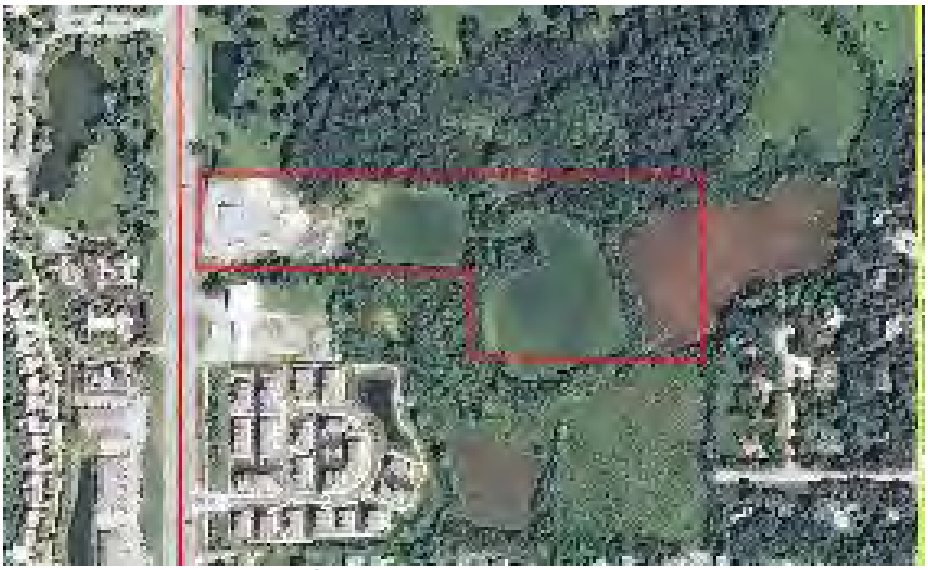


Figure 3: 2011 Farmed Wetland Slide. Project area is marked in red. No wetland signatures were observed. Photo is of a wet year.

Figure 4 2006 Farmed Wetland Slide. Project area is marked in red. No wetland signatures were observed. Photo is of a normal primary precipitation year.

Figure 5: 2004 Farmed Wetland Slide. Project area is marked in red and yellow areas are potential farmed wetlands. Area 1 is 0.2 acres and area 2 is 0.5 acres. Photo is of a normal primary precipitation year.

Figure 6: View of Farmed area 1 noted in Figure 5 (10/25/24). Area does not have wetland plants nor a source of hydrology.

Figure 7: View of Farmed area 2 noted in Figure 4 (10/25/24). Area does not have wetland plants nor a source of hydrology.

STORMWATER MANAGEMENT COMMISSION

February 12, 2025

Don Calabrese
24455 N. Highway 12
Lake Zurich, IL 60047

Subject: **SMC #:** IWLC-24-925
Car Condo Garages, 24455 N. US Highway 12, Uninc. Lake Zurich, Lake County, IL
PIN #: 14-07-400-001
ISOLATED WATERS OF LAKE COUNTY BOUNDARY VERIFICATION

Dear Mr. Calabrese:

This letter responds to the request for field verification of *Isolated Waters of Lake County* (IWLC) on the subject site, received by the Lake County Stormwater Management Commission (SMC) on November 19, 2024, with supplemental information received November 26, 2024. Wetlands referenced in this letter were established as IWLC in a Lake County Preliminary Jurisdictional Determination (LCPJD) by SMC dated November 13, 2024.

SMC wetland staff observed the flagged boundaries during the LCPJD field visit on November 7, 2024, in the company of Mr. Eric Mollahan from Integrated Lakes Management (ILM). **SMC concurs with the boundaries of Wetland 1 and Wetland 2** as flagged in the field and as generally depicted on the enclosed *Figure 9: Wetland Delineation Map*, by ILM, revised November 26, 2024. If not already done, we recommend the flags be surveyed as soon as possible.

This isolated wetland boundary verification is valid for a period of three (3) years from the date of this letter for the indicated wetlands/waters unless new information warrants a revision before the expiration date.

Permitting Considerations

1. The surveyed boundaries of all existing aquatic resources on the development site, including features constructed in dry land, need to be included on the proposed development plans for permitting purposes.

2. The wetland delineation exhibit is to show the approximate location and extent of off-site wetlands/water bodies within 100 feet of the site boundaries, based on available reference materials (WDO §1000.02.F.), and the delineation report is to describe the relative quality of any off-site wetlands (as applicable).

3. The LCPJD identified a mapped Swale as an IWLC. Upon further clarification, with supporting data, SMC has determined that the swale does not qualify as either a wetland or a waters. Therefore, **the Swale is not subject to regulation.**

4. **Unless the property is annexed into the Village of Lake Zurich as part of site development, a Lake County Site Development Permit (SDP) is required from Lake County Planning, Building & Development (PBD) in accordance with applicable provisions of the Unified Development Ordinance.** Please coordinate with Mr. Eric Steffen, Enforcement Officer (EO) (esteffen@lakecountyil.gov) for PBD, regarding SDP submittal requirements. Information concerning the process, including the application form, is located on the PBD website at https://www.lakecountyil.gov/3912/Permits.

LAKE COUNTY STORMWATER MANAGEMENT COMMISSION
500 W. Winchester Road, Suite 201 • Libertyville, Illinois 60048 • 847/377-7700 • FAX 847/984-5747
www.lakecountyil.gov/StormwaterManagement/default.htm

5. **SMC's written approval for IWLC impacts is required as part of SDP issuance.** This includes impacts to the Swale unless you request—and receive—an IWLC exclusion for that feature from the EO. Please coordinate with Ms. Juli Crane, SMC's Principal Wetland Specialist (jcrane@lakecountyil.gov) regarding questions on wetland impact submittal requirements.

We would like to be of assistance. If you have any questions regarding this letter, please contact Juli Crane at the above email address.

Sincerely,
LAKE COUNTY STORMWATER MANAGEMENT COMMISSION

Brian Frank, P.E., CFM
Chief Engineer

Juli E. Crane, Sr. PWS, CWS, CFM
Principal Wetland Specialist

Enclosures: Figure 9*: Wetland Delineation Map* (ILM, 11/26/2024)

xc: Sandy Kubillus/Eric Mollahan (CWS), ILM
Eric Steffen, EO, Lake County PBD
Tom Chefalo, PBD
Bill Santelik, SMC
Jodi McCarthy, Manhard, EO for Lake Zurich
Michael Brown, Village of Lake Zurich
Romeo Kapudija, Developer

This document was digitally transmitted. Please print out a copy of the document and retain for your records. If you are unable to print the document, or desire a hard copy mailed be to you, please notify SMC at your earliest convenience.

U:\Regulatory Program\Permits\24 Permits\IWLC\IWLC-24-925 24455 Hwy 12 BV_Uninc\PERMITS\BV Ltr.docx

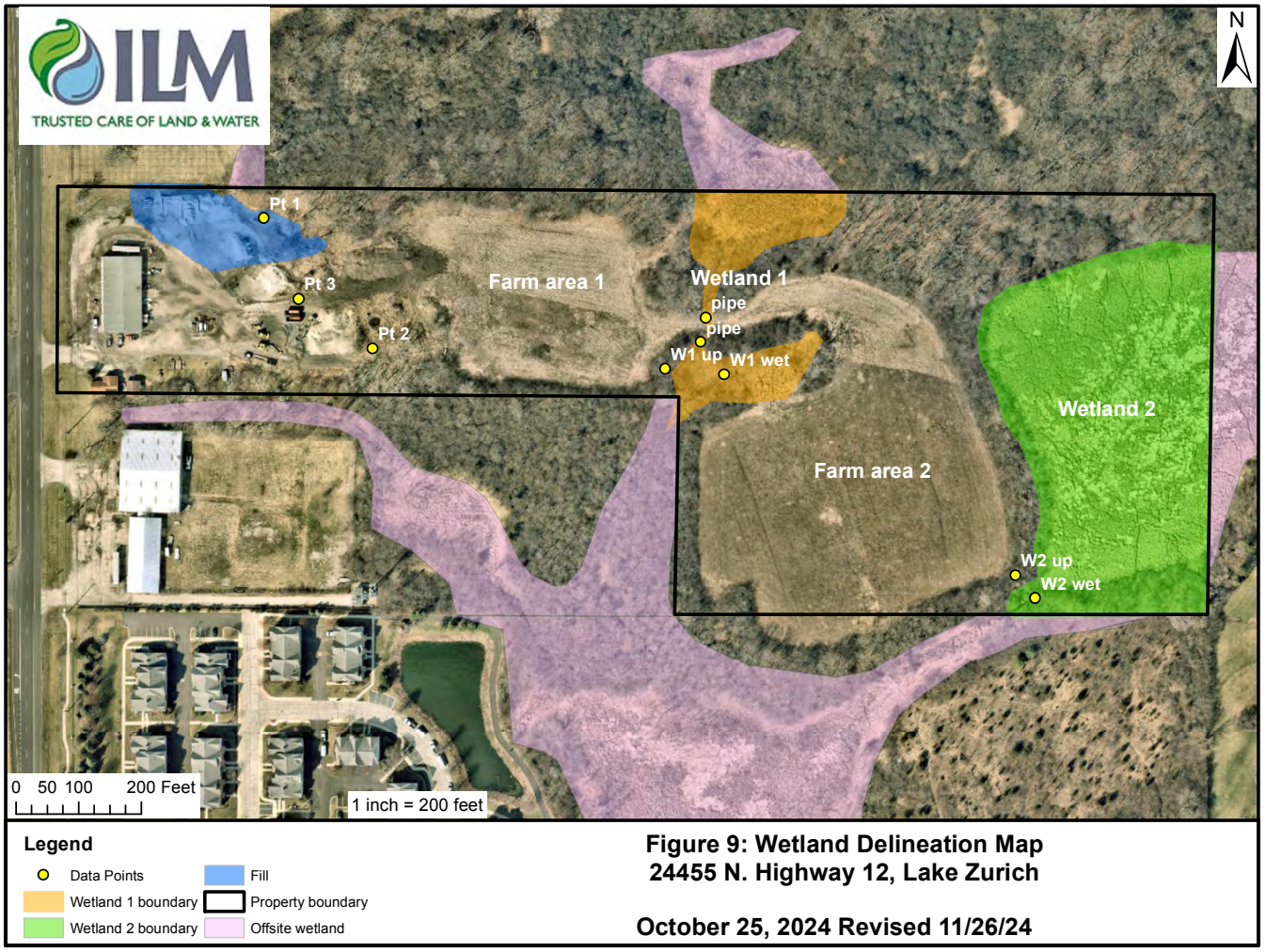


Figure 9: Wetland Delineation Map
24455 N. Highway 12, Lake Zurich

October 25, 2024 Revised 11/26/24

TRUSTED CARE OF LAND & WATER

To whom it may concern:

ILM Environments conducted an April site visit at 24455 Highway 12 property in Lake Zurich to gather data from three soil coring locations within the right-of-way. All three points were taken at the lowest topographical point, where wetlands would be most likely. The results of this assessment are documented in the attached U.S. Army Corps of Engineer Wetland Determination Data Sheets. It was determined that this right-of-way area does not exhibit hydrological, soil and floral traits which would indicate a wetland, therefore wetland impacts would not occur.

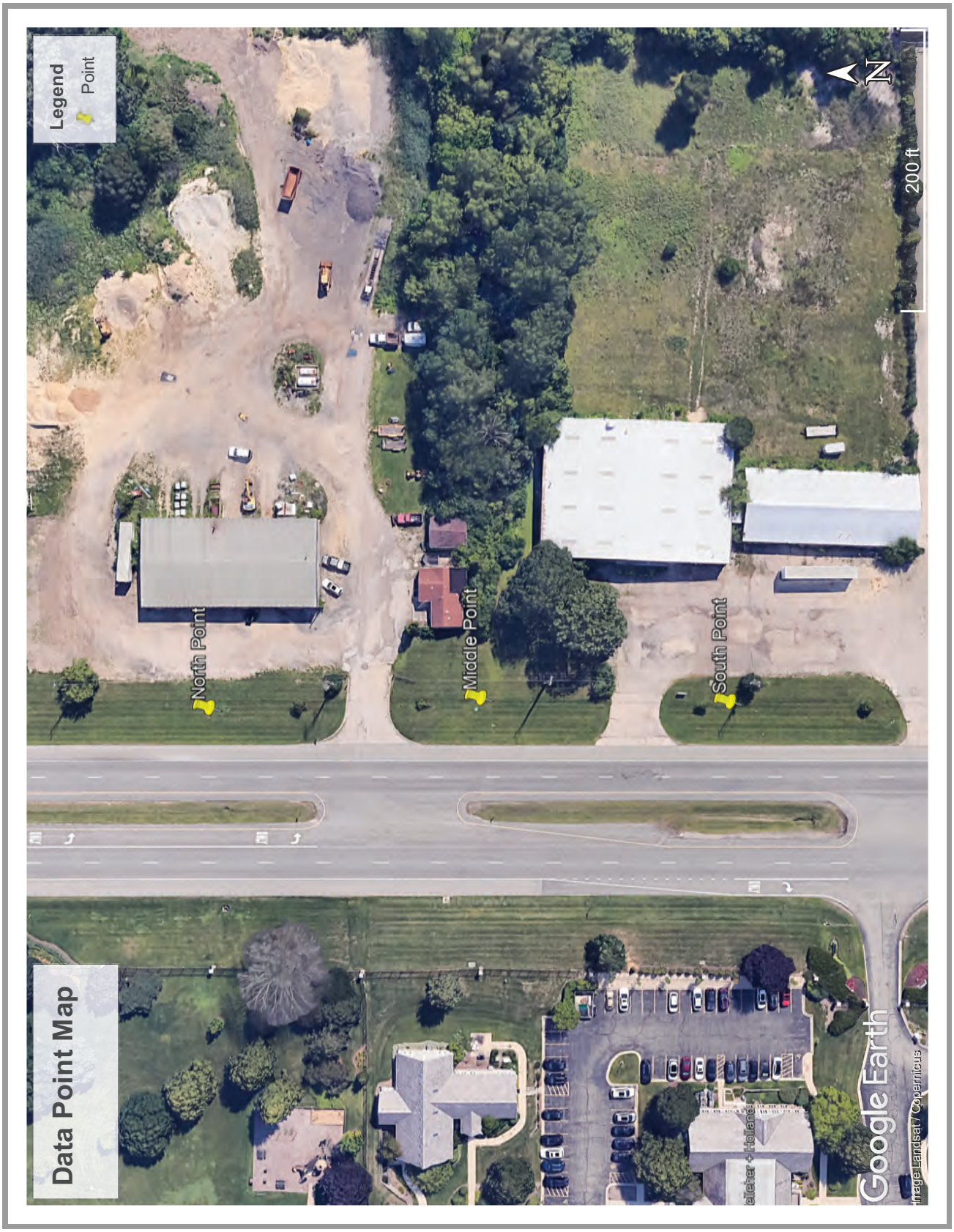
Please reach out with any further questions regarding the data sheets.

Thank you,

Eric Mollahan
Consulting Department Manager/Lead Ecologist ILM
224-688-3936

Eric Mollahan

info@ilmenvironments.com | ilmenvironments.com
110 Le Baron Street, Waukegan, IL 60085 (847) 244-6662


Data Point Map
Legend
Point
North Point
Middle Point
South Point
N
200 ft
Google Earth
Image Landsat / Copernicus

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: 24455 N. Highway 12 City/County: Lake Zurich / Lake Sampling Date: 4/17/25
Applicant/Owner: Caroline Cerbus-Kapudija State: IL Sampling Point: North Point
Investigator(s): Eric Mollahan Section, Township, Range: SE quarter of Section 7, T43N R10E
Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): concave
Slope (%): 1% Lat: 42.13812 Long: -88.64045 Datum:
Soil Map Unit Name: 530D2 Ozaukee silt loam NWI classification: none
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
Hydric Soil Present? Yes ____ No X
Wetland Hydrology Present? Yes ____ No X

Is the Sampled Area within a Wetland? **Yes** ____ **No** X

Remarks:
Moderate drought

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. *Dipsacus fullonum*	15	No	FACU
2. *Setaria viridis*	50	Yes	UPL
3. *Digitaria sanguinalis*	50	Yes	FACU
4. *Trifolium repens*	10	No	FACU
5. *Taraxacum officinale*	20	No	FACU
6. *Arctium minus*	5	No	FACU
7. *Daucus carota*	5	No	UPL
8. *Plantago lanceolata*	10	No	FACU
9. *Cichorium intybus*	15	No	FACU
10.			
	180 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	125	x 4 =	500
UPL species	55	x 5 =	275
Column Totals:	180 (A)		775 (B)

Prevalence Index = B/A = 4.31

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.)

ENG FORM 6116-7, FEB 2024 Midwest – Version 2.0

SOIL

Sampling Point: North Point

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 4/4	100					Loamy/Clayey	
6-12	10YR 4/1	100					Loamy/Clayey	
12-14	10YR 4/3	100					Loamy/Clayey	

[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]:

- ___ 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: gravel/sand

Depth (inches): 14

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)
- 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** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

ENG FORM 6116-7, FEB 2024 Midwest – Version 2.0

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: 24455 N. Highway 12 City/County: Lake Zurich / Lake Sampling Date: 4/17/25
Applicant/Owner: Caroline Cerbus-Kapudija State: IL Sampling Point: South Point
Investigator(s): Eric Mollahan Section, Township, Range: SE quarter of Section 7, T43N R10E
Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): concave
Slope (%): 1% Lat: 42.13625 Long: -88.64050 Datum:
Soil Map Unit Name: 530D2 Ozaukee silt loam NWI classification: none
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
Hydric Soil Present? Yes ____ No X
Wetland Hydrology Present? Yes ____ No X

Is the Sampled Area within a Wetland? **Yes** ____ **No** X

Remarks:
Moderate drought

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. *Taraxacum officinale*	10	No	FACU
2. *Setaria viridis*	50	Yes	UPL
3. *Digitaria sanguinalis*	50	Yes	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	110 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	60	x 4 =	240
UPL species	50	x 5 =	250
Column Totals:	110 (A)		490 (B)

Prevalence Index = B/A = 4.45

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.)

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SOIL

Sampling Point: South Point

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
0-5	10YR 3/1	100	10YR 6/4	1	C	M	Loamy/Clayey	Distinct redox concentrations
5-11	10YR 5/2	100	10YR 6/4	1	C	M	Loamy/Clayey	Distinct redox concentrations
11-15	10YR 6/4	65					Loamy/Clayey	

[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]:

- ___ 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: gravel

Depth (inches): 15

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:

ENG FORM 6116-7, FEB 2024 Midwest – Version 2.0

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: 24455 N. Highway 12 City/County: Lake Zurich / Lake Sampling Date: 4/23/25
Applicant/Owner: Caroline Cerbus-Kapudija State: IL Sampling Point: South Point
Investigator(s): Eric Mollahan Section, Township, Range: SE quarter of Section 7, T43N R10E
Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): concave
Slope (%): 1% Lat: 42.13431 Long: -88.64052 Datum:
Soil Map Unit Name: 530D2 Ozaukee silt loam NWI classification: none
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 p X

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:
Moderate drought

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. *Digitaria sanguinalis*	75	Yes	FACU
2. *Taraxacum officinale*	20	Yes	FACU
3. *Plantago major*	5	No	FAC
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: 0 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 0	x 2 = 0
FAC species 5	x 3 = 15
FACU species 95	x 4 = 380
UPL species 0	x 5 = 0
Column Totals: 100 (A)	395 (B)

Prevalence Index = B/A = 3.95

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.)

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SOIL

Sampling Point: South Point

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
0-4	10YR 4/1	80	10YR 4/6	20	C	M	Loamy/Clayey	Prominent redox concentrations
4-15	10YR 4/4	90	10YR 2/1	10	C	M	Loamy/Clayey	Distinct redox concentrations
15-24	10YR 2/1	90	10YR 4/6	10	C	M	Loamy/Clayey	Prominent redox concentrations

[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)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ? Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 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)
- ___ 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:

ENG FORM 6116-7, FEB 2024 Midwest – Version 2.0

Eric Mollahan
Consulting Department Manager
ILM Environments

Determination Key and Memo for 24455 North Highway 12, Lake Zurich.

MAMMALS

Northern Long-eared Bat Myotis septentrionalis

No critical habitat has been designated for this species.

Species profile: https://ecos.fws.gov/ecp/species/9045

Endangered

The D-Key resulted in a “may affect, but not likely to adversely affect”.

Please review the completed D-Key for this species.

BIRDS

Rufa Red Knot Calidris canutus rufa

There is proposed critical habitat for this species. Your location does not overlap the critical habitat.

Species profile: https://ecos.fws.gov/ecp/species/1864

Threatened

During migration and wintering, they rely on coastal marine habitats like sandy beaches, mudflats, salt marshes, and estuaries, where they can access abundant invertebrate prey.

The required habitat does not exist within the project boundaries. Invertebrate prey is not supported in this area.

Whooping Crane Grus americana

Population: U.S.A. (AL, AR, CO, FL, GA, ID, IL, IN, IA, KY, LA, MI, MN, MS, MO, NC,

NM, OH, SC, TN, UT, VA, WI, WV, western half of WY)

No critical habitat has been designated for this species.

Species profile: https://ecos.fws.gov/ecp/species/758

Experimental Population, NonEssential

Habitat requirements

- **Wetlands:**

Whooping cranes breed in prairie wetlands, including shallow lakes, ponds, and marshes, which offer abundant vegetation and protection from predators.

- **Shallow Water:**

They need shallow water areas for foraging and roosting.

- **Open Views:**

They select breeding sites with wide, open views to help them detect predators and potential threats.

- **Vegetation:**

They prefer areas with vegetation that provides cover and food, but avoid tall, dense vegetation.

There is generally no shallow open water remaining onsite (cattail encroachment) and the vegetation throughout is tall and dense and restricts views.

INSECTS

Monarch Butterfly Danaus plexippus

There is proposed critical habitat for this species. Your location does not overlap the critical habitat.

Species profile: https://ecos.fws.gov/ecp/species/9743

Proposed Threatened

Habitat requirements

- **Sunlight**: At least 6 hours of sunlight per day
- **Soil**: Well-drained, low-clay soil
- **Shelter**: Plants should be close together but not overcrowded
- **Milkweed**: At least 10 milkweed plants of multiple species
- **Nectar plants**: At least 4 nectar plants that bloom throughout the season
- **Water**: Access to a reliable water source

Milkweed species were not observed within the project boundaries.

Western Regal Fritillary Argynnis idalia occidentalis

No critical habitat has been designated for this species.

Species profile: https://ecos.fws.gov/ecp/species/12017

Proposed Threatened

- **Host plant:** Violet species (Viola spp.) for larval feeding.
- **Adult nectar sources:** A variety of wildflowers including butterfly weed, coneflowers, thistles, and mountain mints.
- **Cover and resting areas:** Tall native grasses for adult shelter and overwintering.
- **Habitat type:** Primarily open grasslands, including both upland and wet prairies.

The host plant is generally absent, tall grasses (other than cattail) do not occur, there are limited nectar sources, and the habitat type is degraded.

FLOWERING PLANTS

Eastern Prairie Fringed Orchid Platanthera leucophaea

No critical habitat has been designated for this species.

This species only needs to be considered under the following conditions:

Follow the guidance provided at https://www.fws.gov/midwest/endangered/section7/

s7process/plants/epfos7guide.html

Species profile: https://ecos.fws.gov/ecp/species/601

Threatened

- **Sunlight:**

Full sun exposure is crucial for optimal growth and flowering.

- **Moisture level:**

Wet to mesic prairie conditions, including sedge meadows, fens, and marsh edges.

- **Vegetation:**

Primarily grassy habitats with little woody encroachment, dominated by grasses and sedges.

- **Soil type:**

Glacial soils, lake plain deposits, muck or peat, which can range from neutral to mildly calcareous.

- **Mycorrhizal association:**

Requires a symbiotic relationship with soil fungi for seedling establishment.

The soil microbiology is degraded and would not support the vegetative communities nor the microbiological requirements for this species.

Pitcher's Thistle Cirsium pitcheri

No critical habitat has been designated for this species.

Species profile: https://ecos.fws.gov/ecp/species/8153

Threatened

- **Location:** Primarily found on the shorelines of Lakes Michigan, Superior, and Huron.
- **Terrain:** Open sand dunes and low, open beach ridges.
- **Soil conditions:** Loose, dry, sandy soil with minimal vegetation cover.
- **Disturbance factors:** Requires a certain level of wind-driven sand movement to maintain open areas.
- **Associated plants:** Often grows alongside other dune plants like beach grass (Ammophila breviligulata), dune willow, and sand cherry.

The soil type is not sandy. No other associated species were observed onsite. Other factors are not present.

Project code: 2025-0074157 03/26/2025 13:47:

Concluding Statement:

Based upon the required habitat and ecological associations, the species provided by Section 7 would not exist within the degraded landscape, therefore no impact would occur. Key habitat factors for the listed species' presence have been provided. Requirements which have not been met by the site in question were highlighted and described in bold after the listing.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chicago Ecological Service Field Office
1511 47th Ave
Moline, IL 61265-7022
Phone: (309) 757-5800

In Reply Refer To: 03/26/2025 13:47:34 UTC
Project Code: 2025-0074157
Project Name: 24455 North Highway 12, LZ

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

Additionally, please note that on March 23, 2022, the Service published a proposal to reclassify the northern long-eared bat (NLEB) as endangered under the Endangered Species Act. The U.S. District Court for the District of Columbia has ordered the Service to complete a new final listing

determination for the NLEB by November 2022 (Case 1:15-cv-00477, March 1, 2021). The bat, currently listed as threatened, faces extinction due to the range-wide impacts of white-nose syndrome (WNS), a deadly fungal disease affecting cave-dwelling bats across the continent. The proposed reclassification, if finalized, would remove the current 4(d) rule for the NLEB, as these rules may be applied only to threatened species. Depending on the type of effects a project has on NLEB, the change in the species' status may trigger the need to re-initiate consultation for any actions that are not completed and for which the Federal action agency retains discretion once the new listing determination becomes effective (anticipated to occur by December 30, 2022). If your project may result in incidental take of NLEB after the new listing goes into effect this will first need to addressed in an updated consultation that includes an Incidental Take Statement. If your project may require re-initiation of consultation, please contact our office for additional guidance.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and

their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Chicago Ecological Service Field Office
1511 47th Ave
Moline, IL 61265-7022
(309) 757-5800

PROJECT SUMMARY

Project Code: 2025-0074157
Project Name: 24455 North Highway 12, LZ
Project Type: Residential Construction
Project Description: This project will is planned for Summer of 2025 within the property. There is a planned development that has been coordinated with regional permitting agencies to mitigate any potential impacts to water quality and capacity of the site and wetlands.
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@42.218607399999996,-88.10788374926429,14z

Counties: Lake County, Illinois

ENDANGERED SPECIES ACT SPECIES

There is a total of 7 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered

BIRDS

NAME	STATUS
Rufa Red Knot *Calidris canutus rufa* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1864	Threatened
Whooping Crane *Grus americana* Population: U.S.A. (AL, AR, CO, FL, GA, ID, IL, IN, IA, KY, LA, MI, MN, MS, MO, NC, NM, OH, SC, TN, UT, VA, WI, WV, western half of WY) No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/758	Experimental Population, Non-Essential

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened
Western Regal Fritillary *Argynnis idalia occidentalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/12017	Proposed Threatened

FLOWERING PLANTS

NAME	STATUS
Eastern Prairie Fringed Orchid *Platanthera leucophaea* No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: ▪ Follow the guidance provided at https://www.fws.gov/midwest/endangered/section7/s7process/plants/epfos7guide.html Species profile: https://ecos.fws.gov/ecp/species/601	Threatened
Pitcher's Thistle *Cirsium pitcheri* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8153	Threatened

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Eric Mollahan
Address: 110 Lebaron street
City: Waukegan
State: IL
Zip: 60085
Email emollahan@ilmenvironments.com
Phone: 2246883936

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chicago Ecological Service Field Office
1511 47th Ave
Moline, IL 61265-7022
Phone: (309) 757-5800

In Reply Refer To: 04/14/2025 14:32:20 UTC
Project code: 2025-0074157
Project Name: 24455 North Highway 12, LZ

Federal Nexus: no
Federal Action Agency (if applicable):

Subject: Technical assistance for '24455 North Highway 12, LZ'

Dear Eric Mollahan:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on April 14, 2025, for '24455 North Highway 12, LZ' (here forward, Project). This project has been assigned Project Code 2025-0074157 and all future correspondence should clearly reference this number. **Please carefully review this letter. Your Endangered Species Act (Act) requirements may not bbe complete.**

Ensuring Accurate Determinations When Using IPaC

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into IPaC must accurately represent the full scope and details of the Project.

Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat and Tricolored Bat Range-wide Determination Key (Dkey), invalidates this letter. ***Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid. Note that conservation measures for northern long-eared bat and tricolored bat may differ. If both bat species are present in the action area and the key suggests more conservative measures for one of the species for your project, the Project may need to apply the most conservative measures in order to avoid adverse effects. If unsure which conservation measures should be applied, please contact the appropriate Ecological Services Field Office***

Determination for the Northern Long-Eared Bat and Tricolored Bat

Based upon your IPaC submission and a standing analysis completed by the Service, your project has reached the following effect determination(s):

Species	Listing Status	Determination
Northern Long-eared Bat (*Myotis septentrionalis*)	Endangered	NLAA

Other Species and Critical Habitat that May be Present in the Action Area

The IPaC-assisted determination key for the northern long-eared bat and tricolored bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- Eastern Prairie Fringed Orchid *Platanthera leucophaea* Threatened
- Monarch Butterfly *Danaus plexippus* Proposed Threatened
- Pitcher's Thistle *Cirsium pitcheri* Threatened
- Rufa Red Knot *Calidris canutus rufa* Threatened
- Western Regal Fritillary *Argynnis idalia occidentalis* Proposed Threatened
- Whooping Crane *Grus americana* Experimental Population, Non-Essential

You may coordinate with our Office to determine whether the Action may cause prohibited take of the animal species and/or critical habitat listed above. Note that if a new species is listed that may be affected by the identified action before it is complete, additional review is recommended to ensure compliance with the Endangered Species Act.

Next Steps

Coordination with the Service is complete. This letter serves as technical assistance. All conservation measures should be implemented as proposed. Thank you for considering federally listed species during your project planning.

If no changes occur with the Project or there are no updates on listed species, no further consultation/coordination for this project is required for the northern long-eared bat. However, the Service recommends that project proponents re-evaluate the Project in IPaC if: 1) the scope, timing, duration, or location of the Project changes (includes any project changes or amendments); 2) new information reveals the Project may impact (positively or negatively) federally listed species or designated critical habitat; or 3) a new species is listed, or critical habitat designated. If any of the above conditions occurs, additional coordination with the Service should take place before project implements any changes which are final or commits additional resources.

If you have any questions regarding this letter or need further assistance, please contact the Chicago Ecological Service Field Office and reference Project Code 2025-0074157 associated with this Project.

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

24455 North Highway 12, LZ

2. Description

The following description was provided for the project '24455 North Highway 12, LZ':

> This project will is planned for Summer of 2025 within the property. There is a planned development that has been coordinated with regional permitting agencies to mitigate any potential impacts to water quality and capacity of the site and wetlands.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@42.21901295,-88.1078897320628,14z

DETERMINATION KEY RESULT

Based on the answers provided, the proposed Action is consistent with a determination of “may affect, but not likely to adversely affect” for a least one species covered by this determination key.

QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of listed bats or any other listed species?

   Note: Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

   No

2. Is the action area wholly within Zone 2 of the year-round active area for northern long-eared bat and/or tricolored bat?

   Automatically answered
   No

3. Does the action area intersect Zone 1 of the year-round active area for northern long-eared bat and/or tricolored bat?

   Automatically answered
   No

4. Does any component of the action involve leasing, construction or operation of wind turbines? Answer 'yes' if the activities considered are conducted with the intention of gathering survey information to inform the leasing, construction, or operation of wind turbines.

   Note: For federal actions, answer ‘yes’ if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

   No

5. Is the proposed action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

   No

6. [Semantic] Is the action area located within 0.5 miles of a known bat hibernaculum?

   Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency.

   Automatically answered
   No

7. Does the action area contain any winter roosts or caves (or associated sinkholes, fissures, or other karst features), mines, rocky outcroppings, or tunnels that could provide habitat for hibernating bats?

   No

8. Will the action cause effects to a bridge?

   Note: Covered bridges should be considered as bridges in this question.

   No

9. Will the action result in effects to a culvert or tunnel at any time of year?

   No

10. Are trees present within 1000 feet of the action area?

    Note: If there are trees within the action area that are of a sufficient size to be potential roosts for bats answer "Yes". If unsure, additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines.

    Yes

11. Does the action include the intentional exclusion of bats from a building or structure?

    Note: Exclusion is conducted to deny bats' entry or reentry into a building. To be effective and to avoid harming bats, it should be done according to established standards. If your action includes bat exclusion and you are unsure whether northern long-eared bats or tricolored bats are present, answer "Yes." Answer "No" if there are no signs of bat use in the building/structure. If unsure, contact your local Ecological Services Field Office to help assess whether northern long-eared bats or tricolored bats may be present. Contact a Nuisance Wildlife Control Operator (NWCO) for help in how to exclude bats from a structure safely without causing harm to the bats (to find a NWCO certified in bat standards, search the Internet using the search term "National Wildlife Control Operators Association bats"). Also see the White-Nose Syndrome Response Team's guide for bat control in structures.

    No

12. Does the action involve removal, modification, or maintenance of a human-made structure (barn, house, or other building) **known or suspected to contain roosting bats?**

    No

13. Will the action cause construction of one or more new roads open to the public?

    For federal actions, answer 'yes' when the construction or operation of these facilities is either (1) part of the federal action or (2) would not occur but for an action taken by a federal agency (federal permit, funding, etc.).

    No

14. Will the action include or cause any construction or other activity that is reasonably certain to increase average daily traffic permanently or temporarily on one or more existing roads?

    Note: For federal actions, answer 'yes' when the construction or operation of these facilities is either (1) part of the federal action or (2) would not occur but for an action taken by a federal agency (federal permit, funding, etc.). .

    No

15. Will the action include or cause any construction or other activity that is reasonably certain to increase the number of travel lanes on an existing thoroughfare?

    For federal actions, answer 'yes' when the construction or operation of these facilities is either (1) part of the federal action or (2) would not occur but for an action taken by a federal agency (federal permit, funding, etc.).

    No

16. Will the proposed Action involve the creation of a new water-borne contaminant source (e.g., leachate pond, pits containing chemicals that are not NSF/ANSI 60 compliant)?

    Note: For information regarding NSF/ANSI 60 please visit https://www.nsf.org/knowledge-library/nsf-ansi-standard-60-drinking-water-treatment-chemicals-health-effects

    No

17. Will the proposed action involve the creation of a new point source discharge from a facility other than a water treatment plant or storm water system?

    No

18. Will the action include drilling or blasting?

    No

19. Will the action involve military training (e.g., smoke operations, obscurant operations, exploding munitions, artillery fire, range use, helicopter or fixed wing aircraft use)?

    No

20. Will the proposed action involve the use of herbicides or other pesticides other than herbicides (e.g., fungicides, insecticides, or rodenticides)?

    No

21. Will the action include or cause activities that are reasonably certain to cause chronic or intense nighttime noise (above current levels of ambient noise in the area) in suitable summer habitat for the northern long-eared bat or tricolored bat during the active season?

    Chronic noise is noise that is continuous or occurs repeatedly again and again for a long time. Sources of chronic or intense noise that could cause adverse effects to bats may include, but are not limited to: road traffic; trains; aircraft; industrial activities; gas compressor stations; loud music; crowds; oil and gas extraction; construction; and mining.

    Note: Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines.

    No

22. Does the action include, or is it reasonably certain to cause, the use of permanent or temporary artificial lighting within 1000 feet of suitable northern long-eared bat or tricolored bat roosting habitat?

    Note: Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines.

    Yes

23. Will the action cause an increase in the extent of suitable forested habitat exposed to artificial lighting?

    No

24. Will the action include tree cutting or other means of knocking down or bringing down trees, tree topping, or tree trimming?

    Yes

25. Will the proposed action occur exclusively in an already established and currently maintained utility right-of-way?

    No

26. Does the action include emergency cutting or trimming of hazard trees in order to remove an imminent threat to human safety or property? See hazard tree note at the bottom of the key for text that will be added to response letters

    Note: A "hazard tree" is a tree that is an immediate threat to lives, public health and safety, or improved property.

    No

27. Does the project intersect with the 0- 9.9% forest density category?

    Automatically answered

    No

28. Does the project intersect with the 10.0- 19.9% forest density category map?

    Automatically answered
    Yes

29. Does the project intersect with the 20.0- 29.9% forest density category map?

    Automatically answered
    No

30. Does the project intersect with the 30.0- 100% forest density category map?

    Automatically answered
    No

31. Will the action cause trees to be cut, knocked down, or otherwise brought down across an area greater than 5 acres in total extent?

    No

32. Will the proposed action result in the use of prescribed fire?

    Note: If the prescribed fire action includes other activities than application of fire (e.g., tree cutting, fire line preparation) please consider impacts from those activities within the previous representative questions in the key. This set of questions only considers impacts from flame and smoke.

    No

33. Does the action area intersect the northern long-eared bat species list area?

    Automatically answered
    Yes

34. [Semantic] Is the action area located within 0.25 miles of a culvert that is known to be occupied by northern long-eared or tricolored bats?

    Automatically answered
    No

35. [Semantic] Is the action area located within 150 feet of a documented northern long-eared bat roost site?

    Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency.

    Automatically answered
    No

36. Is suitable summer habitat for the northern long-eared bat present within 1000 feet of project activities?
    If unsure, answer "Yes."

    Note: Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines.

    Yes

37. Are any of the trees proposed for cutting or other means of knocking down, bringing down, topping, or trimming suitable for northern long-eared bat roosting (i.e., live trees and/or snags ≥3 inches dbh that have exfoliating bark, cracks, crevices, and/or cavities)?

    Note: Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines.

    No

38. Do you have any documents that you want to include with this submission?

    No

PROJECT QUESTIONNAIRE

Enter the extent of the action area (in acres) from which trees will be removed - round up to the nearest tenth of an acre. For this question, include the entire area where tree removal will take place, even if some live or dead trees will be left standing.

3.1

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Eric Mollahan
Address: 110 Lebaron street
City: Waukegan
State: IL
Zip: 60085
Email emollahan@ilmenvironments.com
Phone: 2246883936

TRUSTED CARE OF LAND & WATER

Hello,

The purpose of his document is to describe, in greater detail, the composition of vegetation within the wetlands verified onsite based upon ILM's field visits to 24455 N. US Highway 12, in October of 2024.

Wetland 1:

Wetland 1 is comprised predominately of cattail in the most hydric areas (approximately 85%). The peripheries of this wetland are comprised mostly of buckthorn (minimally 90% coverage outside of cattail) in most directions, within the confirmed boundary. Some of these hydric areas have native species present, likely due to the less disturbed nature of the onsite hydrology. When greater diversity of native species was observed, it was generally within a small area (~300 sq. ft.) and at no point was the dominant vegetation. These populations were not widely distributed and occurred where intermittent ponding seems likely. They also occurred where cattail did not meet the edge of the stand of buckthorn (reduced invasive competition). Based on state and federal resources (ecoCAT and Section 7) high-quality plant communities are not expected to be present in or around this location. This wetland does not meet the criteria set forth in appendix L of The Watershed Development Ordinance of Lake County.

Wetland 2:

Wetland 2 is comprised of similar species, with less native diversity. The composition of this wetland is heavily degraded, with 95%+ coverage of buckthorn and cattail. The natives observed in this wetland were within the southwestern section of the unit where intermittent ponding seems likely to occur (within the drainage pattern) and at no point was the dominant vegetation. Based on state and federal resources (ecoCAT and Section 7) high-quality plant communities are not expected to be present in or around this location. This wetland does not meet the criteria set forth in appendix L of The Watershed Development Ordinance of Lake County.

My general assessment is that both units are highly degraded, with limited restoration potential. If restoration activities were to be conducted, large scale removal/treatment of undesirable species would be required, followed by repetitious annual management strategy implementation. To maintain native dominance after such efforts, management would be required in perpetuity. While some areas within the wetland may experience native resurgence, supplemental seeding would be heavily relied upon for achieving desirable native coverage.

info@ilmenvironments.com | ilmenvironments.com
110 Le Baron Street, Waukegan, IL 60085 (847) 244-6662

TRUSTED CARE OF LAND & WATER

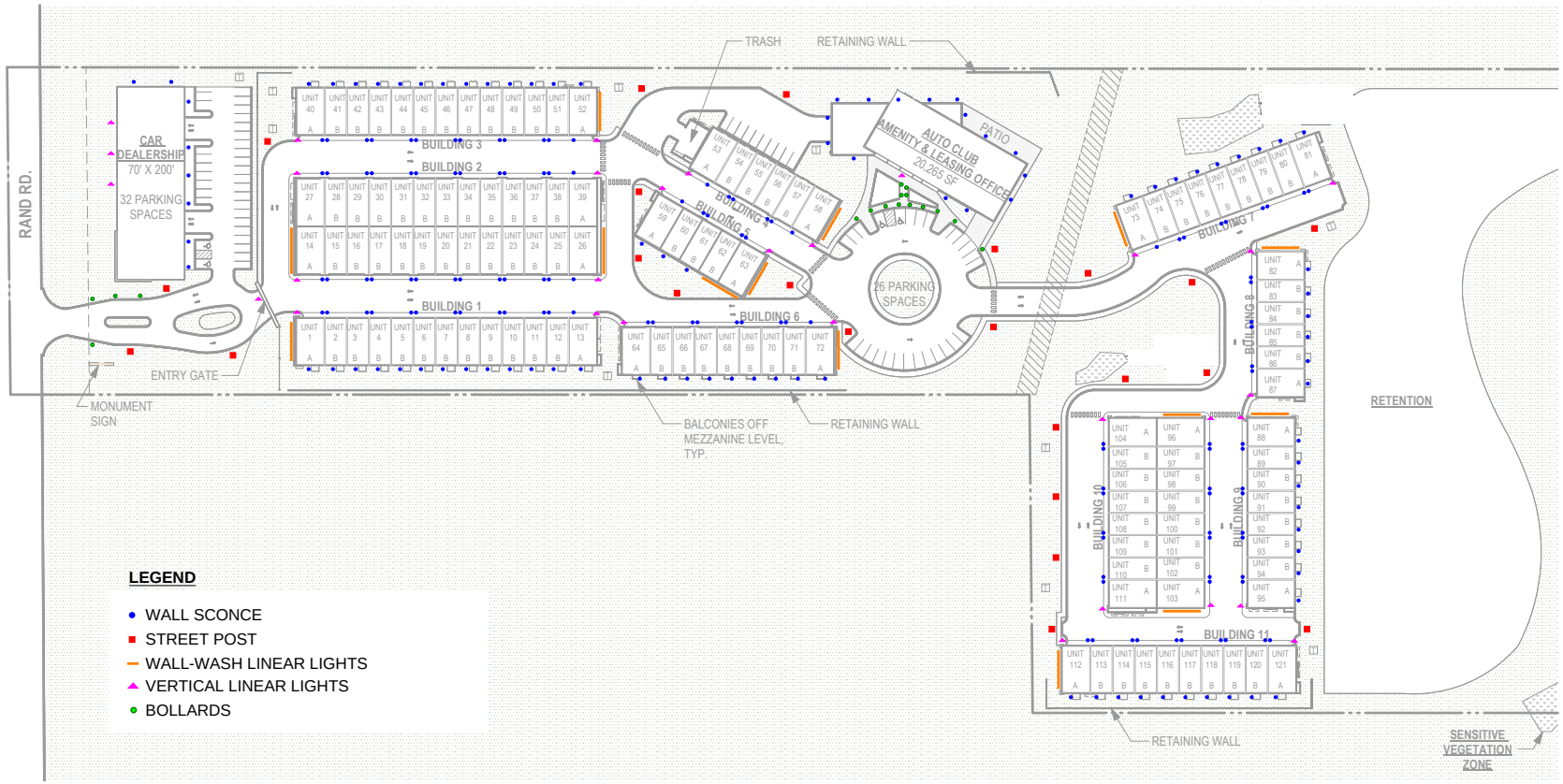
Please reach out with any further questions regarding the composition of these wetlands.

Thank you,

Eric Mollahan
Consulting Department Manager/Lead Ecologist ILM
224-688-3936

Eric Mollahan

info@ilmenvironments.com | ilmenvironments.com
110 Le Baron Street, Waukegan, IL 60085 (847) 244-6662



1 SITE PLAN - LIGHTING DIAGRAM

SCALE: 1" = 100'-0"

OKW Architects

OKW ARCHITECTS
600 W. Jackson, Suite 250
Chicago, IL 60661

N

SCALE: 1" = 100'
0 25' 50' 100'

PROJECT

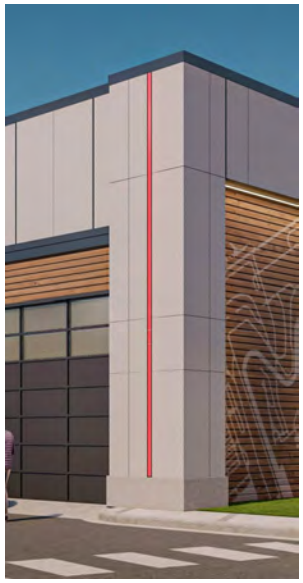
LUXE CORSA AUTO SUITES

24455 N. HIGHWAY 12 LAKE ZURICH, IL

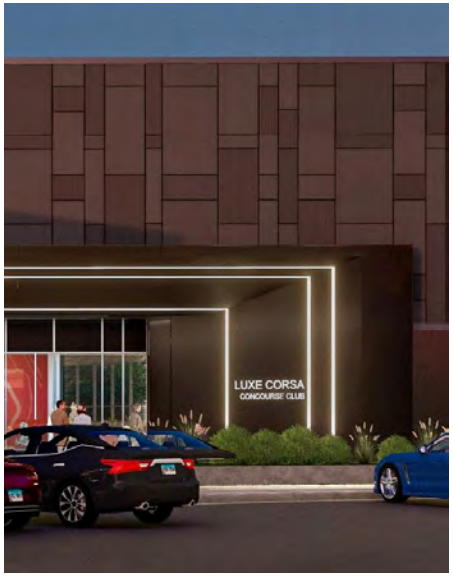
03-05-2025 Project #: 25009

00

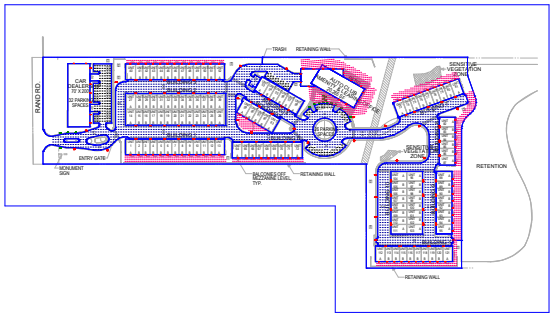
REFERENCE IMAGES



VERTICAL LINEAR LIGHTS



WALL-WASH LINEAR LIGHTS



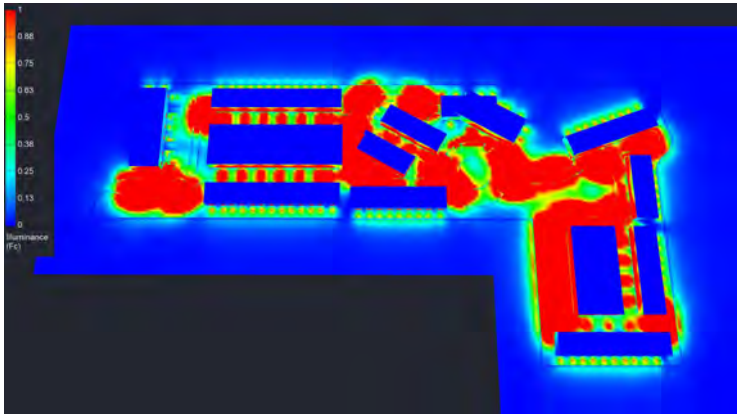
LIGHTING DETAILS:

Luminaire Schedule

Label	Symbol	[MANUFAC]	Qty	LLF	Description	Lum. Lumens	Lum. Watts
A		ENERGY LIGHT	23	0.900	HD-SB03-300W-FL2835-5070-T4 - Single Head	44651	301.2
B		ENERGY LIGHT	17	0.900	22W Round Bollard	2915	21.9
C		ENERGY LIGHT	215	0.900	62-1146R1_Photometrics	1472	20.0385

Calculation Summary

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min	Grid Z
#1 CAR DEALERSHIP PARKING	Illuminance	Fc	0.61	4.8	0.1	6.10	48.00	0
#10 BUILDING BACK 5	Illuminance	Fc	7.89	24.6	1.6	4.93	15.38	0.6
#2 BUILDING 4 PARKING	Illuminance	Fc	1.10	1.8	0.6	1.83	3.00	0
#3 ROUNDABOUT PARKING	Illuminance	Fc	3.09	18.0	0.2	15.45	90.00	0
#4 DRIVEWAY	Illuminance	Fc	3.63	23.0	0.2	18.15	115.00	0
#6 BUILDING BACK 1 & 6	Illuminance	Fc	0.55	1.6	0.0	N.A.	N.A.	0.6
#7 BUILDING BACK 7, 8, 9 & 11	Illuminance	Fc	1.17	22.9	0.0	N.A.	N.A.	0.6
#8 BUILDING BACK 3	Illuminance	Fc	0.60	1.4	0.1	6.00	14.00	0.6
#9 AUTOCLUB PATIO	Illuminance	Fc	2.22	67.7	0.1	22.20	677.00	0.6



Note on this Design:
This report does not provide any assertions regarding Lighting Design or Specification. Instead, its aim is to faithfully represent the photometric outcomes of a design as approved by external parties.

Regarding the Photometric Calculations:
These calculations are based on a mathematical model and are only as precise as permitted by the third-party software and the IES standards utilized. While the digital CAD data may appear accurate, this precision is a result of the techniques used for its generation and does not necessarily imply real-world accuracy.

Several factors may influence the actual performance of lighting in the built environment, including the accuracy of the original source (.ies) files, variations in input voltage and ballast, actual surface finishes, manufacturing discrepancies in both the lamp and luminaire, placement of luminaires, obstacles, and installation quality. Furthermore, errors may arise in field measurements due to the chosen measuring methods or technology, as well as the expertise of the measuring party. While every effort is made to ensure accuracy in this lighting study, the creator cannot be held accountable for any discrepancies. The recipient of this study acknowledges that the likelihood of scaling errors increases in the absence of a .DWG file or other properly dimensioned drawing provided to the designer.

Reflective values significantly impact light levels, and it is recommended that the end-user confirms these values before accepting the results of any photometric report. The managing contractor, architect, or engineer holds the responsibility for ensurin compliance with all relevant lighting ordinances and energy codes applicable to the project.

DESIGN NOTES:

1. MOUNTING HEIGHTS: Poles 20ft / Wall Mount 7ft
2. MEASUREMENTS TAKEN AT GRADE LEVEL
3. SURFACE REFLECTANCE: .7 /.5 /.2

LightMart Solutions Professionals Trust

Lux Corsa Site Lighting

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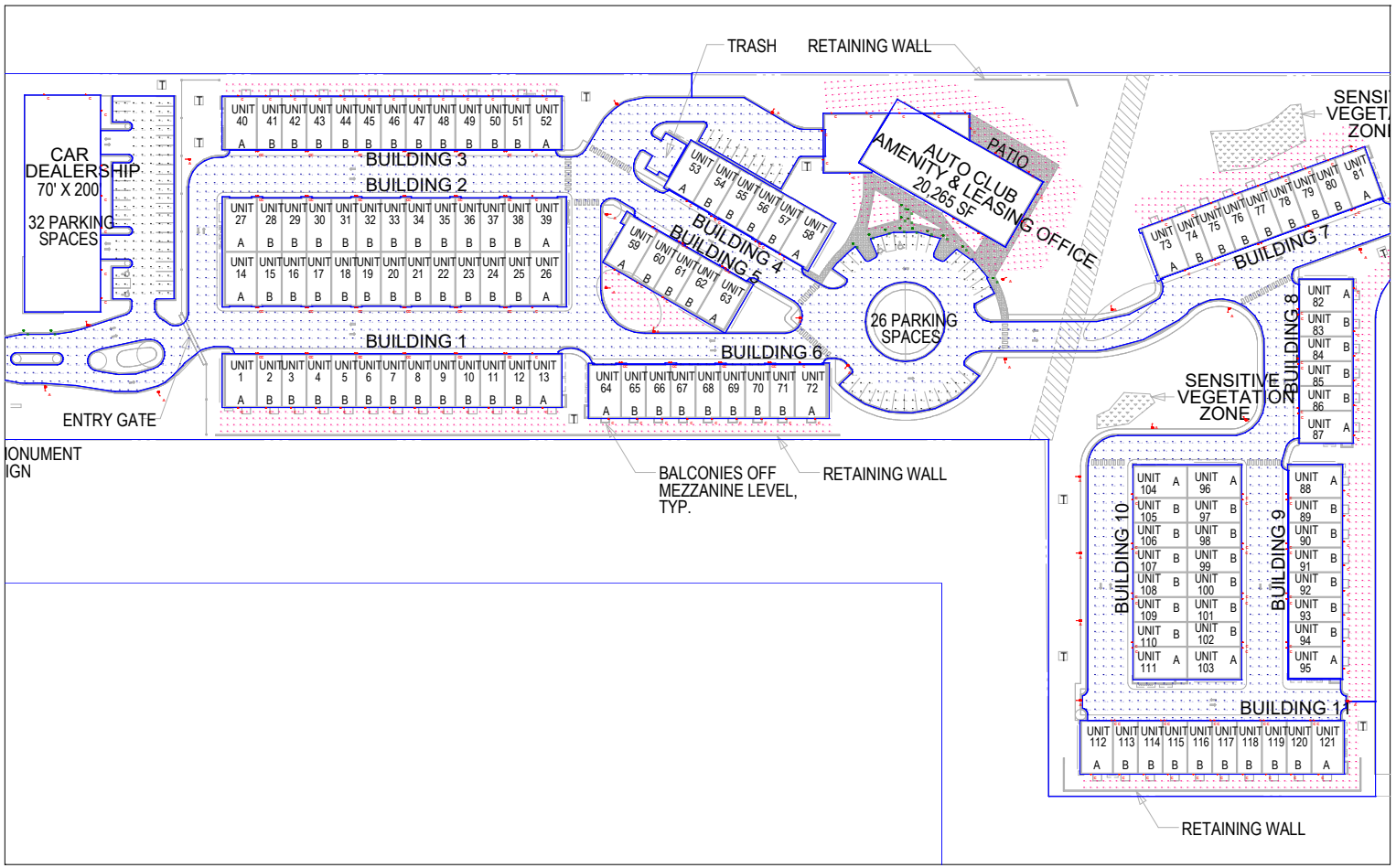
Date:7/31/2025
Drawn By: AG
Revision #: 0
Page 1 of 2

Overall Layout:



Scale: 1 inch= 40 Ft.

LightMart Solutions Professionals Trust

Lux Corsa Site Lighting

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Date:7/31/2025
Drawn By: AG
Revision #: 0
Page 2 of 2

20S04RS125

20 Foot Round Straight Steel Light Pole, 4 Inch Diameter, 11 Gauge

Energy Light, Inc.

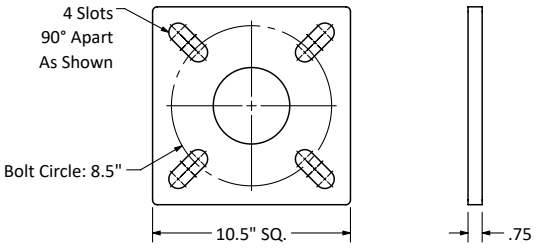
Job: _____

Job Site: _____ State: _____ Client Name: _____

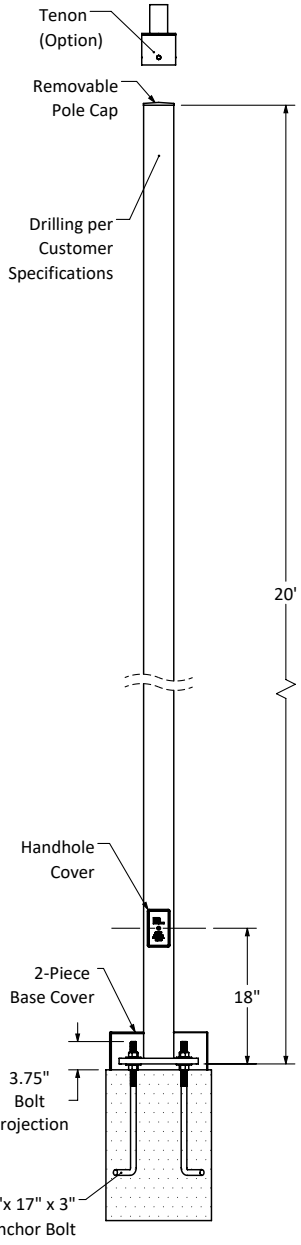
Notes: _____ Approvals: _____ Date: _____

Pole Top Options: A removable pole cap is provided if the pole is drilled for attaching light fixtures. The drill pattern and drill orientation needs to be provided by the customer unless Energy Light fixtures are used for the project. If tenon option is selected, a 2-3⁄8 inch diameter tenon with 4 inch length is provided.
Pole Shaft: Pole shaft shall be weldable-grade, cold-rolled, commercial quality carbon steel tubing conforming to ASTM A500 Grade B 11 gauge.
Handhole: Reinforced, 3" x 5" Handhole with cover, stainless steel screw and backbar is located at 18 inches from the base. Ground lug is included.
Finish: Commercial grade, super durable powder coat finish.
Dark Bronze, White, Black, Gray colors are provided at no extra charge.
Other colors and custom colors are available with extended lead times and additional surcharge.
Anchor Bolts: A set of 4 galvanized steel anchor bolts is provided with each pole assembly. Each anchor bolt includes 2 nuts and 2 washers. Top portion of the anchor bolt is threaded for securing and leveling the pole with the provided nuts and washers. An actual size paper anchor bolt template is provided.
Bolt Circle Range: 8.5" (Bolt circle range: 8"-11").
Base Cover: Two-piece steel square base cover. Stainless steel screws are included to attach the 2 pieces together after pole installation.
Other Options: The following options are available at an extra charge:
Custom tenon sizes, custom colors, electric/GFI outlets, custom pole heights, additional handholes and custom base plate dimensions.
Warranty: 1 Year.
Foundation design: Foundation should be designed by an engineer familiar with local soil and wind conditions as well as local code where the pole(s) will be installed.

Maximum EPA with 1.3 Gust Factor (ft^2)						Pole Weight (lbs)
90 mph	100 mph	110 mph	120 mph	130 mph	140 mph	
5.6	3.9	3.5	2.4	1.5	1.1	124



Base Plate



Disclaimer: All dimensions and specifications are subject to change without any notice. Energy Light, Inc. is not responsible for any claims arising from improper loading (what is attached to the light pole), improper use, incorrect foundation design and/or installation.

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91094-AL

150/200/240/300 Watt Selectable Wattage & Color Temperature LED Area Light

Energy Light, Inc.

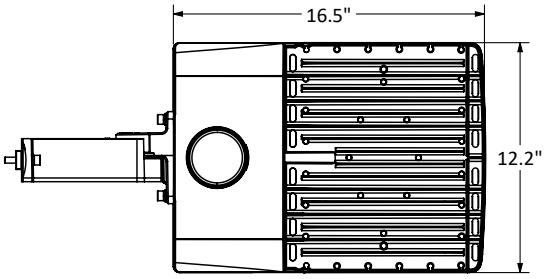
Job: _____

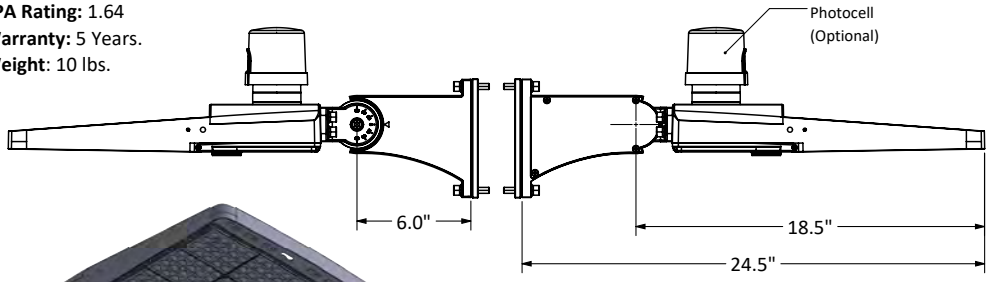
Job Site: _____ State: _____ Client Name: _____

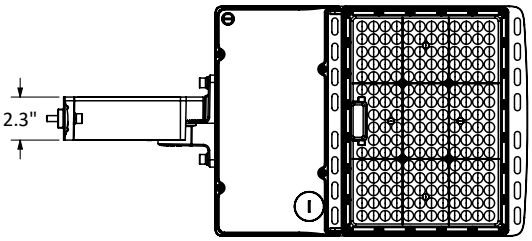
Notes: _____ Approvals: _____ Date: _____

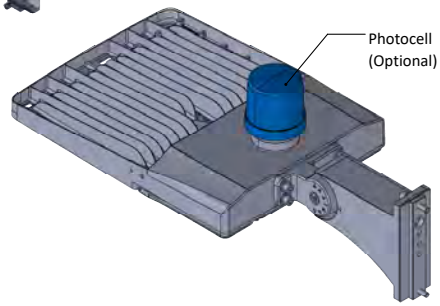
Material: Aluminum construction with integrated fins to maximize heat dissipation.
Color: Dark Bronze.
Preset Power: 300 Watts
Voltage: 120-277 Volt standard.
Selectable Colors: 3000K; 4000K; 5000K
Preset Color Temperature: 5000K.
Light Distribution: Type 3 standard.
Type 4 and Type 5 options as special order.
Photocell: Photocell is optional.
Dimming: 0-10V Dimming Capable.
Dimming control not provided (field install).
UL Listing: UL Listed for Wet Locations.
DLC Listing: DLC Premium.
IP Rating: IP66
EPA Rating: 1.64
Warranty: 5 Years.
Weight: 10 lbs.

WET LOCATION Dimmable IP66









POWER (W)	150	200	240	300
AMPS	1.39 @ 120V/ 0.60 @ 277V	1.85 @ 120V/ 0.80 @ 277V	2.22 @ 120V/ 0.97 @ 277V	2.78 @ 120V/ 1.20 @ 277V
LUMENS/WATT	160			
LUMENS	24,000	32,000	38,400	48,000

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BOLRR2

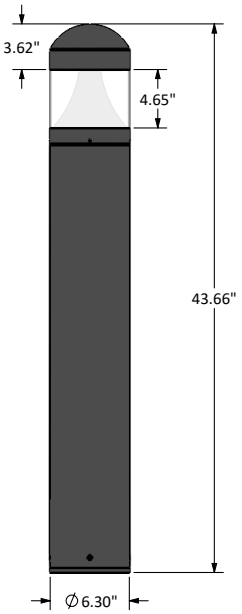
22 Watt Round Dome Top LED Bollard Light with Adjustable Power and Color temperature

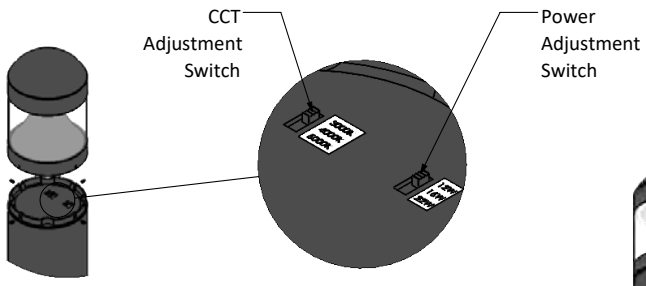
Job: _____

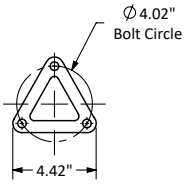
Job Site: _____ State: _____ Client Name: _____

Notes: _____ Approvals: _____ Date: _____

Material: Corrosion Resistant Aluminum Housing
Lens: Anti-UV PC Lens
Power: 22W (MAX); 16W (MID); 12W (MIN)
Color Temperature (CCT): 5000K, 4000K, 3000K
Voltage: 120-277V
Lumens: 2,860 Lm (22W), 2,080 Lm (16W), 1,560 Lm (12W)
Color: Black
Power Factor: >0.9
CRI: >80
Surge Protection: 10KV
Dimming: 0-10V
UL Listing: UL Listed for Wet Location
IP Rating: IP65
Warranty: 5 Years
Weight: 12 lbs



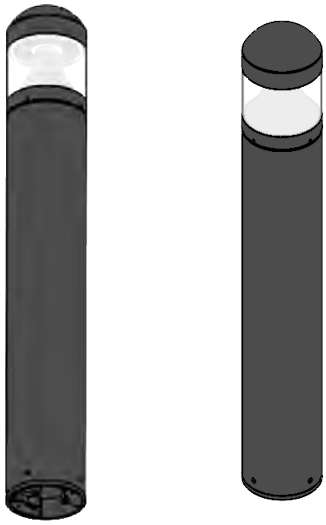




Anchor Bolt Plate

Hardware includes:

	Description	QTY:
	Anchor Bolt	3
	Nut	12
	Flat Washer	6
	Lock Washer	3
	Allen Wrench	1



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SATCO | NUVO

Project Name

Location | Prepared By

NUVO 62-1146R1

2 LT LED LG UP & DOWN SCONCE

Notes

General	
Status	Active
Finish	Bronze
Wattage	20W
Style	Utility
CCT (Kelvin)	3000K
Color Temperature	Warm White
Width (in.)	4.53
Height (in.)	11.69
Extension (in.)	4.21
Indoor or Outdoor Fixture	Outdoor

Smart Product Info	
IOT Enabled	No
Integrated Camera	No

Specifications	
Technology	LED
CRI	90+
Lumen Output	1800L
Rated Hours	50000
Voltage	120V/277V
Dimmable	Non-Dimmable
Photocell or Sensor	No Photocell
Weight (lb.)	2.51
Up/Down Installation	Universal
Fixture Material	Die-Cast Aluminum
Fixture Type	Sconce
Operating Temperature	-30C (-22F) to +50C (+122F)

Dimensions	
Back Plate or Canopy Width (in.)	4.53
Back Plate or Canopy Height (in.)	4.53

Compliance	
Safety Listing	cULus - Certified
Location Rating	Wet
UL Application	Outdoor
ENERGY STAR	No
DLC Approved	No
ADA Compliant	No
B.U.G. Rating	B1-U3-G2
California Status	Lawful for sale in California
Title 20 / 24 Status	Lawful for sale
California Prop 65	Lead
RoHS Compliant	Yes
FCC Compliant	Yes
Canadian Standard ICES-005	Class A
SDS Sheet	LED_Fixture

Additional Information	
Installation Notes	Mounts Up and Down
Warranty	5-Years

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For More Information Visit:
https://www.satco.com/

Traffic Impact Study
Proposed Luxe Corsa Auto Suites

Lake Zurich, Illinois

Prepared For:

Luxe Corsa Partners LLC

Kenig, Lindgren, O'Hara, Aboona, Inc.

July 16, 2025

1. 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 Luxe Corsa Auto Suites to be located on the east side of Rand Road approximately 900 feet north of the intersection of Rand Road with Bailey Lane in Lake Zurich, Illinois.

As proposed, the site, which is currently occupied by a vacant warehouse building, is proposed to be developed with a Luxe Corsa Auto Suites. The plans call for developing the site with 121 car condominium units across 11 buildings, a 14,000 square-foot building containing a 12,500 square-foot used luxury car dealership, a 1,500 square-foot coffee shop, and an ancillary clubhouse building with amenities and leasing office. Access to the site will be provided via a single access drive on Rand Road. **Figure 1** shows the location of the site relative to the area roadway system and **Figure 2** shows an aerial view of the site.

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 the traffic generated by the proposed car condominium.

The sections of this report present the following:

- Existing roadway conditions
- A description of the proposed Luxe Corsa Auto Suites
- Directional distribution of the Luxe Corsa Auto Suites traffic
- Vehicle trip generation for the Luxe Corsa Auto Suites
- Future traffic conditions including access to the Luxe Corsa Auto Suites
- Traffic analyses for the weekday midday and weekday 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 weekday evening peak hours for the following conditions:

1. Existing Conditions – Analyze the capacity of the existing roadway system using existing peak hour traffic volumes in the surrounding area.

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 and the traffic volumes estimated to be generated by other proposed developments in the area.

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 car condominium.

Site Location **Figure 1**

Aerial View of Site **Figure 2**

2. 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.

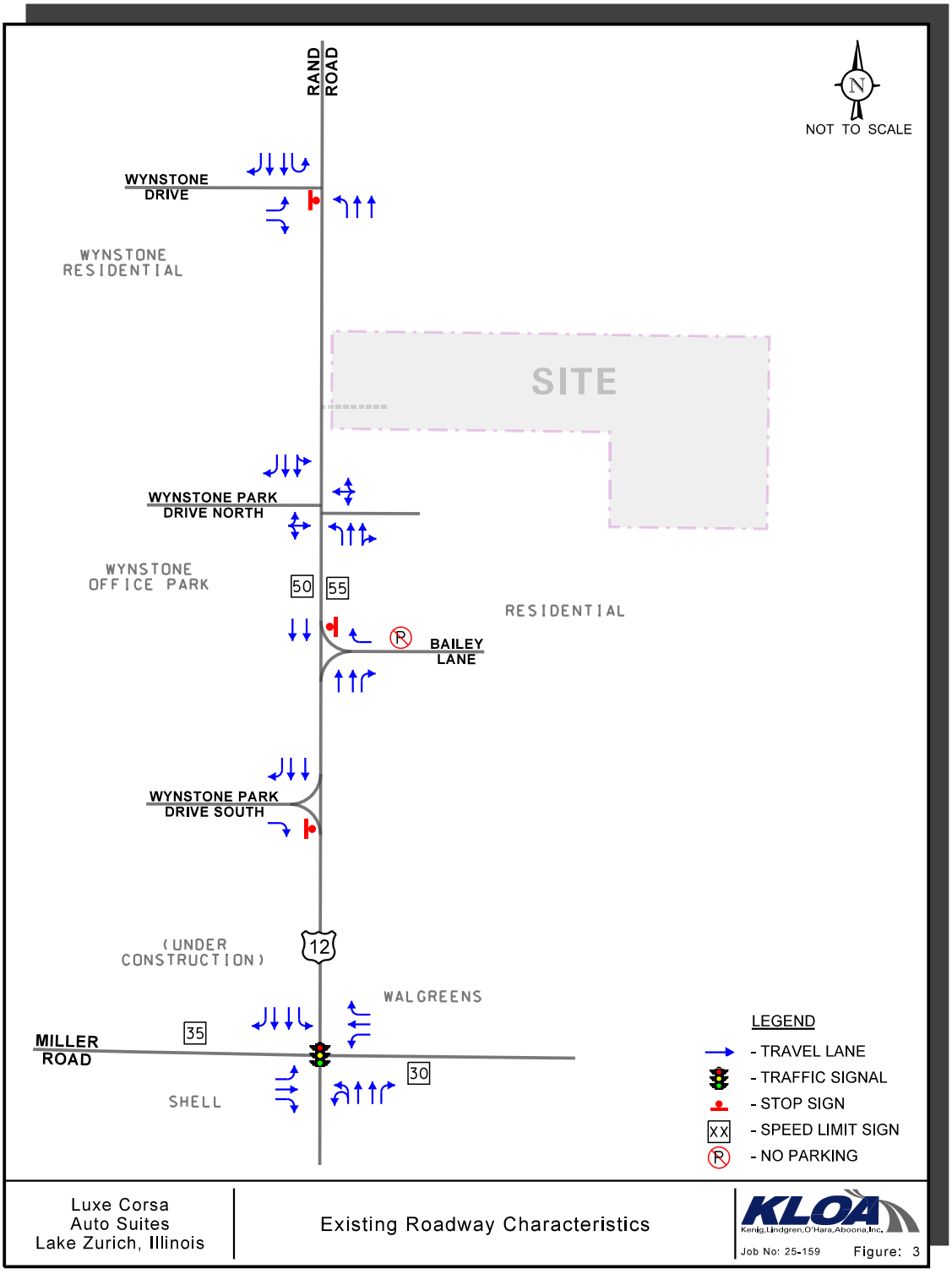
Site Location

The proposed Luxe Corsa Auto Suites will be located on the east side of Rand Road approximately 900 feet north of its intersection with Bailey Lane in Lake Zurich, Illinois. The site is bounded by vacant land owned by Mount St. Joseph to the north, a storage building to the south, vacant land to the east, and Rand Road to the west. Land uses in the vicinity are primarily residential with some commercial buildings to the south on the west side of Rand Road.

Existing Roadway System Characteristics

The characteristics of the existing roadways near the site are described below and illustrated in **Figure 3**.

Rand Road (N US-12) is a northwest-southeast principal arterial roadway that in the vicinity of the site provides two travel lanes in each direction. At its signalized intersection with Miller Road, Rand Road provides a shared U-turn/left-turn lane, two through lanes, and an exclusive right-turn lane on the northbound approach and an exclusive left-turn lane, two through lanes, and an exclusive right-turn lane on the southbound approach. At its unsignalized intersection with Arcadia Lane/ Bailey Lane, Rand Road provides two through lanes and an exclusive right-turn lane on the northbound approach and two through lanes on the southbound approach. At its unsignalized intersection with North Winston Park Drive, Rand Road provides an exclusive left-turn lane and two through lanes on the northbound approach and two through lanes and an exclusive right-turn lane on the southbound approach. At its unsignalized intersection with south Wynston Park Drive, Rand Road provides two through lanes on the northbound approach and two through lanes and an exclusive right-turn lane on the southbound approach. At its unsignalized intersection with Wynston Drive, Rand Road provides an exclusive left-turn lane and two through lanes on the northbound approach and an exclusive U-turn lane, two through lanes, and an exclusive right-turn lane on the southbound approach. At its unsignalized intersection with the site access drive, Rand Road provides a through lane and a shared through/right-turn lane on the northbound approach and an exclusive left-turn lane and two through lanes on the southbound approach. Rand Road is under the jurisdiction of the Illinois Department of Transportation (IDOT), is classified as a Strategic Regional Arterial (SRA) route, carries an Annual Average Daily Traffic (AADT) of 32,200 vehicles (IDOT 2023), and has a posted speed limit of 55 miles per hour on the northbound approach and a posted speed limit of 50 miles per hour on the southbound approach.


RAND ROAD
NOT TO SCALE
WYNSTONE DRIVE
WYNSTONE RESIDENTIAL
SITE
WYNSTONE PARK DRIVE NORTH
WYNSTONE OFFICE PARK
50
55
RESIDENTIAL
BAILEY LANE
WYNSTONE PARK DRIVE SOUTH
(UNDER CONSTRUCTION)
12
WALGREENS
MILLER ROAD
35
30
SHELL
LEGEND
- TRAVEL LANE
- TRAFFIC SIGNAL
- STOP SIGN
XX - SPEED LIMIT SIGN
- NO PARKING
Luxe Corsa
Auto Suites
Lake Zurich, Illinois
Existing Roadway Characteristics
KLOA
Kenig, Lindgren, O'Hara, Aboona, Inc.
Job No: 25-159
Figure: 3

Miller Road is an east-west minor arterial roadway that in the vicinity of the site provides one travel lane in each direction. At its signalized intersection with Rand Road, Miller Road provides an exclusive left-turn lane, through lane, and exclusive right-turn lane on the eastbound and westbound approaches. Miller Road is under the jurisdiction of Lake County Division of Transportation (LCDOT) west of Rand Road and Village of Lake Zurich east of Rand Road carries an AADT of 4,800 vehicles west of Rand Road and 2,600 vehicles east of Rand Road, and has a posted speed limit of 35 miles per hour west of Rand Road and a posted speed limit of 30 miles per hour east of Rand Road.

Arcadia Lane/Bailey Lane is an east-west local roadway that provides one travel lane in each direction. At its unsignalized intersection with Rand Road, Bailey Lane provides a split inbound and outbound lane on the westbound approach. The outbound lane is under stop sign control. Arcadia Lane/Bailey Lane has a posted speed limit of 20 miles per hour.

Wynstone Park Drive is an access drive that serves the commercial buildings on the west side of Rand Road. At the north unsignalized intersection with Rand Road, Wynston Park Drive provides left-turn/through/right-turn lane on the eastbound and westbound approaches. At the south unsignalized intersection with Rand Road, Wynston Park Drive provides an inbound lane and outbound lane on the eastbound approach. The outbound lane is under stop sign control.

Wynstone Drive is a local roadway that provides one travel lane in each direction. At its unsignalized intersection with Rand Road, Wynstone Drive provides an exclusive left-turn/right-turn lane on the eastbound approach and is under stop sign control.

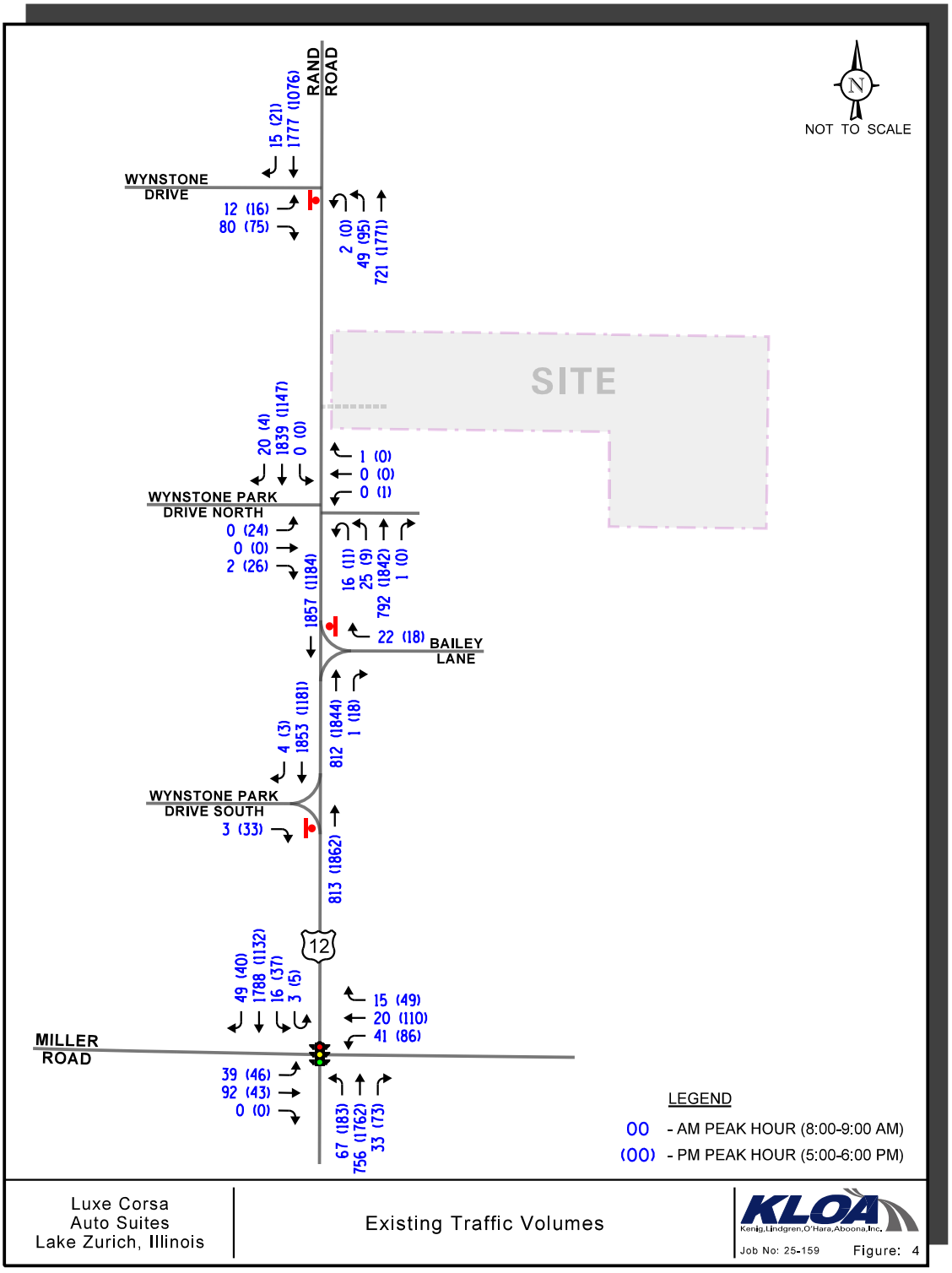
Site Access Drive is an east-west driveway that provides access to the existing vacant storage building at the site. At its unsignalized intersection with Rand Road, the site access drive provides a shared left-turn/right-turn lane on the westbound approach.

Existing Traffic Volumes

In order to determine current traffic conditions in the vicinity of the site, KLOA, Inc. conducted peak period traffic counts utilizing Miovision Scout Collection Units on Tuesday, July 8, 2025 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:

- Rand Road with Miller Road
- Rand Road with Wynstone Park Drive (north and south)
- Rand Road with Wynstone Drive
- Rand Road with Arcadia Lane/Bailey Lane

The results of the traffic counts indicated that the weekday morning peak hour occurs from 7:15 A.M. to 8:15 A.M. and the weekday evening peak hour occurs from 4:30 P.M. to 5:30 P.M. **Figure 4** illustrates the existing peak hour traffic volumes. Copies of the traffic count summary sheets are included in the Appendix.


RAND ROAD
WYNSTONE DRIVE
WYNSTONE PARK DRIVE NORTH
WYNSTONE PARK DRIVE SOUTH
BAILEY LANE
MILLER ROAD
12
SITE
NOT TO SCALE
15 (21) 1777 (1076)
12 (16) 80 (75)
2 (0) 49 (95) 721 (1771)
20 (4) 1839 (1147) 0 (0)
1 (0) 0 (0) 0 (1)
0 (24) 0 (0) 2 (26)
16 (11) 25 (9) 792 (1842) 1 (0)
1857 (1184)
22 (18)
4 (3) 1853 (1181)
812 (1844) 1 (18)
3 (33)
813 (1862)
49 (40) 1788 (1132) 16 (37) 3 (5)
15 (49) 20 (110) 41 (86)
39 (46) 92 (43) 0 (0)
67 (183) 756 (1762) 33 (73)
LEGEND
00 - AM PEAK HOUR (8:00-9:00 AM)
(00) - PM PEAK HOUR (5:00-6:00 PM)
Luxe Corsa
Auto Suites
Lake Zurich, Illinois
Existing Traffic Volumes
KLOA
Kenig,Lindgren,O'Hara,Aboona,Inc.
Job No: 25-159
Figure: 4

Crash Data Summary

KLOA, Inc. obtained accident data for the most recent available past five years (2019 to 2023) for the intersections of Rand Road with Miller Road, Rand Road with Arcadia Lane/Bailey Lane, Rand Road with Wynstone Park Drive (north and south), and Rand Road with Wynstone Drive. The intersections of Rand Road with Arcadia Lane/Bailey Lane, Rand Road with Wynstone Park Drive (north), Rand Road with Wynstone Park Drive (south), and Rand Road with Wynstone Drive averaged less than one crash per year. The crash data from the intersection of Rand Road with Miller Road is summarized in **Table 1**. A review of the data indicated that no fatalities were reported at this intersection during the reviewed period.

Table 1
RAND ROAD WITH MILLER ROAD – CRASH SUMMARY

Year	Type of Crash Frequency							
	Angle	Pedestrian	Object	Rear End	Sideswipe	Turning	Other	Total
2019	1	0	0	8	0	0	0	9
2020	1	0	0	4	0	2	0	7
2021	1	0	1	2	0	0	0	4
2022	0	0	0	5	0	2	1	8
2023	1	0	0	8	0	1	0	10
Total	**4**	**0**	**1**	**27**	**0**	**5**	**1**	**38**
Average	**<1.0**	**--**	**<1.0**	**5.4**	**--**	**1.0**	**<1.0**	**7.6**

3. Traffic Characteristics

In order to properly evaluate future traffic conditions in the surrounding area, it was necessary to determine the traffic characteristics of the proposed Luxe Corsa Auto Suites, including the directional distribution and volumes of traffic that it will generate.

Proposed Site and Development Plan

As proposed, the site will primarily be developed with 121 car storage condominiums distributed over 11 buildings with an ancillary clubhouse building with amenities and leasing office. Additionally, fronting Rand Road will be a 14,000 square-foot building containing a 12,500 square-foot used luxury car dealership and a 1,500 square-foot coffee shop. Access to the proposed Luxe Corsa Auto Suites will be provided via a full-movement access drive on Rand Road that will be located in the approximate location of the existing access drive serving the site. This access drive will provide one inbound lane and one outbound lane with outbound movements under stop sign control. It should be noted that Rand Road already provides a southbound left-turn lane serving the existing access drive.

A copy of the proposed site plan is included in the Appendix.

Directional Distribution

The directions from which vehicles 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 restaurant-generated traffic.

Peak Hour Traffic Volumes

The estimate of vehicle traffic to be generated by the proposed Luxe Corsa Auto Suites is based upon the proposed land use types and sizes. The vehicle trip generation for the proposed car condominium was calculated using data published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 11th Edition. Land-Use Codes 936 (Coffee/Donut Shop without Drive-Thru Window), 842 (Recreational Vehicle Sales), and 151 (Mini Warehouse) were utilized. The Recreational Vehicle Sales code was used over a standard Automobile Sales (new or used) land-use code as the proposed car dealership will be selling used luxury/vintage vehicles that will be utilized for the purposes of collection and recreational use. While it is anticipated that trips generated by the coffee shop will be pass-by trips of existing vehicles along Rand Road or coffee shop customers will be owners of a car storage unit, no trip generation reductions were applied. A copy of the ITE trip generation sheets are included in the Appendix.

Table 2 shows the estimated vehicle trip generation for the weekday morning peak hour, weekday evening peak hour, and daily trips.

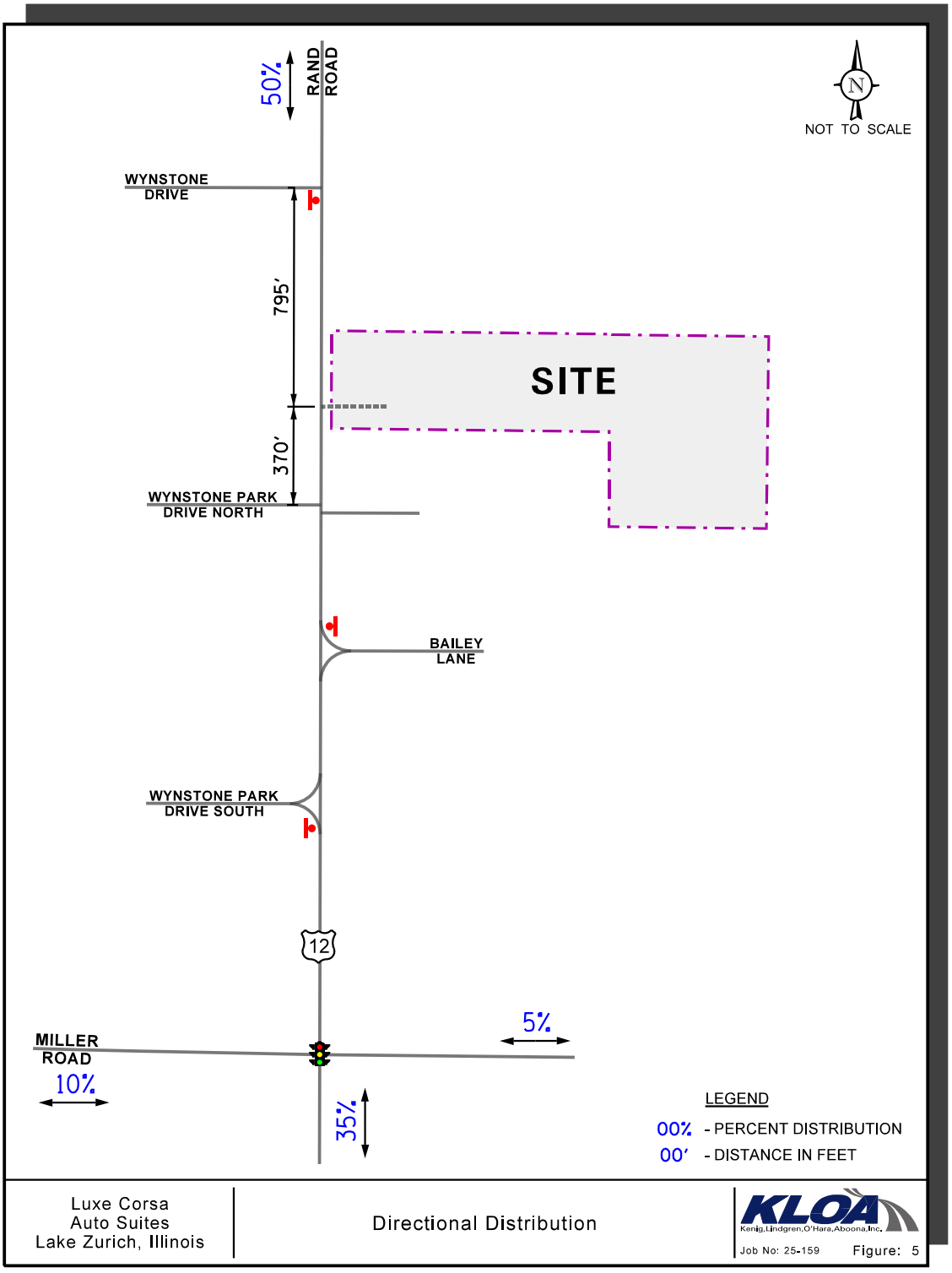

50%
RAND ROAD
NOT TO SCALE
WYNSTONE DRIVE
795'
SITE
370'
WYNSTONE PARK DRIVE NORTH
BAILEY LANE
WYNSTONE PARK DRIVE SOUTH
12
MILLER ROAD
10%
5%
35%
LEGEND
00% - PERCENT DISTRIBUTION
00' - DISTANCE IN FEET
Luxe Corsa
Auto Suites
Lake Zurich, Illinois
Directional Distribution
KLOA
Kenig,Lindgren,O'Hara,Aboona,Inc.
Job No: 25-159
Figure: 5

Table 2
ESTIMATED 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
936	Coffee/Donut Shop without Drive-Through Window (1,500 s.f.)	71	69	140	24	24	48	333	334	667
842	Recreational Vehicle Sales (12,500 s.f.)	5	1	6	3	7	10	31	32	63
151	Mini Warehouse (121 Units)	8	7	15	13	12	25	122	123	245
	Total	**84**	**77**	**161**	**40**	**43**	**83**	**486**	**489**	**975**

4. 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 Luxe Corsa Auto Suites.

Traffic Assignment

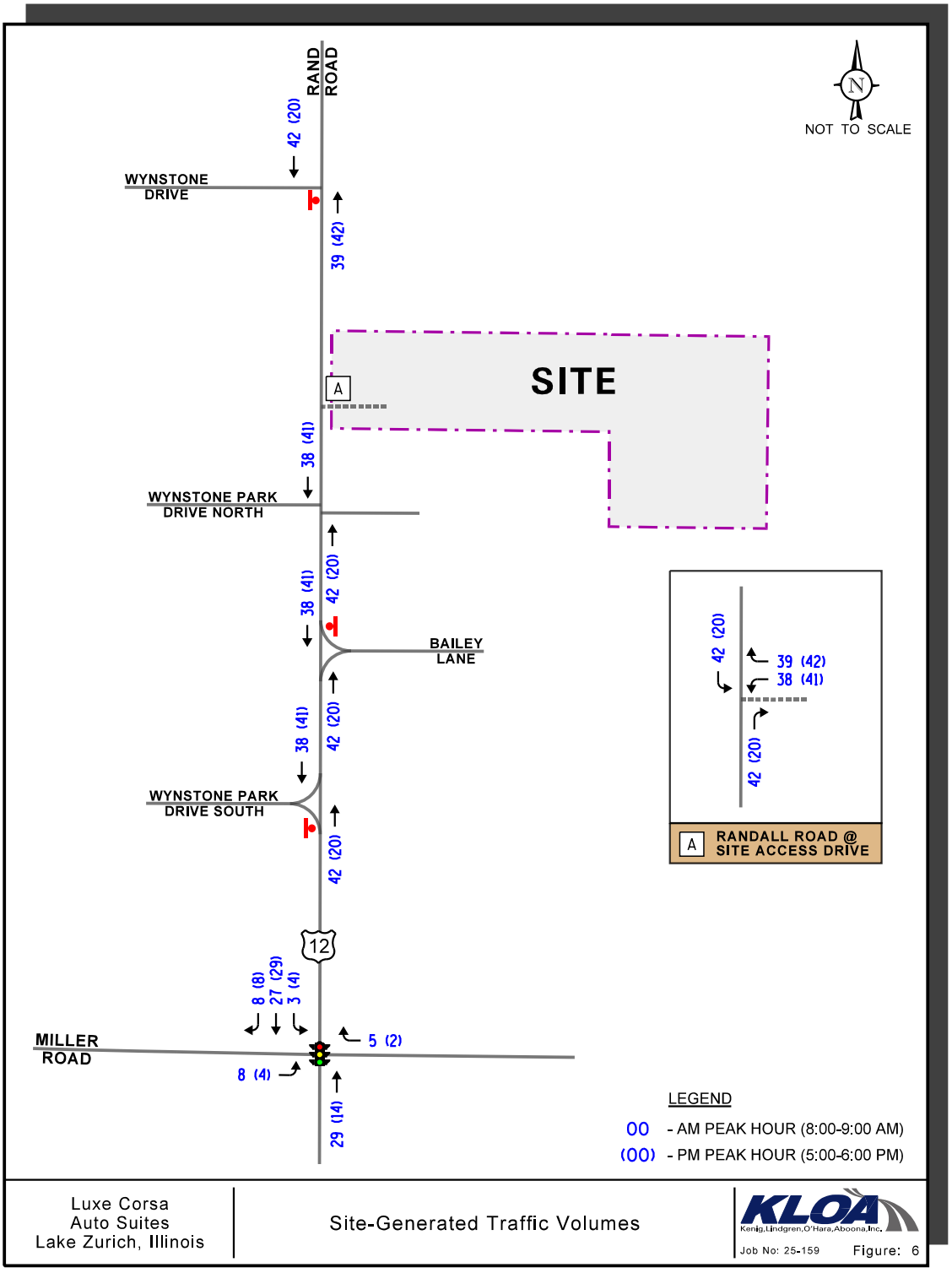
The estimated weekday morning and weekday evening peak hour traffic volumes that will be generated by the proposed Luxe Corsa Auto Suites were assigned to the roadway system in accordance with the previously described directional distribution (Figure 5). **Figure 6** illustrates the traffic assignment of the generated traffic volumes.

Background (No-Build) Traffic Conditions

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 particular planned development). Based on Average Daily Traffic (ADT) projections provided by the Chicago Metropolitan Agency for Planning (CMAP), the existing traffic volumes were increased by an annually compounded growth rate of 0.71 percent per year for six years (buildout year plus five years) for a total of approximately 4.5 percent to project Year 2031 background (no-build) conditions. A copy of the CMAP 2050 projections letter is included in the Appendix. **Figure 7** illustrates the Year 2031 no-build traffic volumes.

Total Projected Traffic Volumes

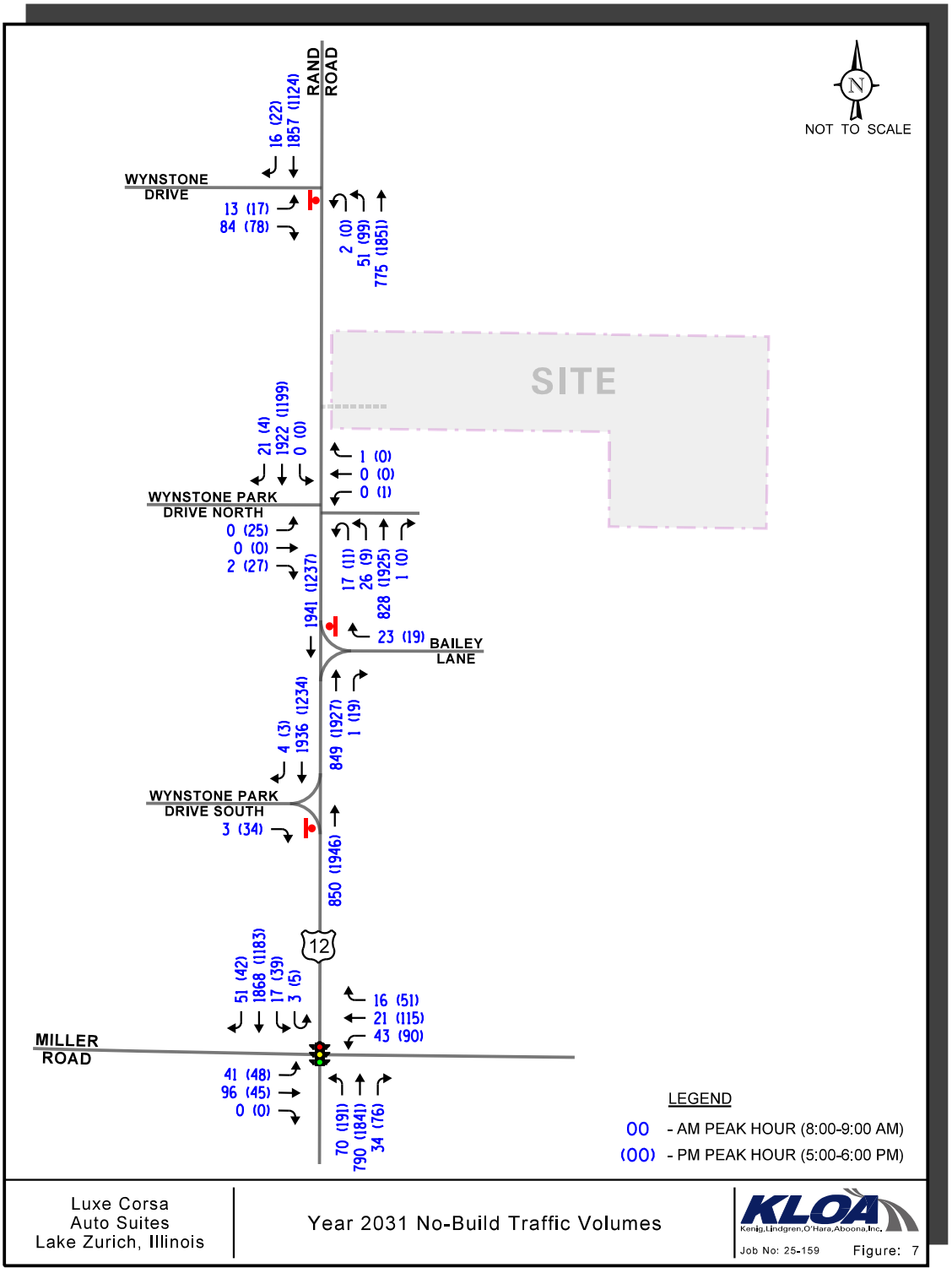
The development-generated traffic (Figure 6) was added to the Year 2031 no-build traffic volumes (Figure 7) to determine the Year 2031 total projected traffic volumes, shown in **Figure 8.**



Luxe Corsa
Auto Suites
Lake Zurich, Illinois

Site-Generated Traffic Volumes

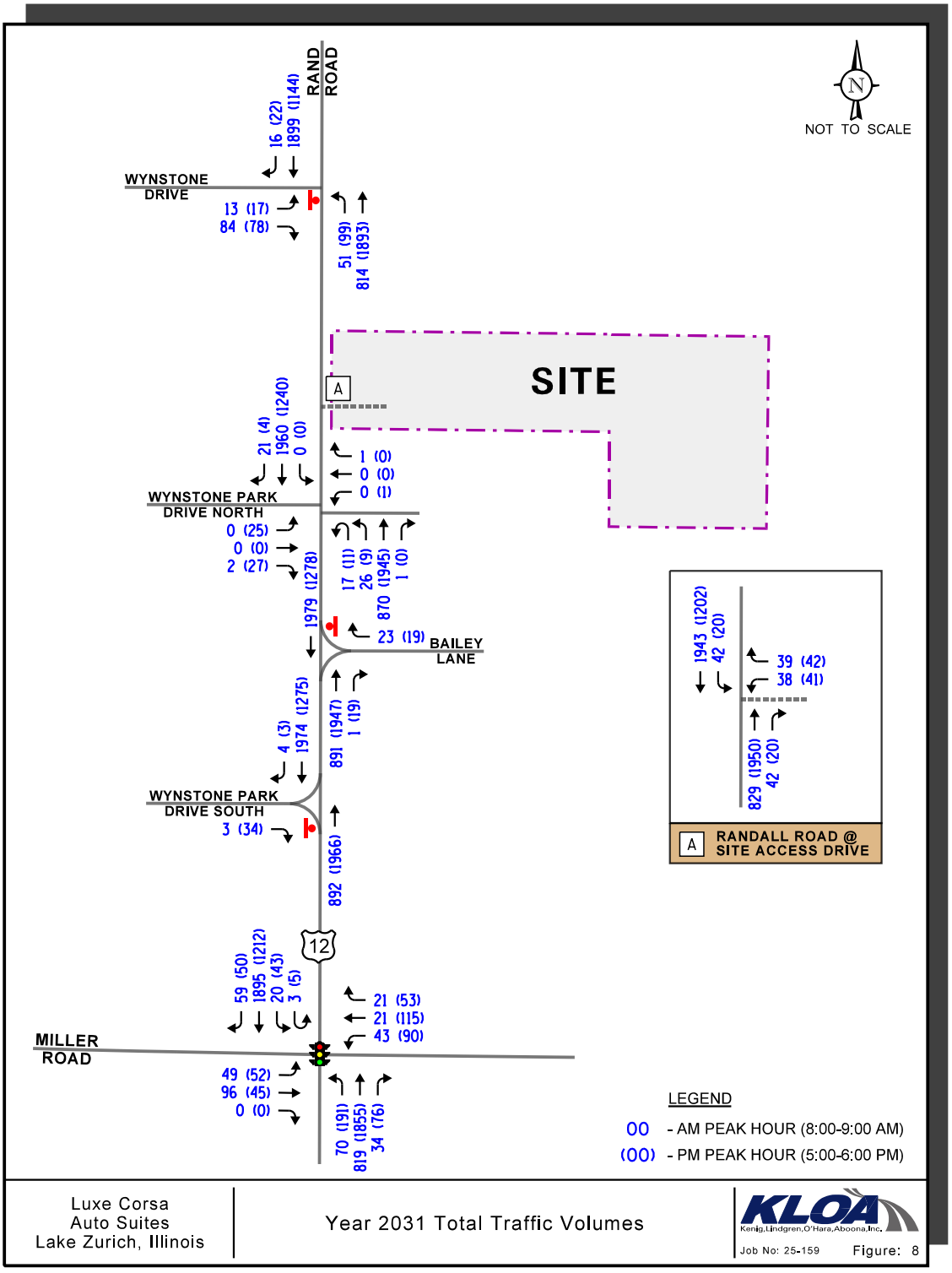
KLOA
Kenig,Lindgren,O'Hara,Aboona,Inc.
Job No: 25-159 Figure: 6



Luxe Corsa
Auto Suites
Lake Zurich, Illinois

Year 2031 No-Build Traffic Volumes

KLOA
Kenig,Lindgren,O'Hara,Aboona,Inc.
Job No: 25-159 Figure: 7


RAND ROAD
NOT TO SCALE
WYNSTONE DRIVE
16 (22)
1899 (1144)
13 (17)
84 (78)
51 (99)
814 (1893)
SITE
A
21 (4)
1960 (1240)
0 (0)
1 (0)
0 (0)
0 (1)
WYNSTONE PARK DRIVE NORTH
0 (25)
0 (0)
2 (27)
17 (11)
26 (9)
870 (1945)
1 (0)
1979 (1278)
23 (19)
BAILEY LANE
4 (3)
1974 (1275)
891 (1947)
1 (19)
WYNSTONE PARK DRIVE SOUTH
3 (34)
892 (1966)
12
59 (50)
1895 (1212)
20 (43)
3 (5)
21 (53)
21 (115)
43 (90)
MILLER ROAD
49 (52)
96 (45)
0 (0)
70 (191)
819 (1855)
34 (76)
1943 (1202)
42 (20)
39 (42)
38 (41)
829 (1950)
42 (20)
A RANDALL ROAD @ SITE ACCESS DRIVE
LEGEND
00 - AM PEAK HOUR (8:00-9:00 AM)
(00) - PM PEAK HOUR (5:00-6:00 PM)
Luxe Corsa
Auto Suites
Lake Zurich, Illinois
Year 2031 Total Traffic Volumes
KLOA
Kenig,Lindgren,O'Hara,Aboona,Inc.
Job No: 25-159
Figure: 8

5. Traffic Analysis and Recommendations

The following provides an evaluation conducted for the weekday morning and weekday evening peak hours. The analysis includes conducting capacity analyses to determine how well the roadway system and access drive is 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 2025), 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), 6th Edition* and analyzed using the Synchro/SimTraffic 11 software. The analysis for the traffic-signal controlled intersection was accomplished using actual 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 3** through **6**. A discussion of each intersection follows. Summary sheets for the capacity analyses are included in the Appendix.

Table 3
CAPACITY ANALYSIS RESULTS – RAND ROAD WITH MILLER ROAD – SIGNALIZED

	Peak Hour	Eastbound		Westbound			Northbound			Southbound		Overall
		L	T/R	L	T	R	L	T	R	L	T	
Existing Conditions	Weekday Morning	D 49.9	E 77.2	D 53.1	E 63.6	A 0.5	D 35.3	B 10.9	A 0.1	A 6.1	C 25.6	C 23.7
		E – 69.2		D – 45.6			B – 12.4			C – 24.8		
	Weekday Evening	D 49.9	E 66.8	D 53.5	E 74.9	A 1.5	B 10.9	B 18.5	A 1.8	A 9.9	B 15.9	B 20.0
		E – 58.0		D – 52.8			B – 17.2			B – 15.1		
No-Build Conditions	Weekday Morning	D 50.0	E 78.3	D 50.9	E 63.0	A 0.6	D 37.0	B 11.1	A 0.1	A 6.2	C 28.5	C 25.6
		E – 69.7		D – 44.2			B – 12.8			C – 27.6		
	Weekday Evening	D 49.8	E 66.7	D 53.6	E 75.5	A 1.6	B 12.2	B 19.9	A 2.0	B 11.9	B 17.0	C 21.1
		E – 58.0		D – 52.9			B – 18.6			B – 16.3		
Projected Conditions	Weekday Morning	D 51.0	E 78.3	D 51.0	E 63.9	A 0.8	D 37.1	B 11.3	A 0.1	A 6.2	C 29.5	C 26.0
		E – 69.0		D – 41.8			B – 12.9			C – 28.3		
	Weekday Evening	D 50.2	E 66.4	D 53.4	E 75.9	A 1.7	B 12.7	C 20.5	A 2.1	B 13.7	B 17.7	C 21.6
		E – 57.6		D – 52.7			B – 19.1			B – 16.8		

Letter denotes Level of Service L – Left Turn R – Right Turn
Delay is measured in seconds. T – Through

Table 4
CAPACITY ANALYSIS RESULTS – EXISTING CONDITIONS – UNSIGNALIZED

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Rand Road with Wynstone Drive				
• Northbound Left Turn	C	22.5	B	11.9
• Eastbound Left Turn	F	65.9	E	38.7
• Eastbound Right Turn	C	24.9	B	14.0
• Southbound Left Turn	A	0.0	A	0.0
Rand Road with Wynstone Park Drive (North)				
• Northbound Left Turn	E	43.5	C	16.4
• Eastbound Approach	C	19.8	D	30.7
• Westbound Approach	B	11.3	A	0.0
• Southbound Left Turn	A	0.0	A	0.0
Rand Road with Arcadia Lane/Bailey Lane				
• Westbound Approach	B	12.3	C	21.3
Rand Road with Wynstone Park Drive (South)				
• Eastbound Approach	C	20.9	B	14.0

LOS = Level of Service
Delay is measured in seconds.
1 – All-way stop control
2 – Two-way stop control

Table 5
CAPACITY ANALYSIS RESULTS
YEAR 2031 NO-BUILD CONDITIONS – UNSIGNALIZED

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Rand Road with Wynstone Drive				
• Northbound Left Turn	C	24.9	B	12.4
• Eastbound Left Turn	F	78.6	E	42.5
• Eastbound Right Turn	D	27.5	B	14.5
• Southbound Left Turn	A	0.0	A	0.0
Rand Road with Wynstone Park Drive (North)				
• Northbound Left Turn	F	52.7	C	17.3
• Eastbound Approach	C	20.9	D	33.8
• Westbound Approach	B	11.5	A	0.0
• Southbound Left Turn	A	0.0	A	0.0
Rand Road with Arcadia Lane/Bailey Lane				
• Westbound Approach	B	12.6	C	22.6
Rand Road with Wynstone Park Drive (South)				
• Eastbound Approach	C	22.1	B	14.4

LOS = Level of Service
Delay is measured in seconds.
1 – All-way stop control
2 – Two-way stop control

Table 6
CAPACITY ANALYSIS RESULTS
YEAR 2031 TOTAL PROJECTED CONDITIONS – UNSIGNALIZED

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Rand Road with Wynstone Drive				
• Northbound Left Turn	D	26.2	B	12.5
• Eastbound Left Turn	F	85.6	E	43.9
• Eastbound Right Turn	D	28.7	B	14.7
• Southbound Left Turn	A	0.0	A	0.0
Rand Road with Wynstone Park Drive (North)				
• Northbound Left Turn	F	57.0	C	18.1
• Eastbound Approach	C	21.4	E	35.6
• Westbound Approach	B	11.7	A	0.0
• Southbound Left Turn	A	0.0	A	0.0
Rand Road with Arcadia Lane/Bailey Lane				
• Westbound Approach	B	12.9	C	23.0
Rand Road with Wynstone Park Drive (South)				
• Eastbound Approach	C	22.7	B	14.8
Rand Road with Proposed Access Drive				
• Westbound Approach	D	25.9	F	99+
• Southbound Left Turn	B	10.1	C	19.3

LOS = Level of Service
Delay is measured in seconds.
1 – All-way stop control
2 – Two-way stop control

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 restaurant-generated traffic.

Rand Road with Miller Road

The results of the capacity analysis indicate that this intersection currently operates at an overall Level of Service (LOS) C during the weekday morning peak hour and LOS B during the weekday evening peak hour. As Rand Road is designated as an SRA, the majority of the green time is assigned to Rand Road. As such, Miller Road approaches operate at lower levels of service, as expected. Furthermore, the northbound and southbound approaches operate at LOS C or better and the eastbound and westbound approaches operate at LOS E or better during the peak hours.

Under Year 2031 no-build and total projected conditions, this intersection is projected to operate at an overall LOS C during the weekday morning and weekday evening peak hours with an increase in delay of less than three seconds from existing conditions. All the approaches are projected to continue to operate at the existing levels of service during both peak hours with increases in delays of less than four seconds. As such, this intersection has sufficient reserve capacity to accommodate the traffic to be generated by the proposed Luxe Corsa Auto Suites and no roadway improvements or traffic control modifications will be required.

It is important to note that the traffic signal at this intersection is currently under construction. Signal timing data provided by LCDOT was utilized in the analysis and is reflected in the capacity results presented.

Rand Road with Wynstone Drive

The results of the capacity analysis indicate that the northbound left-turn, southbound left-turn and eastbound right-turn movements currently operate at LOS C or better during the weekday morning and weekday evening peak hours. Furthermore, the eastbound left-turn movement currently operates at LOS F during the weekday morning peak hour and LOS E during the weekday evening peak hour. It should be noted that the eastbound left-turn movement is expected to operate at a low level of service due to the high volumes on Rand Road.

Under Year 2031 no-build and total projected conditions, the northbound left-turn and the eastbound right-turn are expected to operate at LOS D or better during the peak hours and the eastbound left-turn and the southbound left-turn are expected to continue to operate at existing levels of service with an increase in delay of less than 20 seconds. It should be noted that the eastbound approach is expected to operate at a low level of service due to the high volume on Rand Road. As such, the traffic estimated to be generated by the Luxe Corsa Auto Suites will have a limited impact on the operations of this intersection and no roadway or geometric improvements will be required.

Rand Road with Wynstone Park Drive (north)

The results of the capacity analysis indicate that the northbound left-turn is expected to operate at LOS E or better during the peak hours, the eastbound approach is expected to operate at LOS D or better during the peak hours, the westbound approach is expected to operate at LOS B or better during the peak hours, and the southbound left-turn is expected to operate at LOS A during both peak hours.

Under Year 2031 no-build conditions, all approaches and movements are expected to continue to operate at existing levels of service as exiting conditions with an increase in delay of less than one second except for the northbound left-turn during the weekday morning peak hour which is expected to operate at LOS F with an increase in delay of less than ten seconds.

Under Year 2031 total projected conditions, all approaches and movements are expected to continue to operate at the same levels of service as no-build conditions except the eastbound approach during the weekday evening peak hour which is expected to operate at LOS E with an increase in delay of less than two seconds. It's important to note that the northbound left-turn is expected to experience an increase in delays of approximately four seconds during the weekday morning peak hour. As such, the traffic estimated to be generated by the Luxe Corsa Auto Suites will have a limited impact on the operations of this intersection and no roadway or geometric improvements will be required.

Rand Road with Arcadia Lane/Bailey Lane

The results of the capacity analysis indicate that the westbound approach currently operates at LOS B during the weekday morning peak hour and LOS C during the weekday evening peak hour.

Under Year 2031 no-build and total projected conditions, the westbound approach is expected to continue to operate at existing levels of service with an increase in delay of approximately two seconds or less. As such, this intersection has adequate reserve capacity to accommodate the traffic estimated to be generated by the proposed Luxe Corsa Auto Suites and no roadway improvements or traffic control adjustments will be required.

Rand Road with Wynstone Park Drive (south)

The results of the capacity analysis indicate that the eastbound approach currently operates at LOS C or better during the weekday morning and weekday evening peak hours. Under Year 2031 no-build and total projected conditions, the eastbound approach is projected to continue to operate at existing levels of service as existing conditions with increases in delay of approximately two seconds or less. As such, this intersection has adequate reserve capacity to accommodate the traffic estimated to be generated by the proposed Luxe Corsa Auto Suites and no roadway improvements or traffic control adjustments will be required.

Rand Road with Proposed Access Drive

As proposed, the existing access drive that will serve the proposed development provides one inbound lane and one outbound lane with outbound movement under stop sign control. Vehicles traveling southbound on Rand Road and then turning left onto the site can be accommodated by the exiting southbound exclusive left-turn lane.

The results of the capacity analysis indicate that the westbound approach of the proposed access drive at this intersection is projected to operate at LOS F during the weekday evening peak hour and LOS D during the weekday morning peak hour. Furthermore, the southbound left-turn is projected to operate at LOS C or better during both peak hours. It should be noted that the 95*th* percentile queue of the westbound approach is two to five vehicles during the peak hours which can be accommodated by the proposed access drive without blocking any internal intersections. As such, the traffic estimated to be generated by the Luxe Corsa Auto Suites will have a limited impact on the operations of this intersection and no roadway or geometric improvements will be required.

Additionally, a northbound right-turn lane is not warranted as it does not meet IDOT's volume criteria. The turn lane warrant guidelines are included in the appendix.

6. Conclusion

Based on the preceding analyses and recommendations, the following conclusions have been made:

- The results of the capacity analysis indicate that the traffic that will be generated by the proposed Luxe Corsa Auto Suites will not have a significant impact on the area roadways.
- The existing access drive that will serve the proposed development provides one inbound lane and one outbound lane with outbound movement under stop sign control.
- Southbound left-turn movements can be accommodated by the existing left-turn lane.
- The site plans provides adequate accommodation for the expected two to five vehicles exiting the site.
- A northbound right-turn lane is not warranted as it does not meet IDOT's volume criteria.

Appendix

Traffic Count Summary Sheets
Site Plan
CMAP Projections Letter
Level of Service Table
Capacity Analysis Summary Sheets
Right-Turn Lane Warrant

Traffic Count Summary Sheets

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9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
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Count Name: Rand Road with Bailey Lane/Arcadia Lane TMC
Site Code:
Start Date: 07/09/2025
Page No: 1

Turning Movement Data

Start Time	Arcadia Lane/Bailey Lane Westbound					Rand Road Northbound					Rand Road Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	Int. Total
7:00 AM	0	0	4	0	4	0	148	0	0	148	0	0	525	0	525	677
7:15 AM	0	0	7	0	7	0	154	0	0	154	0	0	365	0	365	526
7:30 AM	0	0	3	0	3	0	198	0	0	198	0	0	373	0	373	574
7:45 AM	0	0	4	0	4	0	197	1	0	198	0	0	360	0	360	562
Hourly Total	0	0	18	0	18	0	697	1	0	698	0	0	1623	0	1623	2339
8:00 AM	0	0	8	0	8	0	244	0	0	244	0	0	429	0	429	681
8:15 AM	0	0	5	0	5	0	223	0	0	223	0	0	400	0	400	628
8:30 AM	0	0	11	0	11	0	196	0	0	196	0	0	365	0	365	572
8:45 AM	0	0	4	0	4	0	224	1	0	225	0	0	345	0	345	574
Hourly Total	0	0	28	0	28	0	887	1	0	888	0	0	1539	0	1539	2455
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	0	5	0	5	0	354	2	0	356	0	0	270	0	270	631
4:15 PM	0	0	2	0	2	0	432	9	0	441	0	0	264	0	264	707
4:30 PM	0	0	3	0	3	0	414	4	0	418	0	0	261	0	261	682
4:45 PM	0	0	5	0	5	0	441	6	0	447	0	0	284	0	284	736
Hourly Total	0	0	15	0	15	0	1641	21	0	1662	0	0	1079	0	1079	2756
5:00 PM	0	0	5	0	5	0	460	4	0	464	0	0	257	0	257	726
5:15 PM	0	0	4	0	4	0	409	4	0	413	0	0	261	0	261	678
5:30 PM	0	0	1	0	1	0	462	3	0	465	0	0	258	0	258	724
5:45 PM	0	0	5	0	5	0	363	3	0	366	0	0	277	0	277	648
Hourly Total	0	0	15	0	15	0	1694	14	0	1708	0	0	1053	0	1053	2776
Grand Total	0	0	76	0	76	0	4919	37	0	4956	0	0	5294	0	5294	10326
Approach %	0.0	0.0	100.0	-	-	0.0	99.3	0.7	-	-	0.0	0.0	100.0	-	-	-
Total %	0.0	0.0	0.7	-	0.7	0.0	47.6	0.4	-	48.0	0.0	0.0	51.3	-	51.3	-
Lights	0	0	73	-	73	0	4692	36	-	4728	0	0	5108	-	5108	9909
% Lights	-	-	96.1	-	96.1	-	95.4	97.3	-	95.4	-	-	96.5	-	96.5	96.0
Buses	0	0	2	-	2	0	8	1	-	9	0	0	1	-	1	12
% Buses	-	-	2.6	-	2.6	-	0.2	2.7	-	0.2	-	-	0.0	-	0.0	0.1
Single-Unit Trucks	0	0	1	-	1	0	157	0	-	157	0	0	129	-	129	287
% Single-Unit Trucks	-	-	1.3	-	1.3	-	3.2	0.0	-	3.2	-	-	2.4	-	2.4	2.8
Articulated Trucks	0	0	0	-	0	0	60	0	-	60	0	0	56	-	56	116
% Articulated Trucks	-	-	0.0	-	0.0	-	1.2	0.0	-	1.2	-	-	1.1	-	1.1	1.1
Bicycles on Road	0	0	0	-	0	0	2	0	-	2	0	0	0	-	0	2
% Bicycles on Road	-	-	0.0	-	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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9575 W. Higgins Rd., Suite 400

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Count Name: Rand Road with Bailey Lane/Arcadia Lane TMC
Site Code:
Start Date: 07/09/2025
Page No: 2

Turning Movement Peak Hour Data (7:15 AM)

Start Time	Arcadia Lane/Bailey Lane Westbound					Rand Road Northbound					Rand Road Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	Int. Total
7:15 AM	0	0	7	0	7	0	154	0	0	154	0	0	365	0	365	526
7:30 AM	0	0	3	0	3	0	198	0	0	198	0	0	373	0	373	574
7:45 AM	0	0	4	0	4	0	197	1	0	198	0	0	360	0	360	562
8:00 AM	0	0	8	0	8	0	244	0	0	244	0	0	429	0	429	681
Total	0	0	22	0	22	0	793	1	0	794	0	0	1527	0	1527	2343
Approach %	0.0	0.0	100.0	-	-	0.0	99.9	0.1	-	-	0.0	0.0	100.0	-	-	-
Total %	0.0	0.0	0.9	-	0.9	0.0	33.8	0.0	-	33.9	0.0	0.0	65.2	-	65.2	-
PHF	0.000	0.000	0.688	-	0.688	0.000	0.813	0.250	-	0.814	0.000	0.000	0.890	-	0.890	0.860
Lights	0	0	20	-	20	0	734	0	-	734	0	0	1478	-	1478	2232
% Lights	-	-	90.9	-	90.9	-	92.6	0.0	-	92.4	-	-	96.8	-	96.8	95.3
Buses	0	0	2	-	2	0	0	1	-	1	0	0	1	-	1	4
% Buses	-	-	9.1	-	9.1	-	0.0	100.0	-	0.1	-	-	0.1	-	0.1	0.2
Single-Unit Trucks	0	0	0	-	0	0	46	0	-	46	0	0	37	-	37	83
% Single-Unit Trucks	-	-	0.0	-	0.0	-	5.8	0.0	-	5.8	-	-	2.4	-	2.4	3.5
Articulated Trucks	0	0	0	-	0	0	13	0	-	13	0	0	11	-	11	24
% Articulated Trucks	-	-	0.0	-	0.0	-	1.6	0.0	-	1.6	-	-	0.7	-	0.7	1.0
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	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Rand Road with Bailey Lane/Arcadia Lane TMC
Site Code:
Start Date: 07/09/2025

Turning Movement Peak Hour Data (4:30 PM)

Start Time	Arcadia Lane/Bailey Lane Westbound					Rand Road Northbound					Rand Road Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	Int. Total
4:30 PM	0	0	3	0	3	0	414	4	0	418	0	0	261	0	261	682
4:45 PM	0	0	5	0	5	0	441	6	0	447	0	0	284	0	284	736
5:00 PM	0	0	5	0	5	0	460	4	0	464	0	0	257	0	257	726
5:15 PM	0	0	4	0	4	0	409	4	0	413	0	0	261	0	261	678
Total	0	0	17	0	17	0	1724	18	0	1742	0	0	1063	0	1063	2822
Approach %	0.0	0.0	100.0	-	-	0.0	99.0	1.0	-	-	0.0	0.0	100.0	-	-	-
Total %	0.0	0.0	0.6	-	0.6	0.0	61.1	0.6	-	61.7	0.0	0.0	37.7	-	37.7	-
PHF	0.000	0.000	0.850	-	0.850	0.000	0.937	0.750	-	0.939	0.000	0.000	0.936	-	0.936	0.959
Lights	0	0	17	-	17	0	1671	18	-	1689	0	0	1025	-	1025	2731
% Lights	-	-	100.0	-	100.0	-	96.9	100.0	-	97.0	-	-	96.4	-	96.4	96.8
Buses	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Buses	-	-	0.0	-	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	0.0	0.0
Single-Unit Trucks	0	0	0	-	0	0	43	0	-	43	0	0	23	-	23	66
% Single-Unit Trucks	-	-	0.0	-	0.0	-	2.5	0.0	-	2.5	-	-	2.2	-	2.2	2.3
Articulated Trucks	0	0	0	-	0	0	10	0	-	10	0	0	15	-	15	25
% Articulated Trucks	-	-	0.0	-	0.0	-	0.6	0.0	-	0.6	-	-	1.4	-	1.4	0.9
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	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Rand Road with Miller Road TMC
Site Code:
Start Date: 07/08/2025
Page No: 1

Turning Movement Data

Start Time	miller rd Eastbound						miller rd Westbound						rand rd Northbound						rand rd Southbound						
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	0	8	21	0	0	29	0	8	5	1	0	14	0	10	151	6	0	167	0	2	377	8	0	387	597
7:15 AM	0	9	14	0	0	23	0	7	6	1	0	14	0	12	165	7	0	184	2	5	429	3	0	439	660
7:30 AM	0	7	29	0	0	36	0	10	5	3	0	18	0	19	185	9	0	213	1	2	418	17	2	438	705
7:45 AM	0	13	31	0	0	44	0	10	6	7	0	23	0	14	210	12	0	236	0	4	464	13	0	481	784
Hourly Total	0	37	95	0	0	132	0	35	22	12	0	69	0	55	711	34	0	800	3	13	1688	41	2	1745	2746
8:00 AM	0	10	18	0	3	28	0	14	3	4	0	21	0	22	179	5	0	206	0	4	334	12	1	350	605
8:15 AM	0	17	14	0	16	31	0	12	9	5	0	26	0	10	219	9	0	238	1	3	328	10	1	342	637
8:30 AM	0	14	14	0	19	28	0	10	10	5	1	25	0	7	194	14	0	215	0	8	364	18	0	390	658
8:45 AM	0	11	32	3	3	46	0	13	4	4	0	21	0	22	203	9	0	234	0	3	314	7	0	324	625
Hourly Total	0	52	78	3	41	133	0	49	26	18	1	93	0	61	795	37	0	893	1	18	1340	47	2	1406	2525
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	12	16	0	0	28	0	25	17	9	0	51	0	46	425	20	0	491	1	8	253	14	0	276	846
4:15 PM	0	11	14	0	0	25	0	15	27	10	0	52	0	57	362	22	0	441	2	2	283	13	0	300	818
4:30 PM	0	12	16	0	0	28	0	17	38	13	0	68	0	38	426	12	0	476	3	18	242	17	0	280	852
4:45 PM	0	13	10	0	0	23	0	20	24	14	0	58	0	44	427	21	0	492	0	4	284	11	0	299	872
Hourly Total	0	48	56	0	0	104	0	77	106	46	0	229	0	185	1640	75	0	1900	6	32	1062	55	0	1155	3388
5:00 PM	0	10	6	0	0	16	0	23	19	13	0	55	0	50	432	21	0	503	0	9	290	5	0	304	878
5:15 PM	0	11	11	0	0	22	0	26	29	9	0	64	0	51	415	19	0	485	2	5	273	5	0	285	856
5:30 PM	0	10	7	0	0	17	0	14	26	4	0	44	0	38	405	16	0	459	1	4	249	6	0	260	780
5:45 PM	0	9	6	0	0	15	0	21	19	6	0	46	0	43	375	21	0	439	1	4	268	1	0	274	774
Hourly Total	0	40	30	0	0	70	0	84	93	32	0	209	0	182	1627	77	0	1886	4	22	1080	17	0	1123	3288
Grand Total	0	177	259	3	41	439	0	245	247	108	1	600	0	483	4773	223	0	5479	14	85	5170	160	4	5429	11947
Approach %	0.0	40.3	59.0	0.7	-	-	0.0	40.8	41.2	18.0	-	-	0.0	8.8	87.1	4.1	-	-	0.3	1.6	95.2	2.9	-	-	-
Total %	0.0	1.5	2.2	0.0	-	3.7	0.0	2.1	2.1	0.9	-	5.0	0.0	4.0	40.0	1.9	-	45.9	0.1	0.7	43.3	1.3	-	45.4	-
Lights	0	173	236	3	-	412	0	241	244	107	-	592	0	476	4541	219	-	5236	13	83	4966	156	-	5218	11458
% Lights	-	97.7	91.1	100.0	-	93.8	-	98.4	98.8	99.1	-	98.7	-	98.6	95.1	98.2	-	95.6	92.9	97.6	96.1	97.5	-	96.1	95.9
Buses	0	0	0	0	-	0	0	2	0	1	-	3	0	1	9	0	-	10	1	1	7	1	-	10	23
% Buses	-	0.0	0.0	0.0	-	0.0	-	0.8	0.0	0.9	-	0.5	-	0.2	0.2	0.0	-	0.2	7.1	1.2	0.1	0.6	-	0.2	0.2
Single-Unit Trucks	0	2	5	0	-	7	0	2	2	0	-	4	0	6	101	2	-	109	0	1	92	1	-	94	214
% Single-Unit Trucks	-	1.1	1.9	0.0	-	1.6	-	0.8	0.8	0.0	-	0.7	-	1.2	2.1	0.9	-	2.0	0.0	1.2	1.8	0.6	-	1.7	1.8
Articulated Trucks	0	2	0	0	-	2	0	0	0	0	-	0	0	0	120	2	-	122	0	0	104	2	-	106	230
% Articulated Trucks	-	1.1	0.0	0.0	-	0.5	-	0.0	0.0	0.0	-	0.0	-	0.0	2.5	0.9	-	2.2	0.0	0.0	2.0	1.3	-	2.0	1.9
Bicycles on Road	0	0	18	0	-	18	0	0	1	0	-	1	0	0	2	0	-	2	0	0	1	0	-	1	22

% Bicycles on Road	-	0.0	6.9	0.0	-	4.1	-	0.0	0.4	0.0	-	0.2	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.2
Pedestrians	-	-	-	-	41	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	4	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

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Count Name: Rand Road with Miller Road TMC
Site Code:
Start Date: 07/08/2025
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Turning Movement Peak Hour Data (7:15 AM)

Start Time	miller rd Eastbound						miller rd Westbound						rand rd Northbound						rand rd Southbound						
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
7:15 AM	0	9	14	0	0	23	0	7	6	1	0	14	0	12	165	7	0	184	2	5	429	3	0	439	660
7:30 AM	0	7	29	0	0	36	0	10	5	3	0	18	0	19	185	9	0	213	1	2	418	17	2	438	705
7:45 AM	0	13	31	0	0	44	0	10	6	7	0	23	0	14	210	12	0	236	0	4	464	13	0	481	784
8:00 AM	0	10	18	0	3	28	0	14	3	4	0	21	0	22	179	5	0	206	0	4	334	12	1	350	605
Total	0	39	92	0	3	131	0	41	20	15	0	76	0	67	739	33	0	839	3	15	1645	45	3	1708	2754
Approach %	0.0	29.8	70.2	0.0	-	-	0.0	53.9	26.3	19.7	-	-	0.0	8.0	88.1	3.9	-	-	0.2	0.9	96.3	2.6	-	-	-
Total %	0.0	1.4	3.3	0.0	-	4.8	0.0	1.5	0.7	0.5	-	2.8	0.0	2.4	26.8	1.2	-	30.5	0.1	0.5	59.7	1.6	-	62.0	-
PHF	0.000	0.750	0.742	0.000	-	0.744	0.000	0.732	0.833	0.536	-	0.826	0.000	0.761	0.880	0.688	-	0.889	0.375	0.750	0.886	0.662	-	0.888	0.878
Lights	0	37	89	0	-	126	0	38	18	14	-	70	0	63	659	29	-	751	2	14	1574	45	-	1635	2582
% Lights	-	94.9	96.7	-	-	96.2	-	92.7	90.0	93.3	-	92.1	-	94.0	89.2	87.9	-	89.5	66.7	93.3	95.7	100.0	-	95.7	93.8
Buses	0	0	0	0	-	0	0	1	0	1	-	2	0	1	2	0	-	3	1	1	6	0	-	8	13
% Buses	-	0.0	0.0	-	-	0.0	-	2.4	0.0	6.7	-	2.6	-	1.5	0.3	0.0	-	0.4	33.3	6.7	0.4	0.0	-	0.5	0.5
Single-Unit Trucks	0	0	2	0	-	2	0	2	1	0	-	3	0	3	26	2	-	31	0	0	25	0	-	25	61
% Single-Unit Trucks	-	0.0	2.2	-	-	1.5	-	4.9	5.0	0.0	-	3.9	-	4.5	3.5	6.1	-	3.7	0.0	0.0	1.5	0.0	-	1.5	2.2
Articulated Trucks	0	2	0	0	-	2	0	0	0	0	-	0	0	0	52	2	-	54	0	0	39	0	-	39	95
% Articulated Trucks	-	5.1	0.0	-	-	1.5	-	0.0	0.0	0.0	-	0.0	-	0.0	7.0	6.1	-	6.4	0.0	0.0	2.4	0.0	-	2.3	3.4
Bicycles on Road	0	0	1	0	-	1	0	0	1	0	-	1	0	0	0	0	-	0	0	0	1	0	-	1	3
% Bicycles on Road	-	0.0	1.1	-	-	0.8	-	0.0	5.0	0.0	-	1.3	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.1	0.0	-	0.1	0.1
Pedestrians	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	3	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

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Count Name: Rand Road with Miller Road TMC
Site Code:
Start Date: 07/08/2025
Page No: 4

Turning Movement Peak Hour Data (4:30 PM)

Start Time	miller rd Eastbound						miller rd Westbound						rand rd Northbound						rand rd Southbound						
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
4:30 PM	0	12	16	0	0	28	0	17	38	13	0	68	0	38	426	12	0	476	3	18	242	17	0	280	852
4:45 PM	0	13	10	0	0	23	0	20	24	14	0	58	0	44	427	21	0	492	0	4	284	11	0	299	872
5:00 PM	0	10	6	0	0	16	0	23	19	13	0	55	0	50	432	21	0	503	0	9	290	5	0	304	878
5:15 PM	0	11	11	0	0	22	0	26	29	9	0	64	0	51	415	19	0	485	2	5	273	5	0	285	856
Total	0	46	43	0	0	89	0	86	110	49	0	245	0	183	1700	73	0	1956	5	36	1089	38	0	1168	3458
Approach %	0.0	51.7	48.3	0.0	-	-	0.0	35.1	44.9	20.0	-	-	0.0	9.4	86.9	3.7	-	-	0.4	3.1	93.2	3.3	-	-	-
Total %	0.0	1.3	1.2	0.0	-	2.6	0.0	2.5	3.2	1.4	-	7.1	0.0	5.3	49.2	2.1	-	56.6	0.1	1.0	31.5	1.1	-	33.8	-
PHF	0.000	0.885	0.672	0.000	-	0.795	0.000	0.827	0.724	0.875	-	0.901	0.000	0.897	0.984	0.869	-	0.972	0.417	0.500	0.939	0.559	-	0.961	0.985
Lights	0	46	43	0	-	89	0	86	110	49	-	245	0	181	1662	73	-	1916	5	36	1064	38	-	1143	3393
% Lights	-	100.0	100.0	-	-	100.0	-	100.0	100.0	100.0	-	100.0	-	98.9	97.8	100.0	-	98.0	100.0	100.0	97.7	100.0	-	97.9	98.1
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Buses	-	0.0	0.0	-	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	2	24	0	-	26	0	0	13	0	-	13	39
% Single-Unit Trucks	-	0.0	0.0	-	-	0.0	-	0.0	0.0	0.0	-	0.0	-	1.1	1.4	0.0	-	1.3	0.0	0.0	1.2	0.0	-	1.1	1.1
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	14	0	-	14	0	0	12	0	-	12	26
% Articulated Trucks	-	0.0	0.0	-	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.8	0.0	-	0.7	0.0	0.0	1.1	0.0	-	1.0	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	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Rand Road with Wynstone Drive
TMC
Site Code:
Start Date: 07/08/2025
Page No: 1

Turning Movement Data

Start Time	s wynstone dr Eastbound					rand rd Northbound					rand rd Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	0	5	5	0	10	0	10	148	0	158	0	349	2	0	351	519
7:15 AM	0	0	21	0	21	0	11	160	0	171	0	393	2	0	395	587
7:30 AM	0	5	23	0	28	0	9	196	0	205	0	400	2	0	402	635
7:45 AM	0	3	22	0	25	1	13	206	0	220	0	417	6	0	423	668
Hourly Total	0	13	71	0	84	1	43	710	0	754	0	1559	12	0	1571	2409
8:00 AM	0	4	14	0	18	1	16	159	0	176	0	423	5	0	428	622
8:15 AM	0	2	18	0	20	0	18	195	0	213	0	394	2	0	396	629
8:30 AM	0	2	25	0	27	0	15	175	0	190	0	419	5	0	424	641
8:45 AM	0	3	25	0	28	0	13	182	0	195	0	323	11	0	334	557
Hourly Total	0	11	82	0	93	1	62	711	0	774	0	1559	23	0	1582	2449
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	3	18	0	21	0	14	408	0	422	0	242	7	0	249	692
4:15 PM	0	1	8	0	9	2	21	369	0	392	0	276	4	0	280	681
4:30 PM	0	3	20	0	23	0	19	390	0	409	0	233	3	0	236	668
4:45 PM	0	5	19	0	24	0	22	399	0	421	0	272	9	0	281	726
Hourly Total	0	12	65	0	77	2	76	1566	0	1644	0	1023	23	0	1046	2767
5:00 PM	0	7	17	0	24	0	21	427	0	448	0	259	6	0	265	737
5:15 PM	0	1	19	0	20	0	33	435	0	468	0	264	3	0	267	755
5:30 PM	0	2	26	0	28	1	31	363	0	395	0	232	9	0	241	664
5:45 PM	0	1	17	0	18	0	14	381	0	395	0	236	8	0	244	657
Hourly Total	0	11	79	0	90	1	99	1606	0	1706	0	991	26	0	1017	2813
Grand Total	0	47	297	0	344	5	280	4593	0	4878	0	5132	84	0	5216	10438
Approach %	0.0	13.7	86.3	-	-	0.1	5.7	94.2	-	-	0.0	98.4	1.6	-	-	-
Total %	0.0	0.5	2.8	-	3.3	0.0	2.7	44.0	-	46.7	0.0	49.2	0.8	-	50.0	-
Lights	0	46	295	-	341	5	278	4367	-	4650	0	4929	83	-	5012	10003
% Lights	-	97.9	99.3	-	99.1	100.0	99.3	95.1	-	95.3	-	96.0	98.8	-	96.1	95.8
Buses	0	0	1	-	1	0	0	9	-	9	0	10	0	-	10	20
% Buses	-	0.0	0.3	-	0.3	0.0	0.0	0.2	-	0.2	-	0.2	0.0	-	0.2	0.2
Single-Unit Trucks	0	0	1	-	1	0	1	104	-	105	0	86	0	-	86	192
% Single-Unit Trucks	-	0.0	0.3	-	0.3	0.0	0.4	2.3	-	2.2	-	1.7	0.0	-	1.6	1.8
Articulated Trucks	0	0	0	-	0	0	0	112	-	112	0	107	0	-	107	219
% Articulated Trucks	-	0.0	0.0	-	0.0	0.0	0.0	2.4	-	2.3	-	2.1	0.0	-	2.1	2.1
Bicycles on Road	0	1	0	-	1	0	1	1	-	2	0	0	1	-	1	4
% Bicycles on Road	-	2.1	0.0	-	0.3	0.0	0.4	0.0	-	0.0	-	0.0	1.2	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Rand Road with Wynstone Drive
TMC
Site Code:
Start Date: 07/08/2025
Page No: 2

Turning Movement Peak Hour Data (7:15 AM)

Start Time	s wynstone dr Eastbound					rand rd Northbound					rand rd Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
7:15 AM	0	0	21	0	21	0	11	160	0	171	0	393	2	0	395	587
7:30 AM	0	5	23	0	28	0	9	196	0	205	0	400	2	0	402	635
7:45 AM	0	3	22	0	25	1	13	206	0	220	0	417	6	0	423	668
8:00 AM	0	4	14	0	18	1	16	159	0	176	0	423	5	0	428	622
Total	0	12	80	0	92	2	49	721	0	772	0	1633	15	0	1648	2512
Approach %	0.0	13.0	87.0	-	-	0.3	6.3	93.4	-	-	0.0	99.1	0.9	-	-	-
Total %	0.0	0.5	3.2	-	3.7	0.1	2.0	28.7	-	30.7	0.0	65.0	0.6	-	65.6	-
PHF	0.000	0.600	0.870	-	0.821	0.500	0.766	0.875	-	0.877	0.000	0.965	0.625	-	0.963	0.940
Lights	0	12	79	-	91	2	47	643	-	692	0	1562	15	-	1577	2360
% Lights	-	100.0	98.8	-	98.9	100.0	95.9	89.2	-	89.6	-	95.7	100.0	-	95.7	93.9
Buses	0	0	1	-	1	0	0	3	-	3	0	7	0	-	7	11
% Buses	-	0.0	1.3	-	1.1	0.0	0.0	0.4	-	0.4	-	0.4	0.0	-	0.4	0.4
Single-Unit Trucks	0	0	0	-	0	0	1	25	-	26	0	22	0	-	22	48
% Single-Unit Trucks	-	0.0	0.0	-	0.0	0.0	2.0	3.5	-	3.4	-	1.3	0.0	-	1.3	1.9
Articulated Trucks	0	0	0	-	0	0	0	50	-	50	0	42	0	-	42	92
% Articulated Trucks	-	0.0	0.0	-	0.0	0.0	0.0	6.9	-	6.5	-	2.6	0.0	-	2.5	3.7
Bicycles on Road	0	0	0	-	0	0	1	0	-	1	0	0	0	-	0	1
% Bicycles on Road	-	0.0	0.0	-	0.0	0.0	2.0	0.0	-	0.1	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
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Count Name: Rand Road with Wynstone Drive
TMC
Site Code:
Start Date: 07/08/2025
Page No: 3

Turning Movement Peak Hour Data (4:30 PM)

Start Time	s wynstone dr Eastbound					rand rd Northbound					rand rd Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
4:30 PM	0	3	20	0	23	0	19	390	0	409	0	233	3	0	236	668
4:45 PM	0	5	19	0	24	0	22	399	0	421	0	272	9	0	281	726
5:00 PM	0	7	17	0	24	0	21	427	0	448	0	259	6	0	265	737
5:15 PM	0	1	19	0	20	0	33	435	0	468	0	264	3	0	267	755
Total	0	16	75	0	91	0	95	1651	0	1746	0	1028	21	0	1049	2886
Approach %	0.0	17.6	82.4	-	-	0.0	5.4	94.6	-	-	0.0	98.0	2.0	-	-	-
Total %	0.0	0.6	2.6	-	3.2	0.0	3.3	57.2	-	60.5	0.0	35.6	0.7	-	36.3	-
PHF	0.000	0.571	0.938	-	0.948	0.000	0.720	0.949	-	0.933	0.000	0.945	0.583	-	0.933	0.956
Lights	0	15	75	-	90	0	95	1612	-	1707	0	1006	21	-	1027	2824
% Lights	-	93.8	100.0	-	98.9	-	100.0	97.6	-	97.8	-	97.9	100.0	-	97.9	97.9
Buses	0	0	0	-	0	0	0	1	-	1	0	0	0	-	0	1
% Buses	-	0.0	0.0	-	0.0	-	0.0	0.1	-	0.1	-	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	0	0	-	0	0	0	23	-	23	0	12	0	-	12	35
% Single-Unit Trucks	-	0.0	0.0	-	0.0	-	0.0	1.4	-	1.3	-	1.2	0.0	-	1.1	1.2
Articulated Trucks	0	0	0	-	0	0	0	15	-	15	0	10	0	-	10	25
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.0	0.9	-	0.9	-	1.0	0.0	-	1.0	0.9
Bicycles on Road	0	1	0	-	1	0	0	0	-	0	0	0	0	-	0	1
% Bicycles on Road	-	6.3	0.0	-	1.1	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Rand Road with Wynstone Park Drive (north) TMC 2
Site Code:
Start Date: 07/08/2025
Page No: 1

Turning Movement Data

Start Time	s wynstone parkdr Eastbound						access dr Westbound						rand rd Northbound						rand rd Southbound						
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	2	155	0	0	158	0	0	389	0	0	389	547
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	3	3	166	0	0	172	0	0	454	3	0	457	629
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	3	4	187	0	0	194	0	0	470	2	0	472	666
7:45 AM	0	0	0	1	0	1	0	0	0	0	0	0	5	11	206	0	0	222	0	0	489	9	0	498	721
Hourly Total	0	0	0	1	0	1	0	0	0	0	0	0	12	20	714	0	0	746	0	0	1802	14	0	1816	2563
8:00 AM	0	0	0	1	0	1	0	0	0	1	0	1	5	7	178	1	0	191	0	0	426	6	0	432	625
8:15 AM	0	3	0	1	0	4	0	0	0	0	0	0	4	21	208	0	0	233	0	0	422	5	0	427	664
8:30 AM	0	4	0	1	0	5	0	0	0	0	0	0	8	10	190	0	0	208	0	0	447	11	0	458	671
8:45 AM	0	1	0	3	0	4	0	0	0	0	0	0	4	13	203	0	0	220	0	0	349	5	0	354	578
Hourly Total	0	8	0	6	0	14	0	0	0	1	0	1	21	51	779	1	0	852	0	0	1644	27	0	1671	2538
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	2	0	3	0	5	0	0	0	0	0	0	4	2	427	0	0	433	0	0	265	2	0	267	705
4:15 PM	0	4	0	3	0	7	0	0	0	0	0	0	5	3	402	0	0	410	0	0	292	3	0	295	712
4:30 PM	0	8	0	9	0	17	0	1	0	0	0	1	2	3	438	0	0	443	0	0	267	1	0	268	729
4:45 PM	0	5	0	5	0	10	0	0	0	0	1	0	0	2	459	0	0	461	0	0	300	2	0	302	773
Hourly Total	0	19	0	20	0	39	0	1	0	0	1	1	11	10	1726	0	0	1747	0	0	1124	8	0	1132	2919
5:00 PM	0	8	0	8	0	16	0	0	0	0	0	0	4	1	453	0	0	458	0	0	289	1	0	290	764
5:15 PM	0	3	0	4	0	7	0	0	0	0	0	0	5	3	459	0	0	467	0	0	286	0	0	286	760
5:30 PM	0	2	0	7	0	9	0	0	0	0	0	0	3	4	413	0	0	420	0	0	253	1	0	254	683
5:45 PM	0	2	0	2	0	4	0	0	0	0	0	0	4	1	396	0	0	401	0	0	265	2	0	267	672
Hourly Total	0	15	0	21	0	36	0	0	0	0	0	0	16	9	1721	0	0	1746	0	0	1093	4	0	1097	2879
Grand Total	0	42	0	48	0	90	0	1	0	1	1	2	60	90	4940	1	0	5091	0	0	5663	53	0	5716	10899
Approach %	0.0	46.7	0.0	53.3	-	-	0.0	50.0	0.0	50.0	-	-	1.2	1.8	97.0	0.0	-	-	0.0	0.0	99.1	0.9	-	-	-
Total %	0.0	0.4	0.0	0.4	-	0.8	0.0	0.0	0.0	0.0	-	0.0	0.6	0.8	45.3	0.0	-	46.7	0.0	0.0	52.0	0.5	-	52.4	-
Lights	0	41	0	48	-	89	0	1	0	1	-	2	60	90	4717	1	-	4868	0	0	5405	53	-	5458	10417
% Lights	-	97.6	-	100.0	-	98.9	-	100.0	-	100.0	-	100.0	100.0	100.0	95.5	100.0	-	95.6	-	-	95.4	100.0	-	95.5	95.6
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	11	0	-	11	0	0	10	0	-	10	21
% Buses	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.0	0.0	0.2	0.0	-	0.2	-	-	0.2	0.0	-	0.2	0.2
Single-Unit Trucks	0	1	0	0	-	1	0	0	0	0	-	0	0	0	129	0	-	129	0	0	159	0	-	159	289
% Single-Unit Trucks	-	2.4	-	0.0	-	1.1	-	0.0	-	0.0	-	0.0	0.0	0.0	2.6	0.0	-	2.5	-	-	2.8	0.0	-	2.8	2.7
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	83	0	-	83	0	0	88	0	-	88	171
% Articulated Trucks	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.0	0.0	1.7	0.0	-	1.6	-	-	1.6	0.0	-	1.5	1.6
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	1

% Bicycles on Road	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	-	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Rand Road with Wynstone Park Drive (north) TMC 2
Site Code:
Start Date: 07/08/2025
Page No: 3

Turning Movement Peak Hour Data (7:15 AM)

Start Time	s wynstone parkdr Eastbound						access dr Westbound						rand rd Northbound						rand rd Southbound						
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	3	3	166	0	0	172	0	0	454	3	0	457	629
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	3	4	187	0	0	194	0	0	470	2	0	472	666
7:45 AM	0	0	0	1	0	1	0	0	0	0	0	0	5	11	206	0	0	222	0	0	489	9	0	498	721
8:00 AM	0	0	0	1	0	1	0	0	0	1	0	1	5	7	178	1	0	191	0	0	426	6	0	432	625
Total	0	0	0	2	0	2	0	0	0	1	0	1	16	25	737	1	0	779	0	0	1839	20	0	1859	2641
Approach %	0.0	0.0	0.0	100.0	-	-	0.0	0.0	0.0	100.0	-	-	2.1	3.2	94.6	0.1	-	-	0.0	0.0	98.9	1.1	-	-	-
Total %	0.0	0.0	0.0	0.1	-	0.1	0.0	0.0	0.0	0.0	-	0.0	0.6	0.9	27.9	0.0	-	29.5	0.0	0.0	69.6	0.8	-	70.4	-
PHF	0.000	0.000	0.000	0.500	-	0.500	0.000	0.000	0.000	0.250	-	0.250	0.800	0.568	0.894	0.250	-	0.877	0.000	0.000	0.940	0.556	-	0.933	0.916
Lights	0	0	0	2	-	2	0	0	0	1	-	1	16	25	659	1	-	701	0	0	1748	20	-	1768	2472
% Lights	-	-	-	100.0	-	100.0	-	-	-	100.0	-	100.0	100.0	100.0	89.4	100.0	-	90.0	-	-	95.1	100.0	-	95.1	93.6
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	2	0	-	2	0	0	8	0	-	8	10
% Buses	-	-	-	0.0	-	0.0	-	-	-	0.0	-	0.0	0.0	0.0	0.3	0.0	-	0.3	-	-	0.4	0.0	-	0.4	0.4
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	38	0	-	38	0	0	61	0	-	61	99
% Single-Unit Trucks	-	-	-	0.0	-	0.0	-	-	-	0.0	-	0.0	0.0	0.0	5.2	0.0	-	4.9	-	-	3.3	0.0	-	3.3	3.7
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	38	0	-	38	0	0	21	0	-	21	59
% Articulated Trucks	-	-	-	0.0	-	0.0	-	-	-	0.0	-	0.0	0.0	0.0	5.2	0.0	-	4.9	-	-	1.1	0.0	-	1.1	2.2
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	1
% Bicycles on Road	-	-	-	0.0	-	0.0	-	-	-	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	-	-	0.1	0.0	-	0.1	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Rand Road with Wynstone Park Drive (north) TMC 2
Site Code:
Start Date: 07/08/2025
Page No: 4

Turning Movement Peak Hour Data (4:30 PM)

Start Time	s wynstone parkdr Eastbound						access dr Westbound						rand rd Northbound						rand rd Southbound						
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
4:30 PM	0	8	0	9	0	17	0	1	0	0	0	1	2	3	438	0	0	443	0	0	267	1	0	268	729
4:45 PM	0	5	0	5	0	10	0	0	0	0	1	0	0	2	459	0	0	461	0	0	300	2	0	302	773
5:00 PM	0	8	0	8	0	16	0	0	0	0	0	0	4	1	453	0	0	458	0	0	289	1	0	290	764
5:15 PM	0	3	0	4	0	7	0	0	0	0	0	0	5	3	459	0	0	467	0	0	286	0	0	286	760
Total	0	24	0	26	0	50	0	1	0	0	1	1	11	9	1809	0	0	1829	0	0	1142	4	0	1146	3026
Approach %	0.0	48.0	0.0	52.0	-	-	0.0	100.0	0.0	0.0	-	-	0.6	0.5	98.9	0.0	-	-	0.0	0.0	99.7	0.3	-	-	-
Total %	0.0	0.8	0.0	0.9	-	1.7	0.0	0.0	0.0	0.0	-	0.0	0.4	0.3	59.8	0.0	-	60.4	0.0	0.0	37.7	0.1	-	37.9	-
PHF	0.000	0.750	0.000	0.722	-	0.735	0.000	0.250	0.000	0.000	-	0.250	0.550	0.750	0.985	0.000	-	0.979	0.000	0.000	0.952	0.500	-	0.949	0.979
Lights	0	24	0	26	-	50	0	1	0	0	-	1	11	9	1770	0	-	1790	0	0	1115	4	-	1119	2960
% Lights	-	100.0	-	100.0	-	100.0	-	100.0	-	-	-	100.0	100.0	100.0	97.8	-	-	97.9	-	-	97.6	100.0	-	97.6	97.8
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Buses	-	0.0	-	0.0	-	0.0	-	0.0	-	-	-	0.0	0.0	0.0	0.0	-	-	0.0	-	-	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	30	0	-	30	0	0	17	0	-	17	47
% Single-Unit Trucks	-	0.0	-	0.0	-	0.0	-	0.0	-	-	-	0.0	0.0	0.0	1.7	-	-	1.6	-	-	1.5	0.0	-	1.5	1.6
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	9	0	-	9	0	0	10	0	-	10	19
% Articulated Trucks	-	0.0	-	0.0	-	0.0	-	0.0	-	-	-	0.0	0.0	0.0	0.5	-	-	0.5	-	-	0.9	0.0	-	0.9	0.6
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	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Rand Road with Wynstone Park Drive (south) TMC 2
Site Code:
Start Date: 07/08/2025
Page No: 1

Turning Movement Data

Start Time	s wynstone park dr Eastbound					rand rd Northbound					rand rd Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	0	0	0	0	0	0	0	158	0	158	0	385	0	0	385	543
7:15 AM	0	0	0	0	0	0	0	174	0	174	0	451	1	0	452	626
7:30 AM	0	0	1	0	1	0	0	183	0	183	0	461	0	0	461	645
7:45 AM	0	0	2	0	2	0	0	235	0	235	0	496	2	0	498	735
Hourly Total	0	0	3	0	3	0	0	750	0	750	0	1793	3	0	1796	2549
8:00 AM	0	0	0	0	0	0	0	195	0	195	0	418	1	0	419	614
8:15 AM	0	0	1	0	1	0	0	243	0	243	0	446	1	0	447	691
8:30 AM	0	0	1	0	1	0	0	216	0	216	0	439	0	0	439	656
8:45 AM	0	0	1	0	1	0	0	226	0	226	0	373	0	0	373	600
Hourly Total	0	0	3	0	3	0	0	880	0	880	0	1676	2	0	1678	2561
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	0	2	0	2	0	0	439	0	439	0	274	0	0	274	715
4:15 PM	0	0	7	0	7	0	0	421	0	421	0	311	1	0	312	740
4:30 PM	0	0	6	0	6	0	0	446	0	446	0	274	0	0	274	726
4:45 PM	0	0	8	0	8	0	0	457	0	457	0	306	1	0	307	772
Hourly Total	0	0	23	0	23	0	0	1763	0	1763	0	1165	2	0	1167	2953
5:00 PM	0	0	15	0	15	0	0	454	0	454	0	302	1	0	303	772
5:15 PM	0	0	4	0	4	0	0	505	0	505	0	299	1	0	300	809
5:30 PM	0	0	2	0	2	0	0	416	0	416	0	275	0	0	275	693
5:45 PM	0	0	2	0	2	0	0	453	0	453	0	280	0	0	280	735
Hourly Total	0	0	23	0	23	0	0	1828	0	1828	0	1156	2	0	1158	3009
Grand Total	0	0	52	0	52	0	0	5221	0	5221	0	5790	9	0	5799	11072
Approach %	0.0	0.0	100.0	-	-	0.0	0.0	100.0	-	-	0.0	99.8	0.2	-	-	-
Total %	0.0	0.0	0.5	-	0.5	0.0	0.0	47.2	-	47.2	0.0	52.3	0.1	-	52.4	-
Lights	0	0	52	-	52	0	0	5016	-	5016	0	5559	8	-	5567	10635
% Lights	-	-	100.0	-	100.0	-	-	96.1	-	96.1	-	96.0	88.9	-	96.0	96.1
Buses	0	0	0	-	0	0	0	13	-	13	0	10	0	-	10	23
% Buses	-	-	0.0	-	0.0	-	-	0.2	-	0.2	-	0.2	0.0	-	0.2	0.2
Single-Unit Trucks	0	0	0	-	0	0	0	91	-	91	0	111	1	-	112	203
% Single-Unit Trucks	-	-	0.0	-	0.0	-	-	1.7	-	1.7	-	1.9	11.1	-	1.9	1.8
Articulated Trucks	0	0	0	-	0	0	0	101	-	101	0	109	0	-	109	210
% Articulated Trucks	-	-	0.0	-	0.0	-	-	1.9	-	1.9	-	1.9	0.0	-	1.9	1.9
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	1	0	-	1	1
% Bicycles on Road	-	-	0.0	-	0.0	-	-	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 dfreeman@kloainc.com

Count Name: Rand Road with Wynstone Park Drive (south) TMC 2
Site Code:
Start Date: 07/08/2025
Page No: 2

Turning Movement Peak Hour Data (7:15 AM)

Start Time	s wynstone park dr Eastbound					rand rd Northbound					rand rd Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
7:15 AM	0	0	0	0	0	0	0	174	0	174	0	451	1	0	452	626
7:30 AM	0	0	1	0	1	0	0	183	0	183	0	461	0	0	461	645
7:45 AM	0	0	2	0	2	0	0	235	0	235	0	496	2	0	498	735
8:00 AM	0	0	0	0	0	0	0	195	0	195	0	418	1	0	419	614
Total	0	0	3	0	3	0	0	787	0	787	0	1826	4	0	1830	2620
Approach %	0.0	0.0	100.0	-	-	0.0	0.0	100.0	-	-	0.0	99.8	0.2	-	-	-
Total %	0.0	0.0	0.1	-	0.1	0.0	0.0	30.0	-	30.0	0.0	69.7	0.2	-	69.8	-
PHF	0.000	0.000	0.375	-	0.375	0.000	0.000	0.837	-	0.837	0.000	0.920	0.500	-	0.919	0.891
Lights	0	0	3	-	3	0	0	725	-	725	0	1749	3	-	1752	2480
% Lights	-	-	100.0	-	100.0	-	-	92.1	-	92.1	-	95.8	75.0	-	95.7	94.7
Buses	0	0	0	-	0	0	0	4	-	4	0	8	0	-	8	12
% Buses	-	-	0.0	-	0.0	-	-	0.5	-	0.5	-	0.4	0.0	-	0.4	0.5
Single-Unit Trucks	0	0	0	-	0	0	0	18	-	18	0	30	1	-	31	49
% Single-Unit Trucks	-	-	0.0	-	0.0	-	-	2.3	-	2.3	-	1.6	25.0	-	1.7	1.9
Articulated Trucks	0	0	0	-	0	0	0	40	-	40	0	38	0	-	38	78
% Articulated Trucks	-	-	0.0	-	0.0	-	-	5.1	-	5.1	-	2.1	0.0	-	2.1	3.0
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	1	0	-	1	1
% Bicycles on Road	-	-	0.0	-	0.0	-	-	0.0	-	0.0	-	0.1	0.0	-	0.1	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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9575 W. Higgins Rd., Suite 400

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(847)518-9990 dfreeman@kloainc.com

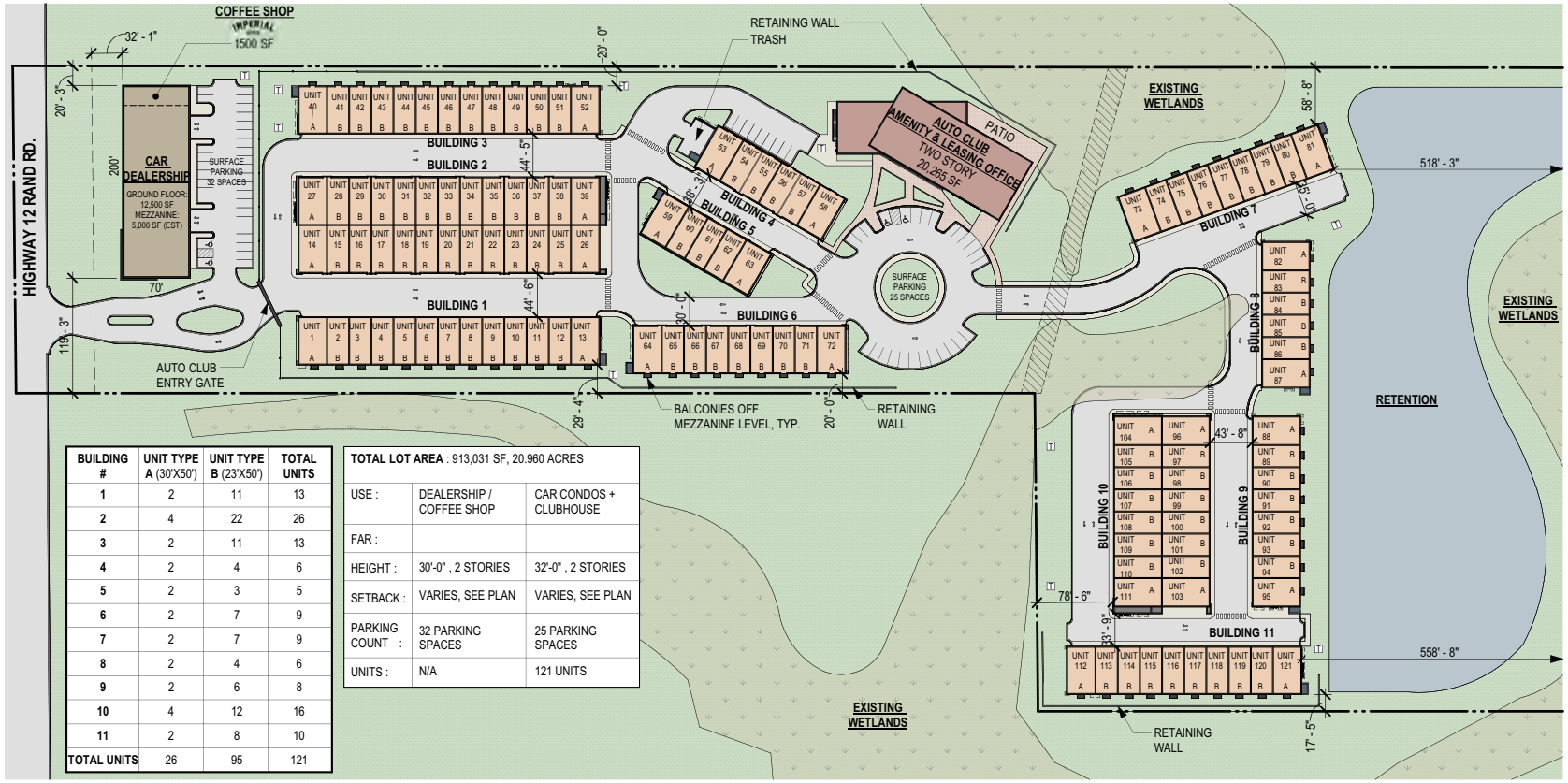
Count Name: Rand Road with Wynstone Park Drive (south) TMC 2
Site Code:
Start Date: 07/08/2025
Page No: 3

Turning Movement Peak Hour Data (4:30 PM)

Start Time	s wynstone park dr Eastbound					rand rd Northbound					rand rd Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
4:30 PM	0	0	6	0	6	0	0	446	0	446	0	274	0	0	274	726
4:45 PM	0	0	8	0	8	0	0	457	0	457	0	306	1	0	307	772
5:00 PM	0	0	15	0	15	0	0	454	0	454	0	302	1	0	303	772
5:15 PM	0	0	4	0	4	0	0	505	0	505	0	299	1	0	300	809
Total	0	0	33	0	33	0	0	1862	0	1862	0	1181	3	0	1184	3079
Approach %	0.0	0.0	100.0	-	-	0.0	0.0	100.0	-	-	0.0	99.7	0.3	-	-	-
Total %	0.0	0.0	1.1	-	1.1	0.0	0.0	60.5	-	60.5	0.0	38.4	0.1	-	38.5	-
PHF	0.000	0.000	0.550	-	0.550	0.000	0.000	0.922	-	0.922	0.000	0.965	0.750	-	0.964	0.951
Lights	0	0	33	-	33	0	0	1825	-	1825	0	1152	3	-	1155	3013
% Lights	-	-	100.0	-	100.0	-	-	98.0	-	98.0	-	97.5	100.0	-	97.6	97.9
Buses	0	0	0	-	0	0	0	2	-	2	0	0	0	-	0	2
% Buses	-	-	0.0	-	0.0	-	-	0.1	-	0.1	-	0.0	0.0	-	0.0	0.1
Single-Unit Trucks	0	0	0	-	0	0	0	23	-	23	0	16	0	-	16	39
% Single-Unit Trucks	-	-	0.0	-	0.0	-	-	1.2	-	1.2	-	1.4	0.0	-	1.4	1.3
Articulated Trucks	0	0	0	-	0	0	0	12	-	12	0	13	0	-	13	25
% Articulated Trucks	-	-	0.0	-	0.0	-	-	0.6	-	0.6	-	1.1	0.0	-	1.1	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	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Site Plan

SITE PLAN



BUILDING #	UNIT TYPE A (30'X50')	UNIT TYPE B (23'X50')	TOTAL UNITS
1	2	11	13
2	4	22	26
3	2	11	13
4	2	4	6
5	2	3	5
6	2	7	9
7	2	7	9
8	2	4	6
9	2	6	8
10	4	12	16
11	2	8	10
TOTAL UNITS	26	95	121

TOTAL LOT AREA : 913,031 SF, 20.960 ACRES

USE :	DEALERSHIP / COFFEE SHOP	CAR CONDOS + CLUBHOUSE
FAR :		
HEIGHT :	30'-0" , 2 STORIES	32'-0" , 2 STORIES
SETBACK :	VARIES, SEE PLAN	VARIES, SEE PLAN
PARKING COUNT :	32 PARKING SPACES	25 PARKING SPACES
UNITS :	N/A	121 UNITS

SITE PLAN
SCALE: 1" = 100' - 0"

OKW Architects
OKW ARCHITECTS
600 W. Jackson, Suite 250
Chicago, IL 60661

LUXE CORSA

LUXE CORSA AUTO SUITES
Lake Zurich, IL
July 01, 2025 Project #: 25009

2

CMAP 2050 Projections Letter

Chicago Metropolitan Agency for Planning

433 West Van Buren Street, Suite 450
Chicago, IL 60607
cmap.illinois.gov | 312-454-0400

June 18, 2025

Ryan May
Project Coordinator
Kenig, Lindgren, O'Hara and Aboona, Inc.
9575 West Higgins Road
Suite 400
Rosemont, IL 60018

Subject: 24455 US Route 12
IDOT

Dear Mr. May:

In response to a request made on your behalf and dated June 17, 2025, we have developed year 2050 average daily traffic (ADT) projections for the subject location.

ROAD SEGMENT	Current ADT	Year 2050 ADT
Rand Road between Wynstone Drive and Miller Drive	32,200	34,700
Rand Road south of Miller Road	37,800	40,800
Miller Road west of Rand Road	4,800	6,200
Miller Road east of Rand Road	2,600	3,500

Traffic projections are developed using existing ADT data provided in the request letter and the results from the December 2024 CMAP Travel Demand Analysis. The regional travel model uses CMAP 2050 socioeconomic projections and assumes the implementation of the ON TO 2050 Comprehensive Regional Plan for the Northeastern Illinois area. The provision of this data in support of your request does not constitute a CMAP endorsement of the proposed development or any subsequent developments.

If you have any questions, please call me at (312) 386-8806 or email me at jrodriguez@cmap.illinois.gov

Jose Rodriguez, PTP, AICP
Senior Planner, Research & Analysis

cc: Rios (IDOT)
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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.	>80.0

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

Existing Weekday Morning Peak Hour

Lanes, Volumes, Timings
1: Rand Road (US 12) & Miller Road 07/11/2025

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	39	92	0	41	20	15	67	756	33	3	16	1788
Future Volume (vph)	39	92	0	41	20	15	67	756	33	3	16	1788
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	1900	2000
Storage Length (ft)	150		170	150		170	255		110		190	
Storage Lanes	1		1	1		1	1		1		1	
Taper Length (ft)	150			150			160				240	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	0.95
Frt						0.850			0.850			
Flt Protected	0.950			0.950			0.950				0.950	
Satd. Flow (prot)	1719	1942	1900	1687	1818	1509	1703	3423	1442	0	1630	3654
Flt Permitted	0.573			0.689			0.039				0.313	
Satd. Flow (perm)	1037	1942	1900	1223	1818	1509	70	3423	1442	0	537	3654
Right Turn on Red			Yes			Yes			Yes			
Satd. Flow (RTOR)						120			84			
Link Speed (mph)		30			35			50				50
Link Distance (ft)		1233			1432			1665				946
Travel Time (s)		28.0			27.9			22.7				12.9
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	5%	3%	0%	7%	10%	7%	6%	11%	12%	33%	7%	4%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	44	105	0	47	23	17	76	859	38	0	21	2032
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	custom	pm+pt	NA
Protected Phases	7	4		3	8		5	2			1	6
Permitted Phases	4		4	8		8	2		2	1	6	
Detector Phase	7	4	4	3	8	8	5	2	2	1	1	6
Switch Phase												
Minimum Initial (s)	3.0	8.0	8.0	3.0	8.0	8.0	5.0	15.0	15.0	3.0	3.0	15.0
Minimum Split (s)	9.5	21.0	21.0	9.5	21.0	21.0	9.5	22.5	22.5	14.0	14.0	22.5
Total Split (s)	16.0	21.0	21.0	16.0	21.0	21.0	20.0	99.0	99.0	14.0	14.0	93.0
Total Split (%)	10.7%	14.0%	14.0%	10.7%	14.0%	14.0%	13.3%	66.0%	66.0%	9.3%	9.3%	62.0%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	4.5	3.5	5.0	5.0	3.5	3.5	5.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.5	6.5	6.5	3.5	6.5	6.5	4.5	7.0	7.0		4.5	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	None	C-Min
Act Effct Green (s)	25.5	14.2		22.0	13.4	13.4	113.3	105.2	105.2		107.5	98.9
Actuated g/C Ratio	0.17	0.09		0.15	0.09	0.09	0.76	0.70	0.70		0.72	0.66
v/c Ratio	0.19	0.57		0.23	0.14	0.07	0.54	0.36	0.04		0.05	0.84
Control Delay (s/veh)	49.9	77.2		53.1	63.6	0.5	35.3	10.9	0.1		6.1	25.6
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay (s/veh)	49.9	77.2		53.1	63.6	0.5	35.3	10.9	0.1		6.1	25.6
LOS	D	E		D	E	A	D	B	A		A	C
Approach Delay (s/veh)		69.2			45.6			12.4				24.8
Approach LOS		E			D			B				C
Queue Length 50th (ft)	36	99		38	21	0	24	191	0		5	786
Queue Length 95th (ft)	69	162		73	51	0	76	242	0		13	998

Lanes, Volumes, Timings
1: Rand Road (US 12) & Miller Road 07/11/2025

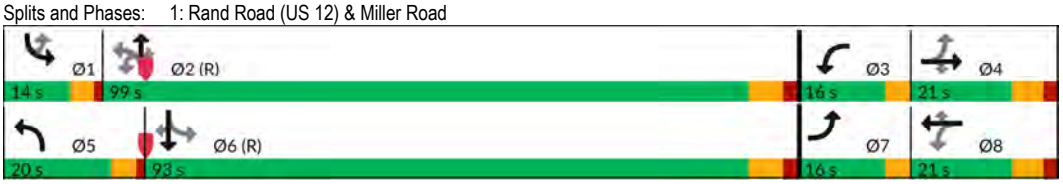
Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	49
Future Volume (vph)	49
Ideal Flow (vphpl)	1900
Storage Length (ft)	115
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1615
Flt Permitted	
Satd. Flow (perm)	1615
Right Turn on Red	Yes
Satd. Flow (RTOR)	116
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.88
Heavy Vehicles (%)	0%
Shared Lane Traffic (%)	
Lane Group Flow (vph)	56
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Detector Phase	6
Switch Phase	
Minimum Initial (s)	15.0
Minimum Split (s)	22.5
Total Split (s)	93.0
Total Split (%)	62.0%
Yellow Time (s)	5.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	7.0
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Recall Mode	C-Min
Act Effct Green (s)	98.9
Actuated g/C Ratio	0.66
v/c Ratio	0.05
Control Delay (s/veh)	0.1
Queue Delay	0.0
Total Delay (s/veh)	0.1
LOS	A
Approach Delay (s/veh)	
Approach LOS	
Queue Length 50th (ft)	0
Queue Length 95th (ft)	0

Lanes, Volumes, Timings
1: Rand Road (US 12) & Miller Road 07/11/2025

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Internal Link Dist (ft)		1153			1352			1585				866
Turn Bay Length (ft)	150			150		170	255		110		190	
Base Capacity (vph)	257	197		234	187	263	221	2399	1035		466	2409
Starvation Cap Reductn	0	0		0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.17	0.53		0.20	0.12	0.06	0.34	0.36	0.04		0.05	0.84

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 35 (23%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay (s/veh): 23.7		Intersection LOS: C	
Intersection Capacity Utilization 75.1%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: Rand Road (US 12) & Miller Road



Lane Group	SBR
Internal Link Dist (ft)	
Turn Bay Length (ft)	115
Base Capacity (vph)	1104
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.05

Intersection Summary

HCM 7th TWSC
2: Wynstone Park Drive (south) & Rand Road (US 12) 07/11/2025

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	3	0	813	1853	4
Future Vol, veh/h	0	3	0	813	1853	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	Free
Storage Length	-	0	-	-	-	325
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	8	4	25
Mvmt Flow	0	3	0	913	2082	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	1041	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	230	0	-	-	0
Stage 1	0	-	0	-	-	0
Stage 2	0	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	-	230	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	20.87	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	230	-
HCM Lane V/C Ratio	-	0.015	-
HCM Ctrl Dly (s/v)	-	20.9	-
HCM Lane LOS	-	C	-
HCM 95th %tile Q(veh)	-	0	-

HCM 7th TWSC
3: Rand Road (US 12) & Bailey Lane 07/11/2025

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	22	812	1	0	1857
Future Vol, veh/h	0	22	812	1	0	1857
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	Free	-	None
Storage Length	-	0	-	275	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	9	7	0	0	3
Mvmt Flow	0	26	944	1	0	2159

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	472	0	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.08	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.39	-	-	-	-
Pot Cap-1 Maneuver	0	520	-	0	0	-
Stage 1	0	-	-	0	0	-
Stage 2	0	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	-	520	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	12.28	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	WBLn1	SBT
Capacity (veh/h)	-	520	-
HCM Lane V/C Ratio	-	0.049	-
HCM Ctrl Dly (s/v)	-	12.3	-
HCM Lane LOS	-	B	-
HCM 95th %tile Q(veh)	-	0.2	-

HCM 7th TWSC
4: Rand Road (US 12) & Wynstone Park Drive (north) 07/11/2025

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	0	0	2	0	0	1	16	25	792	1	0	1839	20
Future Vol, veh/h	0	0	2	0	0	1	16	25	792	1	0	1839	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	145	-	-	-	-	80
Veh in Median Storage, #	-	1	-	-	0	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	2	0	2	2	2	0	0	11	2	2	5	0
Mvmt Flow	0	0	2	0	0	1	17	27	861	1	0	1999	22

Major/Minor	Minor2			Minor1			Major1			Major2			
Conflicting Flow All	2518	2950	999	1950	2971	431	1999	2021	0	0	862	0	0
Stage 1	1999	1999	-	951	951	-	-	-	-	-	-	-	-
Stage 2	520	951	-	999	2021	-	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.54	6.9	7.54	6.54	6.94	6.4	4.1	-	-	4.14	-	-
Critical Hdwy Stg 1	6.5	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.02	3.3	3.52	4.02	3.32	2.5	2.2	-	-	2.22	-	-
Pot Cap-1 Maneuver	15	14	245	39	14	573	76	285	-	-	776	-	-
Stage 1	63	103	-	279	337	-	-	-	-	-	-	-	-
Stage 2	513	336	-	261	101	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-		-	-
Mov Cap-1 Maneuver	10	10	245	26	9	573	137	137	-	-	776	-	-
Mov Cap-2 Maneuver	51	69	-	26	9	-	-	-	-	-	-	-	-
Stage 1	63	103	-	188	227	-	-	-	-	-	-	-	-
Stage 2	345	227	-	258	101	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	19.81	11.3	2.14	0
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	137	-	-	245	573	776	-	-
HCM Lane V/C Ratio	0.325	-	-	0.009	0.002	-	-	-
HCM Ctrl Dly (s/v)	43.5	-	-	19.8	11.3	0	-	-
HCM Lane LOS	E	-	-	C	B	A	-	-
HCM 95th %tile Q(veh)	1.3	-	-	0	0	0	-	-

HCM 7th TWSC
5: Wynstone Drive & Rand Road (US 12) 07/11/2025

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	12	0	80	0	0	0	2	49	742	0	0	1777	15
Future Vol, veh/h	12	0	80	0	0	0	2	49	742	0	0	1777	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	None
Storage Length	50	-	0	-	-	-	-	200	-	-	60	-	280
Veh in Median Storage, #	-	1	-	-	0	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	1	0	0	0	0	4	11	0	0	4	0
Mvmt Flow	13	0	85	0	0	0	2	52	789	0	0	1890	16

Major/Minor	Minor2					Major1				Major2		
Conflicting Flow All	2394	-	945			1890	1906	0	-	789	0	0
Stage 1	1890	-	-			-	-	-	-	-	-	-
Stage 2	503	-	-			-	-	-	-	-	-	-
Critical Hdwy	6.8	-	6.92			6.4	4.18	-	-	4.1	-	-
Critical Hdwy Stg 1	5.8	-	-			-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-			-	-	-	-	-	-	-
Follow-up Hdwy	3.5	-	3.31			2.5	2.24	-	-	2.2	-	-
Pot Cap-1 Maneuver	29	0	265			90	300	-	0	839	-	-
Stage 1	107	0	-			-	-	-	0	-	-	-
Stage 2	578	0	-			-	-	-	0	-	-	-
Platoon blocked, %								-			-	-
Mov Cap-1 Maneuver	23	0	265			260	260	-	-	839	-	-
Mov Cap-2 Maneuver	72	0	-			-	-	-	-	-	-	-
Stage 1	85	0	-			-	-	-	-	-	-	-
Stage 2	578	0	-			-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	30.27	1.44	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBL	SBT	SBR
Capacity (veh/h)	260	-	72	265	839	-	-
HCM Lane V/C Ratio	0.209	-	0.178	0.322	-	-	-
HCM Ctrl Dly (s/v)	22.5	-	65.9	24.9	0	-	-
HCM Lane LOS	C	-	F	C	A	-	-
HCM 95th %tile Q(veh)	0.8	-	0.6	1.3	0	-	-

Capacity Analysis Summary Sheets

Existing Weekday Evening Peak Hour

Lanes, Volumes, Timings
1: Rand Road (US 12) & Miller Road 07/11/2025

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	46	43	0	86	110	49	183	1762	73	5	37	1132
Future Volume (vph)	46	43	0	86	110	49	183	1762	73	5	37	1132
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	1900	2000
Storage Length (ft)	150		170	150		170	255		110		190	
Storage Lanes	1		1	1		1	1		1		1	
Taper Length (ft)	150			150			160				240	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	0.95
Frt						0.850			0.850			
Flt Protected	0.950			0.950			0.950				0.950	
Satd. Flow (prot)	1805	2000	1900	1805	2000	1615	1787	3725	1615	0	1805	3725
Flt Permitted	0.685			0.553			0.186				0.072	
Satd. Flow (perm)	1302	2000	1900	1051	2000	1615	350	3725	1615	0	137	3725
Right Turn on Red			Yes			Yes			Yes			
Satd. Flow (RTOR)						120			84			
Link Speed (mph)		30			35			50				50
Link Distance (ft)		1233			1432			1665				946
Travel Time (s)		28.0			27.9			22.7				12.9
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	1%	2%	0%	0%	0%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	46	43	0	87	111	49	185	1780	74	0	42	1143
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	custom	pm+pt	NA
Protected Phases	7	4		3	8		5	2			1	6
Permitted Phases	4		4	8		8	2		2	1	6	
Detector Phase	7	4	4	3	8	8	5	2	2	1	1	6
Switch Phase												
Minimum Initial (s)	3.0	8.0	8.0	3.0	8.0	8.0	5.0	15.0	15.0	3.0	3.0	15.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	25.0	25.0	9.5	9.5	25.0
Total Split (s)	16.0	23.0	23.0	16.0	23.0	23.0	30.0	96.0	96.0	15.0	15.0	81.0
Total Split (%)	10.7%	15.3%	15.3%	10.7%	15.3%	15.3%	20.0%	64.0%	64.0%	10.0%	10.0%	54.0%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	4.5	3.5	5.0	5.0	3.5	3.5	5.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.5	6.5	6.5	3.5	6.5	6.5	4.5	7.0	7.0		4.5	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	None	C-Min
Act Effct Green (s)	22.0	12.6		27.2	14.9	14.9	113.2	102.3	102.3		105.6	96.6
Actuated g/C Ratio	0.15	0.08		0.18	0.10	0.10	0.75	0.68	0.68		0.70	0.64
v/c Ratio	0.21	0.26		0.35	0.56	0.18	0.51	0.70	0.07		0.25	0.48
Control Delay (s/veh)	49.9	66.8		53.5	74.9	1.5	10.9	18.5	1.8		9.9	15.9
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay (s/veh)	49.9	66.8		53.5	74.9	1.5	10.9	18.5	1.8		9.9	15.9
LOS	D	E		D	E	A	B	B	A		A	B
Approach Delay (s/veh)		58.0			52.8			17.2				15.1
Approach LOS		E			D			B				B
Queue Length 50th (ft)	37	40		72	105	0	47	573	0		10	298
Queue Length 95th (ft)	72	80		120	169	0	82	750	17		23	415

Lanes, Volumes, Timings
1: Rand Road (US 12) & Miller Road 07/11/2025

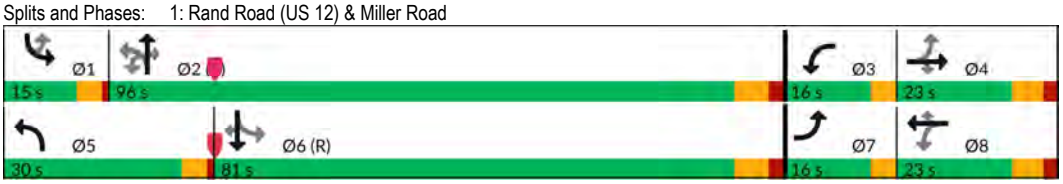
Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	40
Future Volume (vph)	40
Ideal Flow (vphpl)	1900
Storage Length (ft)	115
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1615
Flt Permitted	
Satd. Flow (perm)	1615
Right Turn on Red	Yes
Satd. Flow (RTOR)	116
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.99
Heavy Vehicles (%)	0%
Shared Lane Traffic (%)	
Lane Group Flow (vph)	40
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Detector Phase	6
Switch Phase	
Minimum Initial (s)	15.0
Minimum Split (s)	25.0
Total Split (s)	81.0
Total Split (%)	54.0%
Yellow Time (s)	5.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	7.0
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Recall Mode	C-Min
Act Effct Green (s)	96.6
Actuated g/C Ratio	0.64
v/c Ratio	0.04
Control Delay (s/veh)	0.1
Queue Delay	0.0
Total Delay (s/veh)	0.1
LOS	A
Approach Delay (s/veh)	
Approach LOS	
Queue Length 50th (ft)	0
Queue Length 95th (ft)	0

Lanes, Volumes, Timings
1: Rand Road (US 12) & Miller Road 07/11/2025

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Internal Link Dist (ft)		1153			1352			1585				866
Turn Bay Length (ft)	150			150		170	255		110		190	
Base Capacity (vph)	266	220		257	225	288	509	2539	1127		216	2399
Starvation Cap Reductn	0	0		0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.17	0.20		0.34	0.49	0.17	0.36	0.70	0.07		0.19	0.48

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 111 (74%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay (s/veh): 20.0		Intersection LOS: B	
Intersection Capacity Utilization 77.9%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: Rand Road (US 12) & Miller Road



Lanes, Volumes, Timings
1: Rand Road (US 12) & Miller Road 07/11/2025

Lane Group	SBR
Internal Link Dist (ft)	
Turn Bay Length (ft)	115
Base Capacity (vph)	1081
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.04

Intersection Summary

HCM 7th TWSC
2: Wynstone Park Drive (south) & Rand Road (US 12) 07/11/2025

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	33	0	1862	1181	3
Future Vol, veh/h	0	33	0	1862	1181	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	Free
Storage Length	-	0	-	-	-	325
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	2	2	0
Mvmt Flow	0	35	0	1960	1243	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	622	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	435	0	-	-	0
Stage 1	0	-	0	-	-	0
Stage 2	0	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	-	435	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	14	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	435	-
HCM Lane V/C Ratio	-	0.08	-
HCM Ctrl Dly (s/v)	-	14	-
HCM Lane LOS	-	B	-
HCM 95th %tile Q(veh)	-	0.3	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	18	1844	18	0	1184
Future Vol, veh/h	0	18	1844	18	0	1184
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	Free	-	None
Storage Length	-	0	-	275	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	20	2004	20	0	1287

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	1002	0	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	241	-	0	0	-
Stage 1	0	-	-	0	0	-
Stage 2	0	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	-	241	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	21.28	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	WBLn1	SBT
Capacity (veh/h)	-	241	-
HCM Lane V/C Ratio	-	0.081	-
HCM Ctrl Dly (s/v)	-	21.3	-
HCM Lane LOS	-	C	-
HCM 95th %tile Q(veh)	-	0.3	-

HCM 7th TWSC
4: Rand Road (US 12) & Wynstone Park Drive (north) 07/11/2025

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	24	0	26	0	0	0	11	9	1842	0	0	1147	4
Future Vol, veh/h	24	0	26	0	0	0	11	9	1842	0	0	1147	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	145	-	-	-	-	80
Veh in Median Storage, #	-	1	-	-	0	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	0	-
Peak Hour Factor	98	92	98	92	92	92	98	98	98	92	92	98	98
Heavy Vehicles, %	0	2	0	2	2	2	0	0	2	2	2	2	0
Mvmt Flow	24	0	27	0	0	0	11	9	1880	0	0	1170	4

Major/Minor	Minor2			Minor1			Major1				Major2		
Conflicting Flow All	2151	3091	585	2506	3095	940	1170	1174	0	0	1880	0	0
Stage 1	1170	1170	-	1920	1920	-	-	-	-	-	-	-	-
Stage 2	981	1920	-	585	1174	-	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.54	6.9	7.54	6.54	6.94	6.4	4.1	-	-	4.14	-	-
Critical Hdwy Stg 1	6.5	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.02	3.3	3.52	4.02	3.32	2.5	2.2	-	-	2.22	-	-
Pot Cap-1 Maneuver	28	12	459	14	12	265	263	602	-	-	315	-	-
Stage 1	208	265	-	69	113	-	-	-	-	-	-	-	-
Stage 2	272	113	-	464	264	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-		-	-
Mov Cap-1 Maneuver	26	11	459	13	11	265	337	337	-	-	315	-	-
Mov Cap-2 Maneuver	116	73	-	13	11	-	-	-	-	-	-	-	-
Stage 1	208	265	-	65	106	-	-	-	-	-	-	-	-
Stage 2	255	106	-	437	264	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	30.71	0	0.18	0
HCM LOS	D	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	337	-	-	190	-	315	-	-
HCM Lane V/C Ratio	0.061	-	-	0.268	-	-	-	-
HCM Ctrl Dly (s/v)	16.4	-	-	30.7	0	0	-	-
HCM Lane LOS	C	-	-	D	A	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	1	-	0	-	-

HCM 7th TWSC
5: Wynstone Drive & Rand Road (US 12) 07/11/2025

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	16	0	75	0	0	0	95	1771	0	0	1076	21
Future Vol, veh/h	16	0	75	0	0	0	95	1771	0	0	1076	21
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	0	-	-	-	200	-	-	60	-	280
Veh in Median Storage, #	-	1	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	6	0	0	0	0	0	0	2	0	0	2	0
Mvmt Flow	17	0	78	0	0	0	99	1845	0	0	1121	22

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	2241	-	560	1143	0	-	1845	0	0
Stage 1	1121	-	-	-	-	-	-	-	-
Stage 2	1120	-	-	-	-	-	-	-	-
Critical Hdwy	6.92	-	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	5.92	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.92	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.56	-	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	34	0	477	619	-	0	334	-	-
Stage 1	265	0	-	-	-	0	-	-	-
Stage 2	265	0	-	-	-	0	-	-	-
Platoon blocked, %					-			-	-
Mov Cap-1 Maneuver	28	0	477	619	-	-	334	-	-
Mov Cap-2 Maneuver	123	0	-	-	-	-	-	-	-
Stage 1	223	0	-	-	-	-	-	-	-
Stage 2	265	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	18.37	0.61	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBL	SBT	SBR
Capacity (veh/h)	619	-	123	477	334	-	-
HCM Lane V/C Ratio	0.16	-	0.135	0.164	-	-	-
HCM Ctrl Dly (s/v)	11.9	-	38.7	14	0	-	-
HCM Lane LOS	B	-	E	B	A	-	-
HCM 95th %tile Q(veh)	0.6	-	0.5	0.6	0	-	-

Capacity Analysis Summary Sheets

Year 2031 No-Build Weekday Morning Peak Hour

Lanes, Volumes, Timings
1: Rand Road (US 12) & Miller Road 07/11/2025

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	41	96	0	43	21	16	70	790	34	3	17	1868
Future Volume (vph)	41	96	0	43	21	16	70	790	34	3	17	1868
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	1900	2000
Storage Length (ft)	150		170	150		170	255		110		190	
Storage Lanes	1		1	1		1	1		1		1	
Taper Length (ft)	150			150			160				240	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	0.95
Frt						0.850			0.850			
Flt Protected	0.950			0.950			0.950				0.950	
Satd. Flow (prot)	1719	1942	1900	1687	1818	1509	1703	3423	1442	0	1633	3654
Flt Permitted	0.742			0.567			0.039				0.300	
Satd. Flow (perm)	1343	1942	1900	1007	1818	1509	70	3423	1442	0	516	3654
Right Turn on Red			Yes			Yes			Yes			
Satd. Flow (RTOR)						120			84			
Link Speed (mph)		30			35			50				50
Link Distance (ft)		1233			1432			1665				946
Travel Time (s)		28.0			27.9			22.7				12.9
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	5%	3%	0%	7%	10%	7%	6%	11%	12%	33%	7%	4%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	47	109	0	49	24	18	80	898	39	0	22	2123
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	custom	pm+pt	NA
Protected Phases	7	4		3	8		5	2			1	6
Permitted Phases	4		4	8		8	2		2	1	6	
Detector Phase	7	4	4	3	8	8	5	2	2	1	1	6
Switch Phase												
Minimum Initial (s)	3.0	8.0	8.0	3.0	8.0	8.0	5.0	15.0	15.0	3.0	3.0	15.0
Minimum Split (s)	9.5	21.0	21.0	9.5	21.0	21.0	9.5	22.5	22.5	14.0	14.0	22.5
Total Split (s)	16.0	21.0	21.0	16.0	21.0	21.0	20.0	99.0	99.0	14.0	14.0	93.0
Total Split (%)	10.7%	14.0%	14.0%	10.7%	14.0%	14.0%	13.3%	66.0%	66.0%	9.3%	9.3%	62.0%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	4.5	3.5	5.0	5.0	3.5	3.5	5.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.5	6.5	6.5	3.5	6.5	6.5	4.5	7.0	7.0		4.5	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	None	C-Min
Act Effct Green (s)	24.9	14.3		25.5	14.6	14.6	113.2	105.0	105.0		107.0	98.4
Actuated g/C Ratio	0.17	0.10		0.17	0.10	0.10	0.75	0.70	0.70		0.71	0.66
v/c Ratio	0.19	0.59		0.23	0.14	0.07	0.55	0.37	0.04		0.05	0.89
Control Delay (s/veh)	50.0	78.3		50.9	63.0	0.6	37.0	11.1	0.1		6.2	28.5
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay (s/veh)	50.0	78.3		50.9	63.0	0.6	37.0	11.1	0.1		6.2	28.5
LOS	D	E		D	E	A	D	B	A		A	C
Approach Delay (s/veh)		69.7			44.2			12.8				27.6
Approach LOS		E			D			B				C
Queue Length 50th (ft)	38	103		40	22	0	28	205	0		5	885
Queue Length 95th (ft)	73	167		75	51	0	82	255	0		14	#1188

NB AM 9:31 am 07/11/2025 Baseline Synchro 12 Report
Page 1

Lanes, Volumes, Timings
1: Rand Road (US 12) & Miller Road 07/11/2025

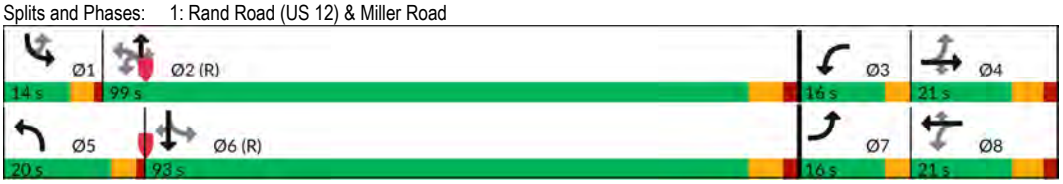
Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	51
Future Volume (vph)	51
Ideal Flow (vphpl)	1900
Storage Length (ft)	115
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1615
Flt Permitted	
Satd. Flow (perm)	1615
Right Turn on Red	Yes
Satd. Flow (RTOR)	116
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.88
Heavy Vehicles (%)	0%
Shared Lane Traffic (%)	
Lane Group Flow (vph)	58
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Detector Phase	6
Switch Phase	
Minimum Initial (s)	15.0
Minimum Split (s)	22.5
Total Split (s)	93.0
Total Split (%)	62.0%
Yellow Time (s)	5.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	7.0
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Recall Mode	C-Min
Act Effct Green (s)	98.4
Actuated g/C Ratio	0.66
v/c Ratio	0.05
Control Delay (s/veh)	0.1
Queue Delay	0.0
Total Delay (s/veh)	0.1
LOS	A
Approach Delay (s/veh)	
Approach LOS	
Queue Length 50th (ft)	0
Queue Length 95th (ft)	0

Lanes, Volumes, Timings
1: Rand Road (US 12) & Miller Road 07/11/2025

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Internal Link Dist (ft)		1153			1352			1585				866
Turn Bay Length (ft)	150			150		170	255		110		190	
Base Capacity (vph)	273	196		239	186	262	221	2395	1034		450	2398
Starvation Cap Reductn	0	0		0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.17	0.56		0.21	0.13	0.07	0.36	0.37	0.04		0.05	0.89

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 35 (23%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay (s/veh): 25.6		Intersection LOS: C	
Intersection Capacity Utilization 77.3%		ICU Level of Service D	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 1: Rand Road (US 12) & Miller Road



Lanes, Volumes, Timings
1: Rand Road (US 12) & Miller Road 07/11/2025

Lane Group	SBR
Internal Link Dist (ft)	
Turn Bay Length (ft)	115
Base Capacity (vph)	1099
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.05

Intersection Summary

HCM 7th TWSC
2: Wynstone Park Drive (south) & Rand Road (US 12) 07/11/2025

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	3	0	850	1936	4
Future Vol, veh/h	0	3	0	850	1936	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	Free
Storage Length	-	0	-	-	-	325
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	8	4	25
Mvmt Flow	0	3	0	955	2175	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	1088	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	214	0	-	-	0
Stage 1	0	-	0	-	-	0
Stage 2	0	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	-	214	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	22.06	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	214	-
HCM Lane V/C Ratio	-	0.016	-
HCM Ctrl Dly (s/v)	-	22.1	-
HCM Lane LOS	-	C	-
HCM 95th %tile Q(veh)	-	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	23	849	1	0	1941
Future Vol, veh/h	0	23	849	1	0	1941
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	Free	-	None
Storage Length	-	0	-	275	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	9	7	0	0	3
Mvmt Flow	0	27	987	1	0	2257

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	494	0	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.08	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.39	-	-	-	-
Pot Cap-1 Maneuver	0	503	-	0	0	-
Stage 1	0	-	-	0	0	-
Stage 2	0	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	-	503	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	12.56	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	WBLn1	SBT
Capacity (veh/h)	-	503	-
HCM Lane V/C Ratio	-	0.053	-
HCM Ctrl Dly (s/v)	-	12.6	-
HCM Lane LOS	-	B	-
HCM 95th %tile Q(veh)	-	0.2	-

HCM 7th TWSC
4: Rand Road (US 12) & Wynstone Park Drive (north) 07/11/2025

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	0	0	2	0	0	1	17	26	828	1	0	1922	21
Future Vol, veh/h	0	0	2	0	0	1	17	26	828	1	0	1922	21
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	145	-	-	-	-	80
Veh in Median Storage, #	-	1	-	-	0	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	2	0	2	2	2	0	0	11	2	2	5	0
Mvmt Flow	0	0	2	0	0	1	18	28	900	1	0	2089	23

Major/Minor	Minor2			Minor1			Major1			Major2			
Conflicting Flow All	2633	3084	1045	2039	3106	451	2089	2112	0	0	901	0	0
Stage 1	2089	2089	-	994	994	-	-	-	-	-	-	-	-
Stage 2	543	995	-	1045	2112	-	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.54	6.9	7.54	6.54	6.94	6.4	4.1	-	-	4.14	-	-
Critical Hdwy Stg 1	6.5	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.02	3.3	3.52	4.02	3.32	2.5	2.2	-	-	2.22	-	-
Pot Cap-1 Maneuver	12	12	229	33	11	556	67	263	-	-	750	-	-
Stage 1	55	93	-	263	321	-	-	-	-	-	-	-	-
Stage 2	496	321	-	245	90	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-		-	-
Mov Cap-1 Maneuver	7	7	229	20	7	556	120	120	-	-	750	-	-
Mov Cap-2 Maneuver	44	60	-	20	7	-	-	-	-	-	-	-	-
Stage 1	55	93	-	161	197	-	-	-	-	-	-	-	-
Stage 2	303	196	-	242	90	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	20.87	11.49	2.6	0
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	120	-	-	229	556	750	-	-
HCM Lane V/C Ratio	0.388	-	-	0.009	0.002	-	-	-
HCM Ctrl Dly (s/v)	52.7	-	-	20.9	11.5	0	-	-
HCM Lane LOS	F	-	-	C	B	A	-	-
HCM 95th %tile Q(veh)	1.6	-	-	0	0	0	-	-

HCM 7th TWSC
5: Wynstone Drive & Rand Road (US 12) 07/11/2025

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	13	0	84	0	0	0	2	51	775	0	0	1857	16
Future Vol, veh/h	13	0	84	0	0	0	2	51	775	0	0	1857	16
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	None
Storage Length	50	-	0	-	-	-	-	200	-	-	60	-	280
Veh in Median Storage, #	-	1	-	-	0	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	1	0	0	0	0	4	11	0	0	4	0
Mvmt Flow	14	0	89	0	0	0	2	54	824	0	0	1976	17

Major/Minor	Minor2					Major1				Major2		
Conflicting Flow All	2501	-	988			1976	1993	0	-	824	0	0
Stage 1	1976	-	-			-	-	-	-	-	-	-
Stage 2	525	-	-			-	-	-	-	-	-	-
Critical Hdwy	6.8	-	6.92			6.4	4.18	-	-	4.1	-	-
Critical Hdwy Stg 1	5.8	-	-			-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-			-	-	-	-	-	-	-
Follow-up Hdwy	3.5	-	3.31			2.5	2.24	-	-	2.2	-	-
Pot Cap-1 Maneuver	24	0	248			79	277	-	0	815	-	-
Stage 1	96	0	-			-	-	-	0	-	-	-
Stage 2	564	0	-			-	-	-	0	-	-	-
Platoon blocked, %								-			-	-
Mov Cap-1 Maneuver	19	0	248			237	237	-	-	815	-	-
Mov Cap-2 Maneuver	62	0	-			-	-	-	-	-	-	-
Stage 1	73	0	-			-	-	-	-	-	-	-
Stage 2	564	0	-			-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	34.34	1.59	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBL	SBT	SBR
Capacity (veh/h)	237	-	62	248	815	-	-
HCM Lane V/C Ratio	0.238	-	0.222	0.36	-	-	-
HCM Ctrl Dly (s/v)	24.9	-	78.6	27.5	0	-	-
HCM Lane LOS	C	-	F	D	A	-	-
HCM 95th %tile Q(veh)	0.9	-	0.8	1.6	0	-	-

Capacity Analysis Summary Sheets

Year 2031 No-Build Weekday Evening Peak Hour

Lanes, Volumes, Timings
1: Rand Road (US 12) & Miller Road 07/11/2025

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	48	45	0	90	115	51	191	1841	76	5	39	1183
Future Volume (vph)	48	45	0	90	115	51	191	1841	76	5	39	1183
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	1900	2000
Storage Length (ft)	150		170	150		170	255		110		190	
Storage Lanes	1		1	1		1	1		1		1	
Taper Length (ft)	150			150			160				240	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	0.95
Frt						0.850			0.850			
Flt Protected	0.950			0.950			0.950				0.950	
Satd. Flow (prot)	1805	2000	1900	1805	2000	1615	1787	3725	1615	0	1805	3725
Flt Permitted	0.682			0.554			0.170				0.059	
Satd. Flow (perm)	1296	2000	1900	1053	2000	1615	320	3725	1615	0	112	3725
Right Turn on Red			Yes			Yes			Yes			
Satd. Flow (RTOR)						120			84			
Link Speed (mph)		30			35			50				50
Link Distance (ft)		1233			1432			1665				946
Travel Time (s)		28.0			27.9			22.7				12.9
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	1%	2%	0%	0%	0%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	48	45	0	91	116	52	193	1860	77	0	44	1195
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	custom	pm+pt	NA
Protected Phases	7	4		3	8		5	2			1	6
Permitted Phases	4		4	8		8	2		2	1	6	
Detector Phase	7	4	4	3	8	8	5	2	2	1	1	6
Switch Phase												
Minimum Initial (s)	3.0	8.0	8.0	3.0	8.0	8.0	5.0	15.0	15.0	3.0	3.0	15.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	25.0	25.0	9.5	9.5	25.0
Total Split (s)	16.0	23.0	23.0	16.0	23.0	23.0	30.0	96.0	96.0	15.0	15.0	81.0
Total Split (%)	10.7%	15.3%	15.3%	10.7%	15.3%	15.3%	20.0%	64.0%	64.0%	10.0%	10.0%	54.0%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	4.5	3.5	5.0	5.0	3.5	3.5	5.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.5	6.5	6.5	3.5	6.5	6.5	4.5	7.0	7.0		4.5	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	None	C-Min
Act Effct Green (s)	22.4	12.8		27.5	15.1	15.1	113.0	101.9	101.9		104.6	95.5
Actuated g/C Ratio	0.15	0.09		0.18	0.10	0.10	0.75	0.68	0.68		0.70	0.64
v/c Ratio	0.22	0.26		0.36	0.57	0.19	0.56	0.74	0.07		0.29	0.50
Control Delay (s/veh)	49.8	66.7		53.6	75.5	1.6	12.2	19.9	2.0		11.9	17.0
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay (s/veh)	49.8	66.7		53.6	75.5	1.6	12.2	19.9	2.0		11.9	17.0
LOS	D	E		D	E	A	B	B	A		B	B
Approach Delay (s/veh)		58.0			52.9			18.6				16.3
Approach LOS		E			D			B				B
Queue Length 50th (ft)	39	42		75	110	0	50	632	0		10	324
Queue Length 95th (ft)	75	83		124	177	0	85	818	18		24	461

Lanes, Volumes, Timings
1: Rand Road (US 12) & Miller Road 07/11/2025

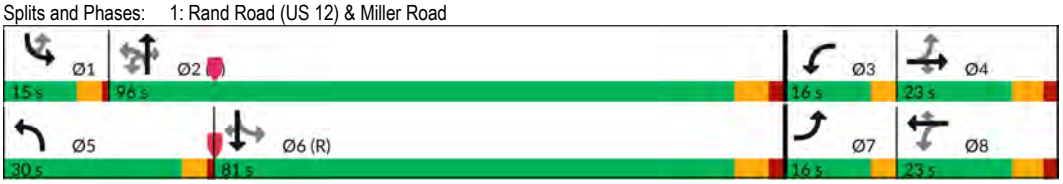
Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	42
Future Volume (vph)	42
Ideal Flow (vphpl)	1900
Storage Length (ft)	115
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1615
Flt Permitted	
Satd. Flow (perm)	1615
Right Turn on Red	Yes
Satd. Flow (RTOR)	116
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.99
Heavy Vehicles (%)	0%
Shared Lane Traffic (%)	
Lane Group Flow (vph)	42
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Detector Phase	6
Switch Phase	
Minimum Initial (s)	15.0
Minimum Split (s)	25.0
Total Split (s)	81.0
Total Split (%)	54.0%
Yellow Time (s)	5.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	7.0
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Recall Mode	C-Min
Act Effct Green (s)	95.5
Actuated g/C Ratio	0.64
v/c Ratio	0.04
Control Delay (s/veh)	0.1
Queue Delay	0.0
Total Delay (s/veh)	0.1
LOS	A
Approach Delay (s/veh)	
Approach LOS	
Queue Length 50th (ft)	0
Queue Length 95th (ft)	0

Lanes, Volumes, Timings
1: Rand Road (US 12) & Miller Road 07/11/2025

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Internal Link Dist (ft)		1153			1352			1585				866
Turn Bay Length (ft)	150			150		170	255		110		190	
Base Capacity (vph)	267	220		259	225	288	491	2529	1123		199	2371
Starvation Cap Reductn	0	0		0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.18	0.20		0.35	0.52	0.18	0.39	0.74	0.07		0.22	0.50

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 111 (74%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay (s/veh): 21.1		Intersection LOS: C	
Intersection Capacity Utilization 80.0%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: Rand Road (US 12) & Miller Road



Lanes, Volumes, Timings
1: Rand Road (US 12) & Miller Road 07/11/2025

Lane Group	SBR
Internal Link Dist (ft)	
Turn Bay Length (ft)	115
Base Capacity (vph)	1070
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.04

Intersection Summary

HCM 7th TWSC
2: Wynstone Park Drive (south) & Rand Road (US 12) 07/11/2025

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	34	0	1946	1234	3
Future Vol, veh/h	0	34	0	1946	1234	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	Free
Storage Length	-	0	-	-	-	325
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	2	2	0
Mvmt Flow	0	36	0	2048	1299	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	649	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	417	0	-	-	0
Stage 1	0	-	0	-	-	0
Stage 2	0	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	-	417	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	14.44	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	417	-
HCM Lane V/C Ratio	-	0.086	-
HCM Ctrl Dly (s/v)	-	14.4	-
HCM Lane LOS	-	B	-
HCM 95th %tile Q(veh)	-	0.3	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	19	1927	19	0	1237
Future Vol, veh/h	0	19	1927	19	0	1237
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	Free	-	None
Storage Length	-	0	-	275	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	21	2095	21	0	1345

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	1047	0	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	225	-	0	0	-
Stage 1	0	-	-	0	0	-
Stage 2	0	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	-	225	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	22.65	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	WBLn1	SBT
Capacity (veh/h)	-	225	-
HCM Lane V/C Ratio	-	0.092	-
HCM Ctrl Dly (s/v)	-	22.6	-
HCM Lane LOS	-	C	-
HCM 95th %tile Q(veh)	-	0.3	-

HCM 7th TWSC
4: Rand Road (US 12) & Wynstone Park Drive (north) 07/11/2025

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	25	0	27	0	0	0	11	9	1925	0	0	1199	4
Future Vol, veh/h	25	0	27	0	0	0	11	9	1925	0	0	1199	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	145	-	-	-	-	80
Veh in Median Storage, #	-	1	-	-	1	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	0	-
Peak Hour Factor	98	92	98	92	92	92	98	98	98	92	92	98	98
Heavy Vehicles, %	0	2	0	2	2	2	0	0	2	2	2	2	0
Mvmt Flow	26	0	28	0	0	0	11	9	1964	0	0	1223	4

Major/Minor	Minor2			Minor1			Major1				Major2		
Conflicting Flow All	2246	3229	612	2617	3233	982	1223	1228	0	0	1964	0	0
Stage 1	1223	1223	-	2005	2005	-	-	-	-	-	-	-	-
Stage 2	1023	2005	-	612	1228	-	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.54	6.9	7.54	6.54	6.94	6.4	4.1	-	-	4.14	-	-
Critical Hdwy Stg 1	6.5	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.02	3.3	3.52	4.02	3.32	2.5	2.2	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 23	9	441	12	9	248	243	575	-	-	292	-	-
Stage 1	193	250	-	61	103	-	-	-	-	-	-	-	-
Stage 2	256	103	-	447	249	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-		-	-
Mov Cap-1 Maneuver	~ 22	9	441	10	9	248	313	313	-	-	292	-	-
Mov Cap-2 Maneuver	107	66	-	48	65	-	-	-	-	-	-	-	-
Stage 1	193	250	-	57	96	-	-	-	-	-	-	-	-
Stage 2	239	96	-	419	249	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	33.83	0	0.18	0
HCM LOS	D	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	313	-	-	177	-	292	-	-
HCM Lane V/C Ratio	0.065	-	-	0.3	-	-	-	-
HCM Ctrl Dly (s/v)	17.3	-	-	33.8	0	0	-	-
HCM Lane LOS	C	-	-	D	A	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	1.2	-	0	-	-

Notes	
~: Volume exceeds capacity	$: Delay exceeds 300s
+: Computation Not Defined	*: All major volume in platoon

HCM 7th TWSC
5: Wynstone Drive & Rand Road (US 12) 07/11/2025

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	17	0	78	0	0	0	99	1851	0	0	1124	22
Future Vol, veh/h	17	0	78	0	0	0	99	1851	0	0	1124	22
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	0	-	-	-	200	-	-	60	-	280
Veh in Median Storage, #	-	1	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	6	0	0	0	0	0	0	2	0	0	2	0
Mvmt Flow	18	0	81	0	0	0	103	1928	0	0	1171	23

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	2341	-	585	1194	0	-	1928	0	0
Stage 1	1171	-	-	-	-	-	-	-	-
Stage 2	1170	-	-	-	-	-	-	-	-
Critical Hdwy	6.92	-	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	5.92	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.92	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.56	-	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	29	0	459	592	-	0	310	-	-
Stage 1	249	0	-	-	-	0	-	-	-
Stage 2	249	0	-	-	-	0	-	-	-
Platoon blocked, %					-			-	-
Mov Cap-1 Maneuver	24	0	459	592	-	-	310	-	-
Mov Cap-2 Maneuver	114	0	-	-	-	-	-	-	-
Stage 1	206	0	-	-	-	-	-	-	-
Stage 2	249	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	19.52	0.63	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBL	SBT	SBR
Capacity (veh/h)	592	-	114	459	310	-	-
HCM Lane V/C Ratio	0.174	-	0.156	0.177	-	-	-
HCM Ctrl Dly (s/v)	12.4	-	42.5	14.5	0	-	-
HCM Lane LOS	B	-	E	B	A	-	-
HCM 95th %tile Q(veh)	0.6	-	0.5	0.6	0	-	-

Capacity Analysis Summary Sheets

Year 2031 Total Projected Weekday Morning Peak Hour

Lanes, Volumes, Timings
1: Rand Road (US 12) & Miller Road 07/11/2025

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	49	96	0	43	21	21	70	819	34	3	20	1897
Future Volume (vph)	49	96	0	43	21	21	70	819	34	3	20	1897
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	1900	2000
Storage Length (ft)	150		170	150		170	255		110		190	
Storage Lanes	1		1	1		1	1		1		1	
Taper Length (ft)	150			150			160				240	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	0.95
Frt						0.850			0.850			
Flt Protected	0.950			0.950			0.950				0.950	
Satd. Flow (prot)	1719	1942	1900	1687	1818	1509	1703	3423	1442	0	1641	3654
Flt Permitted	0.721			0.595			0.039				0.288	
Satd. Flow (perm)	1305	1942	1900	1057	1818	1509	70	3423	1442	0	497	3654
Right Turn on Red			Yes			Yes			Yes			
Satd. Flow (RTOR)						120			84			
Link Speed (mph)		30			35			50				50
Link Distance (ft)		1233			1432			1665				946
Travel Time (s)		28.0			27.9			22.7				12.9
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	5%	3%	0%	7%	10%	7%	6%	11%	12%	33%	7%	4%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	56	109	0	49	24	24	80	931	39	0	26	2156
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	custom	pm+pt	NA
Protected Phases	7	4		3	8		5	2			1	6
Permitted Phases	4		4	8		8	2		2	1	6	
Detector Phase	7	4	4	3	8	8	5	2	2	1	1	6
Switch Phase												
Minimum Initial (s)	3.0	8.0	8.0	3.0	8.0	8.0	5.0	15.0	15.0	3.0	3.0	15.0
Minimum Split (s)	9.5	21.0	21.0	9.5	21.0	21.0	9.5	22.5	22.5	14.0	14.0	22.5
Total Split (s)	16.0	21.0	21.0	16.0	21.0	21.0	20.0	99.0	99.0	14.0	14.0	93.0
Total Split (%)	10.7%	14.0%	14.0%	10.7%	14.0%	14.0%	13.3%	66.0%	66.0%	9.3%	9.3%	62.0%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	4.5	3.5	5.0	5.0	3.5	3.5	5.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.5	6.5	6.5	3.5	6.5	6.5	4.5	7.0	7.0		4.5	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	None	C-Min
Act Effct Green (s)	25.5	14.3		24.8	13.9	13.9	113.3	105.0	105.0		107.2	98.5
Actuated g/C Ratio	0.17	0.10		0.17	0.09	0.09	0.76	0.70	0.70		0.71	0.66
v/c Ratio	0.23	0.59		0.23	0.14	0.10	0.55	0.39	0.04		0.06	0.90
Control Delay (s/veh)	51.0	78.3		51.0	63.9	0.8	37.1	11.3	0.1		6.2	29.5
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay (s/veh)	51.0	78.3		51.0	63.9	0.8	37.1	11.3	0.1		6.2	29.5
LOS	D	E		D	E	A	D	B	A		A	C
Approach Delay (s/veh)		69.0			41.8			12.9				28.3
Approach LOS		E			D			B				C
Queue Length 50th (ft)	45	103		40	22	0	28	216	0		6	920
Queue Length 95th (ft)	83	167		75	51	0	82	268	0		15	#1221

Lanes, Volumes, Timings
1: Rand Road (US 12) & Miller Road 07/11/2025

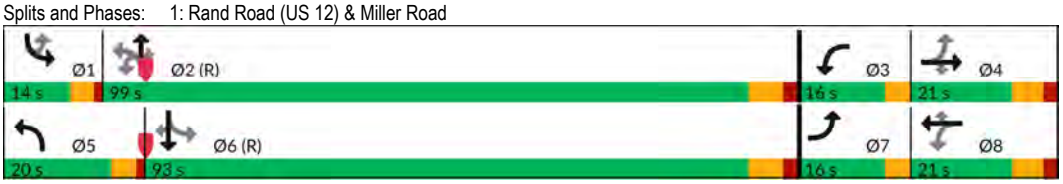
Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	59
Future Volume (vph)	59
Ideal Flow (vphpl)	1900
Storage Length (ft)	115
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1615
Flt Permitted	
Satd. Flow (perm)	1615
Right Turn on Red	Yes
Satd. Flow (RTOR)	116
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.88
Heavy Vehicles (%)	0%
Shared Lane Traffic (%)	
Lane Group Flow (vph)	67
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Detector Phase	6
Switch Phase	
Minimum Initial (s)	15.0
Minimum Split (s)	22.5
Total Split (s)	93.0
Total Split (%)	62.0%
Yellow Time (s)	5.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	7.0
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Recall Mode	C-Min
Act Effct Green (s)	98.5
Actuated g/C Ratio	0.66
v/c Ratio	0.06
Control Delay (s/veh)	0.2
Queue Delay	0.0
Total Delay (s/veh)	0.2
LOS	A
Approach Delay (s/veh)	
Approach LOS	
Queue Length 50th (ft)	0
Queue Length 95th (ft)	0

Lanes, Volumes, Timings
1: Rand Road (US 12) & Miller Road 07/11/2025

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Internal Link Dist (ft)		1153			1352			1585				866
Turn Bay Length (ft)	150			150		170	255		110		190	
Base Capacity (vph)	269	196		241	181	258	222	2394	1034		438	2400
Starvation Cap Reductn	0	0		0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.21	0.56		0.20	0.13	0.09	0.36	0.39	0.04		0.06	0.90

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 35 (23%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.90			
Intersection Signal Delay (s/veh): 26.0		Intersection LOS: C	
Intersection Capacity Utilization 78.4%		ICU Level of Service D	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 1: Rand Road (US 12) & Miller Road



Lane Group	SBR
Internal Link Dist (ft)	
Turn Bay Length (ft)	115
Base Capacity (vph)	1100
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.06

Intersection Summary

HCM 7th TWSC
2: Wynstone Park Drive (south) & Rand Road (US 12) 07/11/2025

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	3	0	892	1976	4
Future Vol, veh/h	0	3	0	892	1976	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	Free
Storage Length	-	0	-	-	-	325
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	8	4	25
Mvmt Flow	0	3	0	1002	2220	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	1110	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	207	0	-	-	0
Stage 1	0	-	0	-	-	0
Stage 2	0	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	-	207	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	22.67	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	207	-
HCM Lane V/C Ratio	-	0.016	-
HCM Ctrl Dly (s/v)	-	22.7	-
HCM Lane LOS	-	C	-
HCM 95th %tile Q(veh)	-	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	23	891	1	0	1979
Future Vol, veh/h	0	23	891	1	0	1979
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	Free	-	None
Storage Length	-	0	-	275	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	9	7	0	0	3
Mvmt Flow	0	27	1036	1	0	2301

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	518	0	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.08	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.39	-	-	-	-
Pot Cap-1 Maneuver	0	484	-	0	0	-
Stage 1	0	-	-	0	0	-
Stage 2	0	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	-	484	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	12.86	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	WBLn1	SBT
Capacity (veh/h)	-	484	-
HCM Lane V/C Ratio	-	0.055	-
HCM Ctrl Dly (s/v)	-	12.9	-
HCM Lane LOS	-	B	-
HCM 95th %tile Q(veh)	-	0.2	-

HCM 7th TWSC
4: Rand Road (US 12) & Wynstone Park Drive (north) 07/11/2025

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	0	0	2	0	0	1	17	26	870	1	0	1960	21
Future Vol, veh/h	0	0	2	0	0	1	17	26	870	1	0	1960	21
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	145	-	-	-	-	80
Veh in Median Storage, #	-	1	-	-	0	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	2	0	2	2	2	0	0	11	2	2	5	0
Mvmt Flow	0	0	2	0	0	1	18	28	946	1	0	2130	23

Major/Minor	Minor2			Minor1			Major1				Major2		
Conflicting Flow All	2697	3171	1065	2105	3193	473	2130	2153	0	0	947	0	0
Stage 1	2130	2130	-	1040	1040	-	-	-	-	-	-	-	-
Stage 2	566	1040	-	1065	2153	-	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.54	6.9	7.54	6.54	6.94	6.4	4.1	-	-	4.14	-	-
Critical Hdwy Stg 1	6.5	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.02	3.3	3.52	4.02	3.32	2.5	2.2	-	-	2.22	-	-
Pot Cap-1 Maneuver	11	10	222	29	10	537	62	253	-	-	721	-	-
Stage 1	52	88	-	246	306	-	-	-	-	-	-	-	-
Stage 2	481	305	-	238	86	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-		-	-
Mov Cap-1 Maneuver	6	6	222	17	6	537	114	114	-	-	721	-	-
Mov Cap-2 Maneuver	42	57	-	17	6	-	-	-	-	-	-	-	-
Stage 1	52	88	-	145	180	-	-	-	-	-	-	-	-
Stage 2	283	180	-	235	86	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	21.39	11.71	2.68	0
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	114	-	-	222	537	721	-	-
HCM Lane V/C Ratio	0.41	-	-	0.01	0.002	-	-	-
HCM Ctrl Dly (s/v)	57	-	-	21.4	11.7	0	-	-
HCM Lane LOS	F	-	-	C	B	A	-	-
HCM 95th %tile Q(veh)	1.7	-	-	0	0	0	-	-

HCM 7th TWSC
5: Wynstone Drive & Rand Road (US 12) 07/11/2025

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	13	0	84	0	0	0	2	51	814	0	0	1899	16
Future Vol, veh/h	13	0	84	0	0	0	2	51	814	0	0	1899	16
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	None
Storage Length	50	-	0	-	-	-	-	200	-	-	60	-	280
Veh in Median Storage, #	-	1	-	-	0	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	1	0	0	0	0	4	11	0	0	4	0
Mvmt Flow	14	0	89	0	0	0	2	54	866	0	0	2020	17

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	2566	-	1010	2020	2037	0	-	866	0	0
Stage 1	2020	-	-	-	-	-	-	-	-	-
Stage 2	546	-	-	-	-	-	-	-	-	-
Critical Hdwy	6.8	-	6.92	6.4	4.18	-	-	4.1	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	-	3.31	2.5	2.24	-	-	2.2	-	-
Pot Cap-1 Maneuver	22	0	240	74	266	-	0	786	-	-
Stage 1	91	0	-	-	-	-	0	-	-	-
Stage 2	550	0	-	-	-	-	0	-	-	-
Platoon blocked, %						-			-	-
Mov Cap-1 Maneuver	16	0	240	226	226	-	-	786	-	-
Mov Cap-2 Maneuver	58	0	-	-	-	-	-	-	-	-
Stage 1	68	0	-	-	-	-	-	-	-	-
Stage 2	550	0	-	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	36.33	1.6	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBL	SBT	SBR
Capacity (veh/h)	226	-	58	240	786	-	-
HCM Lane V/C Ratio	0.25	-	0.239	0.373	-	-	-
HCM Ctrl Dly (s/v)	26.2	-	85.6	28.7	0	-	-
HCM Lane LOS	D	-	F	D	A	-	-
HCM 95th %tile Q(veh)	1	-	0.8	1.6	0	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	38	39	829	42	42	1943
Future Vol, veh/h	38	39	829	42	42	1943
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	210	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	40	41	873	44	44	2045

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2006	458	0	0	917	0
Stage 1	895	-	-	-	-	-
Stage 2	1111	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	53	555	-	-	752	-
Stage 1	364	-	-	-	-	-
Stage 2	281	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	50	555	-	-	752	-
Mov Cap-2 Maneuver	162	-	-	-	-	-
Stage 1	364	-	-	-	-	-
Stage 2	264	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	25.86	0	0.21
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	252	752	-
HCM Lane V/C Ratio	-	-	0.321	0.059	-
HCM Ctrl Dly (s/v)	-	-	25.9	10.1	-
HCM Lane LOS	-	-	D	B	-
HCM 95th %tile Q(veh)	-	-	1.3	0.2	-

Capacity Analysis Summary Sheets

Year 2031 Total Projected Weekday Evening Peak Hour

Lanes, Volumes, Timings
1: Rand Road (US 12) & Miller Road 07/11/2025

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	52	45	0	90	115	53	191	1855	76	5	43	1212
Future Volume (vph)	52	45	0	90	115	53	191	1855	76	5	43	1212
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	1900	2000
Storage Length (ft)	150		170	150		170	255		110		190	
Storage Lanes	1		1	1		1	1		1		1	
Taper Length (ft)	150			150			160				240	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	0.95
Frt						0.850			0.850			
Flt Protected	0.950			0.950			0.950				0.950	
Satd. Flow (prot)	1805	2000	1900	1805	2000	1615	1787	3725	1615	0	1805	3725
Flt Permitted	0.682			0.557			0.162				0.056	
Satd. Flow (perm)	1296	2000	1900	1058	2000	1615	305	3725	1615	0	106	3725
Right Turn on Red			Yes			Yes			Yes			
Satd. Flow (RTOR)						120			84			
Link Speed (mph)		30			35			50				50
Link Distance (ft)		1233			1432			1665				946
Travel Time (s)		28.0			27.9			22.7				12.9
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	1%	2%	0%	0%	0%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	53	45	0	91	116	54	193	1874	77	0	48	1224
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	custom	pm+pt	NA
Protected Phases	7	4		3	8		5	2			1	6
Permitted Phases	4		4	8		8	2		2	1	6	
Detector Phase	7	4	4	3	8	8	5	2	2	1	1	6
Switch Phase												
Minimum Initial (s)	3.0	8.0	8.0	3.0	8.0	8.0	5.0	15.0	15.0	3.0	3.0	15.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	25.0	25.0	9.5	9.5	25.0
Total Split (s)	16.0	23.0	23.0	16.0	23.0	23.0	30.0	96.0	96.0	15.0	15.0	81.0
Total Split (%)	10.7%	15.3%	15.3%	10.7%	15.3%	15.3%	20.0%	64.0%	64.0%	10.0%	10.0%	54.0%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	4.5	3.5	5.0	5.0	3.5	3.5	5.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.5	6.5	6.5	3.5	6.5	6.5	4.5	7.0	7.0		4.5	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	None	C-Min
Act Effct Green (s)	22.9	13.0		27.4	15.0	15.0	112.7	101.5	101.5		104.2	95.0
Actuated g/C Ratio	0.15	0.09		0.18	0.10	0.10	0.75	0.68	0.68		0.69	0.63
v/c Ratio	0.23	0.26		0.36	0.58	0.20	0.57	0.74	0.07		0.32	0.52
Control Delay (s/veh)	50.2	66.4		53.4	75.9	1.7	12.7	20.5	2.1		13.7	17.7
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay (s/veh)	50.2	66.4		53.4	75.9	1.7	12.7	20.5	2.1		13.7	17.7
LOS	D	E		D	E	A	B	C	A		B	B
Approach Delay (s/veh)		57.6			52.7			19.1				16.8
Approach LOS		E			D			B				B
Queue Length 50th (ft)	43	42		75	110	0	50	648	0		11	337
Queue Length 95th (ft)	81	83		124	178	0	85	839	19		28	483

Lanes, Volumes, Timings
1: Rand Road (US 12) & Miller Road 07/11/2025

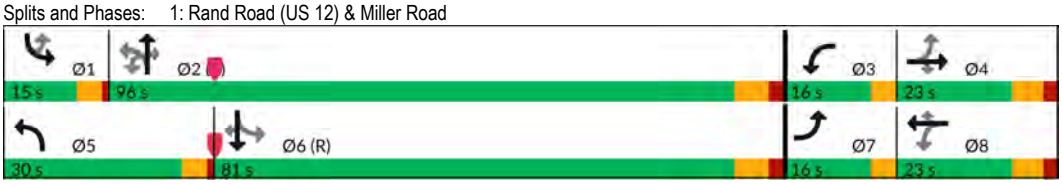
Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	50
Future Volume (vph)	50
Ideal Flow (vphpl)	1900
Storage Length (ft)	115
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1615
Flt Permitted	
Satd. Flow (perm)	1615
Right Turn on Red	Yes
Satd. Flow (RTOR)	116
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.99
Heavy Vehicles (%)	0%
Shared Lane Traffic (%)	
Lane Group Flow (vph)	51
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Detector Phase	6
Switch Phase	
Minimum Initial (s)	15.0
Minimum Split (s)	25.0
Total Split (s)	81.0
Total Split (%)	54.0%
Yellow Time (s)	5.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	7.0
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Recall Mode	C-Min
Act Effct Green (s)	95.0
Actuated g/C Ratio	0.63
v/c Ratio	0.05
Control Delay (s/veh)	0.1
Queue Delay	0.0
Total Delay (s/veh)	0.1
LOS	A
Approach Delay (s/veh)	
Approach LOS	
Queue Length 50th (ft)	0
Queue Length 95th (ft)	0

Lanes, Volumes, Timings
1: Rand Road (US 12) & Miller Road 07/11/2025

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Internal Link Dist (ft)		1153			1352			1585				866
Turn Bay Length (ft)	150			150		170	255		110		190	
Base Capacity (vph)	269	220		259	224	287	482	2520	1119		195	2357
Starvation Cap Reductn	0	0		0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.20	0.20		0.35	0.52	0.19	0.40	0.74	0.07		0.25	0.52

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 111 (74%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay (s/veh): 21.6		Intersection LOS: C	
Intersection Capacity Utilization 80.4%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: Rand Road (US 12) & Miller Road



Lanes, Volumes, Timings
1: Rand Road (US 12) & Miller Road 07/11/2025

Lane Group	SBR
Internal Link Dist (ft)	
Turn Bay Length (ft)	115
Base Capacity (vph)	1065
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.05

Intersection Summary

HCM 7th TWSC
2: Wynstone Park Drive (south) & Rand Road (US 12) 07/11/2025

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	34	0	1966	1275	3
Future Vol, veh/h	0	34	0	1966	1275	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	Free
Storage Length	-	0	-	-	-	325
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	2	2	0
Mvmt Flow	0	36	0	2069	1342	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	671	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	404	0	-	-	0
Stage 1	0	-	0	-	-	0
Stage 2	0	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	-	404	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	14.79	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	404	-
HCM Lane V/C Ratio	-	0.089	-
HCM Ctrl Dly (s/v)	-	14.8	-
HCM Lane LOS	-	B	-
HCM 95th %tile Q(veh)	-	0.3	-

HCM 7th TWSC
3: Rand Road (US 12) & Bailey Lane 07/11/2025

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	19	1947	19	0	1278
Future Vol, veh/h	0	19	1947	19	0	1278
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	Free	-	None
Storage Length	-	0	-	275	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	21	2116	21	0	1389

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	1058	0	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	221	-	0	0	-
Stage 1	0	-	-	0	0	-
Stage 2	0	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	-	221	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	22.98	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	WBLn1	SBT
Capacity (veh/h)	-	221	-
HCM Lane V/C Ratio	-	0.094	-
HCM Ctrl Dly (s/v)	-	23	-
HCM Lane LOS	-	C	-
HCM 95th %tile Q(veh)	-	0.3	-

HCM 7th TWSC
4: Rand Road (US 12) & Wynstone Park Drive (north) 07/11/2025

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	25	0	27	0	0	0	11	9	1945	0	0	1240	4
Future Vol, veh/h	25	0	27	0	0	0	11	9	1945	0	0	1240	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	145	-	-	-	-	80
Veh in Median Storage, #	-	1	-	-	0	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	0	-
Peak Hour Factor	98	92	98	92	92	92	98	98	98	92	92	98	98
Heavy Vehicles, %	0	2	0	2	2	2	0	0	2	2	2	2	0
Mvmt Flow	26	0	28	0	0	0	11	9	1985	0	0	1265	4

Major/Minor	Minor2			Minor1			Major1				Major2		
Conflicting Flow All	2298	3291	633	2658	3295	992	1265	1269	0	0	1985	0	0
Stage 1	1265	1265	-	2026	2026	-	-	-	-	-	-	-	-
Stage 2	1033	2026	-	633	1269	-	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.54	6.9	7.54	6.54	6.94	6.4	4.1	-	-	4.14	-	-
Critical Hdwy Stg 1	6.5	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.02	3.3	3.52	4.02	3.32	2.5	2.2	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 21	9	428	11	8	244	228	554	-	-	287	-	-
Stage 1	182	239	-	59	100	-	-	-	-	-	-	-	-
Stage 2	252	100	-	435	238	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-		-	-
Mov Cap-1 Maneuver	~ 20	8	428	10	8	244	295	295	-	-	287	-	-
Mov Cap-2 Maneuver	103	64	-	10	8	-	-	-	-	-	-	-	-
Stage 1	182	239	-	55	93	-	-	-	-	-	-	-	-
Stage 2	235	93	-	407	238	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	35.65	0	0.18	0
HCM LOS	E	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	295	-	-	169	-	287	-	-
HCM Lane V/C Ratio	0.069	-	-	0.313	-	-	-	-
HCM Ctrl Dly (s/v)	18.1	-	-	35.6	0	0	-	-
HCM Lane LOS	C	-	-	E	A	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	1.3	-	0	-	-

Notes	
~: Volume exceeds capacity	$: Delay exceeds 300s
+: Computation Not Defined	*: All major volume in platoon

HCM 7th TWSC
5: Wynstone Drive & Rand Road (US 12) 07/11/2025

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	17	0	78	0	0	0	99	1893	0	0	1144	22
Future Vol, veh/h	17	0	78	0	0	0	99	1893	0	0	1144	22
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	0	-	-	-	200	-	-	60	-	280
Veh in Median Storage, #	-	1	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	6	0	0	0	0	0	0	2	0	0	2	0
Mvmt Flow	18	0	81	0	0	0	103	1972	0	0	1192	23

Major/Minor	Minor2						Major1			Major2		
Conflicting Flow All	2384	-	596				1215	0	-	1972	0	0
Stage 1	1192	-	-				-	-	-	-	-	-
Stage 2	1192	-	-				-	-	-	-	-	-
Critical Hdwy	6.92	-	6.9				4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	5.92	-	-				-	-	-	-	-	-
Critical Hdwy Stg 2	5.92	-	-				-	-	-	-	-	-
Follow-up Hdwy	3.56	-	3.3				2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	27	0	452				581	-	0	298	-	-
Stage 1	243	0	-				-	-	0	-	-	-
Stage 2	242	0	-				-	-	0	-	-	-
Platoon blocked, %								-			-	-
Mov Cap-1 Maneuver	22	0	452				581	-	-	298	-	-
Mov Cap-2 Maneuver	110	0	-				-	-	-	-	-	-
Stage 1	200	0	-				-	-	-	-	-	-
Stage 2	242	0	-				-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	19.94	0.62	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBL	SBT	SBR
Capacity (veh/h)	581	-	110	452	298	-	-
HCM Lane V/C Ratio	0.177	-	0.161	0.18	-	-	-
HCM Ctrl Dly (s/v)	12.5	-	43.9	14.7	0	-	-
HCM Lane LOS	B	-	E	B	A	-	-
HCM 95th %tile Q(veh)	0.6	-	0.5	0.6	0	-	-

HCM 7th TWSC
16: Rand Road (US 12) & Proposed Access Drive 07/11/2025

Intersection	
Int Delay, s/veh	3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	41	42	1950	20	20	1202
Future Vol, veh/h	41	42	1950	20	20	1202
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	210	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	43	44	2053	21	21	1265

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2738	1037	0	0	2074	0
Stage 1	2063	-	-	-	-	-
Stage 2	675	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	~ 17	232	-	-	272	-
Stage 1	86	-	-	-	-	-
Stage 2	473	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 15	232	-	-	272	-
Mov Cap-2 Maneuver	69	-	-	-	-	-
Stage 1	86	-	-	-	-	-
Stage 2	436	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	115.49	0	0.32
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	107	272	-
HCM Lane V/C Ratio	-	-	0.815	0.077	-
HCM Ctrl Dly (s/v)	-	-	115.5	19.3	-
HCM Lane LOS	-	-	F	C	-
HCM 95th %tile Q(veh)	-	-	4.6	0.2	-

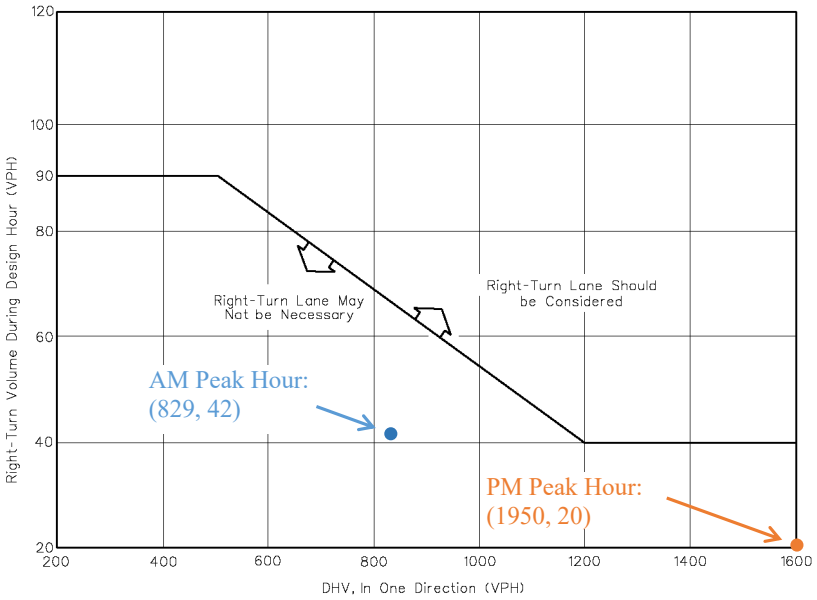
Notes

~: Volume exceeds capacity $: Delay exceeds 300s
+: Computation Not Defined *: All major volume in platoon

Right Turn Warrant

US Route 12 with Proposed Access Drive

Road with Road
Right Turn Lane Guidelines



Note: For speeds less than 50 mph (80 km/hr), see Section 36-3.01(a).

GUIDELINES FOR RIGHT-TURN LANES AT UNSIGNALIZED INTERSECTION ON FOUR-LANE HIGHWAYS
(Design Speed of 50 mph (80 km/hr) or Greater)

Figure 36-3.B

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Luxe Corsa Auto Suites, Lake Zurich, IL

Pearson, Brown & Associates, Inc.

Plan Date: 10/01/2025
Date: 10/01/2025

ENGINEER'S OPINION OF PROBABLE COST

ITEM	QUANTITY	UNIT	UNIT PRICE	EXTENSION
SANITARY SEWER				
8" SDR26 D3034 PVC	1,137	LF	$70.00	$79,590.00
8" DR-18 PVC	855	LF	$90.00	$76,950.00
48" Diameter Manhole	10	EA	$5,500.00	$55,000.00
6" PVC D3034 BLDG SERVICES	13	EA	$2,000.00	$26,000.00
Triple Basin	13	EA	$3,500.00	$45,500.00
Inspection Manhole	13	EA	$5,500.00	$71,500.00
6" Cleanout	13	EA	$700.00	$9,100.00
Connect to Existing Sanitary	1	EA	$4,500.00	$4,500.00
Trench Backfill (CA-6)	1,700	LF	$80.00	$136,000.00
Televise Sanitary Sewer	1,992	LF	$3.50	$6,972.00
Restoration	1	LS	$1,500.00	$1,500.00
SANITARY SEWER TOTAL				$512,612.00
WATER MAIN				
8" PVC C-900 Water Main [AWWA C-907 W/ F477 gaskets]	3,600	LF	$75.00	$270,000.00
12" PVC C-900 Water Main [AWWA C-907 W/ F477 gaskets]	720	LF	$95.00	$68,400.00
6" PVC C-900 Water Main	165	LF	$60.00	$9,900.00
Connect to Existing	1	LS	$3,500.00	$3,500.00
8" Valve in 60" Dia Vault	5	EA	$4,600.00	$23,000.00
12" Valve in 60" Dia Vault	1	EA	$7,000.00	$7,000.00
6'0" Bury Fire Hydrant Assembly	11	EA	$8,500.00	$93,500.00
4" PVC C-900 Bldg Service	5	EA	$3,000.00	$15,000.00
6" PVC C-900 Bldg Service	8	EA	$4,500.00	$36,000.00
Trench Backfill (CA6)	2,925	LF	$35.00	$102,375.00
Offsite Restoration	1	LS	$6,000.00	$6,000.00
WATER MAIN TOTAL				$634,675.00

ITEM	QUANTITY	UNIT	PRICE	EXTENSION
STORM SEWER				
10" PVC ROOF DRAIN COLLECTION STORM SEWER	972	LF	$40.00	$38,880.00
12" PVC ROOF DRAIN COLLECTION STORM SEWER	378	LF	$55.00	$20,790.00
12" ASTM C-76 RCP STORM SEWER	1,125	LF	$40.00	$45,000.00
15" ASTM C-76 RCP STORM SEWER	715	LF	$50.00	$35,750.00
18" ASTM C-76 STORM SEWER	259	LF	$60.00	$15,540.00
21" ASTM C-76 STORM SEWER	142	LF	$70.00	$9,940.00
24" ASTM C-76 STORM SEWER	811	LF	$80.00	$64,880.00
27" ASTM C-76 STORM SEWER	524	LF	$95.00	$49,780.00
36" ASTM C-76 STORM SEWER	410	LF	$125.00	$51,250.00
42" ASTM C-76 STORM SEWER	413	LF	$185.00	$76,405.00
PRE-CAST CONCRETE FLARED END SECTION W/ GRATE 15" & RIP/RAP	4	EA	$2,600.00	$10,400.00
PRE-CAST CONCRETE FLARED END SECTION W/ GRATE 24" & RIP/RAP	4	EA	$3,200.00	$12,800.00
PRE-CAST CONCRETE FLARED END SECTION W/ GRATE 42" & RIP/RAP	1	EA	$5,800.00	$5,800.00
2' DIAMETER PRE-CAST INLET	10	EA	$1,400.00	$14,000.00
2' DIAMETER PRE-CAST CATCH BASIN	2	EA	$2,000.00	$4,000.00
4' DIAMETER STORM MANHOLE	24	EA	$3,400.00	$81,600.00
5' DIAMETER STORM MANHOLE	17	EA	$4,800.00	$81,600.00
6' DIAMETER STORM MANHOLE	5	EA	$6,500.00	$32,500.00
7' DIAMETER STORM MANHOLE	1	EA	$8,000.00	$8,000.00
OUTLET CONTROL STRUCTURE	1	LS	$12,500.00	$12,500.00
SNOUT HYDROCARBON REMOVAL DEVICES OR SIMILAR ALLOW.	1	LS	$10,000.00	$10,000.00
TELEVISE STORM SEWER	4,399	LF	$4.00	$17,596.00
TRENCH BACKFILL (CA-6)	3800	LF	$30.00	$114,000.00
STORM SEWER TOTAL				$813,011.00
GRADING AND EROSION CONTROL				
Strip site, excavate basin, road and pad areas to subgrade, fill areas as needed, respread pond and lot areas (topsoil)	1	LS	$540,000.00	$540,000.00
Construction Entrance Incl. Maint.	1	EA	$10,000.00	$10,000.00
Silt Fence	4,500	LF	$3.00	$13,500.00
Retaining Walls	12,050	FSF	$40.00	$482,000.00
Dewatering Device, Incl. Maint.	1	EA	$2,000.00	$2,000.00
Inlet Filter Baskets, Incl. Maint.	40	EA	$350.00	$14,000.00
Concrete Washout	1	LS	$5,000.00	$5,000.00
Erosion Control Blanket	11,500	SY	$4.50	$51,750.00
GRADING AND EROSION CONTROL TOTAL				$1,118,250.00

ITEM	QUANTITY	UNIT	PRICE	EXTENSION
PAVING				
2" HMA SURFACE COURSE, MIX. D, N50	16,050	SY	$18.00	$288,900.00
3" HMA BINDER COURSE, IL 19.0, N50	16,050	SY	$19.50	$312,975.00
10" CRUSHED AGGREGATE BASE COURSE CA-6	16,050	SY	$25.00	$401,250.00
Combination Curb & Gutter B6.12	4,730	LF	$37.50	$177,375.00
PCC Sidewalk, aprons / patio areas incl trash collection area (5" avg.)	26,400	SF	$8.75	$231,000.00
PAVING TOTAL				$1,411,500.00
STREET LIGHTING				
STREET LIGHTING COMPLETE	10	EA	$7,000.00	$70,000.00
STREET LIGHTING TOTAL				$70,000.00

RECAPITULATION

SANITARY SEWER	$512,612.00
WATER MAIN	$634,675.00
STORM SEWER	$813,011.00
GRADING AND EROSION CONTROL	$1,118,250.00
PAVING	$1,411,500.00
STREET LIGHTING	$70,000.00
LANDSCAPING IMPROVEMENTS (By Others…)	
TOTAL OPINION OF PROBABLE COST	$4,560,048.00

NOTE:
THIS ENGINEER'S OPINION OF PROBABLE COST HAS BEEN PREPARED BASED UPON THE ENGINEER'S EXPERIENCE AS A DESIGN PROFESSIONAL AND IS FURNISHED FOR INFORMATION ONLY. IT DOES NOT CONSTITUTE A GUARANTEE OF ACTUAL CONSTRUCTION COST AND DOES NOT INCLUDE THE FOLLOWING: DECORATIVE LANDSCAPING, TAP ON FEES, PERMITS, DEWATERING OTHER THAN SPECIFICALLY LISTED ABOVE, TIGHT SHEETING, HAUL OFF OF EXCESS MATERIAL, ANY WET OR DRY UTILITY RELOCATION.

ANY ITEM NOT SPECIFICALLY REFERENCED ABOVE SHALL BE CONSIDERED INCIDENTAL TO THE CONSTRUCTION OF THE PROJECT AND SHOULD BE INCLUDED IN THE UNIT PRICE OF THE PROPOSED IMPROVEMENTS.

Construction & Geotechnical Material Testing, Inc.

60 Martin Lane, Elk Grove Village, Illinois 60007
Telephone (630) 595-1111 ♦ Fax (630) 595-1110

July 7, 2025

Mr. Romeo Kapudija
Luxe Corsa Partners, LLC / Luxes Corsa Auto Sales
601 Dundee Avenue
East Dundee, Illinois 60118

CGMT Project No. 25G0361

Reference: ***Report of Subsurface Exploration and Geotechnical Engineering Services, Proposed Luxe Corsa Car Condos, 24455 N. U.S. Highway 12, Lake Zurich, Illinois 60047***

Dear Mr. Kapudija:

CGMT, Inc. has completed the subsurface exploration and geotechnical engineering analyses for the proposed Luxe Corsa Car Condos to be located at 24455 N. U.S. Highway 12, in Lake Zurich, Illinois. This report describes the subsurface exploration procedures, laboratory testing, and geotechnical recommendations for project construction. A Boring Location Plan is included in the Appendix of this report along with the Boring Logs performed for the exploration.

We appreciate this opportunity to be of service to the Luxe Corsa Partners, LLC / Luxes Corsa Auto Sales during the design phase of this project. If you have any questions with regard to the information and recommendations presented in this report, or if we can be of further assistance to you in any way during the planning or construction of this project, please do not hesitate to contact us.

Respectfully,

CONSTRUCTION AND GEOTECHNICAL MATERIAL TESTING, INC.

Pratik K. Patel, P.E.
Vice President

3pc: Encl.

REPORT OF

SUBSURFACE EXPLORATION AND
GEOTECHNICAL ENGINEERING SERVICES

LUXE CORSA CAR CONDOS
24455 N. U.S. HIGHWAY 12
LAKE ZURICH, ILLINOIS 60047

CGMT PROJECT NO. 25G0361

FOR

LUXE CORSA PARTNERS, LLC / LUXES CORSA AUTO SALES
EAST DUNDEE, ILLINOIS

JULY 7, 2025

CGMT Project No. 25G0361
Luxe Corsa Car Condos
Lake Zurich, Illinois

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APPENDIX

CGMT Project No. 25G0361
Luxe Corsa Car Condos
Lake Zurich, Illinois

EXECUTIVE SUMMARY

Construction & Geotechnical Material Testing, Inc. (CGMT) has completed your subsurface exploration and geotechnical engineering project. The subsurface conditions encountered during our exploration and CGMT's conclusions and recommendations are summarized below. This summary should not be considered apart from the entire text of the report with all the qualifications and considerations mentioned herein. Details of our conclusions and recommendations are discussed in the following sections and in the Appendix of this report.

The project site is located at 24455 N. U.S. Highway 12 in Lake Zurich, Illinois. A total of thirty (30) exploratory borings, B-1 through B-30, were performed for this project. The soil conditions encountered at the borings performed at the site are summarized as follows:

At Borings B-1 through B-5, approximately 12 to 17 inches of gravel fill was encountered at the ground surface. At the other borings, approximately 4 to 20 inches of topsoil was encountered at the ground surface. At the ground surface, at each of the borings, except B-3, B-7, B-11, and B-18, black, brown, and gray soft to very stiff silty clay fill soils were encountered and extended to depths of approximately 3½ to 13½ feet below the existing grade. Boring B-6 ended in the clay fill at a depth of approximately 15 feet. Within the clay profile, Borings B-1, B-5, and B-6 encountered approximately 5-feet-thick layers of black, brown, and gray very loose to medium dense sand and gravel fill between depths of approximately 3½ to 13½ feet. At Borings B-3 and B-18, the surface materials were underlain by black, brown and gray, sand and gravel fill that extended to depths of approximately 6 feet and 3½ feet, respectively. No fill was encountered at Borings B-7, B-11, and B-21. The fill soils in the borings were underlain by natural, brown and gray, stiff to hard silty clay that extended to the boring termination depths of approximately 15 to 20 feet.

If available, records of compaction obtained during the mass earthwork phase of the project should be provided to CGMT for our review. However, if records are not available, the existing fill soils appear to have been placed with some measure of control of moisture content and density and it should be feasible to support floor slabs, pavements, and new fill.

If Luxe Corsa Partners, LLC is willing to accept some risk of total and differential settlement and associated long term maintenance, the existing fill material similar to those encountered in the borings extending to depths of approximately 3½ to 15 feet below the existing grade may remain in place below floor slabs and pavements but the subgrade must pass a proofroll under the observation of a CGMT geotechnical engineer or soils technician. However, if Luxe Corsa Partners, LLC is unwilling to accept the risk, then the existing fill soils should be completely removed and replaced with new engineered fill.

Based on the anticipated structural loading and subsurface conditions, conventional shallow foundation systems consisting of spread and/or continuous footings, extended through existing fill soils (encountered in the borings to depths of approximately 3½ to 15 feet below the existing grade) bearing on the natural, stiff to hard silty clay, or new, properly compacted engineered fill is considered feasible and appropriate to support the proposed dealership facility. For footings, extended through existing fill soils, bearing at depths of approximately 3½ feet below grade on natural, stiff to hard silty clay or new, properly compacted engineered fill, we recommend a maximum net allowable soil bearing pressure of 3,000 psf be used to proportion the footings.

Alternatively, if the owner is willing to accept additional risk of total and differential movement of foundations and the associated long term maintenance, the existing fill material, similar to those encountered in the borings extending to depths of approximately 3½ to 15 feet below the existing grade, may remain in place below footings but the foundation bearing soils must be thoroughly evaluated with shallow probe holes, in-place moisture-density tests, and calibrated hand penetrometer tests. If possible, proofrolling would also helpful in evaluating the soils. It is our opinion that the risk of larger than normal building movements can be reduced to a reasonable degree through appropriate site preparation and thorough evaluation of fill characteristics. For footings, bearing at depths of at least 3½ feet below grade on thoroughly tested supported on fill soils consisting of stiff to very stiff silty clay, medium dense sand and gravel fill soils, or new, properly compacted engineered fill, we recommend a maximum net allowable soil bearing pressure of 2,500 psf be used to proportion the footings. However, if Luxe Corsa Partners, LLC is unwilling to accept the risk of total and differential settlement of footings, the existing fill soils should be completely removed and backfilled with engineered fill back to the design footing grade.

Existing fill soils were encountered in the borings at depths between approximately 3½ and 15 feet below the existing grade. Complete removal and replacement discussed above may not be economical due to high construction cost. As an alternative, for ground improvement techniques and construction of conventional shallow foundations, the use of compacted/rammed aggregate piers, similar to Geopier® rammed aggregate piers and Vibro Piers can be considered for support of foundations for the new dealership facility. It is our opinion that foundations supported on compacted/rammed aggregate piers or Vibro Piers as discussed above will likely permit proportioning foundations for a net allowable soil bearing capacity of 3,000 psf, though this must be verified by the rammed aggregate piers or Vibro Piers installer.

The compacted/rammed aggregate piers can be used to reinforce the existing soils beneath spread and wall footings, load bearing walls and floor slabs. The compacted/rammed aggregate piers are constructed by drilling approximately 2 ½ feet in diameter boreholes extending through the layers of unsuitable soils and compacted/ramming thin lifts of new aggregate fill materials within the boreholes to create dense aggregate piers. The compacted/rammed aggregate piers should be constructed through layers of existing fill soils and anticipated to extend to natural, stiff to very stiff silty clay at depths of about 3½ to 15 below existing grade. Temporary casing will likely be needed during construction of the aggregate piers through the existing fill soils. Aggregate piers should be constructed on a grid pattern using well-graded granular soils tamped in thin lifts. We anticipate spacing of compacted/rammed aggregate piers should be in the range of 5 to 10 feet on center. Our experience suggests that aggregate pier manufacturers will interpret the available subsurface information and can provide appropriate foundation design including allowable bearing pressure and anticipated settlement.

We recommend that the excavation of the foundations be monitored full-time by a CGMT geotechnical engineer or his representative to verify that the exposed subgrade materials and the soil bearing pressure will be suitable for the proposed structure.

Report Prepared By:

Nicholas Wolff

Nicholas P. Wolff, P.E.
Geotechnical Engineer

Report Reviewed By:

Pratik Patel

Pratik K. Patel, P.E.
Vice President

1
PROJECT OVERVIEW

Introduction

This report presents the results of our subsurface exploration and engineering services for the proposed dealership development in Lake Zurich, Illinois. A General Location Plan included in the Appendix of this report, shows the approximate location of this project.

Project Description

ITEM	DESCRIPTION
Site Layout	See Boring Location Diagram in the Appendix
Proposed Construction	We understand the project consists of construction of a 70 feet X 200 feet car dealership building, a two-story auto club amenity and leasing office (20,265 s.f), 11 buildings (containing a total of 121 car units) with new drive and parking areas with a retention basin. We anticipate there will be no basements or below grade spaces.
Structural Loads	Max. column loads: 250 kips (Anticipated); Max. wall loads: 4 kips per lineal foot (Anticipated)
Grading and Existing Site Considerations	We estimate less than 2 to 3 feet of cuts and fills will be needed to establish final site grades.

Scope of Work

The conclusions and recommendations contained in this report are based on the soil borings performed in the vicinity of the proposed construction areas, and associated laboratory testing of selected soil samples. The scope of the subsurface exploration included the following:

Number of Borings	Depth (feet)
5	20
25	15

The results of the soil borings, along with a Boring Location Plan showing the approximate locations where the borings were performed, are included in the Appendix of this report. Once the samples were returned to our laboratory we laboratory tests on selected representative soil samples from the borings to evaluate pertinent engineering properties, and, we analyzed the field and laboratory data to develop appropriate engineering recommendations.

The purpose of this report is to provide information and geotechnical engineering recommendations with regard to:

- Subsurface Soil and Groundwater Conditions
- Seismic Considerations
- Site Preparation and Earthwork
- Foundation Design and Construction
- Floor Slab Design and Construction
- Pavement Design and Construction

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EXPLORATION RESULTS

Site Description

ITEM	DESCRIPTION
Project Location	The project site is located at 24455 N. U.S. Highway 12, in Lake Zurich, Illinois.
Existing Site Improvements	At the time of our exploration, the eastern approximate 2/3 of the site was grass-covered vacant area. The western approximate 1/3 was occupied with a single-story flex structure and a gravel-covered equipment yard. We understand the existing structure will be removed.
Existing Topography	The elevations across the western portion of the site generally ranged from approximately 854 to 858 feet (Per Google Earth). The eastern 2/3 of the site had an overall grade down from the west toward the east with site grades ranging from approximately 860 down to 841 feet (Per Google Earth).

Soil Conditions

A total of thirty (30) borings, B-1 through B-30 were performed for this project. The subsurface conditions encountered at the borings performed at the site can be summarized as follows:

At Borings B-1 through B-5, approximately 12 to 17 inches of gravel fill was encountered at the ground surface. At the other borings, approximately 4 to 20 inches of topsoil was encountered at the ground surface. At the ground surface, at each of the borings, except B-3, B-7, B-11, and B-18, black, brown, and gray soft to very stiff silty clay fill soils were encountered and extended to depths of approximately 3½ to 13½ feet below the existing grade. Boring B-6 ended in the clay fill at a depth of approximately 15 feet. Within the clay profile, Borings B-1, B-5, and B-6 encountered approximately 5-feet-thick layers of black, brown, and gray very loose to medium dense sand and gravel fill between depths of approximately 3½ to 13½ feet. At Borings B-3 and B-18, the surface materials were underlain by black, brown and gray, sand and gravel fill that extended to depths of approximately 6 feet and 3½ feet, respectively. No fill was encountered at Borings B-7, B-11, and B-21. The fill soils in the borings were underlain by natural, brown and gray, stiff to hard silty clay that extended to the boring termination depths of approximately 15 to 20 feet.

SOILS	SOIL CHARACTERISTICS
Silty Clay (Existing Fill)	Unconfined Compressive Strengths: 0.25 to 2.0 tsf (typically 0.75 to 1.5 tsf) Dry Density Determinations: 100.5 to 108.2 pcf Moisture Contents: 8.7 to 24.6 percent
Sand and Gravel (Existing Fill)	Very loose to medium dense; 3 to 15 blows per foot
Silty Clay (Natural)	Unconfined Compressive Strengths: 1.25 to 4.0 tsf Moisture Contents: 10.6 to 18.4 percent

The specific soil types observed at the borings are noted on the boring logs, enclosed in the Appendix.

Groundwater Observations

Observations for groundwater were made during sampling and upon completion of the drilling operations at the boring locations. In auger drilling operations, water is not introduced into the boreholes, and the groundwater position can often be obtained by observing water flowing into or out of the boreholes. Furthermore, visual observation of the soil samples retrieved during the auger drilling exploration can often be used in evaluating the groundwater conditions. Groundwater levels were observed during drilling and immediately the completion of drilling. Groundwater measurements are summarized in the table below:

BORINGS	GROUNDWATER LEVELS (FEET)	
	DURING DRILLING	IMMEDIATELY AFTER COMPLETION
All Borings	None	None

Glacial till soils in the Midwest frequently oxidize from gray to brown above the level at which the soil remains saturated. The seasonal high water table is often interpreted to be near this zone of color change. Based on the results of this exploration, the season high water table may be located at depths of approximately 13½ feet below the existing grade.

More definitive evidence of prevailing groundwater levels could be obtained through the use of groundwater monitoring wells, which CGMT could install and monitor if requested.

It should be noted that the groundwater level can vary based on precipitation, evaporation, surface run-off and other factors not immediately apparent at the time of this exploration. Surface water runoff will be a factor during general construction, and steps should be taken during construction to control surface water runoff and to remove any water that may accumulate in the proposed excavations as well as floor slab and pavement areas. Precipitation generally varies seasonally. To assist in anticipating groundwater fluctuations changes throughout the year, average monthly precipitation is provided in the table below:

The Monthly Precipitation for the Antecedent 1-year Period Prior to the Drilling Operations

Month	January	February	March	April	May	June	July	August	September	October	November	December	Total
Normal Precipitation (inches)	1.73	1.79	2.50	3.38	3.68	3.45	3.70	4.90	3.21	3.15	3.15	2.25	36.89

Average precipitation levels were obtained from wunderground.com.

Seismic Zone

Per the 2021 International Building Code, the Soil Site Class is determined from ASCE 7.16, Table 20.3-1 Site Classification. Based upon the site conditions, the site soils can be characterized as Site Class D. Site Class D is described as Stiff Soil Profile for the top 100 ft of the site soil profile. Since we drilled to a maximum depth of 20 feet for this exploration, based on our experience with the soils in this area, the available geologic maps and following the direction of IBC 2021 when there are no borings to 100 feet deep, it is our opinion the site would be defined as Site Class D.

CGMT also calculated the spectral response factors based on the site class as well as the latitude and longitude of the project location using United States Geological Survey (USGS) seismic calculator software. The calculated values are presented in the table below:

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Seismic Design Criteria

Luxe Corsa Car Condos					
24455 N. U.S. Highway 12, Lake Zurich, Illinois 60047					
Latitude	42.218829°	**Longitude**	-88.108433°	**Site Class**	"D"
S_s	0.140g	**S_{MS}**	0.180g	**S_{DS}**	0.120g
S_1	0.066g	**S_{M1}**	0.140g	**S_{D1}**	0.093g

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ANALYSIS AND RECOMMENDATIONS

Overview

The following recommendations have been developed on the basis of the previously described project characteristics and subsurface conditions encountered. If there are any changes to the project characteristics or if different subsurface conditions are encountered during construction, CGMT should be consulted so that the recommendations of this report can be reviewed.

A summary of the results of the exploration is provided in the table below:

Preliminary Bearing Table

Boring	Boring Depth (feet)	Depth to Groundwater (feet)		Approximate Depth to Soils Suitable for a Net Allowable Bearing Pressure of 2,500 psf[1] "Elevated Risk"	Approximate Depth to Soils Suitable for a Net Allowable Bearing Pressure of 3,000 psf[1] "Reduced Risk"
		During Drilling	After Completion		
B-1	20	None	None	6 Feet	6 Feet
B-2	15	None	None	1.5 Feet	13.5 Feet
B-3	20	None	None	1.5 Feet	6 Feet
B-4	15	None	None	1 Foot	8.5 Feet
B-5	15	None	None	8.5 Feet	13.5 Feet
B-6	15	None	None	1 Foot	N/A[2]
B-7	15	None	None	1 Foot	1 Foot
B-8	15	None	None	1.5 Feet	3.5 Feet
B-9	15	None	None	1 Foot	13.5 Feet
B-10	15	None	None	1 Foot	3.5 Feet
B-11	15	None	None	1 Foot	1 Foot
B-12	15	None	None	1 Foot	3.5 Feet
B-13	15	None	None	1 Foot	3.5 Feet
B-14	15	None	None	1 Foot	3.5 Feet
B-15	15	None	None	1 Foot	3.5 Feet
B-16	15	None	None	1 Foot	3.5 Feet
B-17	20	None	None	2 Feet	3.5 Feet
B-18	15	None	None	1 Foot	3.5 Feet
B-19	15	None	None	1 Foot	3.5 Feet
B-20	15	None	None	1 Foot	3.5 Feet
B-21	15	None	None	1 Foot	1 Foot
B-22	15	None	None	1 Foot	3.5 Feet
B-23	15	None	None	1 Foot	3.5 Feet
B-24	15	None	None	1 Foot	3.5 Feet
B-25	15	None	None	1 Foot	3.5 Feet
B-26	15	None	None	1 Foot	3.5 Feet

Preliminary Bearing Table

Boring	Boring Depth (feet)	Depth to Groundwater (feet)		Approximate Depth to Soils Suitable for a Net Allowable Bearing Pressure of 2,500 psf[1] "Elevated Risk"	Approximate Depth to Soils Suitable for a Net Allowable Bearing Pressure of 3,000 psf[1] "Reduced Risk"
		During Drilling	After Completion		
B-27	15	None	None	1 Foot	3.5 Feet
B-28	15	None	None	1 Foot	3.5 Feet
B-29	20	None	None	1 Foot	3.5 Feet
B-30	20	None	None	1 Foot	3.5 Feet

[1]To be used a minimum of 3½ feet below adjacent outside grade.
[2]To be verified in the field. A more thorough evaluation of the existing fill soils and the lower strength/higher moisture content soils will be necessary during the construction phase, which could include test pits.

Subgrade Preparation and Engineered Fill

Subgrade Preparation

Initial subgrade preparation should consist of complete stripping/removal of any topsoil, asphalt pavement course, existing base course materials, vegetation, and soft or unsuitable/deleterious materials from the proposed construction areas. Unsuitable materials, such as topsoil/buried topsoil or organic soils, should either be stockpiled for later use in landscaping fills or placed in approved disposal areas either on-site or off-site. Root systems of existing trees shall be satisfactorily grubbed.

Due to the widely spaced distribution of borings combined with the potential for soil disturbance, the accuracy of topsoil thicknesses based upon measurements at the boring locations is limited. In addition, the density of the surface soils also may impact the measured topsoil thickness. As such, the thicknesses reported on the boring logs should be considered approximate. To provide improved estimates for stripping volumes, CGMT recommends a supplemental topsoil survey be performed.

We recommend that the project geotechnical engineer or his representative should be on site to monitor stripping and site preparation operations and observe that unsuitable soils have been satisfactorily removed and to observe proofrolling.

Any existing utilities, associated structures and backfill materials, should be abandoned, relocated or removed from the proposed construction areas unless they are planned to remain in service. Prior to construction, we recommend all utilities in the proposed construction areas be positively identified and marked. Those utilities that can be relocated should be relocated to the extent practical and backfilled with compacted/densified engineered fill. Abandoned utilities should be removed or grouted full with lean concrete. Excavations resulting from removal/demolition of the existing utilities should be completely filled with engineered fill. Active utilities to remain in the construction areas should be exposed and protected during construction to reduce the potential for damage or interruption of service. Where existing utilities will remain under any structure, we recommend that the utility backfill be removed and replaced with controlled fill.

Any existing floor slabs and/or foundation elements should be completely removed from the proposed construction areas. The tops of foundation walls should be removed to depths of at least 2 feet below the base of new pavements, but existing wall backfill materials, if encountered, should be completely removed and replaced with controlled compacted fill. Soils exposed in the excavations created by the demolition should be observed and evaluated by an experienced geotechnical technician or engineer. The completed excavations should be backfilled with properly placed and compacted fill as recommended in this report. Improper placement and compaction of fill materials during demolition/removal of the existing floor slabs and/or foundation elements could lead to inconsistent subgrade performance resulting in foundation, floor slab and pavement distress and settlement.

It has been our experience that many demolition contractors place the debris from the structure below grade and cap with soil. These type of activities will not provide a suitable subgrade for new foundations, slabs or pavements. Costs of removal and replacement of demolition debris could unnecessarily add thousands of additional dollars to the cost of the project. The presence of a CGMT geotechnical engineer on the site during demolition and backfilling operations would reduce the potential for unnecessary removal and replacement to take place during construction.

We do not recommend the use of 3-inch stone or "Pea Gravel" as engineered fill to backfill undercuts, particularly under floor slabs, pavements and foundations. Due to the large diameter and/or absence of fines, the 3-inch rock exhibits large voids. Fill materials containing large voids are more susceptible to future movement that may become unstable resulting in excessive and variable settlement.

Current EPA and State law requires an asbestos survey prior to demolition or renovation activities. In the event regulated asbestos materials are confirmed to be present, any regulated asbestos materials that would be disturbed must be removed prior to such disturbance by a licensed asbestos removal firm.

After removal of unsuitable/deleterious materials and stripping to the desired grade, and prior to fill placement, we recommend the stripped/exposed subgrades be observed by an experienced geotechnical engineer or his authorized representative at the time of construction in order to aid in identifying localized soft/loose or unsuitable materials which should be removed. Proofrolling using a fully loaded, tandem-axle truck, or loaded truck/equipment similar to those anticipated during construction, should be used at this time to aid in identifying localized soft or unsuitable material which should be removed. Any soft or unsuitable materials encountered during proofrolling should be compacted in place or removed and replaced with an approved backfill compacted to the criteria given below. Prior to proofrolling, the driveway and floor slab areas that will receive less than 1 foot of new fill, should be scarified to a depth of about 9 inches, moisture conditioned, and recompacted as recommended below.

If available, records of compaction obtained during the mass earthwork phase of the project should be provided to CGMT for our review. However, if records are not available, the existing fill soils appear to have been placed with some measure of control of moisture content and density and it should be feasible to support floor slabs, pavements, and new fill.

If Luxe Corsa Partners, LLC is willing to accept some risk of total and differential settlement and associated long term maintenance, the existing fill material similar to those encountered in the borings extending to depths of approximately 3½ to 15 feet below the existing grade may remain in place below floor slabs and pavements but the subgrade must pass a proofroll under the observation of a CGMT geotechnical engineer or soils technician. However, if Luxe Corsa Partners, LLC is unwilling to accept the risk, then the existing fill soils should be completely removed and replaced with new engineered fill.

During final preparation of subgrades, a smooth drum roller is often used to provide a flat surface and provide for better drainage to reduce the negative impact of rain events. Due to the relative sensitivity of the clayey sand and silty clay soils, we recommend that these materials be static rolled (no vibrations) to reduce the potential for subgrade soil disturbance. We also recommend crowning the subgrade to provide positive drainage off the building pad and pavement area subgrades.

Engineered Fill

Where new fill material is required for backfill or to otherwise reach the design subgrade elevation beneath slabs-on-grade and pavements, we recommend that engineered fill be used. Any soil placed as engineered fill should be an approved material, free of organic matter or debris, be a non-frost susceptible soil, and have a liquid limit and plasticity index less than 40 and 15, respectively. The project geotechnical engineer should be consulted to determine the suitability of off-site/on-site materials for use as engineered fill, prior to use or placement. We do not recommend the use of 3-inch stone as engineered fill to backfill undercuts, particularly under floor slabs and foundations. Fill materials containing large voids are more susceptible to future movement that may become unstable resulting in excessive and variable settlement.

Fill should be placed in lifts not exceeding 8 inches in loose thickness, moisture conditioned to within 2 percent of the optimum moisture content, and compacted to at least 95 percent of the maximum dry density obtained in accordance with ASTM Specification D 1557, Modified Proctor Method. Fill placed below footing base elevations should be compacted to at least 95 percent of the material's modified Proctor maximum dry density (ASTM D 1557). Engineered fill placed to support foundations should extend 1 foot beyond the outside edges of the footings and from that point outward laterally 1 foot for every 2 feet of fill thickness below the footings. Laboratory proctor tests should be performed on fill materials to determine the maximum dry density and optimum moisture content. A shrinkage factor of 15 percent can be assumed for estimating earthwork quantities for bidding purposes.

We recommend suitable silty clays used to raise the grade or backfill undercuts should be compacted with a sheepsfoot roller. Granular engineered fill should be compacted with a smooth drum roller or adequate heavy vibratory plate. Moisture control during earthwork operations, including the use of disking or appropriate drying equipment and techniques, should be expected.

In-place density tests should be performed with a minimum of 1 test per 2,000 square feet of fill area for each lift of fill placed. We recommend that the placement of engineered fill be monitored full-time by CGMT representative and in-place density tests should be performed to verify the adequacy of the compaction for each lift of fill placed.

Footing Foundations

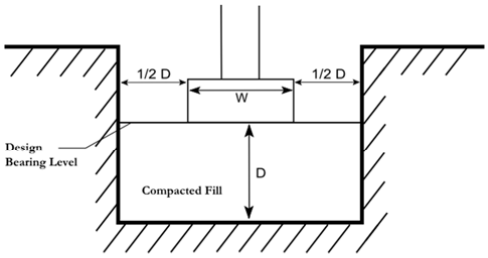
Based on the anticipated structural loading and subsurface conditions, conventional shallow foundation systems consisting of spread and/or continuous footings, extended through existing fill soils (encountered in the borings to depths of approximately 3½ to 15 feet below the existing grade) bearing on the natural, stiff to hard silty clay, or new, properly compacted engineered fill is considered feasible and appropriate to support the proposed dealership facility. For footings, extended through existing fill soils, bearing at depths of approximately 3½ feet below grade on natural, stiff to hard silty clay or new, properly compacted engineered fill, we recommend a maximum net allowable soil bearing pressure of 3,000 psf be used to proportion the footings.

Alternatively, if the owner is willing to accept additional risk of total and differential movement of foundations and the associated long term maintenance, the existing fill material, similar to those encountered in the borings extending to depths of approximately 3½ to 15 feet below the existing grade, may remain in place below footings but the foundation bearing soils must be thoroughly evaluated with shallow probe holes, in-place moisture-density tests, and calibrated hand penetrometer tests. If possible, proofrolling would also helpful in evaluating the soils. It is our opinion that the risk of larger than normal building movements can be reduced to a reasonable degree through appropriate site preparation and thorough evaluation of fill characteristics. For footings, bearing at depths of at least 3½ feet below grade on thoroughly tested supported on fill soils consisting of stiff to very stiff silty clay, medium dense sand and gravel fill soils, or new, properly compacted engineered fill, we recommend a maximum net allowable soil bearing pressure of 2,500 psf be used to proportion the footings. However, if Luxe Corsa Partners, LLC is unwilling to accept the risk of total and differential settlement of footings, the existing fill soils should be completely removed and backfilled with engineered fill back to the design footing grade.

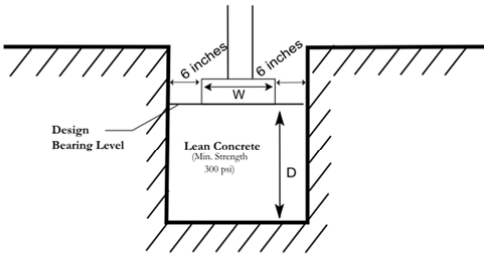
To reduce the potential for foundation bearing failure and excessive settlement due to local shear or "punching" action, we recommend that continuous footings have a minimum width of 18 inches and that isolated column footings have a minimum lateral dimension of 30 inches. In addition, footings should be placed at a depth to provide adequate frost cover protection. We recommend the footings be placed at a minimum depth of 3½ feet below finished grade. Interior footings in heated areas can be placed at a minimum of 2 feet below grade provided that suitable soils are encountered and that the foundations will not be subjected to freezing weather either during or after construction.

We recommend that the excavation of building foundations be monitored on a full-time basis by a CGMT geotechnical engineer or his representative to verify that the exposed subgrade materials and the soil bearing capacity will be suitable for the proposed building and is consistent with the boring log information obtained during the geotechnical exploration.

The contractor should be prepared to undercut/overexcavate and extend the footings to soils of adequate bearing capacity. As an alternative, after overexcavation and removal of weaker/low bearing capacity soils or unsuitable soils, the foundation subgrade can be raised using compacted engineered fill or lean concrete to a minimum frost depth of 3½ feet below final exterior grade. Engineered fill should be compacted to a minimum of 95 percent of the maximum dry density as discussed in the **Subgrade Preparation and Engineered Fill** section. The zone of the engineered fill placed below the foundations should extend 1 foot beyond the outside edges of the footings and from that point, outward laterally 1 foot for every 2 feet of fill thickness below the footing. The overexcavation and backfill procedure is depicted in the figure below. If lean concrete is used to replace weaker/low bearing soils or unsuitable soils, no lateral overexcavation will be necessary, but the excavation should be 1 foot wider than the footing (6 inches on each side).



Overexcavation and Backfill Procedure
(Recommended for Relatively Shallow Deepening)



Overexcavation and Lean Concrete Backfill Procedure
(Recommended for Greater Deepening)

Settlement of the conventional shallow foundations, designed in accordance with our recommendations presented in this report, is expected to be within tolerable limits for the proposed building. For footings, extended through existing fill soils, placed on natural, stiff to very stiff silty clay, or new, properly compacted engineered fill and designed as discussed above, maximum total settlement is expected to be in the range of 1 inch or less. These settlement values are based on our engineering experience with the soil and the anticipated structural loading, and are to guide the structural engineer with his design.

The settlement values provided above are for foundations bearing on suitable natural soils, or on compacted engineered fills. If foundations will bear on existing fill soils that have passed a proofroll test, total and differential settlement may be greater than the estimates provided above.

Rammed or Vibro-Compacted Aggregate Piers

Existing fill soils were encountered in the borings at depths between approximately 3½ and 15 feet below the existing grade. Complete removal and replacement discussed above may not be economical due to high construction cost. As an alternative, for ground improvement techniques and construction of conventional shallow foundations, the use of compacted/rammed aggregate piers, similar to Geopier® rammed aggregate piers and Vibro Piers can be considered for support of foundations for the new dealership facility. It is our opinion that foundations supported on compacted/rammed aggregate piers or Vibro Piers as discussed above will likely permit proportioning foundations for a net allowable soil bearing capacity of 3,000 psf, though this must be verified by the rammed aggregate piers or Vibro Piers installer.

The compacted/rammed aggregate piers can be used to reinforce the existing soils beneath spread and wall footings, load bearing walls and floor slabs. The compacted/rammed aggregate piers are constructed by drilling approximately 2 ½ feet in diameter boreholes extending through the layers of unsuitable soils and compacted/ramming thin lifts of new aggregate fill materials within the boreholes to create dense aggregate piers. The compacted/rammed aggregate piers should be constructed through layers of existing fill soils and anticipated to extend to natural, stiff to very stiff silty clay at depths of about 3½ to 15 below existing grade. Temporary casing will likely be needed during construction of the aggregate piers through the existing fill soils. Aggregate piers should be constructed on a grid pattern using well-graded granular soils tamped in thin lifts. We anticipate spacing of compacted/rammed aggregate piers should be in the range of 5 to 10 feet on center. Our experience suggests that aggregate pier manufacturers will interpret the available subsurface information and can provide appropriate foundation design including allowable bearing pressure and anticipated settlement.

The compacted/rammed aggregate piers can also be used to support floor slabs. For buildings with compacted/rammed aggregate piers, similar to Geopier® rammed aggregate piers and Vibro Piers, floor slabs and the required granular base course can be constructed on top of aggregate piers. Prior to the construction of floor slabs, the subgrade preparation should consist of densifying the exposed design subgrade surface to the extent practical prior to placement of granular base course and concrete.

We recommend that the excavation of building foundations be monitored on a full-time basis by a CGMT geotechnical engineer or his representative to verify the exposed soils and the soil bearing capacity will be suitable for the proposed building and is consistent with the boring log information obtained during the geotechnical exploration.

For footings bearing above soil improved using rammed aggregate piers properly designed and installed, maximum total settlement is expected to be in the range of 1 inch or less based on consolidation of the soils under structural loading. These settlement values are based on our engineering experience with the soil and the anticipated structural loading, and are to guide the structural engineer with his design.

Floor Slab Design

For the design and construction of the slabs-on-grade, we recommend that all existing vegetation, topsoil or organic soils, and any unsuitable/deleterious materials should be removed and replaced with compacted engineered fill as discussed in the **Site Preparation and Engineered Fill** section. If the removal is performed in accordance with these recommendations, we anticipate floor slabs for the structures will be supported on stable and approved subgrades consisting of the exiting soils or new, properly compacted engineered fill.

It is assumed that the existing floor slab subgrade has performed satisfactorily during the proofroll discussed in the Subgrade Preparation subsection, even though existing fill soils were encountered to depths of approximately 3½ to 15 feet below the existing grade. Provided that the floor slab subgrade passes a proofroll, the risk of excessive settlement is low. However, if the floor slab subgrade does not pass the proofroll, some undercutting and placement of controlled backfill will be required.

We recommend that floor slabs be underlain by a minimum of 6 inches of granular material having a maximum aggregate size of 1½ inches and no more than 2 percent of fines. Prior to placing the granular material, the floor subgrade soil should be properly compacted, proofrolled, and free of standing water, mud, and frozen soil. For design of Portland cement concrete slabs-on-grade, a modulus of subgrade reaction (k) of 100 pounds per cubic inch (pci) can be used for slabs constructed on subgrade prepared as discussed herein.

A properly designed and constructed capillary break layer can often mitigate the need for a moisture retarder and can assist in more uniform curing of concrete. If a vapor retarder is considered to provide additional moisture protection, special attention should be given to the surface curing of the slabs to reduce uneven drying of the slabs and associated cracking and/or slab curling. The use of a blotter or cushion layer above the vapor retarder can also be considered for project specific reasons. Please refer to ACI 302.1R96 *Guide for Concrete Floor and Slab Construction* and ASTM E 1643 *Standard Practice for Installation of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs* for additional guidance on this issue.

We recommend that the floor slab be isolated from the foundation footings so differential settlement of the structure will not induce shear stresses on the floor slab. Also, in order to reduce the crack width of any shrinkage cracks that may develop near the surface of the slab, we recommend mesh reinforcement as a minimum be included in the design of the floor slab. Temperature and shrinkage reinforcements in slabs on ground should be positioned in the upper third of the slab thickness. The Wire Reinforcement Institute recommends the mesh reinforcement be placed 2 inches below the slab surface or upper one-third of slab thickness, whichever is closer to the surface. Adequate construction joints, contraction joints and isolation joints should also be provided in the slab to reduce the impacts of cracking and shrinkage. Please refer to ACI 302.1R96 *Guide for Concrete Floor and Slab Construction* for additional information regarding concrete slab joint design.

Pavements

For the design and construction of the pavements, we recommend that topsoil, old pavement be removed before construction of new pavements and that new pavements will be supported by stable and approved subgrades consisting of the exiting soils or new, properly compacted engineered fill.

It is assumed that the existing pavement subgrade has performed satisfactorily during the proofroll discussed in the **Subgrade Preparation** subsection, even though existing fill soils were encountered to depths of approximately 3½ to 15 feet below the existing grade. Provided that the pavement subgrade passes a proofroll, the risk of excessive settlement is low. However, if the pavement subgrade does not pass the proofroll, some undercutting and placement of controlled backfill will be required.

We anticipate the new pavement will be constructed of asphaltic concrete or Portland cement concrete. We expect that the proposed parking lot will generally be utilized for light duty traffic, and the driveways and loading and unloading areas be utilized for light to medium duty traffic. Heavy traffic loads would be anticipated for areas near any dumpsters where garbage trucks would often cross. We recommend the pavement subjected to light traffic be underlain by a minimum of 8 inches of base course granular material, similar to Illinois Department of Transportation gradation CA-6.

Assuming the pavement subgrade will consist predominantly of the cohesive soils and new fill prepared in accordance with the recommendations given in this report, a SSR of Fair, an estimated IBR value of 2 and a drainage class of Very poor should be used for pavement design purposes. Similarly, an estimated modulus of subgrade reaction value equal to 100 pounds per cubic inch should be used for concrete pavement design purposes. Concrete pavements should be air-entrained Portland cement concrete with a minimum compressive strength of 4,000 psi and a minimum flexural strength of 650 psi. Concrete strength requirements are outlined in Article 1020.04 in the IDOT Standard Specifications (Adopted April 1, 2016).

Some typical pavement sections used in this region of the country are given below which could be considered for preliminary estimating purposes. Other sections can also be considered. These sections assume a low volume of light vehicle loads (automobiles, vans, pickups, etc.). They should also be considered minimum thicknesses, and, as such, periodic maintenance should be anticipated. Final design sections should consider details such as final grades, traffic loadings, traffic volumes, the desired design life and any local, county or city codes. If you wish, we would be pleased to perform a detailed pavement section design using AASHTO or Asphalt Institute procedures when this information is available. It should also be noted that these sections do not consider if the binder course will be subject to construction vehicle traffic for an extended period of time. Some distress to the binder course and aggregate base could occur, if this is the case.

Typical Pavement Sections[3]

	Light Duty (Parking Lots)	Heavy Duty[4] (Drives)	Frequent Truck Traffic
Portland Cement Concrete:	5 inches	6 inches	7 inches
Full Depth Asphalt:	5.5 inches	7 inches	10 inches
Combined Section Asphalt / Crushed Stone Base Course:	3/8 inches	4/10 inches	4.5/16 inches

[3]All materials should meet the current Illinois Department of Transportation Standard Specifications for Road and Bridge Construction requirements.

[4]In areas of anticipated heavy traffic, delivery trucks, or concentrated loads, a minimum concrete thickness of 7 inches is recommended but should be evaluated further when loading conditions are known.

Final design sections should consider details such as final grades, traffic loadings, traffic volumes, the desired design life and any local, county or city codes. If you wish, we would be pleased to perform a detailed pavement section design using AASHTO or Asphalt Institute procedures when this information is available. Minimum design requirements for hot-mix asphalt (HMA) shall follow Article 1030.05 in the IDOT Standard Specifications (Adopted April 1, 2016) During asphalt pavement construction, the wearing and leveling course should be compacted to a minimum of 93 percent of the theoretical density value. Prior to placing the granular material, the pavement subgrade soil should be properly compacted, proofrolled, and free of standing water, mud, and frozen soil.

Consideration should also be given to placing a geotechnical fabric at the base of the new pavement section as a separation layer and to reduce the potential for premature degradation of the new pavements.

An important consideration with the design and construction of pavements is surface and subsurface drainage. Where standing water develops, either on the pavement surface or within the base course layer, softening of the subgrade and other problems related to the deterioration of the pavement can be expected. Furthermore, good drainage should reduce the possibility of the subgrade materials becoming saturated over a long period of time. We would be pleased to be of further assistance to you in the design of the project pavements by providing additional recommendations during construction of the project.

Periodic maintenance of pavements should be anticipated. The subgrade parameters provided in this report consider that significant changes in the subgrade moisture content do not occur. To reduce the potential for changes in subgrade moisture, all paved areas should be sloped to provide rapid drainage of surface water and to drain water away from the pavement edges. Water that is allowed to pond on or adjacent to the pavement can saturate and soften the subgrade soils and subsequently accelerate pavement deterioration.

Granular base or subbase materials directly below pavement sections can also collect infiltrated surface water and soften the subgrade as well as increase the effects of frost action, both of which can be detrimental to pavements. For these reasons, where granular materials are used over a cohesive soil subgrade or where the groundwater level is within 3.5 feet of finished pavement subgrade, we recommend the installation of four-inch diameter transverse underdrains to improve the pavement performance and extend its service life. The underdrains should be installed at 300-foot intervals and at low points in the pavement. Pipe underdrains shall be installed per Article 601 in the IDOT Standard Specifications (Adopted April 1, 2016) and consist of Type 2 underdrains.

General Construction Considerations

We recommend that the subgrade preparation, installation of the foundations, and construction of slabs-on-grade be monitored by a CGMT geotechnical engineer or his representative. Methods of verification and identification such as proofrolling, DCP testing and hand auger probe holes will be necessary to further evaluate the subgrade soils and identify unsuitable soils. The contractor should be prepared to overexcavate footing excavations at isolated locations. We recommend that excavations of new foundations be monitored on a full-time basis by a CGMT geotechnical engineer or his representative to verify that the soil bearing pressure and the exposed subgrade materials will be suitable for the proposed dealership and are consistent with the boring log information obtained during this geotechnical exploration. We would be pleased to provide these services.

Since localized areas of soft/unsuitable soils may be present below the bearing elevation of foundations, we recommend that hand-auger borings be performed to at least half the footing width, or a minimum of 3 feet below each isolated column footing and to at least 2 feet below continuous footings. Hand auger borings should be performed at each column footing and at approximately 20-foot intervals along continuous footings to verify the suitability of the soils to support the recommended maximum net allowable bearing pressure. If soft/unsuitable soils are encountered, the footings should be extended until suitable bearing soils are encountered or the unsuitable soils should be removed beneath the base of the footing and replaced with compacted engineered fill or lean concrete. The foundation contractor should expect undercutting/overexcavation or removal of unsuitable material without delay and replacement with engineered fill at the time of foundation excavation/construction.

All loose or soft soils in the subgrade or foundation excavation areas should be densified or removed before placing any concrete or fill. Accumulated water or runoff water at the base of the foundation excavations should also be promptly removed. Groundwater seepage is anticipated not to be a major factor during foundation excavations or undercutting. If encountered, we believe sump and pump system should be adequate to remove accumulated seepage from the bottom of excavations prior to placement of concrete or crushed stone. Concrete should not be placed in water. To reduce the potential for frost heave related problems; forms should be used prior to the placement of foundation concrete.

Exposure to the environment may weaken the soils at the foundations bearing level if the excavations remain open for too long a time. Therefore, foundation concrete should be placed the same day that excavations are opened, when possible. If the bearing soils are softened by surface water intrusion or exposure, the softened soils must be removed from the immediately prior to placement of concrete.

We recommend adequate surface and subsurface drainage be considered in the design and construction of floor slabs and pavements. Where standing water develops, either on slab or pavement surfaces or within the base course layer, softening of the subgrade and other problems related to the deterioration of the floor slabs and pavements can be expected. Adequate drainage should reduce the possibility of the subgrade materials becoming saturated over a long period of time. To reduce water infiltration to the pavement section and within the base course layer resulting in softening of the subgrade and deterioration of the slabs and pavements, we recommend the timely repair or sealing of joints and cracks in slabs and pavement.

All unsuitable materials should be removed and replaced with environmentally clean, inorganic fill and free of debris or harmful matter. Unsuitable materials removed from the project site should be disposed of in accordance with all applicable federal, state, and local regulations.

The contractor should avoid stockpiling excavated materials immediately adjacent to the excavation walls. We recommend that stockpile materials be kept back from the excavation a minimum distance equal to the excavation depth to avoid surcharging the excavation walls. If this is impractical due to space constraints, the excavation walls should be retained with bracing designed for the anticipated surcharge loading.

Excavations should comply with the requirements of OSHA 29CFR, Part 1926, Subpart P, "Excavations" and its appendices, as well as other applicable codes. This document states that the contractor is solely responsible for the design and construction of stable, temporary excavations. The excavations should not only be in accordance with current OSHA excavation and trench safety standards but also with applicable local, state, and federal regulations. The contractor should shore, slope or bench the excavation sides when appropriate. In no case should excavations extend below the level of adjacent structures, utilities or pavements, unless underpinning or other adequate support is provided. Site safety is the sole responsibility of the contractor, who shall also be responsible for the means, methods and sequencing of construction operations.

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EXPLORATION PROCEDURES

Subsurface Exploration Procedures

The soil borings were located in the field by a CGMT Field Engineer based on the proposed boring site plan provided to us. As required by the State of Illinois, the driller notified Illinois One-Call System, JULIE, to verify underground utilities in the vicinity of the project site prior to drilling operations.

The soil borings were performed with a truck-mounted rotary-type auger drill rig, which utilized continuous hollow stem augers to advance the boreholes. Representative soil samples were obtained at 2½ foot intervals for the first 10 feet and 5-foot intervals thereafter by means of conventional split-barrel sampling procedures. In this procedure, a 2-inch O.D., split-barrel sampler is driven into the soil a distance of 18 inches by a 140-pound hammer falling 30 inches. The number of blows required to drive the sampler through a 12-inch interval, after initial setting of 6 inches, is termed the Standard Penetration Test (SPT) or N-value and is indicated for each sample on the boring logs. The SPT value can be used as a qualitative indication of the in-place relative density of cohesionless soils. In a less reliable way, it also indicates the consistency of cohesive soils. This indication is qualitative, since many factors can significantly affect the standard penetration resistance value and prevent a direct correlation between drill crews, drill rigs, drilling procedures, and hammer-rod-sampler assemblies. The drill rig utilized an automatic trip hammer to drive the sampler. Consideration of the effect of the automatic hammer's efficiency was included in the interpretation of subsurface information for the analyses prepared for this report.

The drill crew maintained a field log of the soils encountered in the borings. After recovery, each geotechnical soil sample was removed from the sampler and visually classified. Representative portions of each soil sample were then sealed in jars and brought to our laboratory in Elk Grove Village, Illinois for further visual examination and laboratory testing. After completion of the drilling operations, the boreholes were backfilled with auger cuttings to the existing ground surface.

Laboratory Testing Program

Representative soil samples were selected and tested in our laboratory to check field classifications and to determine pertinent engineering properties. The laboratory testing program included visual classifications and unconfined compressive strength and moisture content determinations. Dry density determinations were performed on selected samples of existing fill soils.

An experienced geotechnical engineer classified each soil sample on the basis of texture and plasticity in accordance with the Unified Soil Classification System. The group symbols for each soil type are indicated in parentheses following the soil descriptions on the boring logs. A brief explanation of the Unified System is included with this report. The geotechnical engineer grouped the various soil types into the major zones noted on the boring logs. The stratification lines designating the interfaces between earth materials on the boring logs and profiles are approximate; in situ, the transitions may be gradual.

Unconfined compressive strength tests were performed on cohesive soil samples with the use of a calibrated hand penetrometer. In the hand penetrometer test, the unconfined compressive strength of a soil sample is estimated, to a maximum of 4½ tons per square foot (tsf) by measuring the resistance of a soil sample to penetration of a small, calibrated spring-loaded cylinder.

The soil samples will be retained in our laboratory for a period of 60 days, after which, they will be discarded unless other instructions are received as to their disposal.

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CLOSING

We recommend that the construction activities be monitored by CGMT to provide the necessary overview and to check the suitability of the subgrade soils for supporting the foundations. Once final loads become available, CGMT must be contacted to review the recommendations presented herein.

This report has been prepared in order to aid in the evaluation of this property and to assist the architect and/or engineer in the design of this project. The scope is limited to the specific project and locations described herein and our description of the project represents our understanding of the significant aspects relative to soil and foundation characteristics. In the event that any change in the nature or location of the proposed construction outlined in this report are planned, we should be informed so that the changes can be reviewed and the conclusions of this report modified or approved in writing by the geotechnical engineer. It is recommended that all construction operations dealing with earthwork and foundations be reviewed by an experienced geotechnical engineer to provide information on which to base a decision as to whether the design requirements are fulfilled in the actual construction. If you wish, we would welcome the opportunity to provide field construction services for you during construction.

The analysis and recommendations submitted in this report are based upon the data obtained from the soil borings and tests performed at the locations as indicated on the Boring Location Plan and other information referenced in this report. This report does not reflect any variations, which may occur between the borings. In the performance of the subsurface exploration, specific information is obtained at specific locations at specific times. However, it is a well-known fact that variations in soil conditions exist on most sites between boring locations and also such situations as groundwater levels vary from time to time. The nature and extent of variations may not become evident until the course of construction. If variations then appear evident, after performing on-site observations during the construction period and noting characteristics and variations, a reevaluation of the recommendations for this report will be necessary.

APPENDIX

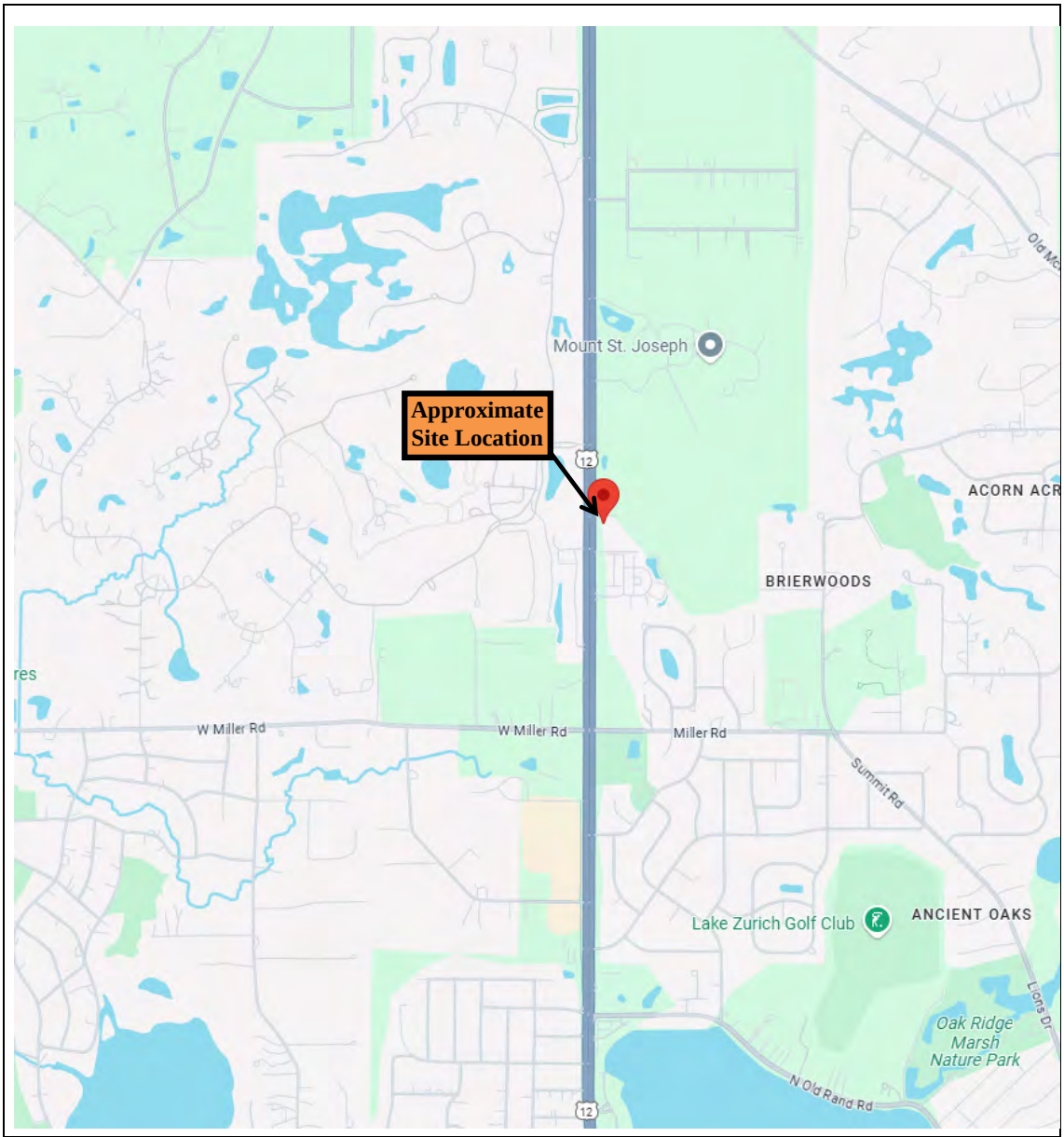
Vicinity Map

Boring Location Plan

Boring Logs

Unified Soil Classification System

Reference Notes for Boring Logs



	VICINITY MAP	N	**CGMT Project No. 25G0361** **Luxe Corsa Car Condos** **24455 N. U.S. Highway 12** **Lake Zurich, Lake County, Illinois 60047**

Drawing Not To Scale

LEGEND

- Approximate Soil Boring Location

N

Soil Boring Location Diagram	
Luxe Corsa Car Condos	
24455 N. U.S. Highway 12 Lake Zurich, Illinois 60047	
Project Manager	Project Number
P. Patel	25G0361
Date	Sheet Number
7/7/2025	Fig. 1

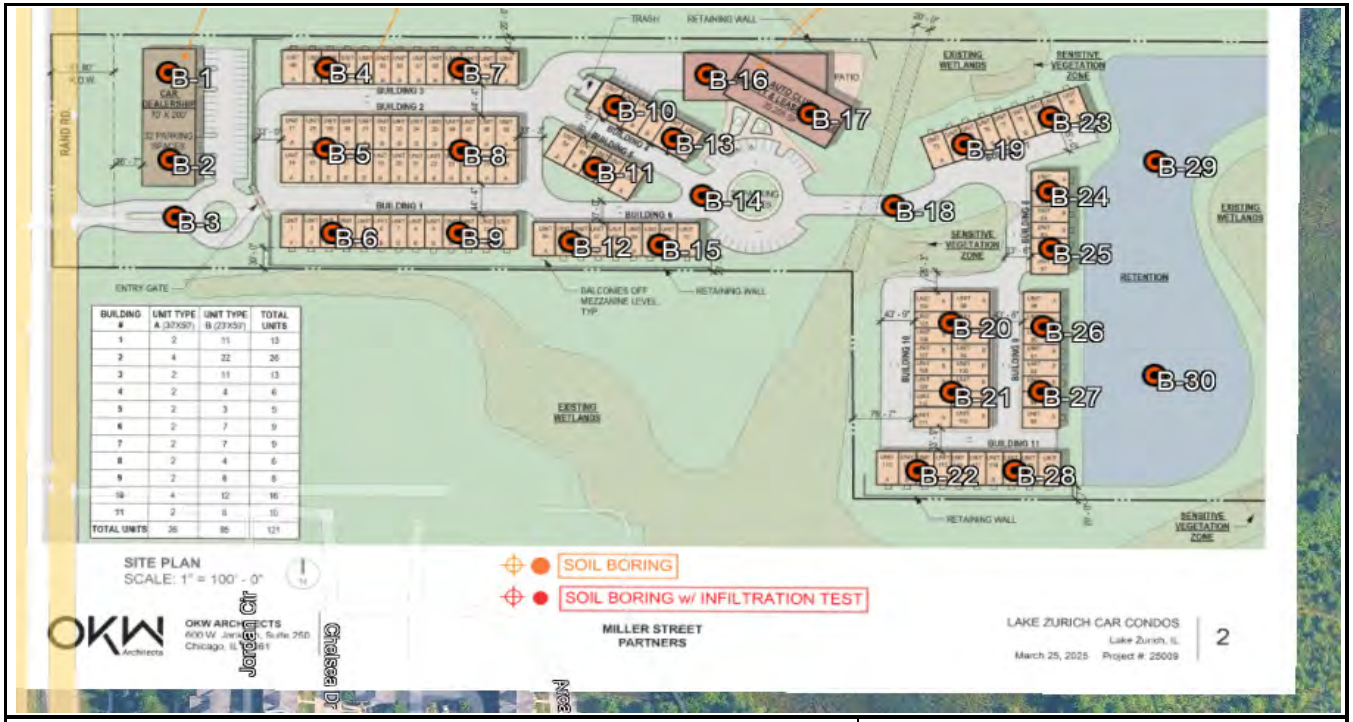
Drawing Not To Scale

LEGEND

- Approximate Soil Boring Location

N

Soil Boring Location Diagram	
Luxe Corsa Car Condos	
24455 N. U.S. Highway 12 Lake Zurich, Illinois 60047	
Project Manager	Project Number
P. Patel	25G0361
Date	Sheet Number
7/7/2025	Fig. 2



Drawing Not To Scale

LEGEND

- Approximate Soil Boring Location

Soil Boring Location Diagram	
Luxe Corsa Car Condos	
24455 N. U.S. Highway 12 Lake Zurich, Illinois 60047	
Project Manager	Project Number
P. Patel	25G0361
Date	Sheet Number
7/7/2025	Fig. 3

Soil Boring Log

Construction & Geotechnical Material Testing, Inc.
60 Martin Lane, Elk Grove Village, Illinois 60007
Telephone (630) 595-1111 ♦ Fax (630) 595-1110

Soil Boring Prepared for:
Mr. Romeo Kapudija
Luxe Corsa Partners, LLC. / Luxes Corsa Auto Suites
601 Dundee Avenue
East Dundee, Illinois 60118

Boring No.: B-01
Date: Tuesday, June 17, 2025
Project: Luxe Corsa Car Condos
24455 N. U.S. Highway 12
Lake Zurich, Illinois 60047
Project No.: 25G0361
Boring Location: See Boring Location Diagram
Logged By: B.A.S.
Ground Elevation:

Elevation	Depth	Strata	Soil / Rock Description	Sample Type & No. Depth Interval (Ft) Recovery (in)	Blow Count	Moisture Content (%)	Unconfined Compressive Strength (TSF)	Notes & Test Results
	0.0		Approximately 17" of Gravel, Trace Sand (GP FILL)					Unconfined compressive strength of soil samples estimated using a calibrated penetrometer.
	1.0		Silty Clay, Trace Sand and Gravel, black, brown and gray, stiff (CL FILL)	SS-1 1.0' - 2.5' 18" Recovery	4 7 4	15.6	1.25	
	2.0							
	3.0							
	4.0		Sand and Gravel, black, brown and gray, very loose (SP-GP FILL) Saturated	SS-2 3.5' - 5.0' 6" Recovery	5 1 2	19.6	-	
	5.0							
	6.0		Silty Clay, Trace Sand and Gravel, brown and gray, stiff to very stiff (CL)	SS-3 6.0' - 7.5' 18" Recovery	4 5 8	16.4	1.5	
	7.0							
	8.0							
	9.0			SS-4 8.5' - 10.0' 18" Recovery	7 10 12	15.2	2.75	
	10.0							
	11.0							
	12.0							
	13.0							
	14.0			SS-5 13.5' - 15.0' 18" Recovery	5 8 11	12.8	2.25	
	15.0							
	16.0							
	17.0							
	18.0							
	19.0			SS-6 18.5' - 20.0' 18" Recovery	5 9 8	13.5	2.0	
	20.0		END of BORING at 20 Feet					

Drilling Contractor:	CGMT, Inc.	**Water Level (Ft.)**	
Drilling Method:	3¼" O.D. H.S.A. Split Spoon Sampling	**During Drilling:**	None
Drilling Equipment:	CME-45C Truck Mounted Drill Rig	**Immediately After Drilling:**	None
	REVIEWED BY: NPW		

Soil Boring Log

Construction & Geotechnical Material Testing, Inc.
60 Martin Lane, Elk Grove Village, Illinois 60007
Telephone (630) 595-1111 ♦ Fax (630) 595-1110

Soil Boring Prepared for:
Mr. Romeo Kapudija
Luxe Corsa Partners, LLC. / Luxes Corsa Auto Suites
601 Dundee Avenue
East Dundee, Illinois 60118

Boring No.: B-02
Date: Tuesday, June 17, 2025
Project: Luxe Corsa Car Condos
24455 N. U.S. Highway 12
Lake Zurich, Illinois 60047
Project No.: 25G0361
Boring Location: See Boring Location Diagram
Logged By: B.A.S.
Ground Elevation:

Elevation	Depth	Strata	Soil / Rock Description	Sample Type & No. Depth Interval (Ft) Recovery (in)	Blow Count	Moisture Content (%)	Unconfined Compressive Strength (TSF)	Notes & Test Results
	0.0		Approximately 14" of Gravel, Trace Sand (GP FILL)					Unconfined compressive strength of soil samples estimated using a calibrated penetrometer.
	1.0		Silty Clay, Trace Sand and Gravel, black, brown and gray, firm to stiff (CL FILL)	SS-1 1.0' - 2.5' 18" Recovery	4 5 5	12.4	1.25	
	2.0							
	3.0			SS-2 3.5' - 5.0' 18" Recovery	3 4 3	9.1	0.75	
	4.0							
	5.0			SS-3 6.0' - 7.5' 18" Recovery	3 4 4	10.9	1.0	
	6.0							
	7.0			SS-4 8.5' - 10.0' 18" Recovery	4 4 6	24.6	1.25	
	8.0							
	9.0							
	10.0							
	11.0							
	12.0							
	13.0		Silty Clay, Trace Sand and Gravel, brown and gray, very stiff (CL)	SS-5 13.5' - 15.0' 18" Recovery	6 8 10	12.9	2.25	
	14.0							
	15.0		END of BORING at 15 Feet					
	16.0							
	17.0							
	18.0							
	19.0							
	20.0							

Drilling Contractor:	CGMT, Inc.	**Water Level (Ft.)**	
Drilling Method:	3¼" O.D. H.S.A. Split Spoon Sampling	**During Drilling:**	None
Drilling Equipment:	CME-45C Truck Mounted Drill Rig	**Immediately After Drilling:**	None
	REVIEWED BY: NPW		

Soil Boring Log

Construction & Geotechnical Material Testing, Inc.
60 Martin Lane, Elk Grove Village, Illinois 60007
Telephone (630) 595-1111 ♦ Fax (630) 595-1110

Soil Boring Prepared for:
Mr. Romeo Kapudija
Luxe Corsa Partners, LLC. / Luxes Corsa Auto Suites
601 Dundee Avenue
East Dundee, Illinois 60118

Boring No.: B-03
Date: Tuesday, June 17, 2025
Project: Luxe Corsa Car Condos
24455 N. U.S. Highway 12
Lake Zurich, Illinois 60047
Project No.: 25G0361
Boring Location: See Boring Location Diagram
Logged By: B.A.S.
Ground Elevation:

Elevation	Depth	Strata	Soil / Rock Description	Sample Type & No. Depth Interval (Ft) Recovery (in)	Blow Count	Moisture Content (%)	Unconfined Compressive Strength (TSF)	Notes & Test Results
	0.0		Approximately 14" of Gravel, Trace Sand (GP FILL)					Unconfined compressive strength of soil samples estimated using a calibrated penetrometer.
	1.0		Sand and Gravel, black, brown and gray, loose to medium dense (SP-GP FILL)	SS-1 1.0' - 2.5' 18" Recovery	4 6 7	5.1	-	
	2.0							
	3.0							
	4.0			SS-2 3.5' - 5.0' 6" Recovery	3 3 5	9.8	-	
	5.0							
	6.0		Silty Clay, Trace Sand and Gravel, brown and gray, stiff to very stiff (CL)	SS-3 6.0' - 7.5' 18" Recovery	4 5 8	18.2	1.5	
	7.0							
	8.0							
	9.0			SS-4 8.5' - 10.0' 18" Recovery	4 6 8	15.6	1.75	
	10.0							
	11.0							
	12.0							
	13.0							
	14.0			SS-5 13.5' - 15.0' 18" Recovery	6 8 9	12.1	2.0	
	15.0							
	16.0							
	17.0							
	18.0							
	19.0			SS-6 18.5' - 20.0' 18" Recovery	5 6 8	13.2	1.75	
	20.0		END of BORING at 20 Feet					

Drilling Contractor:	CGMT, Inc.	**Water Level (Ft.)**	
Drilling Method:	3¼" O.D. H.S.A. Split Spoon Sampling	**During Drilling:**	None
Drilling Equipment:	CME-45C Truck Mounted Drill Rig	**Immediately After Drilling:**	None
	REVIEWED BY: NPW		

Soil Boring Log

Construction & Geotechnical Material Testing, Inc.
60 Martin Lane, Elk Grove Village, Illinois 60007
Telephone (630) 595-1111 ♦ Fax (630) 595-1110

Soil Boring Prepared for:
Mr. Romeo Kapudija
Luxe Corsa Partners, LLC. / Luxes Corsa Auto Suites
601 Dundee Avenue
East Dundee, Illinois 60118

Boring No.: B-04
Date: Tuesday, June 17, 2025
Project: Luxe Corsa Car Condos
24455 N. U.S. Highway 12
Lake Zurich, Illinois 60047
Project No.: 25G0361
Boring Location: See Boring Location Diagram
Logged By: B.A.S.
Ground Elevation:

Elevation	Depth	Strata	Soil / Rock Description	Sample Type & No. Depth Interval (Ft) Recovery (in)	Blow Count	Moisture Content (%)	Unconfined Compressive Strength (TSF)	Notes & Test Results
	0.0		Approximately 12" of Gravel, Trace Sand (GP FILL)					Unconfined compressive strength of soil samples estimated using a calibrated penetrometer.
	1.0		Silty Clay, Trace Sand and Gravel, black, brown and gray, stiff (CL FILL)	SS-1 1.0' - 2.5' 18" Recovery	3 5 6	16.7	1.25	
	2.0							
	3.0							
				SS-2 3.5' - 5.0' 18" Recovery	3 4 4	17.7	1.0	**Dry Density:** 3.5' - 5.0' = 106.3 lbs./ft³
	4.0							
	5.0							
	6.0			SS-3 6.0' - 7.5' 18" Recovery	4 5 7	23.4	1.5	
	7.0							
	8.0							
	9.0		Silty Clay, Trace Sand and Gravel, brown and gray, very stiff (CL)	SS-4 8.5' - 10.0' 18" Recovery	5 10 13	16.7	2.75	
	10.0							
	11.0							
	12.0							
	13.0							
				SS-5 13.5' - 15.0' 18" Recovery	6 8 9	15.9	2.0	
	14.0							
	15.0		END of BORING at 15 Feet					
	16.0							
	17.0							
	18.0							
	19.0							
	20.0							

Drilling Contractor:	CGMT, Inc.	**Water Level (Ft.)**	
Drilling Method:	3¼" O.D. H.S.A. Split Spoon Sampling	**During Drilling:**	None
Drilling Equipment:	CME-45C Truck Mounted Drill Rig	**Immediately After Drilling:**	None
	REVIEWED BY: NPW		

Soil Boring Log

Construction & Geotechnical Material Testing, Inc.
60 Martin Lane, Elk Grove Village, Illinois 60007
Telephone (630) 595-1111 ♦ Fax (630) 595-1110

Soil Boring Prepared for:
Mr. Romeo Kapudija
Luxe Corsa Partners, LLC. / Luxes Corsa Auto Suites
601 Dundee Avenue
East Dundee, Illinois 60118

Boring No.: B-05
Date: Tuesday, June 17, 2025
Project: Luxe Corsa Car Condos
24455 N. U.S. Highway 12
Lake Zurich, Illinois 60047
Project No.: 25G0361
Boring Location: See Boring Location Diagram
Logged By: B.A.S.
Ground Elevation:

Elevation	Depth	Strata	Soil / Rock Description	Sample Type & No. Depth Interval (Ft) Recovery (in)	Blow Count	Moisture Content (%)	Unconfined Compressive Strength (TSF)	Notes & Test Results
	0.0		Approximately 12" of Gravel, Trace Sand (GP FILL)					Unconfined compressive strength of soil samples estimated using a calibrated penetrometer.
	1.0		Silty Clay, Trace Sand and Gravel, black, brown and gray, soft to stiff (CL FILL)	SS-1 1.0' - 2.5' 12" Recovery	2 3 5	13.6	1.0	
	2.0							
	3.0			SS-2 3.5' - 5.0' 18" Recovery	3 1 2	15.2	0.25	
	4.0							
	5.0			SS-3 6.0' - 7.5' 18" Recovery	2 2 2	21.4	0.5	
	6.0							
	7.0							
	8.0		Sand and Gravel, black, brown and gray, medium dense (SP-GP FILL)	SS-4 8.5' - 10.0' 18" Recovery	4 5 7	12.5	-	
	9.0							
	10.0							
	11.0							
	12.0							
	13.0		Silty Clay, Trace Sand and Gravel, brown and gray, very stiff (CL)	SS-5 13.5' - 15.0' 18" Recovery	7 8 8	15.8	2.0	
	14.0							
	15.0		END of BORING at 15 Feet					
	16.0							
	17.0							
	18.0							
	19.0							
	20.0							

Drilling Contractor:	CGMT, Inc.	**Water Level (Ft.)**	
Drilling Method:	3¼" O.D. H.S.A. Split Spoon Sampling	**During Drilling:**	None
Drilling Equipment:	CME-45C Truck Mounted Drill Rig	**Immediately After Drilling:**	None
	REVIEWED BY: NPW		

Soil Boring Log

Construction & Geotechnical Material Testing, Inc.
60 Martin Lane, Elk Grove Village, Illinois 60007
Telephone (630) 595-1111 ♦ Fax (630) 595-1110

Soil Boring Prepared for:
Mr. Romeo Kapudija
Luxe Corsa Partners, LLC. / Luxes Corsa Auto Suites
601 Dundee Avenue
East Dundee, Illinois 60118

Boring No.: B-06
Date: Tuesday, June 17, 2025
Project: Luxe Corsa Car Condos
24455 N. U.S. Highway 12
Lake Zurich, Illinois 60047
Project No.: 25G0361
Boring Location: See Boring Location Diagram
Logged By: B.A.S.
Ground Elevation:

Elevation	Depth	Strata	Soil / Rock Description	Sample Type & No. Depth Interval (Ft) Recovery (in)	Blow Count	Moisture Content (%)	Unconfined Compressive Strength (TSF)	Notes & Test Results
	0.0		Approximately 5" of Topsoil					Unconfined compressive strength of soil samples estimated using a calibrated penetrometer.
	1.0		Silty Clay, Trace Sand and Gravel, black, brown and gray, firm to stiff (CL FILL)	SS-1 1.0' - 2.5' 6" Recovery	3 3 8	8.7	1.25	
	2.0							
	3.0							
	4.0			SS-2 3.5' - 5.0' 18" Recovery	5 7 5	15.8	1.5	
	5.0							
	6.0			SS-3 6.0' - 7.5' 18" Recovery	2 3 4	20.7	0.75	
	7.0							
	8.0							
	9.0		Sand and Gravel, black, brown and gray, medium dense (SP-GP FILL)	SS-4 8.5' - 10.0' 12" Recovery	7 10 3	7.5	-	
	10.0							
	11.0							
	12.0							
	13.0							
	14.0		Silty Clay, Trace Sand and Gravel, black, brown and gray, stiff (CL FILL)	SS-5 13.5' - 15.0' 18" Recovery	5 5 6	23.6	1.25	**Dry Density:** 13.5' - 15.0' = 101.7 lbs./ft³
	15.0		END of BORING at 15 Feet					
	16.0							
	17.0							
	18.0							
	19.0							
	20.0							

Drilling Contractor:	CGMT, Inc.	**Water Level (Ft.)**	
Drilling Method:	3¼" O.D. H.S.A. Split Spoon Sampling	**During Drilling:**	None
Drilling Equipment:	CME-45C Truck Mounted Drill Rig	**Immediately After Drilling:**	None
	REVIEWED BY: NPW		

Soil Boring Log

Construction & Geotechnical Material Testing, Inc.
60 Martin Lane, Elk Grove Village, Illinois 60007
Telephone (630) 595-1111 ♦ Fax (630) 595-1110

Soil Boring Prepared for:
Mr. Romeo Kapudija
Luxe Corsa Partners, LLC. / Luxes Corsa Auto Suites
601 Dundee Avenue
East Dundee, Illinois 60118

Boring No.: B-07
Date: Friday, June 13, 2025
Project: Luxe Corsa Car Condos
24455 N. U.S. Highway 12
Lake Zurich, Illinois 60047
Project No.: 25G0361
Boring Location: See Boring Location Diagram
Logged By: B.A.S.
Ground Elevation:

Elevation	Depth	Strata	Soil / Rock Description	Sample Type & No. Depth Interval (Ft) Recovery (in)	Blow Count	Moisture Content (%)	Unconfined Compressive Strength (TSF)	Notes & Test Results
	0.0		Approximately 6" of Topsoil					Unconfined compressive strength of soil samples estimated using a calibrated penetrometer.
	1.0		Silty Clay, Trace Sand and Gravel, brown and gray, stiff to hard (CL)	SS-1 1.0' - 2.5' 18" Recovery	4 5 10	13.2	1.75	
	2.0							
	3.0			SS-2 3.5' - 5.0' 18" Recovery	5 12 17	14.3	3.5	
	4.0							
	5.0			SS-3 6.0' - 7.5' 18" Recovery	7 12 16	14.3	3.5	
	6.0							
	7.0			SS-4 8.5' - 10.0' 18" Recovery	5 8 9	13.9	2.0	
	8.0							
	9.0							
	10.0							
	11.0							
	12.0							
	13.0			SS-5 13.5' - 15.0' 18" Recovery	10 12 20	11.9	4.0	
	14.0							
	15.0		END of BORING at 15 Feet					
	16.0							
	17.0							
	18.0							
	19.0							
	20.0							

Drilling Contractor:	CGMT, Inc.	**Water Level (Ft.)**	
Drilling Method:	3¼" O.D. H.S.A. Split Spoon Sampling	**During Drilling:**	None
Drilling Equipment:	CME-45C Truck Mounted Drill Rig	**Immediately After Drilling:**	None
	REVIEWED BY: NPW		

Soil Boring Log

Construction & Geotechnical Material Testing, Inc.
60 Martin Lane, Elk Grove Village, Illinois 60007
Telephone (630) 595-1111 ♦ Fax (630) 595-1110

Soil Boring Prepared for:
Mr. Romeo Kapudija
Luxe Corsa Partners, LLC. / Luxes Corsa Auto Suites
601 Dundee Avenue
East Dundee, Illinois 60118

Boring No.: B-08
Date: Friday, June 13, 2025
Project: Luxe Corsa Car Condos
24455 N. U.S. Highway 12
Lake Zurich, Illinois 60047
Project No.: 25G0361
Boring Location: See Boring Location Diagram
Logged By: B.A.S.
Ground Elevation:

Elevation	Depth	Strata	Soil / Rock Description	Sample Type & No. Depth Interval (Ft) Recovery (in)	Blow Count	Moisture Content (%)	Unconfined Compressive Strength (TSF)	Notes & Test Results
	0.0		Approximately 18" of Topsoil					Unconfined compressive strength of soil samples estimated using a calibrated penetrometer.
	1.0			SS-1	3	-	-	
	2.0		Silty Clay, Trace Sand and Gravel, black, brown and gray, stiff (CL FILL)	1.0' - 2.5' 18" Recovery	5 7	22.0	1.5	**Dry Density:** 1.5' - 2.5' = 100.5 lbs./ft³
	3.0							
	4.0		Silty Clay, Trace Sand and Gravel, brown and gray, stiff to hard (CL)	SS-2 3.5' - 5.0' 18" Recovery	4 5 10	17.5	1.75	
	5.0							
	6.0			SS-3 6.0' - 7.5' 18" Recovery	6 9 13	16.5	2.75	
	7.0							
	8.0							
	9.0			SS-4 8.5' - 10.0' 18" Recovery	5 10 14	16.9	3.0	
	10.0							
	11.0							
	12.0							
	13.0							
	14.0			SS-5 13.5' - 15.0' 18" Recovery	7 15 18	12.8	4.0	
	15.0		END of BORING at 15 Feet					
	16.0							
	17.0							
	18.0							
	19.0							
	20.0							

Drilling Contractor:	CGMT, Inc.	**Water Level (Ft.)**	
Drilling Method:	3¼" O.D. H.S.A. Split Spoon Sampling	**During Drilling:**	None
Drilling Equipment:	CME-45C Truck Mounted Drill Rig	**Immediately After Drilling:**	None
	REVIEWED BY: NPW		

Soil Boring Log

Construction & Geotechnical Material Testing, Inc.
60 Martin Lane, Elk Grove Village, Illinois 60007
Telephone (630) 595-1111 ♦ Fax (630) 595-1110

Soil Boring Prepared for:
Mr. Romeo Kapudija
Luxe Corsa Partners, LLC. / Luxes Corsa Auto Suites
601 Dundee Avenue
East Dundee, Illinois 60118

Boring No.: B-09
Date: Tuesday, June 17, 2025
Project: Luxe Corsa Car Condos
24455 N. U.S. Highway 12
Lake Zurich, Illinois 60047
Project No.: 25G0361
Boring Location: See Boring Location Diagram
Logged By: B.A.S.
Ground Elevation:

Elevation	Depth	Strata	Soil / Rock Description	Sample Type & No. Depth Interval (Ft) Recovery (in)	Blow Count	Moisture Content (%)	Unconfined Compressive Strength (TSF)	Notes & Test Results
	0.0		Approximately 10" of Topsoil					Unconfined compressive strength of soil samples estimated using a calibrated penetrometer.
	1.0		Silty Clay, Trace Sand and Gravel, black, brown and gray, stiff (CL FILL)	SS-1 1.0' - 2.5' 18" Recovery	4 5 5	12.9	1.25	
	2.0							
	3.0			SS-2 3.5' - 5.0' 18" Recovery	3 4 4	14.8	1.0	
	4.0							
	5.0			SS-3 6.0' - 7.5' 18" Recovery	3 4 4	22.0	1.0	**Dry Density:** 6.0' - 7.5' = 100.5 lbs./ft³
	6.0							
	7.0							
	8.0			SS-4 8.5' - 10.0' 18" Recovery	5 5 4	23.3	1.0	
	9.0							
	10.0							
	11.0							
	12.0							
	13.0		Silty Clay, Trace Sand and Gravel, brown and gray, very stiff (CL)	SS-5 13.5' - 15.0' 18" Recovery	6 11 13	15.6	3.0	
	14.0							
	15.0		END of BORING at 15 Feet					
	16.0							
	17.0							
	18.0							
	19.0							
	20.0							

Drilling Contractor:	CGMT, Inc.	**Water Level (Ft.)**	
Drilling Method:	3¼" O.D. H.S.A. Split Spoon Sampling	**During Drilling:**	None
Drilling Equipment:	CME-45C Truck Mounted Drill Rig	**Immediately After Drilling:**	None
	REVIEWED BY: NPW		

Soil Boring Log

Construction & Geotechnical Material Testing, Inc.
60 Martin Lane, Elk Grove Village, Illinois 60007
Telephone (630) 595-1111 ♦ Fax (630) 595-1110

Soil Boring Prepared for:
Mr. Romeo Kapudija
Luxe Corsa Partners, LLC. / Luxes Corsa Auto Suites
601 Dundee Avenue
East Dundee, Illinois 60118

Boring No.: B-10
Date: Friday, June 13, 2025
Project: Luxe Corsa Car Condos
24455 N. U.S. Highway 12
Lake Zurich, Illinois 60047
Project No.: 25G0361
Boring Location: See Boring Location Diagram
Logged By: B.A.S.
Ground Elevation:

Elevation	Depth	Strata	Soil / Rock Description	Sample Type & No. Depth Interval (Ft) Recovery (in)	Blow Count	Moisture Content (%)	Unconfined Compressive Strength (TSF)	Notes & Test Results
	0.0		Approximately 10" of Topsoil					Unconfined compressive strength of soil samples estimated using a calibrated penetrometer.
	1.0		Silty Clay, Trace Sand and Gravel, black, brown and gray, stiff (CL FILL)	SS-1 1.0' - 2.5' 18" Recovery	4 5 10	14.6	1.75	
	2.0							
	3.0							
	4.0		Silty Clay, Trace Sand and Gravel, brown and gray, very stiff (CL)	SS-2 3.5' - 5.0' 18" Recovery	5 8 11	14.8	2.25	
	5.0							
	6.0			SS-3 6.0' - 7.5' 18" Recovery	8 11 17	15.5	3.5	
	7.0							
	8.0							
	9.0			SS-4 8.5' - 10.0' 18" Recovery	9 11 12	16.0	2.75	
	10.0							
	11.0							
	12.0							
	13.0							
	14.0			SS-5 13.5' - 15.0' 18" Recovery	6 9 11	11.4	2.5	
	15.0		END of BORING at 15 Feet					
	16.0							
	17.0							
	18.0							
	19.0							
	20.0							

Drilling Contractor:	CGMT, Inc.	**Water Level (Ft.)**	
Drilling Method:	3¼" O.D. H.S.A. Split Spoon Sampling	**During Drilling:**	None
Drilling Equipment:	CME-45C Truck Mounted Drill Rig	**Immediately After Drilling:**	None
	REVIEWED BY: NPW		

Soil Boring Log

Construction & Geotechnical Material Testing, Inc.
60 Martin Lane, Elk Grove Village, Illinois 60007
Telephone (630) 595-1111 ♦ Fax (630) 595-1110

Soil Boring Prepared for:
Mr. Romeo Kapudija
Luxe Corsa Partners, LLC. / Luxes Corsa Auto Suites
601 Dundee Avenue
East Dundee, Illinois 60118

Boring No.: B-11
Date: Friday, June 13, 2025
Project: Luxe Corsa Car Condos
24455 N. U.S. Highway 12
Lake Zurich, Illinois 60047
Project No.: 25G0361
Boring Location: See Boring Location Diagram
Logged By: B.A.S.
Ground Elevation:

Elevation	Depth	Strata	Soil / Rock Description	Sample Type & No. Depth Interval (Ft) Recovery (in)	Blow Count	Moisture Content (%)	Unconfined Compressive Strength (TSF)	Notes & Test Results
	0.0		Approximately 12" of Topsoil					Unconfined compressive strength of soil samples estimated using a calibrated penetrometer.
	1.0		Silty Clay, Trace Sand and Gravel, brown and gray, stiff to very stiff (CL)	SS-1 1.0' - 2.5' 18" Recovery	3 5 9	16.1	1.75	
	2.0							
	3.0			SS-2 3.5' - 5.0' 18" Recovery	5 8 10	15.4	2.25	
	4.0							
	5.0							
	6.0			SS-3 6.0' - 7.5' 18" Recovery	7 9 13	15.6	2.75	
	7.0							
	8.0							
	9.0			SS-4 8.5' - 10.0' 18" Recovery	5 8 12	16.5	2.5	
	10.0							
	11.0							
	12.0							
	13.0							
	14.0			SS-5 13.5' - 15.0' 18" Recovery	7 10 10	12.7	2.5	
	15.0		END of BORING at 15 Feet					
	16.0							
	17.0							
	18.0							
	19.0							
	20.0							

Drilling Contractor: CGMT, Inc.
Drilling Method: 3¼" O.D. H.S.A. Split Spoon Sampling
Drilling Equipment: CME-45C Truck Mounted Drill Rig
REVIEWED BY: NPW

Water Level (Ft.)
During Drilling: None
Immediately After Drilling: None

Soil Boring Log

Construction & Geotechnical Material Testing, Inc.
60 Martin Lane, Elk Grove Village, Illinois 60007
Telephone (630) 595-1111 ♦ Fax (630) 595-1110

Soil Boring Prepared for:
Mr. Romeo Kapudija
Luxe Corsa Partners, LLC. / Luxes Corsa Auto Suites
601 Dundee Avenue
East Dundee, Illinois 60118

Boring No.: B-12
Date: Tuesday, June 17, 2025
Project: Luxe Corsa Car Condos
24455 N. U.S. Highway 12
Lake Zurich, Illinois 60047
Project No.: 25G0361
Boring Location: See Boring Location Diagram
Logged By: B.A.S.
Ground Elevation:

Elevation	Depth	Strata	Soil / Rock Description	Sample Type & No. Depth Interval (Ft) Recovery (in)	Blow Count	Moisture Content (%)	Unconfined Compressive Strength (TSF)	Notes & Test Results
	0.0		Approximately 6" of Topsoil					Unconfined compressive strength of soil samples estimated using a calibrated penetrometer.
	1.0		Silty Clay, Trace Sand and Gravel, black, brown and gray, very stiff (CL FILL)	SS-1 1.0' - 2.5' 18" Recovery	5 6 10	16.7	2.0	
	2.0							
	3.0							
			Silty Clay, Trace Sand and Gravel, brown and gray, very stiff (CL)	SS-2 3.5' - 5.0' 18" Recovery	4 8 12	15.5	2.5	
	4.0							
	5.0							
	6.0			SS-3 6.0' - 7.5' 18" Recovery	6 8 9	17.1	2.0	
	7.0							
	8.0							
	9.0			SS-4 8.5' - 10.0' 18" Recovery	10 8 11	17.8	2.25	
	10.0							
	11.0							
	12.0							
	13.0							
	14.0			SS-5 13.5' - 15.0' 18" Recovery	6 7 10	14.9	2.0	
	15.0		END of BORING at 15 Feet					
	16.0							
	17.0							
	18.0							
	19.0							
	20.0							

Drilling Contractor:	CGMT, Inc.	**Water Level (Ft.)**	
Drilling Method:	3¼" O.D. H.S.A. Split Spoon Sampling	**During Drilling:**	None
Drilling Equipment:	CME-45C Truck Mounted Drill Rig	**Immediately After Drilling:**	None
	REVIEWED BY: NPW		

Soil Boring Log

Construction & Geotechnical Material Testing, Inc.
60 Martin Lane, Elk Grove Village, Illinois 60007
Telephone (630) 595-1111 ♦ Fax (630) 595-1110

Soil Boring Prepared for:
Mr. Romeo Kapudija
Luxe Corsa Partners, LLC. / Luxes Corsa Auto Suites
601 Dundee Avenue
East Dundee, Illinois 60118

Boring No.: B-13
Date: Friday, June 13, 2025
Project: Luxe Corsa Car Condos
24455 N. U.S. Highway 12
Lake Zurich, Illinois 60047
Project No.: 25G0361
Boring Location: See Boring Location Diagram
Logged By: B.A.S.
Ground Elevation:

Sheet 1 of 1

Elevation	Depth	Strata	Soil / Rock Description	Sample Type & No. Depth Interval (Ft) Recovery (in)	Blow Count	Moisture Content (%)	Unconfined Compressive Strength (TSF)	Notes & Test Results
	0.0		Approximately 11" of Topsoil					Unconfined compressive strength of soil samples estimated using a calibrated penetrometer.
	1.0		Silty Clay, Trace Sand and Gravel, black, brown and gray, very stiff (CL FILL)	SS-1 1.0' - 2.5' 18" Recovery	4 6 10	14.9	2.0	
	2.0							
	3.0							
			Silty Clay, Trace Sand and Gravel, brown and gray, very stiff (CL)	SS-2 3.5' - 5.0' 18" Recovery	4 10 12	16.0	2.75	
	4.0							
	5.0							
	6.0			SS-3 6.0' - 7.5' 18" Recovery	6 8 13	14.0	2.5	
	7.0							
	8.0							
	9.0			SS-4 8.5' - 10.0' 18" Recovery	7 11 12	16.6	2.75	
	10.0							
	11.0							
	12.0							
	13.0							
	14.0			SS-5 13.5' - 15.0' 18" Recovery	6 8 11	14.9	2.25	
	15.0		END of BORING at 15 Feet					
	16.0							
	17.0							
	18.0							
	19.0							
	20.0							

Drilling Contractor:	CGMT, Inc.	**Water Level (Ft.)**	
Drilling Method:	3¼" O.D. H.S.A. Split Spoon Sampling	**During Drilling:**	None
Drilling Equipment:	CME-45C Truck Mounted Drill Rig	**Immediately After Drilling:**	None
	REVIEWED BY: NPW		

Soil Boring Log

Construction & Geotechnical Material Testing, Inc.
60 Martin Lane, Elk Grove Village, Illinois 60007
Telephone (630) 595-1111 ♦ Fax (630) 595-1110

Soil Boring Prepared for:
Mr. Romeo Kapudija
Luxe Corsa Partners, LLC. / Luxes Corsa Auto Suites
601 Dundee Avenue
East Dundee, Illinois 60118

Boring No.: B-14
Date: Monday, June 16, 2025
Project: Luxe Corsa Car Condos
24455 N. U.S. Highway 12
Lake Zurich, Illinois 60047
Project No.: 25G0361
Boring Location: See Boring Location Diagram
Logged By: B.A.S.
Ground Elevation:

Elevation	Depth	Strata	Soil / Rock Description	Sample Type & No. Depth Interval (Ft) Recovery (in)	Blow Count	Moisture Content (%)	Unconfined Compressive Strength (TSF)	Notes & Test Results
	0.0		Approximately 12" of Topsoil					Unconfined compressive strength of soil samples estimated using a calibrated penetrometer.
	1.0		Silty Clay, Trace Sand and Gravel, black, brown and gray, stiff (CL FILL)	SS-1 1.0' - 2.5' 18" Recovery	4 6 7	14.8	1.5	
	2.0							
	3.0							
			Silty Clay, Trace Sand and Gravel, brown and gray, very stiff (CL)	SS-2 3.5' - 5.0' 18" Recovery	3 8 9	15.8	2.0	
	4.0							
	5.0							
	6.0			SS-3 6.0' - 7.5' 18" Recovery	4 8 9	16.5	2.0	
	7.0							
	8.0							
	9.0			SS-4 8.5' - 10.0' 18" Recovery	6 7 9	17.1	2.0	
	10.0							
	11.0							
	12.0							
	13.0							
	14.0		Silty Clay, Trace Sand and Gravel, gray, stiff (CL)	SS-5 13.5' - 15.0' 18" Recovery	4 7 8	15.0	1.75	
	15.0		END of BORING at 15 Feet					
	16.0							
	17.0							
	18.0							
	19.0							
	20.0							

Drilling Contractor:	CGMT, Inc.	**Water Level (Ft.)**	
Drilling Method:	3¼" O.D. H.S.A. Split Spoon Sampling	**During Drilling:**	None
Drilling Equipment:	CME-45C Truck Mounted Drill Rig	**Immediately After Drilling:**	None
	REVIEWED BY: NPW		

Soil Boring Log

Construction & Geotechnical Material Testing, Inc.
60 Martin Lane, Elk Grove Village, Illinois 60007
Telephone (630) 595-1111 ♦ Fax (630) 595-1110

Soil Boring Prepared for:
Mr. Romeo Kapudija
Luxe Corsa Partners, LLC. / Luxes Corsa Auto Suites
601 Dundee Avenue
East Dundee, Illinois 60118

Boring No.: B-15
Date: Tuesday, June 17, 2025
Project: Luxe Corsa Car Condos
24455 N. U.S. Highway 12
Lake Zurich, Illinois 60047
Project No.: 25G0361
Boring Location: See Boring Location Diagram
Logged By: B.A.S.
Ground Elevation:

Elevation	Depth	Strata	Soil / Rock Description	Sample Type & No. Depth Interval (Ft) Recovery (in)	Blow Count	Moisture Content (%)	Unconfined Compressive Strength (TSF)	Notes & Test Results
	0.0		Approximately 6" of Topsoil					Unconfined compressive strength of soil samples estimated using a calibrated penetrometer.
	1.0		Silty Clay, Trace Sand and Gravel, black, brown and gray, stiff (CL FILL)	SS-1 1.0' - 2.5' 18" Recovery	4 5 7	14.7	1.5	
	2.0							
	3.0							
			Silty Clay, Trace Sand and Gravel, brown and gray, very stiff (CL)	SS-2 3.5' - 5.0' 18" Recovery	4 8 13	14.4	2.5	
	4.0							
	5.0							
	6.0			SS-3 6.0' - 7.5' 18" Recovery	7 11 13	15.5	3.0	
	7.0							
	8.0							
	9.0			SS-4 8.5' - 10.0' 18" Recovery	8 10 13	14.6	2.75	
	10.0							
	11.0							
	12.0							
	13.0							
	14.0			SS-5 13.5' - 15.0' 18" Recovery	7 10 12	13.2	2.75	
	15.0		END of BORING at 15 Feet					
	16.0							
	17.0							
	18.0							
	19.0							
	20.0							

Drilling Contractor: CGMT, Inc.
Drilling Method: 3¼" O.D. H.S.A. Split Spoon Sampling
Drilling Equipment: CME-45C Truck Mounted Drill Rig
REVIEWED BY: NPW

Water Level (Ft.)
During Drilling: None
Immediately After Drilling: None

Soil Boring Log

Construction & Geotechnical Material Testing, Inc.
60 Martin Lane, Elk Grove Village, Illinois 60007
Telephone (630) 595-1111 ♦ Fax (630) 595-1110

Soil Boring Prepared for:
Mr. Romeo Kapudija
Luxe Corsa Partners, LLC. / Luxes Corsa Auto Suites
601 Dundee Avenue
East Dundee, Illinois 60118

Boring No.: B-16
Date: Friday, June 13, 2025
Project: Luxe Corsa Car Condos
24455 N. U.S. Highway 12
Lake Zurich, Illinois 60047
Project No.: 25G0361
Boring Location: See Boring Location Diagram
Logged By: B.A.S.
Ground Elevation:

Elevation	Depth	Strata	Soil / Rock Description	Sample Type & No. Depth Interval (Ft) Recovery (in)	Blow Count	Moisture Content (%)	Unconfined Compressive Strength (TSF)	Notes & Test Results
	0.0		Approximately 6" of Topsoil					Unconfined compressive strength of soil samples estimated using a calibrated penetrometer.
	1.0		Silty Clay, Trace Sand and Gravel, black, brown and gray, very stiff (CL FILL)	SS-1 1.0' - 2.5' 6" Recovery	6 6 10	19.8	2.0	
	2.0							
	3.0							
	4.0		Silty Clay, Trace Sand and Gravel, brown and gray, stiff to very stiff (CL)	SS-2 3.5' - 5.0' 18" Recovery	5 7 8	16.1	1.75	
	5.0							
	6.0			SS-3 6.0' - 7.5' 18" Recovery	6 8 10	16.4	2.25	
	7.0							
	8.0							
	9.0			SS-4 8.5' - 10.0' 18" Recovery	4 6 9	16.0	1.75	
	10.0							
	11.0							
	12.0							
	13.0							
	14.0			SS-5 13.5' - 15.0' 18" Recovery	7 10 9	15.8	2.25	
	15.0		END of BORING at 15 Feet					
	16.0							
	17.0							
	18.0							
	19.0							
	20.0							

Drilling Contractor:	CGMT, Inc.	**Water Level (Ft.)**	
Drilling Method:	3¼" O.D. H.S.A. Split Spoon Sampling	**During Drilling:**	None
Drilling Equipment:	CME-45C Truck Mounted Drill Rig	**Immediately After Drilling:**	None
	REVIEWED BY: NPW		

Soil Boring Log

Construction & Geotechnical Material Testing, Inc.
60 Martin Lane, Elk Grove Village, Illinois 60007
Telephone (630) 595-1111 ♦ Fax (630) 595-1110

Soil Boring Prepared for:
Mr. Romeo Kapudija
Luxe Corsa Partners, LLC. / Luxes Corsa Auto Suites
601 Dundee Avenue
East Dundee, Illinois 60118

Boring No.: B-17
Date: Monday, June 16, 2025
Project: Luxe Corsa Car Condos
24455 N. U.S. Highway 12
Lake Zurich, Illinois 60047
Project No.: 25G0361
Boring Location: See Boring Location Diagram
Logged By: B.A.S.
Ground Elevation:

Elevation	Depth	Strata	Soil / Rock Description	Sample Type & No. Depth Interval (Ft) Recovery (in)	Blow Count	Moisture Content (%)	Unconfined Compressive Strength (TSF)	Notes & Test Results
	0.0		Approximately 20" of Topsoil					Unconfined compressive strength of soil samples estimated using a calibrated penetrometer.
	1.0			SS-1	4	-	-	
	2.0		Silty Clay, Trace Sand and Gravel, black, brown and gray, stiff (CL FILL)	1.0' - 2.5' 18" Recovery	5 7	14.5	1.5	
	3.0							
	4.0		Silty Clay, Trace Sand and Gravel, brown and gray, very stiff (CL)	SS-2 3.5' - 5.0' 18" Recovery	4 7 10	15.0	2.0	
	5.0							
	6.0			SS-3 6.0' - 7.5' 18" Recovery	7 10 13	15.3	2.75	
	7.0							
	8.0							
	9.0			SS-4 8.5' - 10.0' 18" Recovery	5 9 10	14.4	2.25	
	10.0							
	11.0							
	12.0							
	13.0							
	14.0		Silty Clay, Trace Sand and Gravel, gray, stiff to very stiff (CL)	SS-5 13.5' - 15.0' 18" Recovery	6 8 8	14.4	2.0	
	15.0							
	16.0							
	17.0							
	18.0							
	19.0			SS-6 18.5' - 20.0' 18" Recovery	4 6 8	16.6	1.75	
	20.0		END of BORING at 20 Feet					

		Water Level (Ft.)	
Drilling Contractor:	CGMT, Inc.		
Drilling Method:	3¼" O.D. H.S.A. Split Spoon Sampling	**During Drilling:**	None
Drilling Equipment:	CME-45C Truck Mounted Drill Rig	**Immediately After Drilling:**	None
	REVIEWED BY: NPW		

Soil Boring Log

Construction & Geotechnical Material Testing, Inc.
60 Martin Lane, Elk Grove Village, Illinois 60007
Telephone (630) 595-1111 ♦ Fax (630) 595-1110

Soil Boring Prepared for:
Mr. Romeo Kapudija
Luxe Corsa Partners, LLC. / Luxes Corsa Auto Suites
601 Dundee Avenue
East Dundee, Illinois 60118

Boring No.: B-18
Date: Monday, June 16, 2025
Project: Luxe Corsa Car Condos
24455 N. U.S. Highway 12
Lake Zurich, Illinois 60047
Project No.: 25G0361
Boring Location: See Boring Location Diagram
Logged By: B.A.S.
Ground Elevation:

Elevation	Depth	Strata	Soil / Rock Description	Sample Type & No. Depth Interval (Ft) Recovery (in)	Blow Count	Moisture Content (%)	Unconfined Compressive Strength (TSF)	Notes & Test Results
	0.0		Approximately 10" of Topsoil					Unconfined compressive strength of soil samples estimated using a calibrated penetrometer.
	1.0		Sand and Gravel, black, brown and gray, medium dense (SP-GP FILL)	SS-1 1.0' - 2.5' 6" Recovery	5 6 7	21.4	-	
	2.0							
	3.0							
			Silty Clay, Trace Sand and Gravel, brown and gray, stiff to very stiff (CL)	SS-2 3.5' - 5.0' 18" Recovery	4 6 8	16.2	1.75	
	4.0							
	5.0							
	6.0			SS-3 6.0' - 7.5' 18" Recovery	4 7 9	16.6	2.0	
	7.0							
	8.0							
	9.0			SS-4 8.5' - 10.0' 18" Recovery	6 7 7	16.6	1.75	
	10.0							
	11.0							
	12.0							
	13.0							
	14.0		Silty Clay, Trace Sand and Gravel, gray, stiff (CL)	SS-5 13.5' - 15.0' 18" Recovery	4 5 7	15.1	1.5	
	15.0		END of BORING at 15 Feet					
	16.0							
	17.0							
	18.0							
	19.0							
	20.0							

Drilling Contractor:	CGMT, Inc.	**Water Level (Ft.)**	
Drilling Method:	3¼" O.D. H.S.A. Split Spoon Sampling	**During Drilling:**	None
Drilling Equipment:	CME-45C Truck Mounted Drill Rig	**Immediately After Drilling:**	None
	REVIEWED BY: NPW		

Soil Boring Log

Construction & Geotechnical Material Testing, Inc.
60 Martin Lane, Elk Grove Village, Illinois 60007
Telephone (630) 595-1111 ♦ Fax (630) 595-1110

Soil Boring Prepared for:
Mr. Romeo Kapudija
Luxe Corsa Partners, LLC. / Luxes Corsa Auto Suites
601 Dundee Avenue
East Dundee, Illinois 60118

Boring No.: B-19
Date: Monday, June 16, 2025
Project: Luxe Corsa Car Condos
24455 N. U.S. Highway 12
Lake Zurich, Illinois 60047
Project No.: 25G0361
Boring Location: See Boring Location Diagram
Logged By: B.A.S.
Ground Elevation:

Elevation	Depth	Strata	Soil / Rock Description	Sample Type & No. Depth Interval (Ft) Recovery (in)	Blow Count	Moisture Content (%)	Unconfined Compressive Strength (TSF)	Notes & Test Results
	0.0		Approximately 6" of Topsoil					Unconfined compressive strength of soil samples estimated using a calibrated penetrometer.
	1.0		Silty Clay, Trace Sand and Gravel, black, brown and gray, stiff (CL FILL)	SS-1 1.0' - 2.5' 18" Recovery	4 6 7	14.4	1.5	
	2.0							
	3.0							
			Silty Clay, Trace Sand and Gravel, brown and gray, stiff to very stiff (CL)	SS-2 3.5' - 5.0' 18" Recovery	4 8 8	15.0	2.0	
	4.0							
	5.0							
	6.0			SS-3 6.0' - 7.5' 18" Recovery	6 8 11	16.4	2.25	
	7.0							
	8.0							
	9.0			SS-4 8.5' - 10.0' 18" Recovery	5 8 9	12.1	2.0	
	10.0							
	11.0							
	12.0							
	13.0							
	14.0			SS-5 13.5' - 15.0' 18" Recovery	5 6 8	19.1	1.75	
	15.0		END of BORING at 15 Feet					
	16.0							
	17.0							
	18.0							
	19.0							
	20.0							

Drilling Contractor:	CGMT, Inc.	**Water Level (Ft.)**
Drilling Method:	3¼" O.D. H.S.A. Split Spoon Sampling	**During Drilling:** None
Drilling Equipment:	CME-45C Truck Mounted Drill Rig	**Immediately After Drilling:** None
	REVIEWED BY: NPW	

Soil Boring Log

Construction & Geotechnical Material Testing, Inc.
60 Martin Lane, Elk Grove Village, Illinois 60007
Telephone (630) 595-1111 ♦ Fax (630) 595-1110

Soil Boring Prepared for:
Mr. Romeo Kapudija
Luxe Corsa Partners, LLC. / Luxes Corsa Auto Suites
601 Dundee Avenue
East Dundee, Illinois 60118

Boring No.: B-20
Date: Friday, June 13, 2025
Project: Luxe Corsa Car Condos
24455 N. U.S. Highway 12
Lake Zurich, Illinois 60047
Project No.: 25G0361
Boring Location: See Boring Location Diagram
Logged By: B.A.S.
Ground Elevation:

Elevation	Depth	Strata	Soil / Rock Description	Sample Type & No. Depth Interval (Ft) Recovery (in)	Blow Count	Moisture Content (%)	Unconfined Compressive Strength (TSF)	Notes & Test Results
	0.0		Approximately 10" of Topsoil					Unconfined compressive strength of soil samples estimated using a calibrated penetrometer.
	1.0		Silty Clay, Trace Sand and Gravel, black, brown and gray, stiff (CL FILL)	SS-1 1.0' - 2.5' 18" Recovery	3 4 6	18.2	1.25	**Dry Density:** 1.0' - 2.5' = 108.2 lbs./ft³
	2.0							
	3.0							
	4.0		Silty Clay, Trace Sand and Gravel, brown and gray, very stiff (CL)	SS-2 3.5' - 5.0' 18" Recovery	4 9 13	15.2	2.75	
	5.0							
	6.0			SS-3 6.0' - 7.5' 18" Recovery	7 9 14	15.4	2.75	
	7.0							
	8.0							
	9.0			SS-4 8.5' - 10.0' 18" Recovery	5 8 13	14.9	2.5	
	10.0							
	11.0							
	12.0							
	13.0							
	14.0		Silty Clay, Trace Sand and Gravel, gray, very stiff (CL)	SS-5 13.5' - 15.0' 18" Recovery	5 7 9	10.6	2.0	
	15.0		END of BORING at 15 Feet					
	16.0							
	17.0							
	18.0							
	19.0							
	20.0							

		Water Level (Ft.)	
Drilling Contractor:	CGMT, Inc.		
Drilling Method:	3¼" O.D. H.S.A. Split Spoon Sampling	**During Drilling:**	None
Drilling Equipment:	CME-45C Truck Mounted Drill Rig	**Immediately After Drilling:**	None
	REVIEWED BY: NPW		

Soil Boring Log

Construction & Geotechnical Material Testing, Inc.
60 Martin Lane, Elk Grove Village, Illinois 60007
Telephone (630) 595-1111 ♦ Fax (630) 595-1110

Soil Boring Prepared for:
Mr. Romeo Kapudija
Luxe Corsa Partners, LLC. / Luxes Corsa Auto Suites
601 Dundee Avenue
East Dundee, Illinois 60118

Boring No.: B-21
Date: Friday, June 13, 2025
Project: Luxe Corsa Car Condos
24455 N. U.S. Highway 12
Lake Zurich, Illinois 60047
Project No.: 25G0361
Boring Location: See Boring Location Diagram
Logged By: B.A.S.
Ground Elevation:

Elevation	Depth	Strata	Soil / Rock Description	Sample Type & No. Depth Interval (Ft) Recovery (in)	Blow Count	Moisture Content (%)	Unconfined Compressive Strength (TSF)	Notes & Test Results
	0.0		Approximately 5" of Topsoil					Unconfined compressive strength of soil samples estimated using a calibrated penetrometer.
	1.0		Silty Clay, Trace Sand and Gravel, brown and gray, stiff to very stiff (CL)	SS-1 1.0' - 2.5' 18" Recovery	5 7 8	15.9	1.75	
	2.0							
	3.0			SS-2 3.5' - 5.0' 18" Recovery	5 11 13	16.3	3.0	
	4.0							
	5.0			SS-3 6.0' - 7.5' 18" Recovery	5 7 9	16.3	2.0	
	6.0							
	7.0			SS-4 8.5' - 10.0' 18" Recovery	3 8 10	12.3	2.25	
	8.0							
	9.0							
	10.0							
	11.0							
	12.0							
	13.0		Silty Clay, Trace Sand and Gravel, gray, stiff (CL)	SS-5 13.5' - 15.0' 18" Recovery	4 6 8	13.1	1.75	
	14.0							
	15.0		END of BORING at 15 Feet					
	16.0							
	17.0							
	18.0							
	19.0							
	20.0							

Drilling Contractor:	CGMT, Inc.	**Water Level (Ft.)**	
Drilling Method:	3¼" O.D. H.S.A. Split Spoon Sampling	**During Drilling:**	None
Drilling Equipment:	CME-45C Truck Mounted Drill Rig	**Immediately After Drilling:**	None
	REVIEWED BY: NPW		

Soil Boring Log

Construction & Geotechnical Material Testing, Inc.
60 Martin Lane, Elk Grove Village, Illinois 60007
Telephone (630) 595-1111 ♦ Fax (630) 595-1110

Soil Boring Prepared for:
Mr. Romeo Kapudija
Luxe Corsa Partners, LLC. / Luxes Corsa Auto Suites
601 Dundee Avenue
East Dundee, Illinois 60118

Boring No.: B-22
Date: Monday, June 16, 2025
Project: Luxe Corsa Car Condos
24455 N. U.S. Highway 12
Lake Zurich, Illinois 60047
Project No.: 25G0361
Boring Location: See Boring Location Diagram
Logged By: B.A.S.
Ground Elevation:

Elevation	Depth	Strata	Soil / Rock Description	Sample Type & No. Depth Interval (Ft) Recovery (in)	Blow Count	Moisture Content (%)	Unconfined Compressive Strength (TSF)	Notes & Test Results
	0.0		Approximately 5" of Topsoil					Unconfined compressive strength of soil samples estimated using a calibrated penetrometer.
	1.0		Silty Clay, Trace Sand and Gravel, black, brown and gray, stiff (CL FILL)	SS-1 1.0' - 2.5' 18" Recovery	5 7 8	13.2	1.75	
	2.0							
	3.0							
			Silty Clay, Trace Sand and Gravel, brown and gray, very stiff (CL)	SS-2 3.5' - 5.0' 18" Recovery	4 7 12	14.8	2.25	
	4.0							
	5.0							
	6.0			SS-3 6.0' - 7.5' 18" Recovery	7 8 11	14.4	2.25	
	7.0							
	8.0							
	9.0			SS-4 8.5' - 10.0' 18" Recovery	5 8 10	14.5	2.25	
	10.0							
	11.0							
	12.0							
	13.0							
	14.0			SS-5 13.5' - 15.0' 18" Recovery	6 6 10	18.4	2.0	
	15.0		END of BORING at 15 Feet					
	16.0							
	17.0							
	18.0							
	19.0							
	20.0							

Drilling Contractor:	CGMT, Inc.	**Water Level (Ft.)**	
Drilling Method:	3¼" O.D. H.S.A. Split Spoon Sampling	**During Drilling:**	None
Drilling Equipment:	CME-45C Truck Mounted Drill Rig	**Immediately After Drilling:**	None
	REVIEWED BY: NPW		

Soil Boring Log

Construction & Geotechnical Material Testing, Inc.
60 Martin Lane, Elk Grove Village, Illinois 60007
Telephone (630) 595-1111 ♦ Fax (630) 595-1110

Soil Boring Prepared for:
Mr. Romeo Kapudija
Luxe Corsa Partners, LLC. / Luxes Corsa Auto Suites
601 Dundee Avenue
East Dundee, Illinois 60118

Boring No.: B-23
Date: Monday, June 16, 2025
Project: Luxe Corsa Car Condos
24455 N. U.S. Highway 12
Lake Zurich, Illinois 60047
Project No.: 25G0361
Boring Location: See Boring Location Diagram
Logged By: B.A.S.
Ground Elevation:

Elevation	Depth	Strata	Soil / Rock Description	Sample Type & No. Depth Interval (Ft) Recovery (in)	Blow Count	Moisture Content (%)	Unconfined Compressive Strength (TSF)	Notes & Test Results
	0.0		Approximately 12" of Topsoil					Unconfined compressive strength of soil samples estimated using a calibrated penetrometer.
	1.0		Silty Clay, Trace Sand and Gravel, black, brown and gray, stiff (CL FILL)	SS-1 1.0' - 2.5' 18" Recovery	4 4 6	16.8	1.25	
	2.0							
	3.0							
	4.0		Silty Clay, Trace Sand and Gravel, brown and gray, stiff to very stiff (CL)	SS-2 3.5' - 5.0' 18" Recovery	4 5 9	14.7	1.75	
	5.0							
	6.0			SS-3 6.0' - 7.5' 18" Recovery	6 10 10	17.4	2.5	
	7.0							
	8.0							
	9.0			SS-4 8.5' - 10.0' 18" Recovery	5 7 11	17.0	2.25	
	10.0							
	11.0							
	12.0							
	13.0							
	14.0			SS-5 13.5' - 15.0' 18" Recovery	4 6 7	18.3	1.5	
	15.0		END of BORING at 15 Feet					
	16.0							
	17.0							
	18.0							
	19.0							
	20.0							

Drilling Contractor:	CGMT, Inc.	**Water Level (Ft.)**	
Drilling Method:	3¼" O.D. H.S.A. Split Spoon Sampling	**During Drilling:**	None
Drilling Equipment:	CME-45C Truck Mounted Drill Rig	**Immediately After Drilling:**	None
	REVIEWED BY: NPW		

Soil Boring Log

Construction & Geotechnical Material Testing, Inc.
60 Martin Lane, Elk Grove Village, Illinois 60007
Telephone (630) 595-1111 ♦ Fax (630) 595-1110

Soil Boring Prepared for:
Mr. Romeo Kapudija
Luxe Corsa Partners, LLC. / Luxes Corsa Auto Suites
601 Dundee Avenue
East Dundee, Illinois 60118

Boring No.: B-24
Date: Monday, June 16, 2025
Project: Luxe Corsa Car Condos
24455 N. U.S. Highway 12
Lake Zurich, Illinois 60047
Project No.: 25G0361
Boring Location: See Boring Location Diagram
Logged By: B.A.S.
Ground Elevation:

Elevation	Depth	Strata	Soil / Rock Description	Sample Type & No. Depth Interval (Ft) Recovery (in)	Blow Count	Moisture Content (%)	Unconfined Compressive Strength (TSF)	Notes & Test Results
	0.0		Approximately 12" of Topsoil					Unconfined compressive strength of soil samples estimated using a calibrated penetrometer.
	1.0		Silty Clay, Trace Sand and Gravel, black, brown and gray, stiff (CL FILL)	SS-1 1.0' - 2.5' 18" Recovery	3 4 4	17.3	1.0	**Dry Density:** 1.0' - 2.5' = 108.0 lbs./ft³
	2.0							
	3.0		Silty Clay, Trace Sand and Gravel, brown and gray, stiff to very stiff (CL)	SS-2 3.5' - 5.0' 18" Recovery	4 5 8	16.7	1.5	
	4.0							
	5.0							
	6.0			SS-3 6.0' - 7.5' 18" Recovery	5 8 12	15.4	2.5	
	7.0							
	8.0							
	9.0			SS-4 8.5' - 10.0' 18" Recovery	5 9 11	16.5	2.25	
	10.0							
	11.0							
	12.0							
	13.0							
	14.0		Silty Clay, Trace Sand and Gravel, gray, stiff (CL)	SS-5 13.5' - 15.0' 18" Recovery	4 5 6	17.4	1.25	
	15.0		END of BORING at 15 Feet					
	16.0							
	17.0							
	18.0							
	19.0							
	20.0							

Drilling Contractor:	CGMT, Inc.	**Water Level (Ft.)**	
Drilling Method:	3¼" O.D. H.S.A. Split Spoon Sampling	**During Drilling:**	None
Drilling Equipment:	CME-45C Truck Mounted Drill Rig	**Immediately After Drilling:**	None
	REVIEWED BY: NPW		

Soil Boring Log

Construction & Geotechnical Material Testing, Inc.
60 Martin Lane, Elk Grove Village, Illinois 60007
Telephone (630) 595-1111 ♦ Fax (630) 595-1110

Soil Boring Prepared for:
Mr. Romeo Kapudija
Luxe Corsa Partners, LLC. / Luxes Corsa Auto Suites
601 Dundee Avenue
East Dundee, Illinois 60118

Boring No.: B-25
Date: Monday, June 16, 2025
Project: Luxe Corsa Car Condos
24455 N. U.S. Highway 12
Lake Zurich, Illinois 60047
Project No.: 25G0361
Boring Location: See Boring Location Diagram
Logged By: B.A.S.
Ground Elevation:

Elevation	Depth	Strata	Soil / Rock Description	Sample Type & No. Depth Interval (Ft) Recovery (in)	Blow Count	Moisture Content (%)	Unconfined Compressive Strength (TSF)	Notes & Test Results
	0.0		Approximately 10" of Topsoil					Unconfined compressive strength of soil samples estimated using a calibrated penetrometer.
	1.0		Silty Clay, Trace Sand and Gravel, black, brown and gray, stiff (CL FILL)	SS-1 1.0' - 2.5' 18" Recovery	3 5 6	15.9	1.25	
	2.0							
	3.0							
			Silty Clay, Trace Sand and Gravel, brown and gray, very stiff (CL)	SS-2 3.5' - 5.0' 18" Recovery	5 7 9	16.0	2.0	
	4.0							
	5.0							
	6.0			SS-3 6.0' - 7.5' 18" Recovery	6 10 10	17.3	2.5	
	7.0							
	8.0							
	9.0			SS-4 8.5' - 10.0' 18" Recovery	7 8 10	16.3	2.25	
	10.0							
	11.0							
	12.0							
	13.0							
	14.0			SS-5 13.5' - 15.0' 18" Recovery	6 8 9	16.1	2.0	
	15.0		END of BORING at 15 Feet					
	16.0							
	17.0							
	18.0							
	19.0							
	20.0							

Drilling Contractor:	CGMT, Inc.	**Water Level (Ft.)**	
Drilling Method:	3¼" O.D. H.S.A. Split Spoon Sampling	**During Drilling:**	None
Drilling Equipment:	CME-45C Truck Mounted Drill Rig	**Immediately After Drilling:**	None
	REVIEWED BY: NPW		

Soil Boring Log

Construction & Geotechnical Material Testing, Inc.
60 Martin Lane, Elk Grove Village, Illinois 60007
Telephone (630) 595-1111 ♦ Fax (630) 595-1110

Soil Boring Prepared for:
Mr. Romeo Kapudija
Luxe Corsa Partners, LLC. / Luxes Corsa Auto Suites
601 Dundee Avenue
East Dundee, Illinois 60118

Boring No.: B-26
Date: Monday, June 16, 2025
Project: Luxe Corsa Car Condos
24455 N. U.S. Highway 12
Lake Zurich, Illinois 60047
Project No.: 25G0361
Boring Location: See Boring Location Diagram
Logged By: B.A.S.
Ground Elevation:

Elevation	Depth	Strata	Soil / Rock Description	Sample Type & No. Depth Interval (Ft) Recovery (in)	Blow Count	Moisture Content (%)	Unconfined Compressive Strength (TSF)	Notes & Test Results
	0.0		Approximately 8" of Topsoil					Unconfined compressive strength of soil samples estimated using a calibrated penetrometer.
	1.0		Silty Clay, Trace Sand and Gravel, black, brown and gray, stiff (CL FILL)	SS-1 1.0' - 2.5' 18" Recovery	3 5 8	15.6	1.5	
	2.0							
	3.0							
	4.0		Silty Clay, Trace Sand and Gravel, brown and gray, very stiff (CL)	SS-2 3.5' - 5.0' 18" Recovery	5 12 13	14.2	3.0	
	5.0							
	6.0			SS-3 6.0' - 7.5' 18" Recovery	5 8 12	15.1	2.5	
	7.0							
	8.0							
	9.0			SS-4 8.5' - 10.0' 18" Recovery	6 10 11	15.7	2.5	
	10.0							
	11.0							
	12.0							
	13.0							
	14.0			SS-5 13.5' - 15.0' 18" Recovery	5 9 10	17.5	2.25	
	15.0		END of BORING at 15 Feet					
	16.0							
	17.0							
	18.0							
	19.0							
	20.0							

Drilling Contractor:	CGMT, Inc.	**Water Level (Ft.)**	
Drilling Method:	3¼" O.D. H.S.A. Split Spoon Sampling	**During Drilling:**	None
Drilling Equipment:	CME-45C Truck Mounted Drill Rig	**Immediately After Drilling:**	None
	REVIEWED BY: NPW		

Soil Boring Log

Construction & Geotechnical Material Testing, Inc.
60 Martin Lane, Elk Grove Village, Illinois 60007
Telephone (630) 595-1111 ♦ Fax (630) 595-1110

Soil Boring Prepared for:
Mr. Romeo Kapudija
Luxe Corsa Partners, LLC. / Luxes Corsa Auto Suites
601 Dundee Avenue
East Dundee, Illinois 60118

Boring No.: B-27
Date: Monday, June 16, 2025
Project: Luxe Corsa Car Condos
24455 N. U.S. Highway 12
Lake Zurich, Illinois 60047
Project No.: 25G0361
Boring Location: See Boring Location Diagram
Logged By: B.A.S.
Ground Elevation:

Elevation	Depth	Strata	Soil / Rock Description	Sample Type & No. Depth Interval (Ft) Recovery (in)	Blow Count	Moisture Content (%)	Unconfined Compressive Strength (TSF)	Notes & Test Results
	0.0		Approximately 5" of Topsoil					Unconfined compressive strength of soil samples estimated using a calibrated penetrometer.
	1.0		Silty Clay, Trace Sand and Gravel, black, brown and gray, very stiff (CL FILL)	SS-1 1.0' - 2.5' 18" Recovery	4 7 9	14.3	2.0	
	2.0							
	3.0							
			Silty Clay, Trace Sand and Gravel, brown and gray, stiff to very stiff (CL)	SS-2 3.5' - 5.0' 18" Recovery	5 8 13	15.4	2.5	
	4.0							
	5.0							
	6.0			SS-3 6.0' - 7.5' 18" Recovery	5 7 12	15.5	2.25	
	7.0							
	8.0							
	9.0			SS-4 8.5' - 10.0' 18" Recovery	7 10 11	17.2	2.5	
	10.0							
	11.0							
	12.0							
	13.0							
	14.0			SS-5 13.5' - 15.0' 18" Recovery	4 7 8	14.4	1.75	
	15.0		END of BORING at 15 Feet					
	16.0							
	17.0							
	18.0							
	19.0							
	20.0							

Drilling Contractor:	CGMT, Inc.	**Water Level (Ft.)**	
Drilling Method:	3¼" O.D. H.S.A. Split Spoon Sampling	**During Drilling:**	None
Drilling Equipment:	CME-45C Truck Mounted Drill Rig	**Immediately After Drilling:**	None
	REVIEWED BY: NPW		

Soil Boring Log

Construction & Geotechnical Material Testing, Inc.
60 Martin Lane, Elk Grove Village, Illinois 60007
Telephone (630) 595-1111 ♦ Fax (630) 595-1110

Soil Boring Prepared for:
Mr. Romeo Kapudija
Luxe Corsa Partners, LLC. / Luxes Corsa Auto Suites
601 Dundee Avenue
East Dundee, Illinois 60118

Boring No.: B-28
Date: Monday, June 16, 2025
Project: Luxe Corsa Car Condos
24455 N. U.S. Highway 12
Lake Zurich, Illinois 60047
Project No.: 25G0361
Boring Location: See Boring Location Diagram
Logged By: B.A.S.
Ground Elevation:

Elevation	Depth	Strata	Soil / Rock Description	Sample Type & No. Depth Interval (Ft) Recovery (in)	Blow Count	Moisture Content (%)	Unconfined Compressive Strength (TSF)	Notes & Test Results
	0.0		Approximately 6" of Topsoil					Unconfined compressive strength of soil samples estimated using a calibrated penetrometer.
	1.0		Silty Clay, Trace Sand and Gravel, black, brown and gray, stiff (CL FILL)	SS-1 1.0' - 2.5' 18" Recovery	3 5 9	15.7	1.75	
	2.0							
	3.0							
			Silty Clay, Trace Sand and Gravel, brown and gray, very stiff (CL)	SS-2 3.5' - 5.0' 18" Recovery	4 7 11	15.1	2.25	
	4.0							
	5.0							
	6.0			SS-3 6.0' - 7.5' 18" Recovery	4 6 10	15.4	2.0	
	7.0							
	8.0							
	9.0			SS-4 8.5' - 10.0' 18" Recovery	4 8 8	15.5	2.0	
	10.0							
	11.0							
	12.0							
	13.0							
	14.0			SS-5 13.5' - 15.0' 18" Recovery	4 7 10	15.2	2.0	
	15.0		END of BORING at 15 Feet					
	16.0							
	17.0							
	18.0							
	19.0							
	20.0							

Drilling Contractor:	CGMT, Inc.	**Water Level (Ft.)**	
Drilling Method:	3¼" O.D. H.S.A. Split Spoon Sampling	**During Drilling:**	None
Drilling Equipment:	CME-45C Truck Mounted Drill Rig	**Immediately After Drilling:**	None
	REVIEWED BY: NPW		

Soil Boring Log

Construction & Geotechnical Material Testing, Inc.
60 Martin Lane, Elk Grove Village, Illinois 60007
Telephone (630) 595-1111 ♦ Fax (630) 595-1110

Soil Boring Prepared for:
Mr. Romeo Kapudija
Luxe Corsa Partners, LLC. / Luxes Corsa Auto Suites
601 Dundee Avenue
East Dundee, Illinois 60118

Boring No.: B-29
Date: Monday, June 16, 2025
Project: Luxe Corsa Car Condos
24455 N. U.S. Highway 12
Lake Zurich, Illinois 60047
Project No.: 25G0361
Boring Location: See Boring Location Diagram
Logged By: B.A.S.
Ground Elevation:

Elevation	Depth	Strata	Soil / Rock Description	Sample Type & No. Depth Interval (Ft) Recovery (in)	Blow Count	Moisture Content (%)	Unconfined Compressive Strength (TSF)	Notes & Test Results
	0.0		Approximately 4" of Topsoil					Unconfined compressive strength of soil samples estimated using a calibrated penetrometer.
	1.0		Silty Clay, Trace Sand and Gravel, black, brown and gray, stiff (CL FILL)	SS-1 1.0' - 2.5' 18" Recovery	6 7 7	14.3	1.75	
	2.0							
	3.0							
	4.0		Silty Clay, Trace Sand and Gravel, brown and gray, very stiff (CL)	SS-2 3.5' - 5.0' 18" Recovery	6 7 11	15.6	2.25	
	5.0							
	6.0			SS-3 6.0' - 7.5' 18" Recovery	7 10 13	14.5	2.75	
	7.0							
	8.0							
	9.0			SS-4 8.5' - 10.0' 18" Recovery	6 7 12	15.5	2.25	
	10.0							
	11.0							
	12.0							
	13.0							
	14.0			SS-5 13.5' - 15.0' 18" Recovery	5 6 10	14.6	2.0	
	15.0							
	16.0							
	17.0							
	18.0							
	19.0			SS-6 18.5' - 20.0' 18" Recovery	7 9 10	14.6	2.25	
	20.0		END of BORING at 20 Feet					

Drilling Contractor:	CGMT, Inc.	**Water Level (Ft.)**	
Drilling Method:	3¼" O.D. H.S.A. Split Spoon Sampling	**During Drilling:**	None
Drilling Equipment:	CME-45C Truck Mounted Drill Rig	**Immediately After Drilling:**	None
	REVIEWED BY: NPW		

Soil Boring Log

Construction & Geotechnical Material Testing, Inc.
60 Martin Lane, Elk Grove Village, Illinois 60007
Telephone (630) 595-1111 ♦ Fax (630) 595-1110

Soil Boring Prepared for:
Mr. Romeo Kapudija
Luxe Corsa Partners, LLC. / Luxes Corsa Auto Suites
601 Dundee Avenue
East Dundee, Illinois 60118

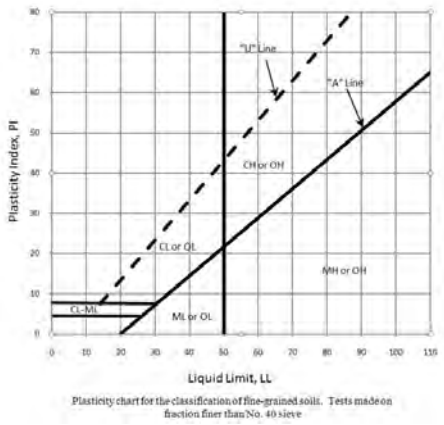
Boring No.: B-30
Date: Monday, June 16, 2025
Project: Luxe Corsa Car Condos
24455 N. U.S. Highway 12
Lake Zurich, Illinois 60047
Project No.: 25G0361
Boring Location: See Boring Location Diagram
Logged By: B.A.S.
Ground Elevation:

Elevation	Depth	Strata	Soil / Rock Description	Sample Type & No. Depth Interval (Ft) Recovery (in)	Blow Count	Moisture Content (%)	Unconfined Compressive Strength (TSF)	Notes & Test Results
	0.0		Approximately 6" of Topsoil					Unconfined compressive strength of soil samples estimated using a calibrated penetrometer.
	1.0		Silty Clay, Trace Sand and Gravel, black, brown and gray, stiff (CL FILL)	SS-1 1.0' - 2.5' 18" Recovery	4 6 7	16.0	1.5	
	2.0							
	3.0							
			Silty Clay, Trace Sand and Gravel, brown and gray, very stiff (CL)	SS-2 3.5' - 5.0' 18" Recovery	4 8 12	15.4	2.5	
	4.0							
	5.0							
	6.0			SS-3 6.0' - 7.5' 18" Recovery	4 8 10	16.7	2.25	
	7.0							
	8.0							
	9.0			SS-4 8.5' - 10.0' 18" Recovery	5 7 10	18.1	2.0	
	10.0							
	11.0							
	12.0							
	13.0							
	14.0			SS-5 13.5' - 15.0' 18" Recovery	4 7 9	16.4	2.0	
	15.0							
	16.0							
	17.0							
	18.0							
	19.0			SS-6 18.5' - 20.0' 18" Recovery	6 9 12	16.0	2.5	
	20.0		END of BORING at 20 Feet					

Drilling Contractor:	CGMT, Inc.	**Water Level (Ft.)**	
Drilling Method:	3¼" O.D. H.S.A. Split Spoon Sampling	**During Drilling:**	None
Drilling Equipment:	CME-45C Truck Mounted Drill Rig	**Immediately After Drilling:**	None
	REVIEWED BY: NPW		

UNITED SOIL CLASSIFICATION SYSTEM
(ASTM D-2487)

Major Division		Group Symbol	Typical Names	Classification on basis of percentage of fines	Classification Criteria
Coarse-grained soils: More than 50% retained on No. 200 sieve	Gravels: More than 50% of coarse fraction retained on No. 4 sieve	GW	Well-graded gravels and gravel-sand mixtures, little or no fines	GW, GP, SW, SP, GM, GC, SM, SC: Borderline classification requiring use of dual symbol	$C_u = D_{60}/D_{10}$ greater than 4 $C_z = (D_{30})^2/(D_{10}XD_{60})$ between 1 & 3
		GP	Poorly graded gravels and gravel-sand mixtures, little or no fines		Not meeting both criteria for GW
		GM	Silty gravels, gravel-sand-silt mixtures		Atterberg limits plot below "A" line or plasticity index less than 4
		GC	Clayey gravels, gravel-sand-clay mixtures		Atterberg limits plot above "A" line and plasticity index greater than 7
	Sands: More than 50% of coarse fraction passes No. 4 sieve	SW	Well-graded sands and gravelly sands, little or no fines	Less than 5% pass No. 200 sieve More than 12% pass No. 200 sieve 5% to 12% pass No. 200 sieve	$C_u = D_{60}/D_{10}$ greater than 6 $C_z = (D_{30})^2/(D_{10}XD_{60})$ between 1 & 3
		SP	Poorly graded sands and gravelly sands, little or no fines		Not meeting both criteria for SW
		SM	Silty sands, sand-silt mixtures		Atterberg limits plot below "A" line or plasticity index less than 4
		SC	Clayey sands, sand-clay mixtures		Atterberg limits plot above "A" line and plasticity index greater than 7
Fine-grained soils: 50% or more passing No. 200 sieve	Silts and Clays: Liquid limit 50% or less	ML	Inorganic silts, very fine sands, rock flour, silty or clayey fine sands	Note: U-line represents approximate upper limit of LL and PI combinations natural soils (empirically determined). ASTM D-2487	
		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays		
		OL	Organic silts and organic silty clays of low plasticity		
	Silts and Clays: Liquid limit greater than 50%	MH	Inorganic silts, micaceous or diatomaceous fine sands or silts, elastic silts		
		CH	Inorganic clays of high plasticity, fat clays		
		OH	Organic clays of medium to high plasticity		
Highly organic soils		Pt	Peat, muck and other highly organic soils		Fibrous organic matter; will char, burn or glow



Plasticity chart for the classification of fine-grained soils. Tests made on fraction finer than No. 40 sieve

Borderline classifications, used for soils possessing characteristics of two groups, are designated by combinations of group symbols. For example: GW-GC, well-graded gravel-sand mixture with clay binder

UNIFIED SOIL CLASSIFICATION SYSTEM

REFERENCE NOTES FOR BORING LOGS

I. Drilling and Sampling Symbols:

SS – Split Spoon Sampler
ST – Shelby Tube Sampler
RC – Rock Core: NX, BX, AX
PM – Pressuremeter
DC – Dutch Cone Penetrometer
RB – Rock Bit Drilling
BS – Bulk Sample of Drilling
PA – Power Auger (no sample)
HSA – Hollow Stem Auger
WS – Wash Sample

Standard Penetration (Blows/Ft) refers to the blows per foot of a 140 lb. hammer falling 30 inches on a 2 inch O.D. split spoon sampler, as specified in ASTM D-1586. The blow count is commonly referred to as the N-value.

II. Correlation of Penetration Resistances to Soil Properties:

Relative Density-Sands, Silts

SPT – N	Relative Density
0 – 3	Very Loose
4 – 9	Loose
10 – 29	Medium Dense
30 – 49	Dense
50 – 80	Very Dense

Consistency of Cohesive Soils

Unconfined Compressive Strength, Qp, tsf	Consistency
under 0.25	Very Soft
0.25 – 0.49	Soft
0.50 – 0.99	Firm
1.00 – 1.99	Stiff
2.00 – 3.99	Very Stiff
4.00 – 8.00	Hard
over 8.00	Very Hard

III Unified Soil Classification Symbols:

GP – Poorly Graded Gravel
GW – Well Graded Gravel
GM – Silty Gravel
GC – Clayey Gravel
SP – Poorly Graded Sand
SW – Well Graded Sand
SM – Silty Sand
SC – Clayey Sand
ML – Low Plasticity Silt
MH – High Plasticity Silt
CL – Low Plasticity Clay
CH – High Plasticity Clay
OL – Low Plasticity Organic
OH – High Plasticity Organic
CL-ML – Dual Classification (Typical)

IV. Water Level Measurement Symbol:

WL – Water Level
WS – While Sampling
WD – While Drilling
BCR – Before Casing Removal
ACR – After Casing Removal
WCI – Wet Cave In
DCI – Dry Cave In

The water levels are those water levels actually measured in the borehole at the times indicated by the symbol. The measurements are relatively reliable when augering, without adding fluids, in a granular soil. In clays and plastic silts, the accurate determination of water levels may require several days for the water level to stabilize. In such cases, additional methods of measurement are generally applied.

McHENRY-LAKE COUNTY SOIL & WATER CONSERVATION DISTRICT

NATURAL RESOURCES INFORMATION REPORT

25-045-4706

June 18, 2025

This report has been prepared for:
Romeo Kapudija

Contact Person:
John F. Cerbus, P.E.

PREPARED BY:
McHENRY-LAKE COUNTY SOIL & WATER CONSERVATION DISTRICT
1648 S. EASTWOOD DR.
WOODSTOCK, IL 60098
PHONE: (815) 338-0444
www.mchenryswcd.org

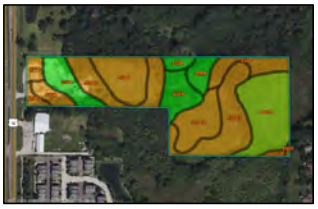
The McHenry-Lake County Soil & Water Conservation District is an equal opportunity provider and employer.

EXECUTIVE SUMMARY OF NRI REPORT #25-045-4706

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.

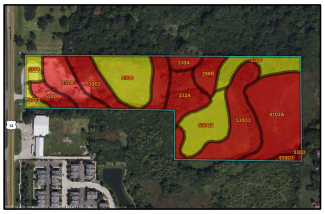
Site Picture (Highway 12, looking east)

Groundwater Contamination Potential:



Nitrate Leaching Potential
The Natural Resources Conservation Service Soil Survey indicates there are no high leaching potentials identified 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.

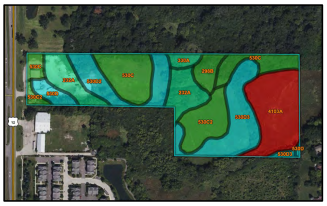
Soil Limitations (This evaluates the parcel from the surface down to approximately 5 feet.):



Small Commercial Buildings
The Applicant indicated the intent to build commercial buildings on the parcel. The Natural Resources Conservation Service Soil Survey indicates 14.2acres or 69.4% of the parcel as very limited for small commercial buildings (identified in red). "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.

Erosion Ratings

The NRCS Soils Survey indicates 12.6 acres or 61.3% 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 7.1 acres or 34.5% of the parcel is composed of prime farmland soils (identified in green) and 3.3 acres or 16.2% of the parcel is comprised of prime when drained soils (identified in blue).

Hydric Soils

The NRCS Soil Survey indicates 7.1 acres or 34.7% of the parcel is comprised of hydric soils (identified in red and orange).

**The site plan, prepared by OKW Architects, dated 1/31/2025, indicates the hydric soil areas will be avoided except for the farthest west polygon of soil 232A. However, this area has been previously disturbed and most likely does not contain its original soil properties.

Floodplain/Drainage Information:

The FEMA Flood Insurance Rate Map

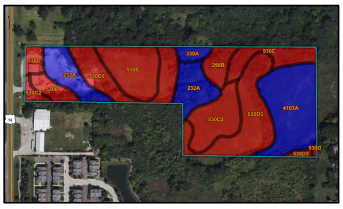
The map indicates 3.3 acres of the parcel is within Zone A, 100-year floodplain.

U.S. Geological Survey (USGS) Flood of Record Map (Hydrologic Atlas)

The Flood of Record Map for this area indicates 4.99 acres of the parcel have previously flooded during the 1960 flood of record.

**The site plan, prepared by OKW Architects, dated 1/31/2025, indicates most of these areas will be free from development. Please consult with the Lake County Stormwater Management Agencies for permit requirements for the floodplain areas that may be impacted.

Flooding Frequency
The Natural Resources Conservation Service (NRCS) Soil Survey indicates frequent flooding is not probable. The chance of flooding is less than once in 500 years.

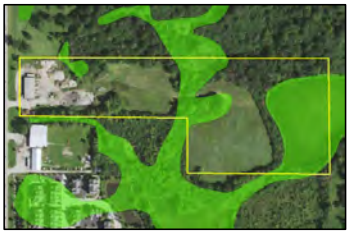


Ponding Frequency
The Natural Resources Conservation Service (NRCS) Soil Survey indicates that approximately 7.1 acres or 34.7% of the parcel is comprised of soils with frequent ponding (identified in blue). Ponding occurs, on average, more than once in 2 years. The chance of ponding is more than 50 percent in any year.

Wetland Information:

USDA-NRCS Wetland Inventory
The NRCS Wetlands Inventory indicates there are no farmed wetlands on the parcel.

ADID Wetland Inventory
The ADID Wetland Study indicates there are no High Quality ADID wetlands on the parcel.



Lake County Wetland Inventory
The Lake County Wetland Inventory identifies 6.23 acres of wetlands on the parcel (identified in green).

**The site plan, prepared by OKW Architects, dated 1/31/2025, indicates a portion of these wetlands will be impacted. As we were not provided with a wetland delineation, it is unclear how many acres will be impacted. The petitioner is encouraged to contact the Lake County Stormwater Management Commission and the U.S. Army Corps of Engineers for permitting requirements.

Drainage Tile and Drainage Districts:
A review of maps identifying known field tile locations in Lake County did not identify any known 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. Undetected field tiles can cause flooding and other hydrologic problems in the future.

Retention Systems, Lined:
The Natural Resources Conservation Service (NRCS) Soil Survey indicates the parcel does not contain very limited ratings for retention systems. "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.

Cultural Resources: None identified

v

Woodlands:
The parcel contains mature trees mainly within the eastern portion of the parcel and along the property lines. 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	25-045-4706
Applicant's Name	Romeo Kapudija
Size of Parcel	19.9676 acres
Zoning Change	GC
Parcel Index Number(s)	14-07-400-001
Common Location	24455 Route 12, Lake Zurich, IL
Contact Person	John F. Cerbus, P.E.

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*

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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 # 25-045-4706

In the Southeast Quarter of Section 7, Township 43 North, Range 10 East on 19.9676 acres. This parcel is located north of the intersection of US. Highway 12 and Miller Road and is commonly known as 24455 Route 12, Lake Zurich, 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

[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 there are no Natural Areas Inventory Sites within 500 feet of the parcel.

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.

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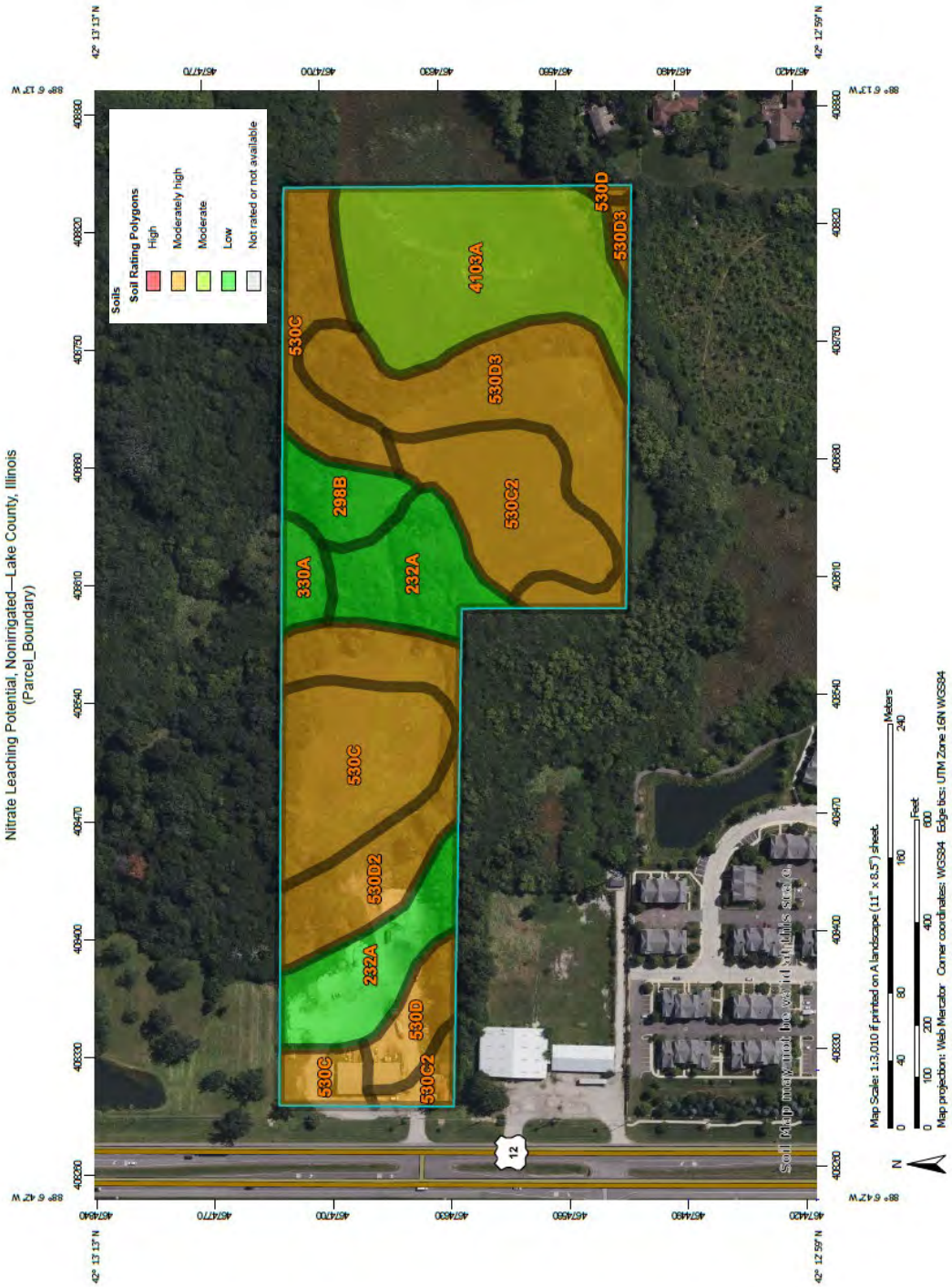
Nitrate Leaching Potential, Nonirrigated—Lake County, Illinois
(Parcel_Boundary)
Soils
Soil Rating Polygons
High
Moderately high
Moderate
Low
Not rated or not available
530C
530D3
530D
4103A
530C2
298B
330A
232A
530D2
530C
530D
530C2
232A
530C
12
Soil Map may not be valid at this scale.
Map Scale: 1:3,010 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
N

Nitrate Leaching Potential, Nonirrigated

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres	Percent
232A	Ashkum silty clay loam, 0 to 2 percent slopes	Low	Ashkum, drained (92%)	Water quantity available for leaching (1.00)	2.9	14.2%
				Denitrification due to saturation (0.50)		
				Water holding capacity (0.48)		
			Peotone, drained (5%)	Water quantity available for leaching (1.00)		
				Denitrification due to saturation (0.50)		
				Water holding capacity (0.05)		
298B	Beecher silt loam, 2 to 4 percent slopes	Low	Beecher (90%)	Water quantity available for leaching (1.00)	0.8	3.9%
				Water holding capacity (0.79)		
				Denitrification due to saturation (0.50)		
			Ashkum, drained (6%)	Water quantity available for leaching (1.00)		
				Denitrification due to saturation (0.50)		
				Water holding capacity (0.48)		
330A	Peotone silty clay loam, 0 to 2 percent slopes	Low	Peotone, drained (95%)	Water quantity available for leaching (1.00)	0.4	2.0%
				Denitrification due to saturation (0.50)		
				Water holding capacity (0.05)		

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres	Percent
530C	Ozaukee silt loam, 4 to 6 percent slopes	Moderately high	Ozaukee (90%)	Water quantity available for leaching (1.00)	4.0	19.5%
				Water holding capacity (0.59)		
530C2	Ozaukee silt loam, 4 to 6 percent slopes, eroded	Moderately high	Ozaukee, eroded (96%)	Water quantity available for leaching (1.00)	2.3	11.1%
				Water holding capacity (0.73)		
530D	Ozaukee silt loam, 6 to 12 percent slopes	Moderately high	Ozaukee (94%)	Water quantity available for leaching (1.00)	0.7	3.5%
				Water holding capacity (0.52)		
530D2	Ozaukee silt loam, 6 to 12 percent slopes, eroded	Moderately high	Ozaukee, eroded (93%)	Water quantity available for leaching (1.00)	2.3	11.0%
				Water holding capacity (0.68)		
			Ozaukee, severely eroded (2%)	Water quantity available for leaching (1.00)		
				Water holding capacity (0.79)		
530D3	Ozaukee silty clay loam, 6 to 12 percent slopes, severely eroded	Moderately high	Ozaukee, severely eroded (92%)	Water quantity available for leaching (1.00)	3.3	16.2%
				Water holding capacity (0.79)		
			Chatsworth, severely eroded (2%)	Water quantity available for leaching (1.00)		
				Water holding capacity (0.72)		
4103A	Houghton muck, ponded, 0 to 2 percent slopes	Moderate	Houghton (90%)	Water travel time (1.00)	3.8	18.5%
				Water quantity available for leaching (0.99)		
				Denitrification due to saturation (0.50)		
			Pella (3%)	Water quantity available for leaching (0.99)		
				Water travel time (0.89)		

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres	Percent
				Denitrification due to saturation (0.50)		

Rating	Acres	Percent
Moderately high	12.5	61.3%
Moderate	3.8	18.5%
Low	4.1	20.2%

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.

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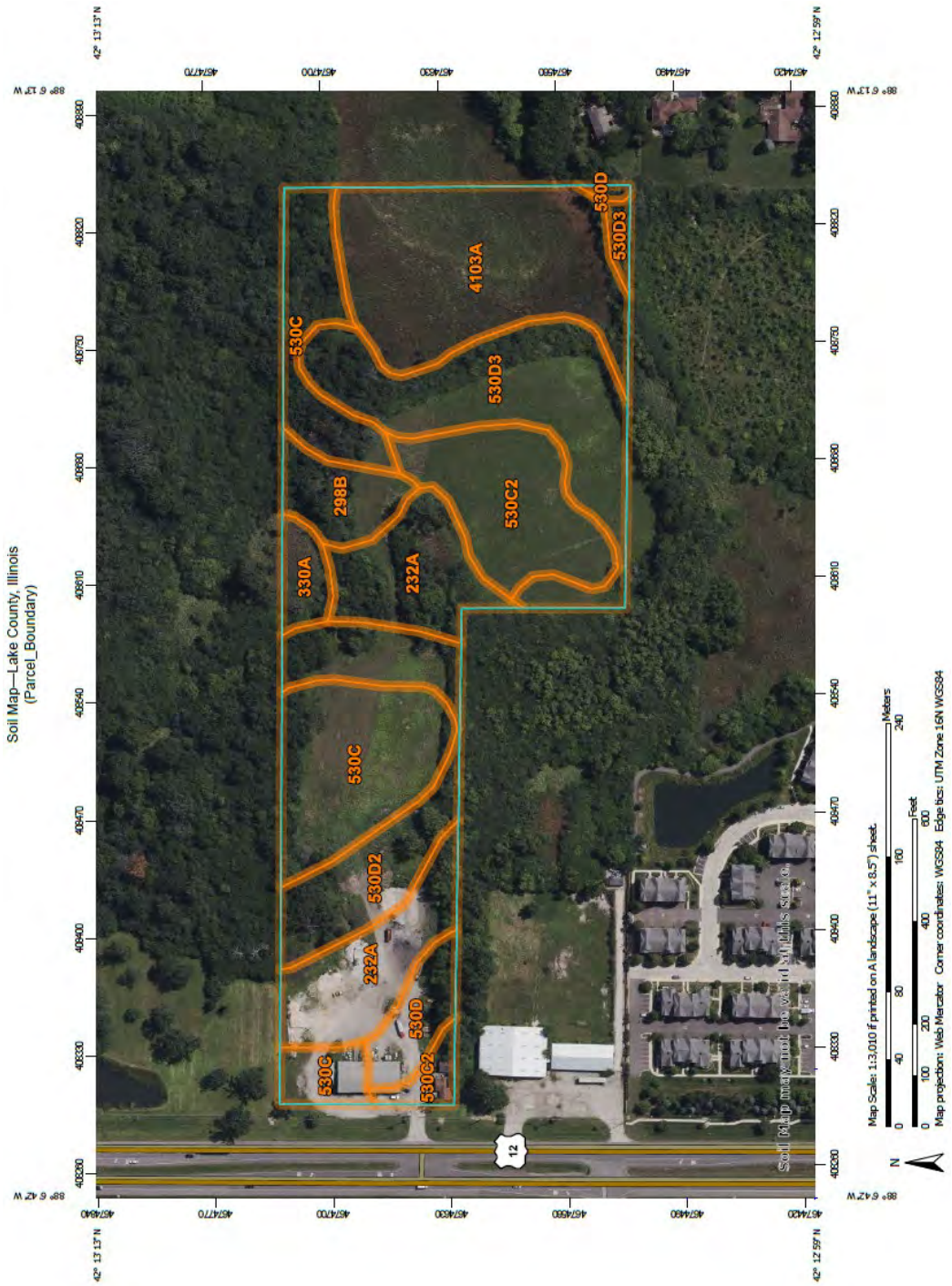
Soil Map—Lake County, Illinois
(Parcel_Boundary)
530D
530D3
4103A
530C
530D3
298B
530C2
330A
232A
530C
530D2
232A
530D
530C
530C2
12
Map Scale: 1:3,010 if printed on A landscape (11" x 8.5") sheet.
Meters
Feet
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84
N

Soil Map Unit Descriptions

Map Unit Symbol	Map Unit Name	Acres	Percent
232A	Ashkum silty clay loam, 0 to 2 percent slopes	2.9	14.2%
298B	Beecher silt loam, 2 to 4 percent slopes	0.8	3.9%
330A	Peotone silty clay loam, 0 to 2 percent slopes	0.4	2.0%
530C	Ozaukee silt loam, 4 to 6 percent slopes	4.0	19.5%
530C2	Ozaukee silt loam, 4 to 6 percent slopes, eroded	2.3	11.1%
530D	Ozaukee silt loam, 6 to 12 percent slopes	0.7	3.5%
530D2	Ozaukee silt loam, 6 to 12 percent slopes, eroded	2.3	11.0%
530D3	Ozaukee silty clay loam, 6 to 12 percent slopes, severely eroded	3.3	16.2%
4103A	Houghton muck, ponded, 0 to 2 percent slopes	3.8	18.5%

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.

SMALL COMMERCIAL BUILDINGS

Small commercial buildings are structures that are less than three stories high and do not have basements. The foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. The ratings 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 (which is inferred from the Unified classification of the soil). The properties that affect the ease and amount of excavation include flooding, depth to a water table, ponding, 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.

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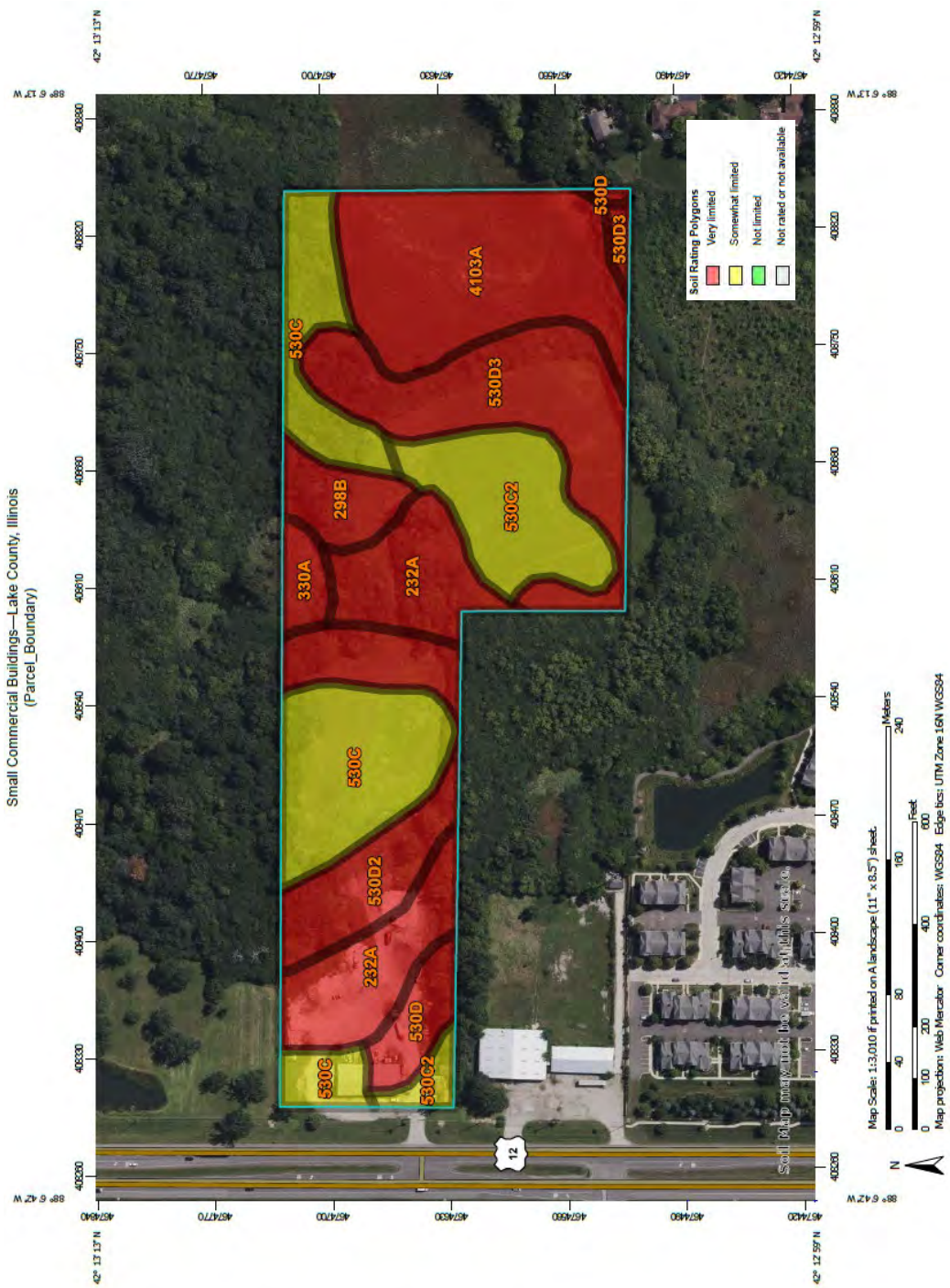
Small Commercial Buildings—Lake County, Illinois
(Parcel_Boundary)
Soil Rating Polygons
Very limited
Somewhat limited
Not limited
Not rated or not available
530D
530D3
4103A
530C
530D3
298B
530C2
330A
232A
530C
530D2
232A
530D
530C
530C2
12
Soil Map may not be valid at this scale.
Map Scale: 1:3,010 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
N

Small Commercial Buildings

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres	Percent
232A	Ashkum silty clay loam, 0 to 2 percent slopes	Very limited	Ashkum, drained (92%)	Ponding (1.00)	2.9	14.2%
				Depth to saturated zone (1.00)		
				Shrink-swell (1.00)		
			Peotone, drained (5%)	Ponding (1.00)		
				Depth to saturated zone (1.00)		
				Shrink-swell (1.00)		
			Orthents, clayey (2%)	Shrink-swell (1.00)		
298B	Beecher silt loam, 2 to 4 percent slopes	Very limited	Beecher (90%)	Depth to saturated zone (1.00)	0.8	3.9%
			Ashkum, drained (6%)	Ponding (1.00)		
				Depth to saturated zone (1.00)		
				Shrink-swell (1.00)		
			Orthents, clayey (2%)	Shrink-swell (1.00)		
330A	Peotone silty clay loam, 0 to 2 percent slopes	Very limited	Peotone, drained (95%)	Ponding (1.00)	0.4	2.0%
				Depth to saturated zone (1.00)		
				Shrink-swell (1.00)		
530C	Ozaukee silt loam, 4 to 6 percent slopes	Somewhat limited	Ozaukee (90%)	Slope (0.00)	4.0	19.5%
530C2	Ozaukee silt loam, 4 to 6 percent slopes, eroded	Somewhat limited	Ozaukee, eroded (96%)	Slope (0.14)	2.3	11.1%
530D	Ozaukee silt loam, 6 to 12 percent slopes	Very limited	Ozaukee (94%)	Slope (1.00)	0.7	3.5%
				Shrink-swell (0.01)		

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres	Percent
			Blount, Lake Michigan Lobe (4%)	Depth to saturated zone (1.00)		
530D2	Ozaukee silt loam, 6 to 12 percent slopes, eroded	Very limited	Ozaukee, eroded (93%)	Slope (1.00)	2.3	11.0%
			Blount, Lake Michigan Lobe (3%)	Depth to saturated zone (1.00)		
			Ozaukee, severely eroded (2%)	Slope (1.00)		
				Depth to saturated zone (0.00)		
530D3	Ozaukee silty clay loam, 6 to 12 percent slopes, severely eroded	Very limited	Ozaukee, severely eroded (92%)	Slope (1.00)	3.3	16.2%
				Depth to saturated zone (0.00)		
			Blount, Lake Michigan Lobe (4%)	Depth to saturated zone (1.00)		
			Chatsworth, severely eroded (2%)	Slope (1.00)		
				Depth to saturated zone (0.16)		
4103A	Houghton muck, ponded, 0 to 2 percent slopes	Very limited	Houghton (90%)	Ponding (1.00)	3.8	18.5%
				Subsidence (1.00)		
				Depth to saturated zone (1.00)		
				Organic matter content (1.00)		
			Pella (3%)	Ponding (1.00)		
				Depth to saturated zone (1.00)		
				Shrink-swell (0.50)		

Rating	Acres	Percent
Very limited	14.2	69.4%
Somewhat limited	6.2	30.6%

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.

Erosion control practices are useful controls only if they are properly located, installed, inspected and maintained.

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
232A	Ashkum silty clay loam, 0 to 2 percent slopes – Non-HEL	2.9	14.2%
298B	Beecher silt loam, 2 to 4 percent slopes – Non-HEL	0.8	3.9%
330A	Peotone silty clay loam, 0 to 2 percent slopes – Non-HEL	0.4	2.0%
530C	Ozaukee silt loam, 4 to 6 percent slopes - HEL	4.0	19.5%
530C2	Ozaukee silt loam, 4 to 6 percent slopes, eroded - HEL	2.3	11.1%
530D	Ozaukee silt loam, 6 to 12 percent slopes -HEL	0.7	3.5%
530D2	Ozaukee silt loam, 6 to 12 percent slopes, eroded - HEL	2.3	11.0%
530D3	Ozaukee silty clay loam, 6 to 12 percent slopes, severely eroded - HEL	3.3	16.2%
4103A	Houghton muck, ponded, 0 to 2 percent slopes – Non-HEL	3.8	18.5%
Total Highly Erodible Soils		**12.6**	**61.3%**

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	Percent
232A	Ashkum silty clay loam, 0 to 2 percent slopes	Prime farmland if drained	2.9	14.2%
298B	Beecher silt loam, 2 to 4 percent slopes	All areas are prime farmland	0.8	3.9%
330A	Peotone silty clay loam, 0 to 2 percent slopes	Prime farmland if drained	0.4	2.0%
530C	Ozaukee silt loam, 4 to 6 percent slopes	All areas are prime farmland	4.0	19.5%
530C2	Ozaukee silt loam, 4 to 6 percent slopes, eroded	All areas are prime farmland	2.3	11.1%
530D	Ozaukee silt loam, 6 to 12 percent slopes	Farmland of statewide importance	0.7	3.5%
530D2	Ozaukee silt loam, 6 to 12 percent slopes, eroded	Farmland of statewide importance	2.3	11.0%
530D3	Ozaukee silty clay loam, 6 to 12 percent slopes, severely eroded	Farmland of statewide importance	3.3	16.2%
4103A	Houghton muck, ponded, 0 to 2 percent slopes	Not prime farmland	3.8	18.5%
Total Prime Farmland			**7.1**	**34.5%**
Total Prime Farmland if Drained			**3.3**	**16.2%**

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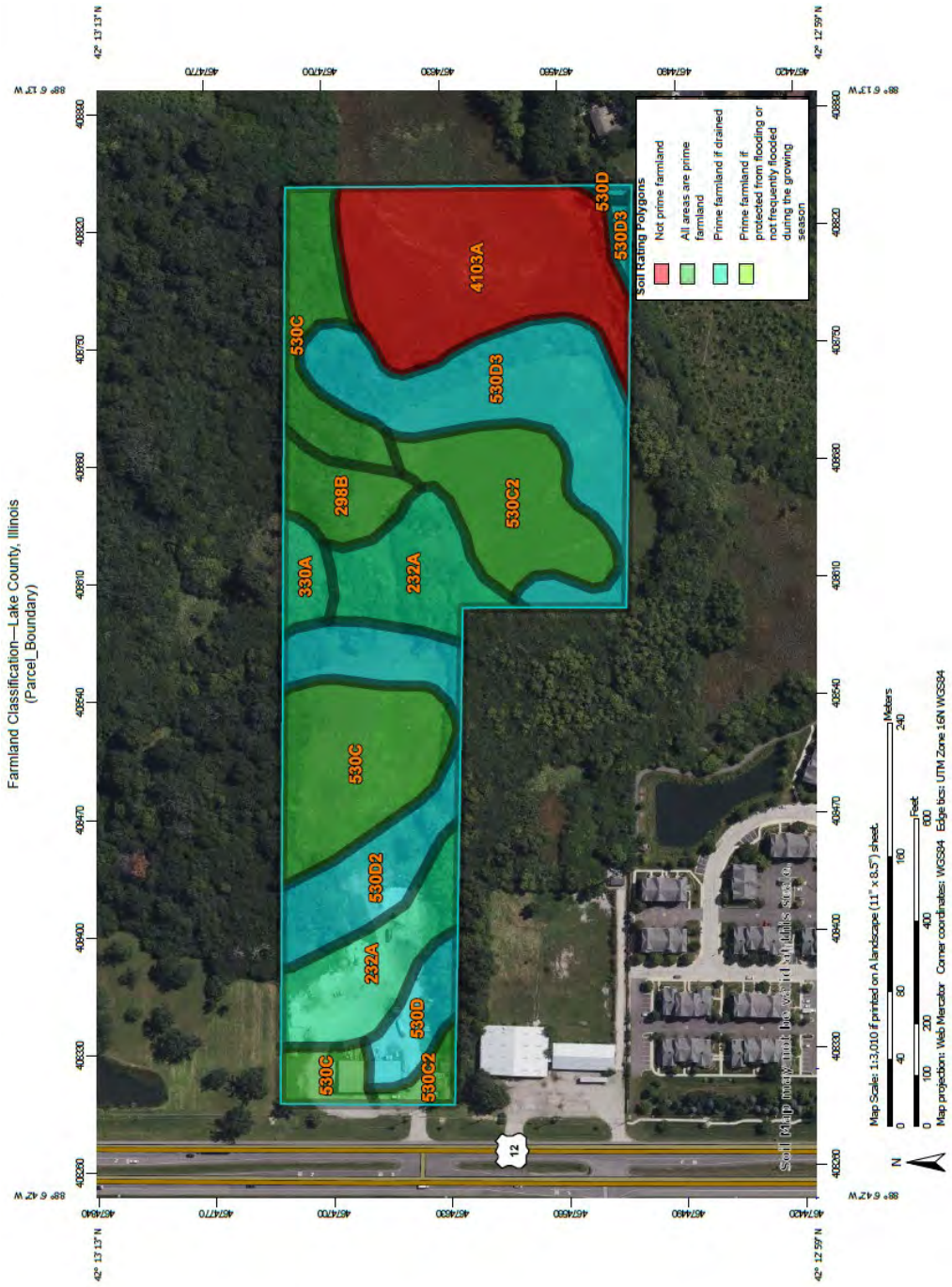

Farmland Classification—Lake County, Illinois
(Parcel_Boundary)
Soil Rating Polygons
Not prime farmland
All areas are prime farmland
Prime farmland if drained
Prime farmland if protected from flooding or not frequently flooded during the growing season
4103A
530D
530D3
530C
530D3
298B
530C2
330A
232A
530C
530D2
232A
530D
530C
530C2
12
Soil data may not be available at this scale.
Map Scale: 1:3,010 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
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 in AOI	Percent of AOI
232A	Ashkum silty clay loam, 0 to 2 percent slopes	97 - Hydric	2.9	14.2%
298B	Beecher silt loam, 2 to 4 percent slopes	6	0.8	3.9%
330A	Peotone silty clay loam, 0 to 2 percent slopes	100 - Hydric	0.4	2.0%
530C	Ozaukee silt loam, 4 to 6 percent slopes	2	4.0	19.5%
530C2	Ozaukee silt loam, 4 to 6 percent slopes, eroded	0	2.3	11.1%
530D	Ozaukee silt loam, 6 to 12 percent slopes	0	0.7	3.5%
530D2	Ozaukee silt loam, 6 to 12 percent slopes, eroded	0	2.3	11.0%
530D3	Ozaukee silty clay loam, 6 to 12 percent slopes, severely eroded	0	3.3	16.2%
4103A	Houghton muck, ponded, 0 to 2 percent slopes	93 - Hydric	3.8	18.5%
Total Hydric			**7.1**	**34.7%**

Hydric Rating by Map Unit—Lake County, Illinois
(Parcel_Boundary)
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
4103A
530D3
530D
530C
298B
330A
232A
530C2
530C
530D2
232A
530D
530C
530C2
12
Soil Map may not be valid at this scale.
Map Scale: 1:3,010 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

Field Tile Map: A check of our map of known field tiles, does not identify tile lines 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.

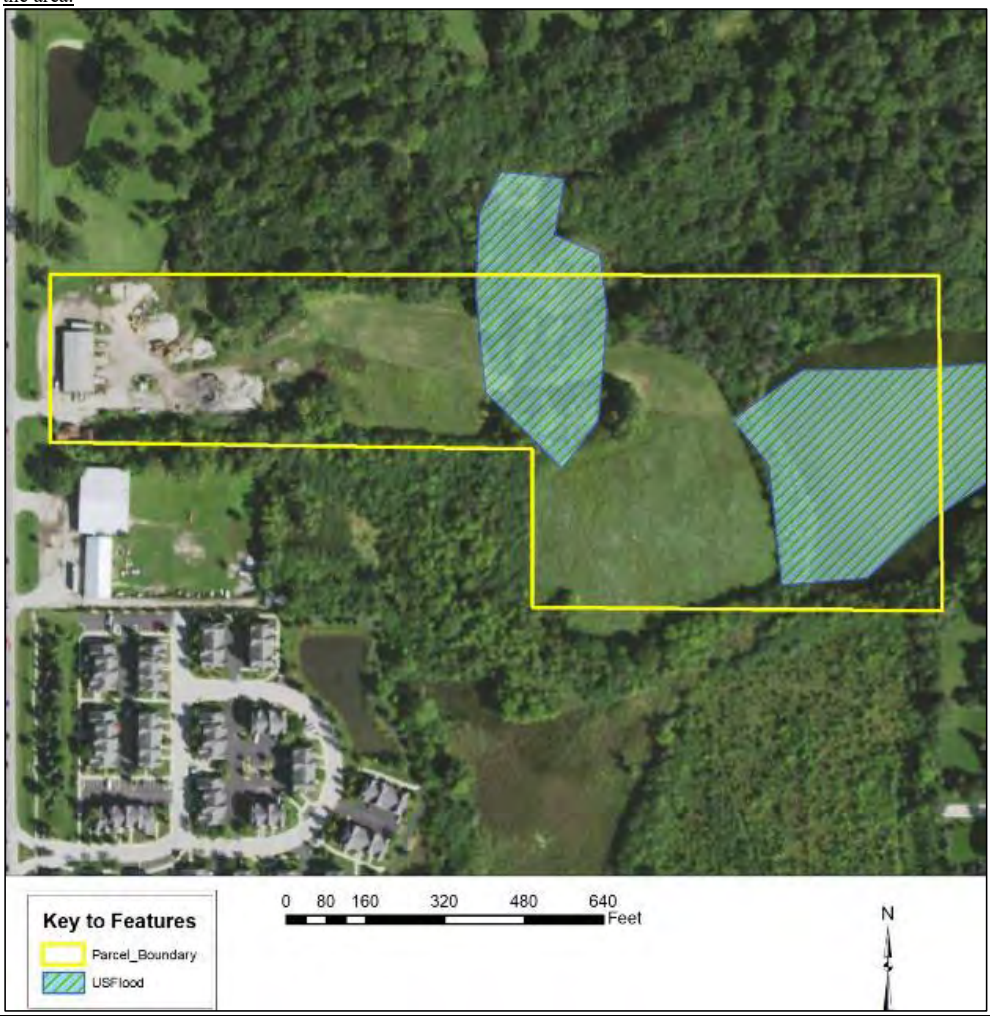
Floodplains play a vital role in reducing the flood damage potential associated with an urbanizing area and, when left in an undisturbed state, also provide valuable wildlife habitat benefits. If it is the petitioner's intent to conduct floodplain filling or modification activities, the petitioner and 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 rolling topography (slopes 0 to 12%) involving high and low areas (elevation ranges from 833' above sea level to 873' 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 4.99 acres of previous flooding on the parcel.

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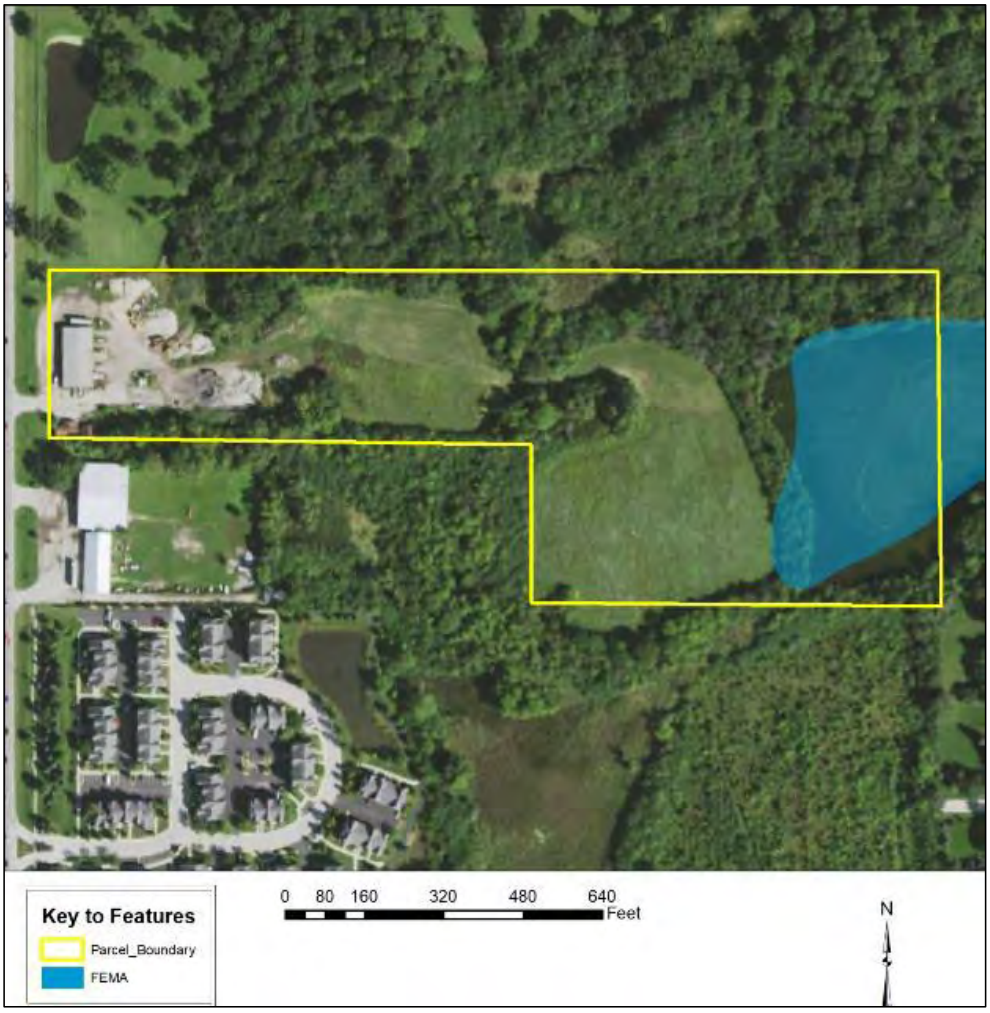


Federal Emergency Management Agency: Flood Insurance Rate Map Panels 17097C0226K and 17097C0228K
The map indicates 3.3 acres of the parcel is within Zone A, 100-year floodplain.

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.

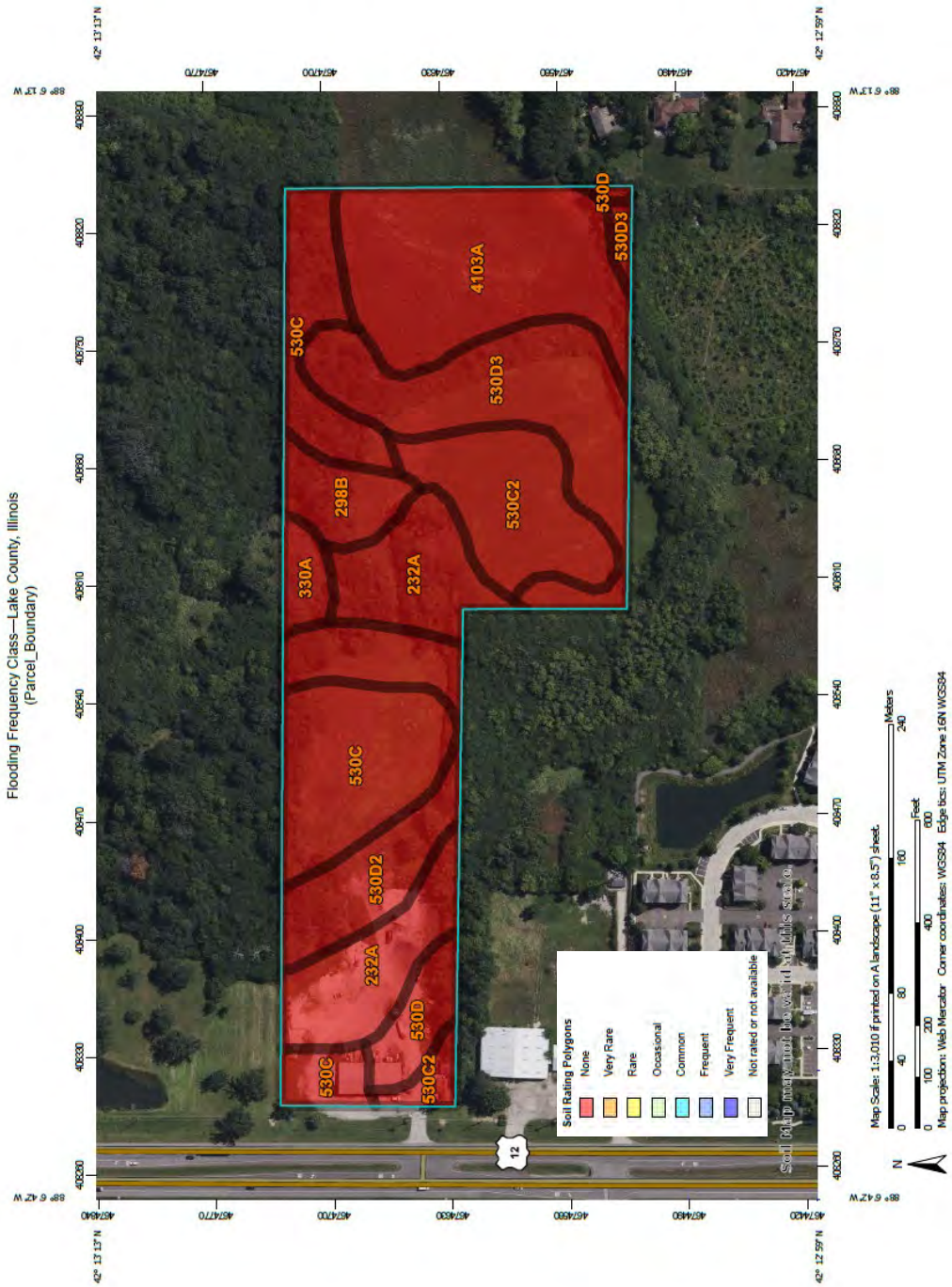
"Frequent" means that flooding is likely to occur often under normal weather conditions. The chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year.

"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
232A	Ashkum silty clay loam, 0 to 2 percent slopes	None	2.9	14.2%
298B	Beecher silt loam, 2 to 4 percent slopes	None	0.8	3.9%
330A	Peotone silty clay loam, 0 to 2 percent slopes	None	0.4	2.0%
530C	Ozaukee silt loam, 4 to 6 percent slopes	None	4.0	19.5%
530C2	Ozaukee silt loam, 4 to 6 percent slopes, eroded	None	2.3	11.1%
530D	Ozaukee silt loam, 6 to 12 percent slopes	None	0.7	3.5%
530D2	Ozaukee silt loam, 6 to 12 percent slopes, eroded	None	2.3	11.0%
530D3	Ozaukee silty clay loam, 6 to 12 percent slopes, severely eroded	None	3.3	16.2%
4103A	Houghton muck, ponded, 0 to 2 percent slopes	None	3.8	18.5%
Total Flooding			**0.0**	**0.0%**

35


Flooding Frequency Class—Lake County, Illinois
(Parcel_Boundary)
530C
530D2
232A
530D
530C2
330A
298B
232A
530C
4103A
530D3
530D
530D3
530C2
Soil Rating Polygons
None
Very Rare
Rare
Occasional
Common
Frequent
Very Frequent
Not rated or not available
Soil Rating Lines
Soil Rating Points
Map Scale: 1:3,010 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
N
12

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.

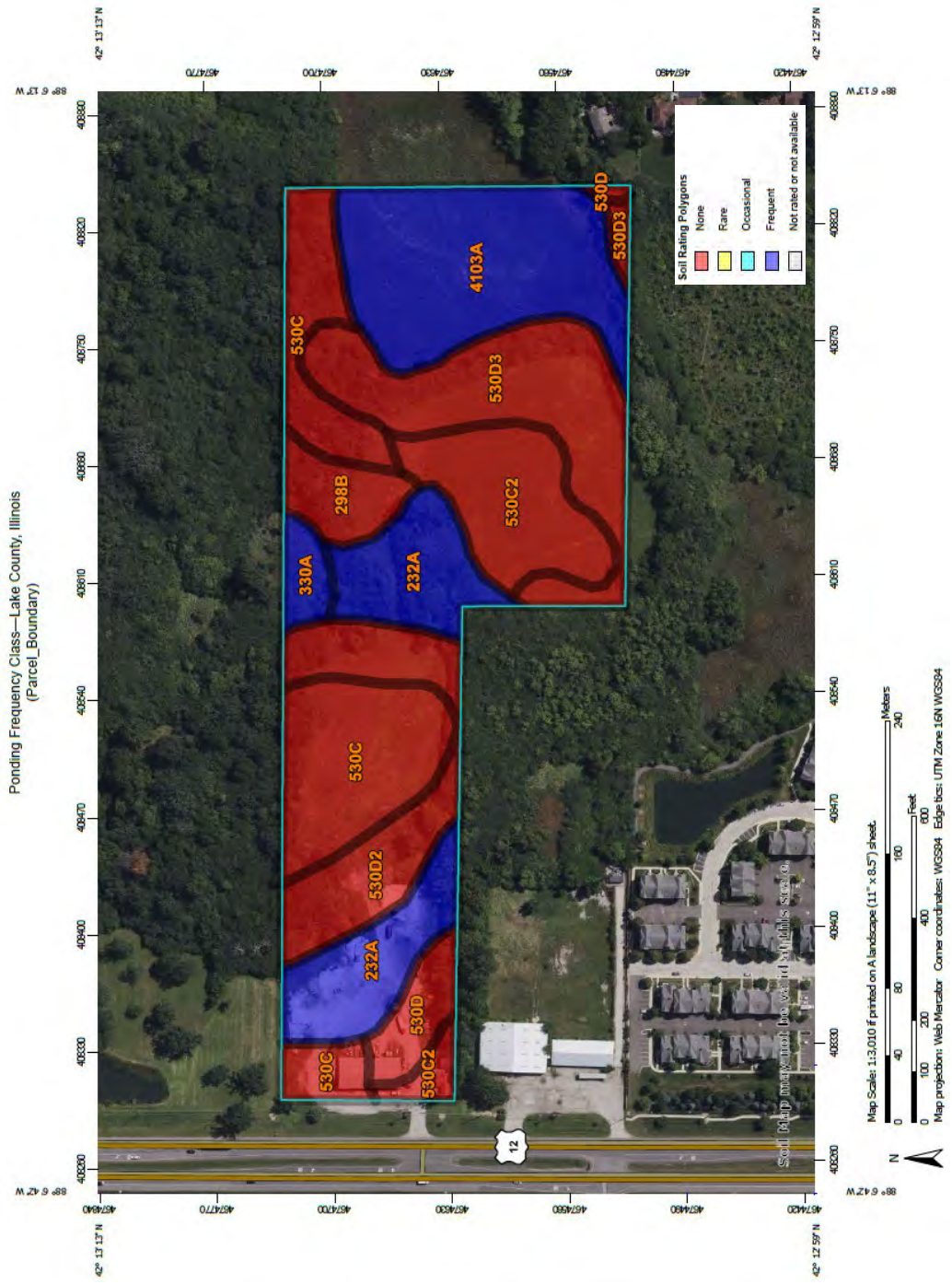
"Occasional" means that ponding occurs, on the average, once or less in 2 years. The chance of ponding is 5 to 50 percent in any year.

"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
232A	Ashkum silty clay loam, 0 to 2 percent slopes	Frequent	2.9	14.2%
298B	Beecher silt loam, 2 to 4 percent slopes	None	0.8	3.9%
330A	Peotone silty clay loam, 0 to 2 percent slopes	Frequent	0.4	2.0%
530C	Ozaukee silt loam, 4 to 6 percent slopes	None	4.0	19.5%
530C2	Ozaukee silt loam, 4 to 6 percent slopes, eroded	None	2.3	11.1%
530D	Ozaukee silt loam, 6 to 12 percent slopes	None	0.7	3.5%
530D2	Ozaukee silt loam, 6 to 12 percent slopes, eroded	None	2.3	11.0%
530D3	Ozaukee silty clay loam, 6 to 12 percent slopes, severely eroded	None	3.3	16.2%
4103A	Houghton muck, ponded, 0 to 2 percent slopes	Frequent	3.8	18.5%
Total Frequent			**7.1**	**34.7%**

37


Ponding Frequency Class—Lake County, Illinois
(Parcel_Boundary)
Soil Rating Polygons
None
Rare
Occasional
Frequent
Not rated or not available
530C
530D3
530D
4103A
530C2
298B
330A
232A
530D2
12
Map Scale: 1:3,010 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

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 located in the Flint Creek Subwatershed (HUC 12 – 071200061104) of the Fox River.

The watersheds plans can be found at these links:

https://www.lakecountyil.gov/2437/Watershed-Management-Plans

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 indicates there are no farmed wetlands on the parcel.

LAKE COUNTY WETLAND INVENTORY

The map identifies 6.23 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 the wetlands on the parcel are not high quality wetlands.

43

Key to Features
Parcel_Boundary
ADID Wetlands
0 80 160 320 480 640
Feet
N

RETENTION SYSTEMS, LINED

Lined retention systems are stormwater management practices that are placed 3 to 5 feet in the ground, depending on the application. An impervious liner, made of rubber or clay, is used to retain water and thus to maintain hydrophytic vegetation. These systems are meant to be used where the hydrology will not allow other systems, but the slope and bedrock depth are favorable. 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. Some land shaping may be needed to allow stormwater runoff to accumulate in the system. 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 that are 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 lined 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, Lined

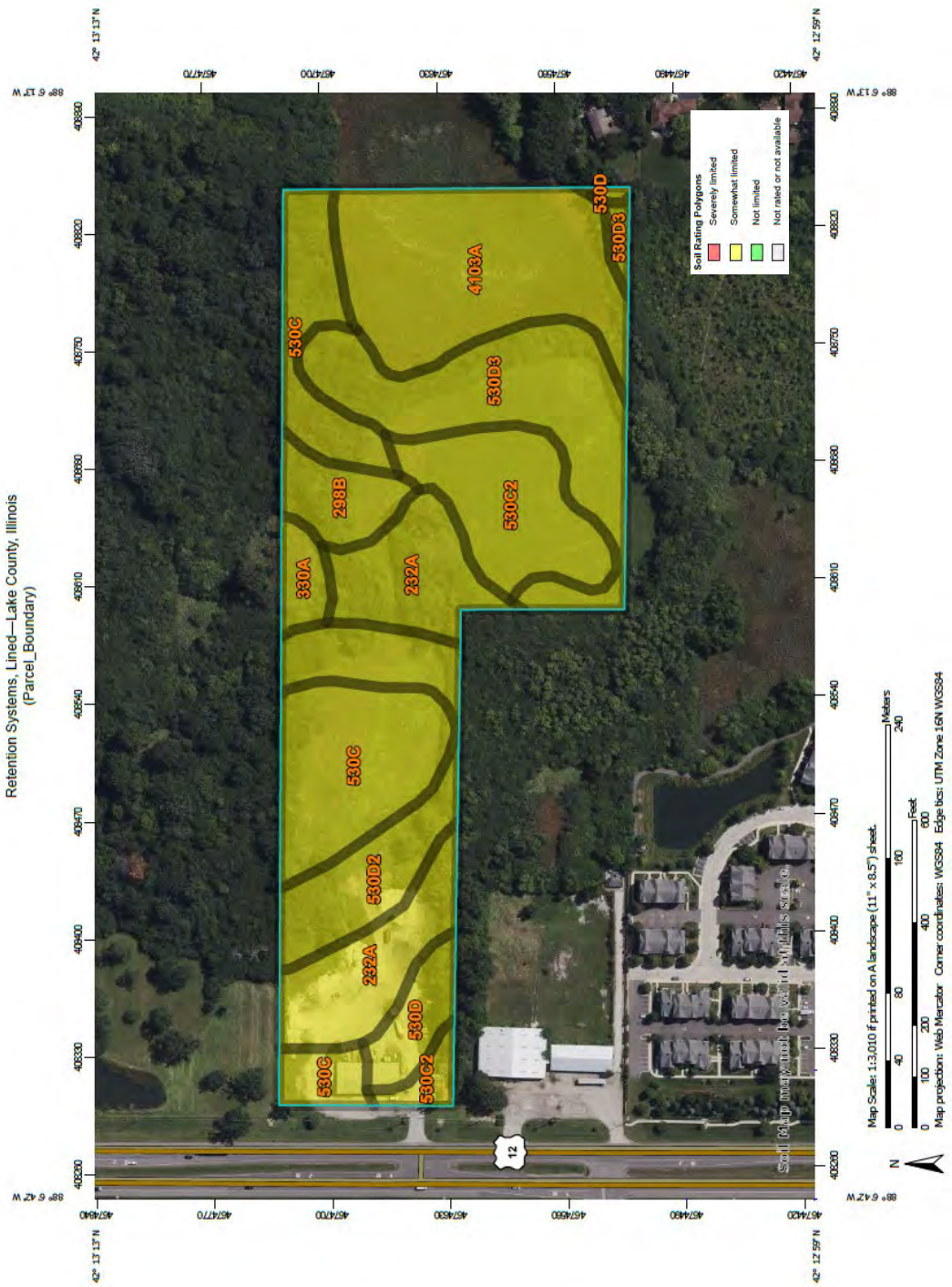
Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres	Percent
232A	Ashkum silty clay loam, 0 to 2 percent slopes	Somewhat limited	Ashkum, drained (92%)	Vegetation establishment (0.41)	2.9	14.2%
				Water spreading surface (0.17)		
			Peotone, drained (5%)	Vegetation establishment (0.38)		
			Orthents, clayey (2%)	Vegetation establishment (0.50)		
				Water spreading surface (0.50)		
				Insufficient groundwater (0.01)		
298B	Beecher silt loam, 2 to 4 percent slopes	Somewhat limited	Beecher (90%)	Water spreading surface (0.50)	0.8	3.9%
				Vegetation establishment (0.16)		
				Water movement (0.14)		
			Ashkum, drained (6%)	Vegetation establishment (0.41)		
				Water spreading surface (0.17)		
			Orthents, clayey (2%)	Vegetation establishment (0.50)		
				Water spreading surface (0.50)		
				Insufficient groundwater (0.01)		
330A	Peotone silty clay loam, 0 to 2 percent slopes	Somewhat limited	Peotone, drained (95%)	Vegetation establishment (0.38)	0.4	2.0%
530C	Ozaukee silt loam, 4 to 6 percent slopes	Somewhat limited	Ozaukee (90%)	Water spreading surface (0.50)	4.0	19.5%

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres	Percent
				Vegetation establishment (0.32)		
				Water movement (0.14)		
				Slope (0.04)		
				Insufficient groundwater (0.01)		
			Ashkum, drained (2%)	Vegetation establishment (0.41)		
				Water spreading surface (0.17)		
530C2	Ozaukee silt loam, 4 to 6 percent slopes, eroded	Somewhat limited	Ozaukee, eroded (96%)	Water spreading surface (0.50)	2.3	11.1%
				Water movement (0.14)		
				Slope (0.12)		
				Vegetation establishment (0.05)		
				Insufficient groundwater (0.01)		
530D	Ozaukee silt loam, 6 to 12 percent slopes	Somewhat limited	Ozaukee (94%)	Slope (0.97)	0.7	3.5%
				Water spreading surface (0.50)		
				Vegetation establishment (0.32)		
				Water movement (0.14)		
				Insufficient groundwater (0.01)		
			Blount, Lake Michigan Lobe (4%)	Water spreading surface (0.50)		
				Vegetation establishment (0.32)		
				Water movement (0.14)		
530D2	Ozaukee silt loam, 6 to 12 percent slopes, eroded	Somewhat limited	Ozaukee, eroded (93%)	Slope (0.97)	2.3	11.0%
				Water spreading surface (0.50)		

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres	Percent
				Water movement (0.14)		
				Vegetation establishment (0.05)		
				Insufficient groundwater (0.01)		
			Blount, Lake Michigan Lobe (3%)	Water spreading surface (0.50)		
				Vegetation establishment (0.32)		
				Water movement (0.14)		
			Ozaukee, severely eroded (2%)	Slope (0.97)		
				Water spreading surface (0.50)		
				Vegetation establishment (0.36)		
				Insufficient groundwater (0.00)		
530D3	Ozaukee silty clay loam, 6 to 12 percent slopes, severely eroded	Somewhat limited	Ozaukee, severely eroded (92%)	Slope (0.97)	3.3	16.2%
				Water spreading surface (0.50)		
				Vegetation establishment (0.36)		
				Insufficient groundwater (0.00)		
			Blount, Lake Michigan Lobe (4%)	Water spreading surface (0.50)		
				Vegetation establishment (0.32)		
				Water movement (0.14)		
			Chatsworth, severely eroded (2%)	Slope (0.97)		
				Vegetation establishment (0.50)		
				Water spreading surface (0.50)		

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres	Percent
				Insufficient groundwater (0.00)		
4103A	Houghton muck, ponded, 0 to 2 percent slopes	Somewhat limited	Houghton (90%)	Vegetation establishment (0.50)	3.8	18.5%
				Water spreading surface (0.50)		
				Water movement (0.25)		
			Pella (3%)	Water spreading surface (0.50)		
				Water movement (0.14)		
				Vegetation establishment (0.05)		
Totals for Area of Interest					**20.4**	**100.0%**

Rating	Acres	Percent
Somewhat limited	20.4	100.0%


Retention Systems, Lined—Lake County, Illinois
(Parcel_Boundary)
Soil Rating Polygons
Severely limited
Somewhat limited
Not limited
Not rated or not available
530D
530D3
530C
4103A
530D3
298B
530C2
330A
232A
530C
530D2
232A
530D
530C
530C2
12
Soil data may not be valid at this scale.
Map Scale: 1:3,010 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
N

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

Soil Survey of Lake County, Illinois, USDA-SCS in cooperation with the Illinois Agricultural Experiment Station – September 1970.

Geology For Planning In Lake County, IL. State of IL Department of Registration and Education, Illinois State Geologic Survey 1973.

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USDA-SCS National Soils Handbook – latest amended.

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Lower Des Plaines Tributaries Watershed, Cook, DuPage, and Lake Counties, Illinois USDA-SCS, MSD, IDOT-DWR – July 1987.

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IEPA – Stormwater Detention for Water quality Benefits, NIPC – January 1986.

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Potential for Contamination of Shallow Aquifers in Illinois (Plate 2). Illinois Department of Energy and Natural Resources – State Geological Survey Division. Natural Resources Building, 615 E. Peabody Drive, Champaign, Illinois 61820, 1984.

Illinois Environmental Protection Agency, Standards and Specification for Soil Erosion and Sediment Control, Illinois EPA – October 1987.

National Wetlands Inventory Maps, Department of the Interior, Fish and Wildlife Service, 1984.

2000 Land Atlas & Plat Book, Lake County IL, 11th Edition. Published by Rockford Map Publishers, Inc.

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.

EcoCAT
Ecological Compliance Assessment Tool

Applicant:	Pearson, Brown & Associates, Inc.	*IDNR Project Number:*	2509473
Contact:	John F. Cerbus, P.E.	*Date:*	02/12/2025
Address:	1850 W. Winchester Rd - Suite 205 Libertyville, IL 60048		
Project:	Lake Zurich Auto Club		
Address:	24455 N. US Highway 12 , Uninc. Lake Zurich		

Description: Proposed car condo project

Natural Resource Review Results

Consultation for Endangered Species Protection and Natural Areas Preservation (Part 1075)

The Illinois Natural Heritage Database contains no record of State-listed threatened or endangered species, Illinois Natural Area Inventory sites, dedicated Illinois Nature Preserves, or registered Land and Water Reserves in the vicinity of the project location.

Consultation is terminated. 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. Termination does not imply IDNR's authorization or endorsement.

Location
The applicant is responsible for the accuracy of the location submitted for the project.

County: Lake

Township, Range, Section:
43N, 10E, 7

IL Department of Natural Resources Contact
Isabella Newingham
217-785-5500
Division of Ecosystems & Environment

Government Jurisdiction
IL Environmental Protection Agency
Chris Johnston, P.E.
1021 N. Grand Avenue, East
P.O. Box 19276
Springfield, Illinois 62794 -9276

Disclaimer

The Illinois Natural Heritage Database cannot provide a conclusive statement on the presence, absence, or condition of natural resources in Illinois. This review reflects the information existing in the Database at the time of this inquiry, 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, compliance with applicable statutes and regulations is required.

IDNR Project Number: 2509473

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Sarosh Saher

Subject: FW: [EXTERNAL] RE: Bat D-Key Project Code: 2025-0074157

Report This Email FAQ GoDaddy Advanced Email Security, Powered by INKY

Good afternoon,

Please see the correspondence between USFWS and myself from today. This email should be plenty sufficient, as the initial result and correspondence I provided today essentially indicates they did not have concerns with this matter.

Give me a call with any questions.

Eric Mollahan

From: Rock Island, FW3 <RockIsland@fws.gov>
Sent: Monday, July 14, 2025 3:23:10 PM
To: Eric Mollahan <emollahan@ilmenvironments.com>
Subject: Re: [EXTERNAL] RE: Bat D-Key Project Code: 2025-0074157

Hi - we do not provide, nor are you required to have, a concurrence for projects that are determined to have "no effect" to listed species. As your email described below, clearing of brush or early successional woody vegetation at that location would not rise to a level that we would engage. This email is the best we could offer.

Illinois-Iowa Ecological Services Field Office
U.S. Fish and Wildlife Service
1511 47th Avenue
Moline, Illinois 61265
309-757-5800

From: Eric Mollahan <emollahan@ilmenvironments.com>
Sent: Monday, July 14, 2025 2:49 PM
To: Rock Island, FW3 <RockIsland@fws.gov>
Subject: [EXTERNAL] RE: Bat D-Key Project Code: 2025-0074157

Good afternoon,

I am reaching out regarding the project:

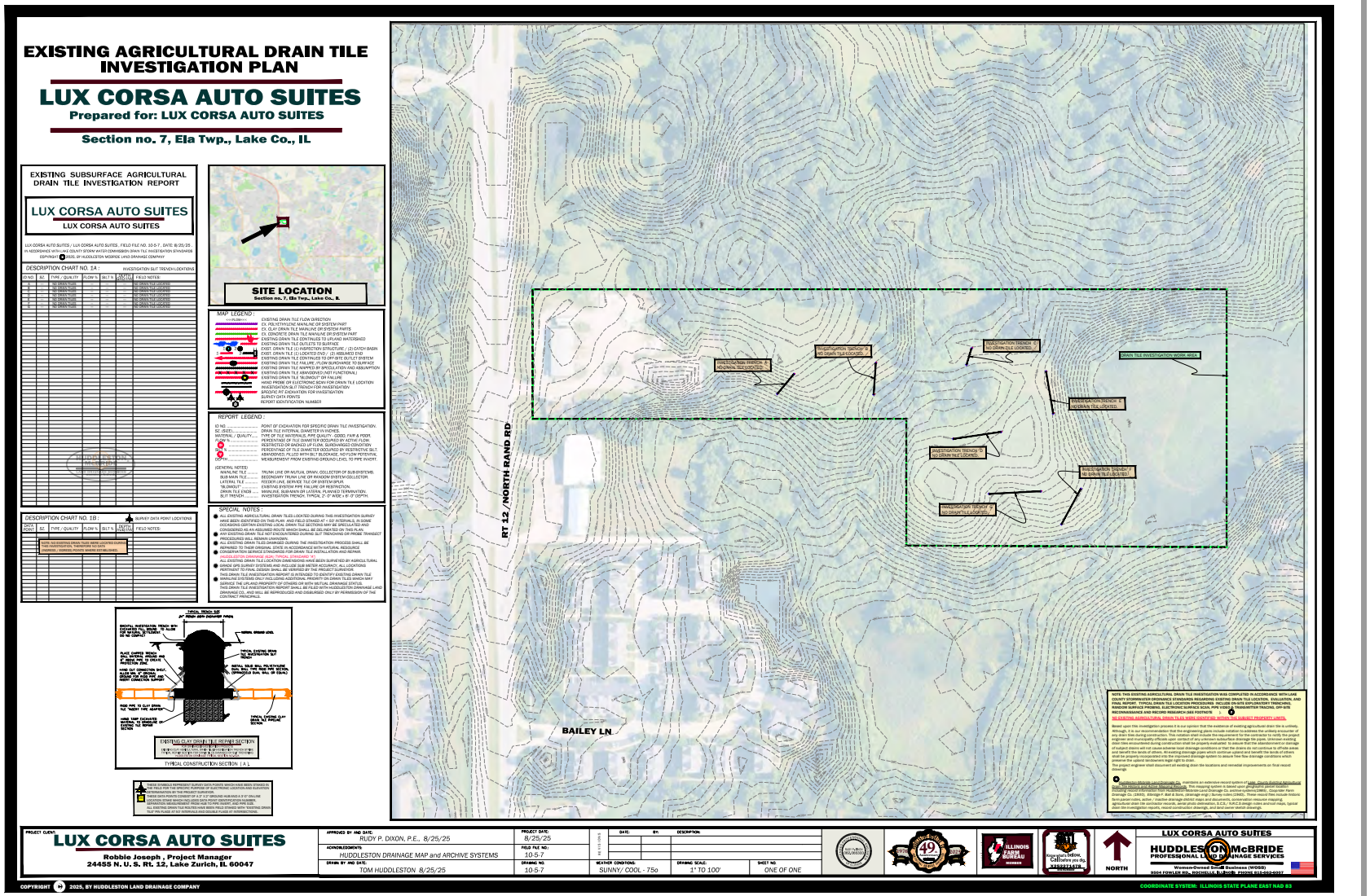
Project Code: 2025-0074157
Project Name: 24455 North Highway 12, LZ

I was recently engaged with the Lake Zurich community regarding this development. Although they understood the correspondence indicated limited concerns with the project in respect to northern long eared bat impacts, they said they would like to have a document. This document would state that USFWS is not concerned about removing of (buckthorn dominated) woodland within the project area outside of the general woody removal timeline. Is this something USFWS could provide for this development proposal? I believe we discussed this via phone shortly after the initial email in this chain.

Please reach out with any follow up questions, concerns or clarifications regarding the project, and thank you so much for your time!

Best regards,

Eric Mollahan
Consulting Department Manager/Lead Ecologist ILM
224-688-3936



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STORMWATER MANAGEMENT COMMISSION

August 13, 2025

Romeo Kapudija
Luxe Corsa Partners, LLC
601 Dundee Avenue
East Dundee, IL 60018

Subject: Base Flood Elevation Determination #BFE-25-072
Luxe Corsa Auto Suites

EXISTING CONDITIONS BFE APPROVAL

Dear Mr. Kapudija:

We have completed our review of the documentation determining a base flood elevation for the existing Zone A floodplain at 24455 North U.S. Highway 12 in unincorporated Lake County. The calculations were presented in the August 6, 2025 report entitled:

EXISTING BASE FLOOD ELEVATION DETERMINATION FOR LUXE CORSA AUTO SUITES, LAKE ZURICH, ILLINOIS, prepared by Pearson, Brown & Associates, Inc., received by SMC August 8, 2025.

Based on the supporting information, we approve the following base flood elevation:

APPROVED EXISTING CONDITIONS BASE FLOOD ELEVATION
ZONE A FLOODPLAIN, 24455 North U.S. Highway 12

Critical Duration (Hr)	BFE (NAVD 88)
2	834.00

The SMC approved BFE is being used as best available information and has not been approved by FEMA. A BFE approval by FEMA will supersede this approval.

Sincerely,

LAKE COUNTY STORMWATER MANAGEMENT COMMISSION

Philip Ruiz, P.E., CFM
Principal Permit Engineer

Brian Frank, P.E., CFM
Chief Engineer

C: John Cerbus – Pearson, Brown & Associates, Inc.

500 W. Winchester Road • Libertyville, Illinois 60048 • 847/377-7700 • FAX 847/984-5747

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
Lake Zurich
24455 US Hwy 12
IEPA
Demolition and New Construction of Auto Suites

PLEASE REFER TO: SHPO LOG #003052225

June 18, 2025

John F. Cerbus
Pearson, Brown & Associates, Inc.
1850 W. Winchester Road, Suite 205
Libertyville, IL 60048-5355

The Illinois State Historic Preservation Office is required by the Illinois State Agency Historic Resources Preservation Act (20 ILCS 3420, as amended, 17 IAC 4180) (Act) to review all state undertakings for their effect on cultural resources. Pursuant to this requirement, we have received information regarding the above referenced project for our comment.

According to the information provided there is no federal involvement in your project. Be aware the state law is less restrictive than the federal cultural resource laws concerning archaeology. If your project will use federal loans or grants, need federal agency permits, use federal property, or involve assistance from a federal agency, then your project must be reviewed under the National Historic Preservation Act of 1966, as amended. Please notify us immediately if such is the case so we can determine which entity should initiate consultation. Additional archaeological survey may be necessary.

No historic properties were identified within the area of potential visual effects. Additionally, our files do not identify any known archaeological sites within the area of potential direct effects, nor is it within a high probability area for archaeological resources as defined in the Act. Accordingly, this project is **EXEMPT** from archaeological survey requests pursuant to Section 6 of the Act. An archaeological survey is not *required* under state law as there is no public funding nor is it on public land.

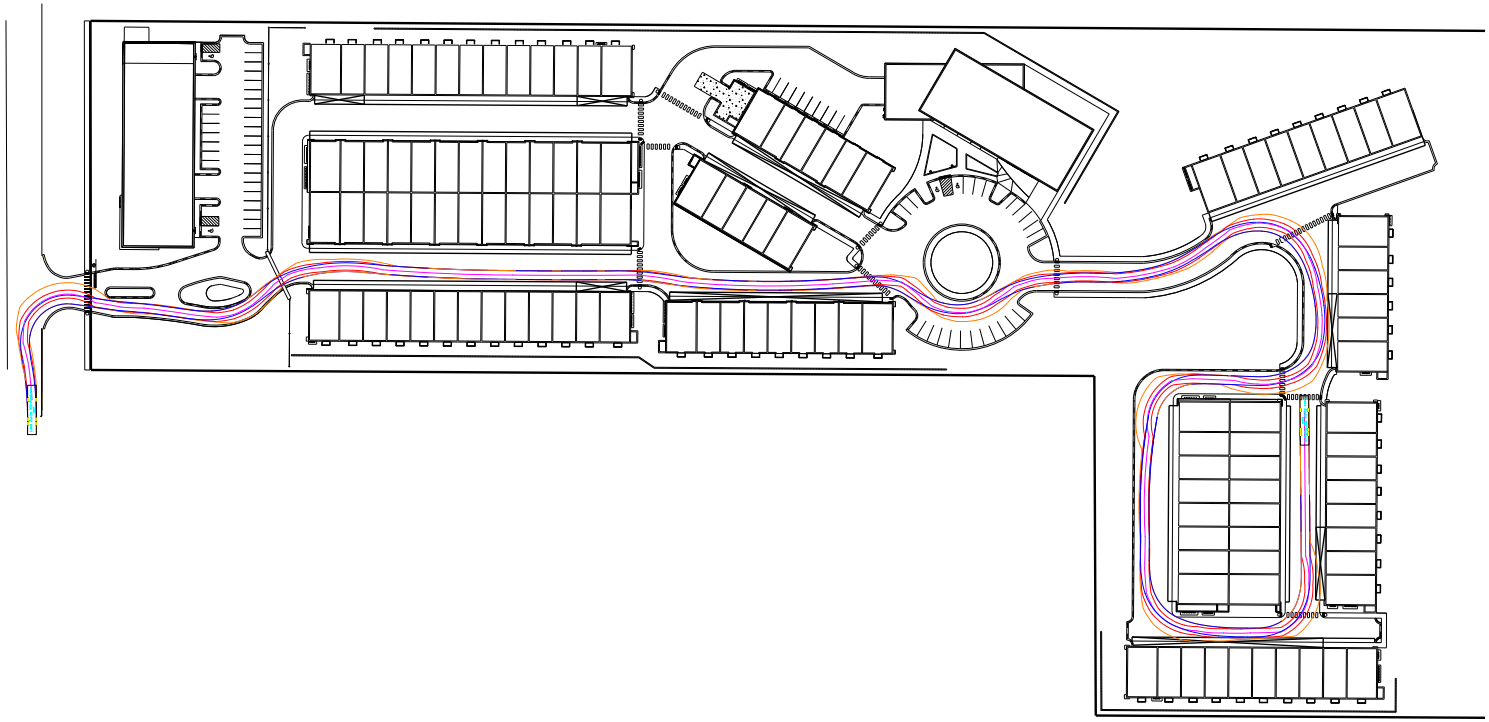
Since the area has never been surveyed for archaeological resources, however, it is possible that historic properties are present but remain unidentified. Please consider assisting the State of Illinois in its efforts to preserve and protect historic resources by sharing with us the results of any due diligence archaeological surveys. Early awareness of the presence of historic properties may help prevent unanticipated discoveries and potential construction delays. Our most recently updated list of archaeological consultants is available on our website.

This letter remains in effect for two (2) years from the date of issuance. This 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 further assistance is needed please contact Jeff Kruchten, Principal Archaeologist, at 217/785-1279 or jeff.kruchten@illinois.gov.

Sincerely,

Carey L. Mayer

Carey L. Mayer, AIA
Deputy State Historic Preservation Officer



PEARSON, BROWN & ASSOCIATES, INC.
CONSULTING ENGINEERS
1850 W. WINCHESTER ROAD - SUITE 205
LIBERTYVILLE, IL. 60048
PHONE: (847) 367-4707
FAX: (847) 367-2567
E-MAIL ADDRESS: pba@pearsonbrown.com

NORTH

0 50' 100'
SCALE: 1" = 100'

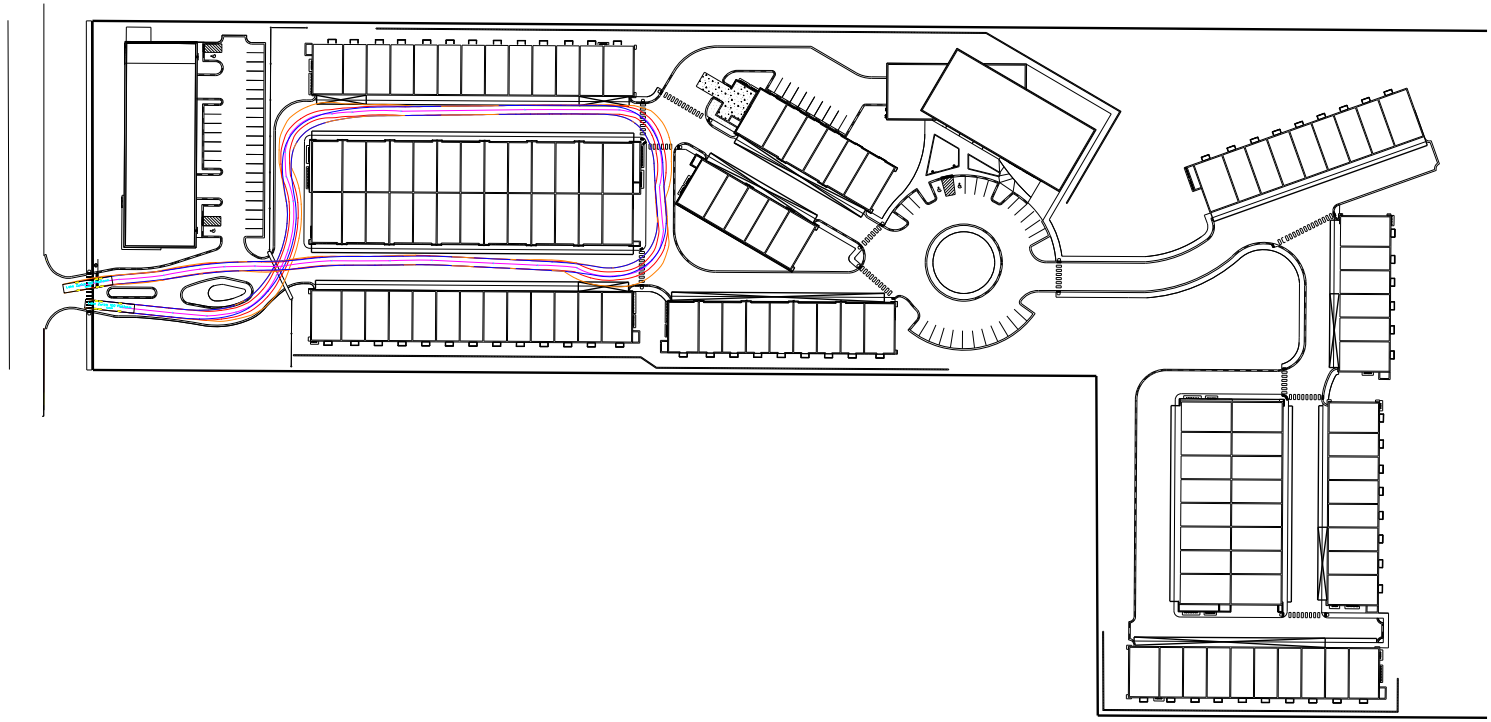
TITLE:
AUTO TURN EXHIBIT

PROJECT:
LUXE CORSA AUTO SUITES
24455 US ROUTE 12
LAKE ZURICH, IL

PROJECT NO.: 2541

EXHIBIT
1

DATE: 10/01/25



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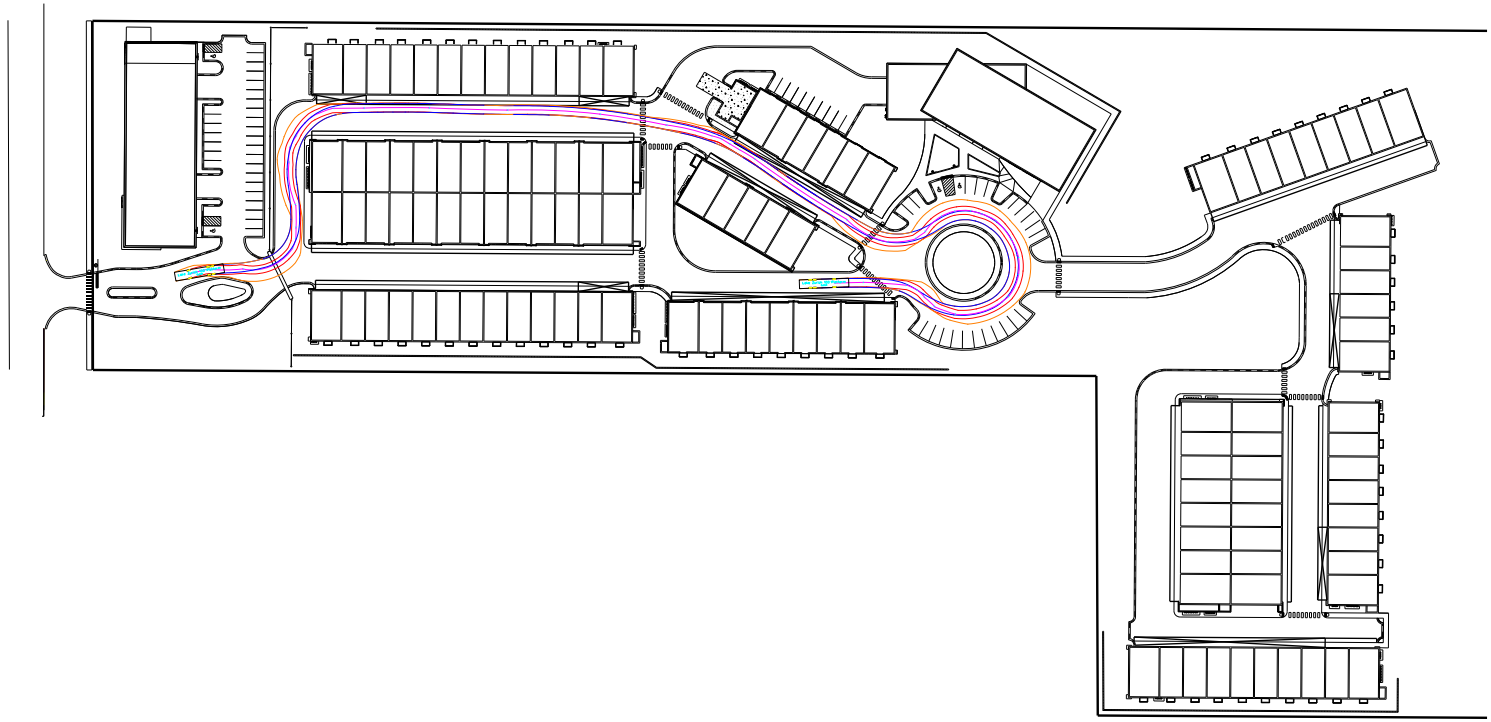

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EXHIBIT
3

DATE: 10/01/25