AGENDA PACKET

VILLAGE OF LAKE ZURICH

Village Board of Trustees Meeting

September 3, 2024
07:00 pm

VILLAGE OF LAKE ZURICH
VILLAGE BOARD OF TRUSTEES MEETING

SEPTEMBER 3, 2024
07:00 PM
AGENDA

1. **CALL TO ORDER**

2. **PLEDGE OF ALLEGIANCE**

3. **ROLL CALL**
   Mayor Thomas Poynton, Trustee Dan Bobrowski, Trustee Mary Beth Euker, Trustee Jake Marx, Trustee William Riley, Trustee Marc Spacone, Trustee Roger Sugrue, Trustee Greg Weider.

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

   - Recognition of Ela Township Pageant Queens - Teen Miss Alexis Alt, Junior Miss Meghan Zaehler and Little Miss Zoey Kumar.
   - Recognition of Trustee Dan Bobrowski for Public Service on the Village Board.

5. **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.

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 August 19, 2024

   Attachment: 6a.pdf

   B. Approval of Semi-Monthly Warrant Register Dated September 3, 2024, Totaling $1,327,483.25

   Attachment: 6b.pdf

   C. Ordinance Approving a Special Use Permit for The Simulation Zone at 189 South Rand Road (Ord. #2024-09-583)

   Summary: The owners and operators of The Simulation Zone request a Special Use Permit at 189 South Rand Road to open a business offering realistic racing, golf, flight, and other simulation technology experiences. The Planning and Zoning Commission held a public hearing on August 21, 2024 and voted 6-0 in favor of recommending approval of this Special Use Permit.

   Attachment: 6c.pdf

   D. Ordinance Granting a Variation to Allow for the Construction of a Terrace Within the Rear Yard at 474 Rush Court (Ord. #2024-09-584)

   Summary: The owners of 474 Rush Court request a Zoning Variation to allow a terrace patio in the backyard that exceeds the minimum setback requirements. The Planning and Zoning Commission held a public hearing on August 21, 2024 and voted 6-0 in favor of recommending approval of the Zoning Variation.

   Attachment: 6d.pdf

   E. Change Order to Previously Awarded Contract for Buffalo Creek Building A Flooring Replacement in the Amended Amount Not-to-Exceed $34,636

   Summary: The Village Board awarded a contract to NPN Flooring for flooring replacement at Buffalo Creek Building A on May 20, 2024 in the amount not-to-exceed $34,196.40. During construction, a moisture test was conducted after removal of existing floor which found the levels of moisture in the concrete subfloor to be at a level too high to allow proper bonding of the new flooring to the concrete. The proposed change order results in a cost increase of $439.60 over the previously awarded amount of $34,196.40 with the final project cost to be in the amount not-to-exceed $34,636.

Attachment: 6e.pdf

7. NEW BUSINESS

This agenda item includes matters coming to the Board of Trustees for discussion and possible action.

A. Ordinance Granting Approval for a Planned Unit Development for OSK Residential Development Located at 670 South Old Rand Road (Ord. #2024-09-585) (Trustee Marx)

Summary: Developers at OSK Capital Partners request approval of a Planned Unit Development, Zoning Map Amendment and Preliminary Plat of Subdivision to develop a new residential community at 670 South Old Road Road.

This application was originally submitted to the Village in 2022 for construction of 50 townhouses within 12 buildings but was denied by the Village Board due to concerns about too high of density, parking, wetlands disturbance, and structures within the creek area.

OSK Capital Partners has now resubmitted a revised development proposal consisting of 18 single family homes and 18 townhomes. The Planning and Zoning Commission considered this revised application at Public Hearings held on June 19 and July 17, 2024.

At its meeting on July 17, 2024, the Planning and Zoning Commission voted 6-0 to recommend approval of this revised development concept plan incorporating the conditions for approval provided by staff in its report.

Recommended Action: A motion to approve Ordinance #2024-09-586 Granting Approval of a Planned Unit Development, Amendment to the Official Zoning Map, Preliminary Plat, Development Concept Plan, Special Use Permits, and Modifications to the Zoning and Land Development Code for a Residential Subdivision at 670 South Old Rand Road.

Attachment: 7a.pdf

B. Ordinance Approving an Increase in the Non-Home Rule Municipal Retailers; and Municipal Service Occupation Tax (Ord. #2024-09-586) (Mayor Poynton)

Summary: The provided ordinance enacts a 0.5% increase to the Village's Non-Home Rule (NHR) Sales Tax, increasing the rate to a total of 1.0%, effective January 1, 2025. A recent change to state statute now allows non-home rule municipalities to adopt a local sales tax without requiring referendum approval. The Village previously adopted a 0.5% NHR sales tax in 2011, which has funded the Village's road program since.

The proposed rate increase will generate an additional $2.5 million annually, which will be used to fund Lake Michigan project-related expenses and debt service. The revenue from this sales tax will cover one-third of the project's costs, reducing the reliance on future water rate increases for utility customers to fund the project.

Approximately 40% of retail purchases at Lake Zurich establishments that are subject to sales tax are made by non-residents. Considering this proposed increase in the NHR sales tax rate, non-residents will contribute approximately 15% of the cost to bring Lake Michigan water into the Village.

Upon the adoption of this ordinance, staff will prepare an ordinance to reduce the scheduled Lake Michigan project water rate increases planned for 2025-2028, in accordance with the previously-discussed project funding strategy.

Recommended Action: A motion to approve Ordinance #2024-09-587 Approving an Increase in the Village of Lake Zurich Non-Home Rule Municipal Retailers' Occupation Tax and Non-Home Rule Municipal Service Occupation Tax.

Attachment: 7b.pdf

8. TRUSTEE REPORTS

9. VILLAGE STAFF REPORTS

10. ADJOURNMENT

The next regularly scheduled Village Board meeting is on Monday, September 16, 2024.

The Village of Lake Zurich is subject to the requirements of the Americans with Disabilities Act of 1990. Individuals with disabilities who plan to attend this meeting and who require certain accommodations so that they can observe and participate in this meeting, or who have questions regarding the accessibility of the meeting or the Village's facilities, should contact the Village's ADA Coordinator at 847. 438.5141 (TDD 847.438.2349) promptly to allow the Village to make reasonable accommodations for those individuals.

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

Monday, August 19, 2024 7:00 p.m.

1. **CALL TO ORDER** by Village Manager Ray Keller at 7.01pm.
2. **ROLL CALL:** Trustee Mary Beth Euker, Trustee Jake Marx, Trustee William Riley, Trustee Marc Spacone, Trustee Roger Sugrue, Trustee Greg Weider. Mayor Thomas Poynton was absent and excused. Also in attendance: Village Manager Ray Keller, Asst. Village Manager Michael Duebner, Village Atty. Scott Uhler, Management Services Dir. Kyle Kordell, Police Chief Steve Husak.

   APPOINTMENT of a CHAIRPERSON
   Motion was made by Trustee Euker, seconded by Trustee Weider, to appoint Trustee Spacone as the temporary chairperson.
   AYES: 6 Trustees Euker, Marx, Riley, Spacone, Sugrue, Weider.
   NAYS: 0
   ABSENT: 0
   MOTION CARRIED. **VOICE VOTE.**
3. **PLEDGE OF ALLEGIANCE**
4. **PRESIDENT'S REPORT / COMMUNITY UPDATE**

   Trustee Spacone read the commendation awarded the Arboretum at Kuechmann Park.
5. **PUBLIC COMMENT**

   There were none.
6. **CONSENT AGENDA**
   - **A. Approval of Minutes from the Village Board Meeting of August 5, 2024**
   - **B. Approval of Semi-Monthly Warrant Register Dated August 19, 2024, Totaling $1,821,532.47**
   - **C. Agreement with I3 Broadband, LLC Executing a Right-of-Way at 505 Telser Road**

     Summary: I3 Broadband, LLC of Peoria, Illinois requests a right-of-way (ROW) agreement with the Village to install broadband services throughout the industrial park and residential neighborhoods and further requesting to establish a head end at a disused communication building next to the cell tower at 505 Telser Road. Under the agreement, the Village will lease communications shelter located at the Community Services Facility to I3 Broadband for a 10-year lease for $500 per month with rent increases every

five years. I3 Broadband is responsible for placing the shelter into service, utilities and ongoing maintenance.

D. Ordinance Amending Title 3, Chapter 3, Article B of the Village of Lake Zurich Municipal Code Requirements of Liquor License Issuance ORD. #2024-08-581

Summary: Staff recommends section 3-3B-15 requiring a surety bond of $1,000 for annual liquor license applicants be stricken and section 3-3B-16 be updated to reflect current insurance requirements.

E. Ordinance Amending Title 3 of Chapter 3 of the Village of Lake Zurich Municipal Code for Liquor Licenses for 1918 Winter Street, LLC dba Mariano's at 1350 East Route 22 ORD. #2024-08-582

Summary: 1918 Winter Street Illinois/dba Mariano's located at 1350 East Route 22 requests a full-service restaurant Class-A, a retail sales Class-B and annual tasting Class-B1 liquor licenses for the dispensing and retail sale of alcoholic beverages inside the store.

Recommended Action: A motion was made by Trustee Riley, seconded by Trustee Euker, to approve the Consent Agenda as presented.

AYES: 6 Trustees Euker, Marx, Riley, Spacone, Sugrue, Weider.
NAYS: 0
ABSENT: 0
MOTION CARRIED.

7. TRUSTEE REPORTS

Trustee Sugrue reported on the recent Alpine Runners successful event.
Trustee Euker stated that volunteers are still needed for Rock The Block event.
Trustee Sugrue requested that residents take care driving with school starting.

8. VILLAGE STAFF REPORTS – There were none.

9. ADJOURNMENT

Motion to adjourn the meeting was made by Trustee Marx, seconded by Trustee Riley.

AYES: 6 Trustees Euker, Marx, Riley, Spacone, Sugrue, Weider.
NAYS: 0
ABSENT: 0
MOTION CARRIED.

The meeting was adjourned at 7.08pm.

Respectfully submitted:

Kathleen Johnson, Village Clerk.

Approved by:

_____ _____

Mayor Thomas M. Poynton Date

VILLAGE OF LAKE ZURICH

WARRANT REPORT - 08/5/2024

$1,327,483.25

Item	GL Number	GL Desc	Invoice Description	Amount
	Fund 101 GENERAL			
	Dept 00000			
1	101-00000-10216	PETTY CASH SPECIAL EVENTS	RTB 2024 - PETTY CASH	3,300.00
2	101-00000-14101	INVENTORY	POSTAGE REPLENISH A/C #34328807	2,000.00
3	101-00000-21202	AMBULANCE FEES PAYABLE	AMB REF - LEMKE, C 08/13/23	106.89
4	101-00000-21202	AMBULANCE FEES PAYABLE	AMB REF - SEOK, M 10/23/21	1,694.50
5	101-00000-21203	RECREATION CREDIT PAYABLE	REF PRG CXL - JR TENNIS	26.00
6	101-00000-21203	RECREATION CREDIT PAYABLE	REF PRG CXL - YOUTH TENNIS	16.80
7	101-00000-21203	RECREATION CREDIT PAYABLE	REF PRG CXL - YOUTH TENNIS	14.00
8	101-00000-21203	RECREATION CREDIT PAYABLE	REF PRG CXL - JR TENNIS	31.20
9	101-00000-21203	RECREATION CREDIT PAYABLE	REF PRG CXL - LBP BALLET	200.00
10	101-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BCE24-0007 - HONEY LAKE RD	800.00
11	101-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF - SWEEP CHARGE - HONEY LAKE	2,400.00
12	101-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BCE23-0006 - 442 S RAND RD	3,843.00
13	101-00000-22501	ER - UNDISTRIBUTED LIFE INS	IPBC INSURANCE COVERAGE - AUG 2024	478.28
		Total For Dept 00000		14,910.67
	Dept 11006 LEGISLATIVE MAYOR & BOARD			
1	101-11006-53211	OTHER SUPPLIES	ALPINE PARADE CANDY	119.75
2	101-11006-53211	OTHER SUPPLIES	ALPINE PARADE CANDY	210.70
3	101-11006-53211	OTHER SUPPLIES	ALPINE PARADE CANDY	122.58
4	101-11006-53211	OTHER SUPPLIES	ALPINE PARADE CANDY	398.96
5	101-11006-53211	OTHER SUPPLIES	NAME PLATE - MARX	13.50
6	101-11006-54302	PUBLIC RELATIONS	GREEN BUSINESS AWARDS	260.69
		Total For Dept 11006 LEGISLATIVE MAYOR & BOARD		1,126.18
	Dept 12001 VILLAGE ADMIN ADMINISTRATION			
1	101-12001-51652	TRAINING AND MEETINGS	COFFEE WITH THE MAYOR	26.42
2	101-12001-51654	MEMBERSHIPS & SUBSCRIP	IAMMA MEMBERSHIP - RAUSCHER	50.00
3	101-12001-51654	MEMBERSHIPS & SUBSCRIP	ILCMA DUES - KELLER	486.00
4	101-12001-51654	MEMBERSHIPS & SUBSCRIP	ICSC ANNUAL DUES - KELLER	125.00

VILLAGE OF LAKE ZURICH

WARRANT REPORT - 08/5/2024

$1,327,483.25

Item	GL Number	GL Desc	Invoice Description	Amount
5	101-12001-52111	OTHER PROFESSIONAL SVCS	PROPERTY TAX REVIEWS WITH COUNTY PTAB	1,066.15
6	101-12001-52201	VILLAGE ATTORNEY	LEGAL SERVICES - JUL 2024	5,478.75
7	101-12001-52202	LITIGATION	LEGAL SERVICES - JUL 2024	3,831.00
		Total For Dept 12001 VILLAGE ADMIN ADMINISTRATION		11,063.32
	Dept 12120 VILLAGE ADMIN HUMAN RESOURCES			
1	101-12120-51655	EMPLOYEE RECOGNITION	EMPLYOYEE PICNIC GIFTS	108.25
2	101-12120-52111	OTHER PROFESSIONAL SVCS	DOCUWARE DOC SCAN, IMPORT & CONTENT MGMNT	2,689.20
3	101-12120-52203	LABOR ATTORNEY	LEGAL SERVICES - JUL	4,305.50
4	101-12120-54305	EMPLOYEE EXAMS	EMPLOYEE SCREENING	65.00
5	101-12120-54305	EMPLOYEE EXAMS	HEALTH SCREENINGS	1,415.00
		Total For Dept 12120 VILLAGE ADMIN HUMAN RESOURCES		8,582.95
	Dept 12180 VILLAGE ADMIN ECONOMIC DEVELOPMENT			
1	101-12180-51652	TRAINING AND MEETINGS	MEMBERSHIP RENEWAL MD (2026)	125.00
2	101-12180-51654	MEMBERSHIPS & SUBSCRIP	MEMBERSHIP RENEWAL MD (2025)	125.00
		Total For Dept 12180 VILLAGE ADMIN ECONOMIC DEVELOPMENT		250.00
	Dept 13001 FINANCE ADMINISTRATION			
1	101-13001-53207	PRINTING-STATIONERY/FORM	ENVELOPES	189.68
2	101-13001-53208	OFFICE SUPPLIES	PAPER	66.80
		Total For Dept 13001 FINANCE ADMINISTRATION		256.48
	Dept 17001 TECHNOLOGY ADMINISTRATION			
1	101-17001-52111	OTHER PROFESSIONAL SVCS	SUPPORT AGMT 2024 - SEP	2,095.60
2	101-17001-52111	OTHER PROFESSIONAL SVCS	DOCUWARE SUPPORT - AUG	435.01
3	101-17001-52704	MAINT-EQUIPMENT	COPIES - MAY/JUL 24	2,367.03
4	101-17001-53203	TELEPHONE & DATA SVCS	ANALOG LINES - AUG	1,332.68
		Total For Dept 17001 TECHNOLOGY ADMINISTRATION		6,230.32
	Dept 24001 POLICE ADMINISTRATION			
1	101-24001-51651	LICENSING/CERTIFICATIONS	NOTARY INSURANCE - BIONDO	30.00

VILLAGE OF LAKE ZURICH

WARRANT REPORT - 08/5/2024

$1,327,483.25

Item	GL Number	GL Desc	Invoice Description	Amount
2	101-24001-52701	MAINT-BLDGS & GROUNDS	INSTALL OF DATA DROPS	760.00
3	101-24001-53206	POSTAGE & SHIPPING	POSTAGE	16.45
4	101-24001-53206	POSTAGE & SHIPPING	POSTAGE	18.64
5	101-24001-53207	PRINTING-STATIONERY/FORM	TRAFFIC AND PARKING CITATIONS	1,636.50
6	101-24001-53207	PRINTING-STATIONERY/FORM	TRAFFIC AND PARKING CITATIONS	1,219.90
7	101-24001-53208	OFFICE SUPPLIES	COPY PAPER	439.39
		Total For Dept 24001 POLICE ADMINISTRATION		4,120.88
	Dept 24210 POLICE OPERATIONS			
1	101-24210-51652	TRAINING AND MEETINGS	REIMB: CROSSING GUARD TRAINING	79.27
2	101-24210-51652	TRAINING AND MEETINGS	ROLL CALL NEWS ANNUAL MEMBERSHIP	140.00
3	101-24210-51652	TRAINING AND MEETINGS	SIEMERS - CAR SEAT RECERTIFICATION	55.00
4	101-24210-52111	OTHER PROFESSIONAL SVCS	VEHICLE TOWING SERVICE	610.00
5	101-24210-52204	OTHER LEGAL	LOCAL PROSECUTOR FEES - JUL	6,666.67
6	101-24210-52704	MAINT-EQUIPMENT	BREATH INSTRUMENT DRY GAS	177.75
7	101-24210-53209	UNIFORMS	REIMB: BOOTS	119.20
8	101-24210-53209	UNIFORMS	EAR MOLD - SIEBER	16.00
9	101-24210-53209	UNIFORMS	PANTS - STRUGA	54.79
10	101-24210-53211	OTHER SUPPLIES	PRISONER MEAL	9.77
11	101-24210-53211	OTHER SUPPLIES	PRISONER MEAL	9.56
12	101-24210-53211	OTHER SUPPLIES	PRISONER MEAL	9.77
13	101-24210-53211	OTHER SUPPLIES	PRISONER MEAL	14.06
14	101-24210-53211	OTHER SUPPLIES	PRISONER MEAL	9.66
		Total For Dept 24210 POLICE OPERATIONS		7,971.50
	Dept 24230 POLICE CRIME PREVENTION			
1	101-24230-53211	OTHER SUPPLIES	FLASH DRIVE	109.99
2	101-24230-53211	OTHER SUPPLIES	EVIDENCE BUCCAL SWABS	70.10
		Total For Dept 24230 POLICE CRIME PREVENTION		180.09
	Dept 25001 FIRE ADMINISTRATION			
1	101-25001-51654	MEMBERSHIPS & SUBSCRIP	ANNUAL MEMEBERSHIP - WOLTMAN	55.00

VILLAGE OF LAKE ZURICH

WARRANT REPORT - 08/5/2024

$1,327,483.25

Item	GL Number	GL Desc	Invoice Description	Amount
2	101-25001-51655	EMPLOYEE RECOGNITION	FLAG CASE	181.90
3	101-25001-52111	OTHER PROFESSIONAL SVCS	FIRE LOCATION STUDY - FGMA	27,334.00
4	101-25001-52111	OTHER PROFESSIONAL SVCS	SUPPORT AGMT 2024 - SEP	1,128.40
5	101-25001-52203	LABOR ATTORNEY	LEGAL SERVICES - JUN	7,915.25
6	101-25001-52203	LABOR ATTORNEY	LEGAL SERVICES - JUL	1,885.00
7	101-25001-52704	MAINT-EQUIPMENT	COPIES - MAY/JUL 24	707.07
8	101-25001-53203	TELEPHONE & DATA SVCS	ANALOG LINES - AUG	185.58
9	101-25001-53208	OFFICE SUPPLIES	PARCHMENT PAPER	30.19
10	101-25001-53209	UNIFORMS	BOOTS - CHIEF PILGARD	228.44
11	101-25001-53209	UNIFORMS	CREDIT - BOOTS	(110.60)
12	101-25001-53209	UNIFORMS	UNIFORM MODIFICATION - MICHEHL	68.00
13	101-25001-53209	UNIFORMS	BOOTS	204.05
14	101-25001-53209	UNIFORMS	SHIRTS - BOECKMANN	79.00
15	101-25001-53209	UNIFORMS	SHIRTS, NAMEPLATE - LUCAS	158.00
16	101-25001-53209	UNIFORMS	SHIRTS - MICHEHL	110.00
17	101-25001-53209	UNIFORMS	SHIRTS,BELT, SHORTS - PENKAVA	72.00
18	101-25001-53210	SMALL TOOLS & EQUIP	DRIP PANS, DRYING RACK	33.98
19	101-25001-53211	OTHER SUPPLIES	BUCKETS, EXTEN CORDS, CHISELS, STRAPS, BIT SET	284.13
20	101-25001-53211	OTHER SUPPLIES	HEAVY DUTY TAPE	11.98
21	101-25001-53211	OTHER SUPPLIES	TISSUE, DETERGENT, REHAB SUPPLIES	53.87
22	101-25001-53405	BLDG & GROUND MAINT SUPP	CLEANING HEADS	58.79
23	101-25001-53405	BLDG & GROUND MAINT SUPP	WATER FILTER	38.52
24	101-25001-54305	EMPLOYEE EXAMS	EMPLOYEE SCREENING EXAMS	760.00
		Total For Dept 25001 FIRE ADMINISTRATION		41,472.55
	Dept 25310 FIRE EMERGENCY MANAGEMENT			
1	101-25310-53211	OTHER SUPPLIES	D ALKALINE BATTERIES	11.16
2	101-25310-53211	OTHER SUPPLIES	NFPA-1142 STANDARD	282.70
		Total For Dept 25310 FIRE EMERGENCY MANAGEMENT		293.86
	Dept 25320 FIRE FIRE SUPPRESSION			
1	101-25320-51652	TRAINING AND MEETINGS	FIREMANSHIP CONFERENCE - BOOTH	592.25

VILLAGE OF LAKE ZURICH

WARRANT REPORT - 08/5/2024

$1,327,483.25

Item	GL Number	GL Desc	Invoice Description	Amount
2	101-25320-52707	MAINT-OTHER	AC ADAPTOR - SCBA TEST MACHINE	121.63
3	101-25320-53209	UNIFORMS	CAIRNS FIRE HELMETS	1,520.00
4	101-25320-53209	UNIFORMS	5 SETS OF TURNOUT GEAR FOR EXPLORERS	11,477.55
5	101-25320-53209	UNIFORMS	BOOTS - SAWYER, STEINHAGEN	820.00
6	101-25320-53209	UNIFORMS	REFLECTIVE HELMET DECALS	261.00
7	101-25320-53211	OTHER SUPPLIES	TISSUE, DETERGENT, REHAB SUPPLIES	86.27
8	101-25320-53407	EQUIP MAINT PART&SUPPLIE	RUBBER MOLD FOR EXTRICATION TOOLS	33.00
		Total For Dept 25320 FIRE FIRE SUPPRESSION		14,911.70
	Dept 25330 FIRE EMS			
1	101-25330-51653	BOOKS & PUBLICATIONS	INFECTION CONTROL PROGRAM	265.00
2	101-25330-51654	MEMBERSHIPS & SUBSCRIP	NAPSICO MEMBERSHIP - YEE	60.00
3	101-25330-52111	OTHER PROFESSIONAL SVCS	AMBULANCE FEES - JUL 2024	2,472.35
4	101-25330-53211	OTHER SUPPLIES	RUGGED BOOK REPLACEMENT	9.99
		Total For Dept 25330 FIRE EMS		2,807.34
	Dept 25340 FIRE SPECIAL RESCUE			
1	101-25340-52704	MAINT-EQUIPMENT	CALIBRATION OF PORTABLE GAS MONITORS	482.40
2	101-25340-52707	MAINT-OTHER	RETURN DIVE ANNUAL MAINTENANCE ON EQUIPMENT	(1,128.01)
3	101-25340-53209	UNIFORMS	BAYONET ADAPTERS	629.48
4	101-25340-55254	MACHINERY & EQUIPMENT	2 NEW LARGE ZEAGLE BCD FOR NEW DIVE TEAM MEMBERS	3,303.12
		Total For Dept 25340 FIRE SPECIAL RESCUE		3,286.99
	Dept 28001 COMMUNITY DEVELOPMENT ADMINISTRATION			
1	101-28001-51652	TRAINING AND MEETINGS	PZC MEETING - WATER, FRUIT, SODA	33.63
2	101-28001-51654	MEMBERSHIPS & SUBSCRIP	MCCAULEY MEMBERSHIP	123.97
3	101-28001-51654	MEMBERSHIPS & SUBSCRIP	LC RECORDER ONLINE ACCESS SUBSCRIP	285.00
4	101-28001-52111	OTHER PROFESSIONAL SVCS	RECORDING DOCUMENTS	312.00
5	101-28001-52111	OTHER PROFESSIONAL SVCS	JULY 2024 BUILDING SERVICES	10,044.44
		Total For Dept 28001 COMMUNITY DEVELOPMENT ADMINISTRATION		10,799.04

VILLAGE OF LAKE ZURICH

WARRANT REPORT - 08/5/2024

$1,327,483.25

Item	GL Number	GL Desc	Invoice Description	Amount
	Dept 36001 PUBLIC WORKS ADMINISTRATION			
1	101-36001-51652	TRAINING AND MEETINGS	APWA PWX CONFERENCE	429.00
2	101-36001-52111	OTHER PROFESSIONAL SVCS	UNIFORMS/MATS 08/15	34.71
3	101-36001-52111	OTHER PROFESSIONAL SVCS	UNIFORMS/MATS 08/22	34.71
4	101-36001-52113	ENGR/ARCHITECTURAL	ADA TRANSITION PLAN DEVELOPMENT	9,070.62
5	101-36001-52605	MOSQUITO ABATEMENT	MOSQUITO MANAGEMENT SERVICE	250.00
6	101-36001-52701	MAINT-BLDGS & GROUNDS	VILLAGE HALL PEST CONTROL - AUG	75.00
7	101-36001-52701	MAINT-BLDGS & GROUNDS	UNIFORMS/MATS 08/15	55.76
8	101-36001-52701	MAINT-BLDGS & GROUNDS	UNIFORMS/MATS 08/22	55.76
9	101-36001-52701	MAINT-BLDGS & GROUNDS	CLEANING SERVICES - AUG	5,716.85
10	101-36001-52701	MAINT-BLDGS & GROUNDS	FD CARPET CLEANING	200.00
11	101-36001-53208	OFFICE SUPPLIES	NOTARY BOOK	15.12
12	101-36001-53211	OTHER SUPPLIES	MEETING SIGN	26.86
13	101-36001-53211	OTHER SUPPLIES	MAILBOX	120.00
14	101-36001-53211	OTHER SUPPLIES	STOP/SLOW PADDLES	277.89
15	101-36001-53401	CUSTODIAL SUPPLIES	TISSUE, TOWELS, BAGS, WIPES, SOAP	1,309.02
16	101-36001-53403	LANDSCAPING SUPPLIES	HANGING BASKETS	1,200.00
17	101-36001-53403	LANDSCAPING SUPPLIES	TOPSOIL #233685	90.00
18	101-36001-53404	RIGHT OF WAY SUPPLIES	CONCRETE HARDWARE	215.12
19	101-36001-53404	RIGHT OF WAY SUPPLIES	OUTLET	26.17
20	101-36001-53404	RIGHT OF WAY SUPPLIES	TELSPAR POLES	133.50
21	101-36001-53405	BLDG & GROUNDS SUPPLIES	MEETING SIGN	155.98
22	101-36001-53405	BLDG & GROUNDS SUPPLIES	BATTERIES	101.30
23	101-36001-53405	BLDG & GROUNDS SUPPLIES	STRAPS	52.15
24	101-36001-53405	BLDG & GROUNDS SUPPLIES	BATTERIES	10.85
25	101-36001-53405	BLDG & GROUNDS SUPPLIES	WASHERS, BOLTS	13.45
26	101-36001-53405	BLDG & GROUNDS SUPPLIES	505 PAINT	309.19
27	101-36001-53405	BLDG & GROUNDS SUPPLIES	505 PAINT	68.51
28	101-36001-53407	EQUIP MAINT PART&SUPPLIE	BREEZEWALD FURNITURE LOCKS	229.71
29	101-36001-55254	MACHINERY & EQUIPMENT	STRAPS	24.72
		Total For Dept 36001 PUBLIC WORKS ADMINISTRATION		20,301.95

VILLAGE OF LAKE ZURICH

WARRANT REPORT - 08/5/2024

$1,327,483.25

Item	GL Number	GL Desc	Invoice Description	Amount
	Dept 36420 PUBLIC WORKS PARK MAINTENANCE			
1	101-36420-52701	MAINT-BLDGS & GROUNDS	BUFFALO CREEK PEST CONTROL - AUG	70.20
2	101-36420-52701	MAINT-BLDGS & GROUNDS	PAULUS PK PEST CONTROL - AUG	76.40
3	101-36420-52701	MAINT-BLDGS & GROUNDS	CLEANING SERVICES - AUG	7,444.31
4	101-36420-53201	ELECTRICITY	200 S RAND RD	844.67
5	101-36420-53202	NATURAL GAS	125 N OLD RAND RD	71.97
6	101-36420-53401	CUSTODIAL SUPPLIES	TISSUE, TOWELS, BAGS, WIPES, SOAP	670.40
7	101-36420-53401	CUSTODIAL SUPPLIES	CLEANSER	456.00
8	101-36420-53403	LANDSCAPING SUPPLIES	BATTERIES	28.68
9	101-36420-53403	LANDSCAPING SUPPLIES	WATER TANK	68.58
10	101-36420-53403	LANDSCAPING SUPPLIES	WASP SPRAY	27.88
11	101-36420-53405	BLDG & GROUND MAINT SUPP	BREEZEWALD FURNITURE LOCKS	39.98
12	101-36420-53405	BLDG & GROUND MAINT SUPP	DOCK BOX REPAIR	78.64
13	101-36420-53405	BLDG & GROUND MAINT SUPP	PLUMBING SUPPLIES - PVC PIPE, ADAPTERS	85.21
14	101-36420-53405	BLDG & GROUND MAINT SUPP	FLOWER CARE	49.92
15	101-36420-53405	BLDG & GROUND MAINT SUPP	FLOWER CARE	59.91
16	101-36420-53405	BLDG & GROUND MAINT SUPP	PVC	2.11
17	101-36420-53405	BLDG & GROUND MAINT SUPP	FOAM, PIPE INSULATION	27.64
18	101-36420-53405	BLDG & GROUND MAINT SUPP	INSECTICIDAL SPRAY	39.91
19	101-36420-53405	BLDG & GROUND MAINT SUPP	PLUMBING SUPPLIES	56.51
20	101-36420-53405	BLDG & GROUND MAINT SUPP	LIGHTING	99.96
21	101-36420-53405	BLDG & GROUND MAINT SUPP	LIGHTING RETURN	(99.96)
22	101-36420-53405	BLDG & GROUND MAINT SUPP	BUFFALO CREEK PLUMBING	14.98
23	101-36420-53407	EQUIP MAINT PART&SUPPLIE	SPRAYGROUND MUSHROOMS	2,247.00
24	101-36420-54306	EQUIPMENT RENTAL	SAW EMERGENCY REPAIR BC	261.05
25	101-36420-55254	MACHINERY & EQUIPMENT	BLOWER	495.99
26	101-36420-55254	MACHINERY & EQUIPMENT	POLE PRUNER	587.99
27	101-36420-55254	MACHINERY & EQUIPMENT	CHAIN SAW	358.99
		Total For Dept 36420 PUBLIC	WORKS PARK MAINTENANCE	14,164.92
	Dept 36471 PUBLIC WORKS FLEET SERVICES			
1	101-36471-51651	LICENSING/CERTIFICATIONS	UST CERT RENEWAL NEYFELDT	10.00

VILLAGE OF LAKE ZURICH

WARRANT REPORT - 08/5/2024

$1,327,483.25

Item	GL Number	GL Desc	Invoice Description	Amount
2	101-36471-51651	LICENSING/CERTIFICATIONS	UST CERT RENEWAL PAULUS	125.00
3	101-36471-51652	TRAINING AND MEETINGS	IPSI FALL 2024 YEAR 2	795.00
4	101-36471-52111	OTHER PROFESSIONAL SVCS	UNIFORMS/MATS 08/15	33.62
5	101-36471-52111	OTHER PROFESSIONAL SVCS	UNIFORMS/MATS 08/22	33.62
6	101-36471-52111	OTHER PROFESSIONAL SVCS	I-PASS	20.00
7	101-36471-52111	OTHER PROFESSIONAL SVCS	REPLACEMENT PLATE TLR5	6.00
8	101-36471-52111	OTHER PROFESSIONAL SVCS	PLATE RENEWAL	151.00
9	101-36471-52701	MAINT-BLDGS & GROUNDS	FUEL ISLAND HOSE	102.38
10	101-36471-52701	MAINT-BLDGS & GROUNDS	UPS BATTERIES	940.80
11	101-36471-53210	SMALL TOOLS & EQUIP	TORX DRIVER	12.97
12	101-36471-53210	SMALL TOOLS & EQUIP	COUPLER	12.99
13	101-36471-53211	OTHER SUPPLIES	POR-15	223.00
14	101-36471-53211	OTHER SUPPLIES	BATTERIES	21.35
15	101-36471-53211	OTHER SUPPLIES	CREDIT GREASE GUN ADAPTOR	(192.88)
16	101-36471-53211	OTHER SUPPLIES	GREASE GUN ADAPTOR	192.88
17	101-36471-53401	CUSTODIAL SUPPLIES	FLOOR SOAP	712.40
18	101-36471-53406	AUTO PARTS & SUPPLIES	MOUNT	58.52
19	101-36471-53406	AUTO PARTS & SUPPLIES	CREDIT - PARTS RETURN	(12.98)
20	101-36471-53406	AUTO PARTS & SUPPLIES	FUEL SENDER 215	129.82
21	101-36471-53406	AUTO PARTS & SUPPLIES	CREDIT - PARTS RETURN	(28.40)
22	101-36471-53406	AUTO PARTS & SUPPLIES	CREDIT - CORE RETURN	(18.00)
23	101-36471-53406	AUTO PARTS & SUPPLIES	BRAKE ROTORS	278.19
24	101-36471-53406	AUTO PARTS & SUPPLIES	BULB	1.62
25	101-36471-53406	AUTO PARTS & SUPPLIES	BALL STUD	4.49
26	101-36471-53406	AUTO PARTS & SUPPLIES	FILTERS	79.97
27	101-36471-53406	AUTO PARTS & SUPPLIES	HARNESS	27.00
28	101-36471-53406	AUTO PARTS & SUPPLIES	THROTTLE BODY	163.84
29	101-36471-53407	EQUIP MAINT PART&SUPPLIE	WHEEL CHOCKS	101.18
30	101-36471-53407	EQUIP MAINT PART&SUPPLIE	WASHER	4.98
31	101-36471-53407	EQUIP MAINT PART&SUPPLIE	SAFETY DECALS	151.15
32	101-36471-53407	EQUIP MAINT PART&SUPPLIE	COUPLER	126.23
33	101-36471-53407	EQUIP MAINT PART&SUPPLIE	FILTER	66.89

VILLAGE OF LAKE ZURICH

WARRANT REPORT - 08/5/2024

$1,327,483.25

Item	GL Number	GL Desc	Invoice Description	Amount
34	101-36471-53407	EQUIP MAINT PART&SUPPLIE	PLUG	3.28
35	101-36471-53407	EQUIP MAINT PART&SUPPLIE	BATTERY	84.38
36	101-36471-53407	EQUIP MAINT PART&SUPPLIE	CONNECTOR	13.25
37	101-36471-53407	EQUIP MAINT PART&SUPPLIE	HOSE	25.00
38	101-36471-53407	EQUIP MAINT PART&SUPPLIE	THREAD KIT	58.98
39	101-36471-53407	EQUIP MAINT PART&SUPPLIE	133 MUFFLER	209.00
40	101-36471-53415	FUELS	DIESEL & FUEL #1851623 8/9	9,144.00
41	101-36471-53415	FUELS	DIESEL & FUEL #1851624 8/9	8,204.30
		Total For Dept 36471 PUBLIC WORKS FLEET SERVICES		22,076.82
	Dept 67001 RECREATION ADMINISTRATION			
1	101-67001-53208	OFFICE SUPPLIES	PAPER, LABELS, PENS	283.42
2	101-67001-53211	OTHER SUPPLIES	KNOBS, SCREWS, PULLS	36.31
		Total For Dept 67001 RECREATION ADMINISTRATION		319.73
	Dept 67935 RECREATION DANCE			
1	101-67935-52115	RECREATION PROGRAM SERVICE	LESSON PLANS	75.00
		Total For Dept 67935 RECREATION DANCE		75.00
	Dept 67940 RECREATION PRESCHOOL			
1	101-67940-53212	PROGRAM SUPPLIES	ROLLING CARTS	139.98
2	101-67940-53212	PROGRAM SUPPLIES	PLAY-DOH	132.99
3	101-67940-53212	PROGRAM SUPPLIES	CURRICULUM	49.00
		Total For Dept 67940 RECREATION PRESCHOOL		321.97
	Dept 67945 RECREATION YOUTH PROGRAMS			
1	101-67945-52115	RECREATION PROGRAM SERVICE	SUMMER CHESS SCHOLARS - 5 PARTICIPANTS	393.75
2	101-67945-52115	RECREATION PROGRAM SERVICE	SUMMER SESSION MUSIC MASTERS	1,591.50
3	101-67945-52115	RECREATION PROGRAM SERVICE	SPRING II SESSION - MUSIC MASTERS 30 PARTICIPANTS	1,827.00
		Total For Dept 67945 RECREATION YOUTH PROGRAMS		3,812.25

VILLAGE OF LAKE ZURICH

WARRANT REPORT - 08/5/2024

$1,327,483.25

Item	GL Number	GL Desc	Invoice Description	Amount
	Dept 67960 RECREATION CAMPS			
1	101-67960-52115	RECREATION PROGRAM SERVICE	CAMP CEDAR POST CAMP TRANSPORT - FIELD TRIP	324.00
2	101-67960-52115	RECREATION PROGRAM SERVICE	CAMP CEDAR FIELD TRIP - BOWLING	203.00
3	101-67960-52115	RECREATION PROGRAM SERVICE	CAMP CEDAR FIELD TRIP - MINI GOLF	736.25
4	101-67960-52115	RECREATION PROGRAM SERVICE	CAMP CEDAR FIELD TRIP - MYSTIC WATERS	647.00
5	101-67960-52115	RECREATION PROGRAM SERVICE	CAMPDOCS SUBSCRIPTION - SEP	275.00
6	101-67960-52115	RECREATION PROGRAM SERVICE	CAMP CEDAR FIELD TRIP - RAINBOW FALLS	360.00
7	101-67960-52115	RECREATION PROGRAM SERVICE	CAMP CEDAR FIELD TRIP - INDEPENDENCE GROVE	198.00
8	101-67960-52115	RECREATION PROGRAM SERVICE	2024 DAY CAMP LUNCHES	6,280.00
9	101-67960-52115	RECREATION PROGRAM SERVICE	CAMP CEDAR FIELD TRIP - ROCKWALL	570.00
10	101-67960-52115	RECREATION PROGRAM SERVICE	CAMP CEDAR FIELD TRIP - STAR CINEMA	450.00
11	101-67960-52115	RECREATION PROGRAM SERVICE	CAMP CEDAR FIELD TRIP - ULTIMATE NINJAS	370.00
12	101-67960-52115	RECREATION PROGRAM SERVICE	CAMP CEDAR FIELD TRIP - TURTLE CREEK WATER PARK	552.00
13	101-67960-52115	RECREATION PROGRAM SERVICE	CAMP CEDAR FIELD TRIP - TURTLE CREEK WATER PARK	588.00
14	101-67960-53212	PROGRAM SUPPLIES	KARAOKE MACHINE	97.94
15	101-67960-53212	PROGRAM SUPPLIES	STRING KIT, BEADS, PAPER PLATES, CONSTRUCTION PAPER	70.79
16	101-67960-53212	PROGRAM SUPPLIES	CONSTRUCTION PAPER, PAINT	39.83
17	101-67960-53212	PROGRAM SUPPLIES	CONSTRUCTION PAPER	51.39
18	101-67960-53212	PROGRAM SUPPLIES	STRING POLES	34.96
19	101-67960-53212	PROGRAM SUPPLIES	PLATES, SHAVING CREAM	28.40
20	101-67960-53212	PROGRAM SUPPLIES	BOWLS, PLATES, SILVERWARE	34.25
21	101-67960-53212	PROGRAM SUPPLIES	TIDE AND GLITTER	20.72
22	101-67960-53212	PROGRAM SUPPLIES	BOOTS N BARBEQUE - MAC & CHEESE, PULLED PORK, CHICKEN WINGS	206.18
23	101-67960-53212	PROGRAM SUPPLIES	COUNSELOR OF THE WEEK - SNO CONE	12.84
24	101-67960-53212	PROGRAM SUPPLIES	COUNSELOR OF THE WEEK - LEMONADE, POPCORN	23.54
25	101-67960-53212	PROGRAM SUPPLIES	COUNSELOR OF THE WEEK - HOTDOG, POPCORN	9.63
26	101-67960-53212	PROGRAM SUPPLIES	BASKETBALL HOOP	185.93
27	101-67960-53212	PROGRAM SUPPLIES	PICTURES	16.86
		Total For Dept 67960 RECREATION CAMPS		12,386.51
	Dept 67965 RECREATION ATHLETICS			
1	101-67965-52115	RECREATION PROGRAM SERVICE	JULY SESSION 1 PARTICIPANT	302.40

VILLAGE OF LAKE ZURICH

WARRANT REPORT - 08/5/2024

$1,327,483.25

Item	GL Number	GL Desc	Invoice Description	Amount
		Total For Dept 67965 RECREATION ATHLETICS		302.40
	Dept 67970 RECREATION AQUATICS			
1	101-67970-53211	OTHER SUPPLIES	TWO WAY RADIOS	259.98
2	101-67970-53211	OTHER SUPPLIES	EYE WASH, EYE WASH CUPS	124.87
3	101-67970-53211	OTHER SUPPLIES	DISPOSABLE TOWELS	39.99
4	101-67970-53211	OTHER SUPPLIES	STRING POLES	17.48
5	101-67970-53211	OTHER SUPPLIES	SCHEDULING PLATFORM	24.95
		Total For Dept 67970 RECREATION AQUATICS		467.27
		Total For Fund 101 GENERAL		**202,492.69**
	Fund 207 SPECIAL EVENTS FUND			
	Dept 00000			
1	207-00000-22501	ER - UNDISTRIBUTED LIFE INS	IPBC INSURANCE COVERAGE - AUG	2.75
		Total For Dept 00000		2.75
	Dept 67601 RECREATION ROCK THE BLOCK			
1	207-67601-52115	RECREATION PROGRAM SERV	2024 RTB BAND	6,000.00
2	207-67601-52115	RECREATION PROGRAM SERV	2024 RTB FINAL PYMNT	2,145.00
3	207-67601-52115	RECREATION PROGRAM SERV	2024 RTB - BAND	4,000.00
4	207-67601-52115	RECREATION PROGRAM SERV	2024 RTB BAND	2,100.00
5	207-67601-52115	RECREATION PROGRAM SERV	2024 RTB FACE PAINTER	480.00
		Total For Dept 67601 RECREATION ROCK THE BLOCK		14,725.00
	Dept 67603 RECREATION FARMERS MARKET			
1	207-67603-52115	RECREATION PROGRAM SERV	FARMERS MARKET BAND - 9/13	250.00
2	207-67603-52115	RECREATION PROGRAM SERV	FARMERS MARKET BAND - 9/6	150.00
3	207-67603-53212	PROGRAM SUPPLIES	HOOKS	43.99
		Total For Dept 67603 RECREATION FARMERS MARKET		443.99

VILLAGE OF LAKE ZURICH

WARRANT REPORT - 08/5/2024

$1,327,483.25

Item	GL Number	GL Desc	Invoice Description	Amount
	Dept 67604 RECREATION FOURTH OF JULY FESTIVAL			
1	207-67604-53212	PROGRAM SUPPLIES	DOWEL RODS, YARDSTICK	19.19
2	207-67604-53212	PROGRAM SUPPLIES	CONSTRUCTION PAPER, PAINT	12.44
3	207-67604-53212	PROGRAM SUPPLIES	CONSTRUCTION PAPER	158.99
4	207-67604-53212	PROGRAM SUPPLIES	4TH OF JULY ICE	27.84
5	207-67604-53212	PROGRAM SUPPLIES	4TH OF JUL STAFF FOOD - DRINKS, SNACKS	442.81
6	207-67604-53212	PROGRAM SUPPLIES	4TH OF JULY STAFF FOOD - SANDWICHES	840.87
7	207-67604-53212	PROGRAM SUPPLIES	4TH OF JULY STAFF FOOD - FRUIT	14.22
8	207-67604-53212	PROGRAM SUPPLIES	4TH OF JULY SIGNAGE	90.00
		Total For Dept 67604 RECREATION FOURTH OF JULY FESTIVAL		1,606.36
	Dept 67605 RECREATION WINTER FESTIVAL			
1	207-67605-53212	PROGRAM SUPPLIES	STRING POLES	29.99
		Total For Dept 67605 RECREATION WINTER FESTIVAL		29.99
	Dept 67699 RECREATION MISC SPECIAL EVENTS			
1	207-67699-53212	PROGRAM SUPPLIES	KARAOKE MACHINE	35.98
2	207-67699-53212	PROGRAM SUPPLIES	HAIR EXTENSIONS RETURN	(17.99)
3	207-67699-53212	PROGRAM SUPPLIES	MOVIES IN PARK - PIZZA FOR STAFF	97.84
		Total For Dept 67699 RECREATION MISC SPECIAL EVENTS		115.83
		Total For Fund 207 SPECIAL EVENTS FUND		**16,923.92**
	Fund 214 TIF #2 DOWNTOWN			
	Dept 10490 GENERAL GOVERNMENT TIF			
1	214-10490-55252	BLDG & BLDG IMPROVEMENTS	FACADE 50% PROGRAM - SIGN FACE UPGRADE	687.64
		Total For Dept 10490 GENERAL GOVERNMENT TIF		687.64
		Total For Fund 214 TIF #2 DOWNTOWN		**687.64**
	Fund 227 DISPATCH CENTER			
	Dept 00000			

VILLAGE OF LAKE ZURICH
WARRANT REPORT - 08/5/2024
$1,327,483.25

Item	*GL Number*	*GL Desc*	*Invoice Description*	*Amount*
1	227-00000-22501	ER - UNDISTRIBUTED LIFE INS	IPBC INSURANCE COVERAGE - AUG	49.00
		Total For Dept 00000		49.00
	Dept 24220 POLICE DISPATCH			
1	227-24220-51651	LICENSING/CERTIFICATIONS	STEFFY - EMD RENEWAL FEE	21.00
2	227-24220-52704	MAINT-EQUIPMENT	DISPATCH CONSOLE REPAIR	590.00
3	227-24220-53209	UNIFORMS	PANTS - CUPELLO	58.76
4	227-24220-53209	UNIFORMS	NAMETAG - CUPELLO	17.12
5	227-24220-53209	UNIFORMS	BOOTS - CUPELLO	76.57
		Total For Dept 24220 POLICE DISPATCH		763.45
		Total For Fund 227 DISPATCH CENTER		**812.45**
	Fund 401 VILLAGE CAPITAL PROJECTS			
	Dept 36001 PUBLIC WORKS ADMINISTRATION			
1	401-36001-55251	LAND IMPROVEMENTS	PAVING OPERATIONS	276,696.09
2	401-36001-55252	BLDG & BLDG IMPROVEMENTS	MULTI-SITE PHASE III	11,900.00
		Total For Dept 36001 PUBLIC WORKS ADMINISTRATION		288,596.09
		Total For Fund 401 VILLAGE CAPITAL PROJECTS		**288,596.09**
	Fund 405 NHR CAPITAL PROJECTS			
	Dept 36001 PUBLIC WORKS ADMINISTRATION			
1	405-36001-53416	CONCRETE & ASPHALT	CONCRETE #123808	1,634.50
2	405-36001-53416	CONCRETE & ASPHALT	BLACKTOP	658.55
3	405-36001-55253	INFRASTRUCTURE IMPROVEMT	TELSPAR POLES	69.90
4	405-36001-55253	INFRASTRUCTURE IMPROVEMT	2024 INFRASTRUCTURE	262,076.80
5	405-36001-55253	INFRASTRUCTURE IMPROVEMT	SOIL TESTING FOR ROAD PROGRAM	1,357.50
6	405-36001-55253	INFRASTRUCTURE IMPROVEMT	SOIL AND CONCRETE TESTING FOR ROAD PROGRAM	4,345.00
		Total For Dept 36001 PUBLIC WORKS ADMINISTRATION		270,142.25
		Total For Fund 405 NHR CAPITAL PROJECTS		**270,142.25**

VILLAGE OF LAKE ZURICH

WARRANT REPORT - 08/5/2024

$1,327,483.25

Item	GL Number	GL Desc	Invoice Description	Amount
	Fund 501 WATER & SEWER			
	Dept 00000			
1	501-00000-21204	LC CONNECTION FEES PAYABLE	BOND REF #BLC24-0142 - 264 EAST LN	4,030.00
2	501-00000-21204	LC CONNECTION FEES PAYABLE	BOND REF #BLC24-0143 - 34 E MAIN ST	403.00
3	501-00000-22501	ER - UNDISTRIBUTED LIFE INS	IPBC INSURANCE COVERAGE - AUG	52.97
4	501-00000-27102	IEPA LOAN PAYABLE	2008 IEPA LOAN PRINCIPAL AND INTEREST	50,612.59
		Total For Dept 00000		55,098.56
	Dept 36001 PUBLIC WORKS ADMINISTRATION			
1	501-36001-51652	TRAINING AND MEETINGS	APWA PWX CONFERENCE	429.00
2	501-36001-52111	OTHER PROFESSIONAL SVCS	UNIFORMS/MATS 08/15	31.84
3	501-36001-52111	OTHER PROFESSIONAL SVCS	UNIFORMS/MATS 08/22	31.84
4	501-36001-52201	VILLAGE ATTORNEY	LEGAL SERVICES - JUL 2024	603.75
5	501-36001-53203	TELEPHONE & DATA SVCS	ANALOG LINES - AUG 2024	168.70
6	501-36001-56603	INTEREST	2008 IEPA LOAN PRINCIPAL AND INTEREST	5,987.07
		Total For Dept 36001 PUBLIC WORKS ADMINISTRATION		7,252.20
	Dept 36550 PUBLIC WORKS WATER SERVICE			
1	501-36550-52113	ENGR/ARCHITECTURAL	LZ SUPPLY STUDY ASSESSMENT	3,759.49
2	501-36550-52113	ENGR/ARCHITECTURAL	LAKE MICHIGAN SUPPLY ROUTE STUDY	18,532.45
3	501-36550-52704	MAINT-EQUIPMENT	SCADA COMMUNICATION FAIL REPAIR/WELL 10 PLC FAULT EMERGENCY REPAIR	1,120.00
4	501-36550-53201	ELECTRICITY	ELECTRICITY-WELLS/WTP'S, SANITARY PUMP/LIFT STA	31,492.34
5	501-36550-53201	ELECTRICITY	ELECTRICITY-WELLS/WTP'S, SANITARY PUMP/LIFT STATIONS	28,213.39
6	501-36550-53202	NATURAL GAS	NATURAL GAS - WELL #12	49.60
7	501-36550-53202	NATURAL GAS	NATURAL GAS - WELL #7	143.89
8	501-36550-53202	NATURAL GAS	NATURAL GAS - WELL #8	151.44
9	501-36550-53202	NATURAL GAS	NATURAL GAS - WELL #9	47.02
10	501-36550-53210	SMALL TOOLS & EQUIP	CUT-OFF SAW BLADE FOR DI PIPE	189.99
11	501-36550-53211	OTHER SUPPLIES	WATEROUS HYDRANT REPAIR PARTS	244.00
12	501-36550-53403	LANDSCAPING SUPPLIES	TOPSOIL #233681 8/9	90.00

VILLAGE OF LAKE ZURICH
WARRANT REPORT - 08/5/2024
$1,327,483.25

Item	GL Number	GL Desc	Invoice Description	Amount
13	501-36550-53414	CHEMICALS	BULK WTR COND SALT - WELL #10	2,857.82
14	501-36550-53414	CHEMICALS	BULK WTR COND SALT - WELL #8	2,941.39
15	501-36550-53416	CONCRETE & ASPHALT	CONCRETE #123757	1,876.88
16	501-36550-55253	INFRASTRUCTURE IMPROVEMT	2024 INFRASTRUCTURE	9,102.20
		Total For Dept 36550 PUBLIC WORKS WATER SERVICE		100,811.90
	Dept 36560 PUBLIC WORKS SEWER SERVICE			
1	501-36560-52111	OTHER PROFESSIONAL SVCS	2024 PRETREATMENT ASSISTANCE	787.50
2	501-36560-52111	OTHER PROFESSIONAL SVCS	METROCLOUD DATA MONITORING/LIFT STATIONS	585.00
3	501-36560-52710	MAINT-INST & SCADA	FLOW METER MAINTENANCE/REPAIR MIONSKE & RSR LIFT STAT	405.00
4	501-36560-53201	ELECTRICITY	ELECTRICITY-WELLS/WTP'S, SANITARY PUMP/LIFT STA	5,910.49
5	501-36560-53201	ELECTRICITY	ELECTRICITY-WELLS/WTP'S, SANITARY PUMP/LIFT STATIONS	6,627.62
6	501-36560-53408	LIFT STATION PARTS & SUP	UPS BATTERY	23.77
7	501-36560-53408	LIFT STATION PARTS & SUP	REPLACEMENT UPS FOR LIFT STATION CONTROL PANELS	345.74
8	501-36560-53408	LIFT STATION PARTS & SUP	BETTY DR LIFT STATION CONTROL PARTS	112.60
9	501-36560-53408	LIFT STATION PARTS & SUP	FLOW METER MAINTENANCE/REPAIR MIONSKE & RSR LIFT STAT	275.00
10	501-36560-53408	LIFT STATION PARTS & SUP	REPLACEMENT FLOW METER/CHURCH ST LIFT STATION	4,304.42
11	501-36560-53412	SEWER SYST REPAIR	NON SHEAR SEWER PIPE COUPLINGS	178.00
		Total For Dept 36560 PUBLIC WORKS SEWER SERVICE		19,555.14
		Total For Fund 501 WATER & SEWER		**182,717.80**
	Fund 601 MEDICAL INSURANCE			
	Dept 10001 GENERAL GOVERNMENT ADMINISTRATION			
1	601-10001-52340	MEDICAL ADMIN FEE	COBRA PLAN - AUG	108.80
2	601-10001-52340	MEDICAL ADMIN FEE	FSA PLAN - AUG	115.72
3	601-10001-52341	HEALTH INS. FIXED COSTS	IPBC INSURANCE COVERAGE - AUG	263,189.71
		Total For Dept 10001 GENERAL GOVERNMENT ADMINISTRATION		263,414.23
		Total For Fund 601 MEDICAL INSURANCE		**263,414.23**

VILLAGE OF LAKE ZURICH

WARRANT REPORT - 08/5/2024

$1,327,483.25

Item	GL Number	GL Desc	Invoice Description	Amount
	Fund 603 RISK MANAGEMENT			
	Dept 00000			
1	603-00000-22501	ER - UNDISTRIBUTED LIFE INS	IPBC INSURANCE COVERAGE - AUG	1.70
		Total For Dept 00000		1.70
	Dept 10001 GENERAL GOVERNMENT ADMINISTRATION			
1	603-10001-52114	LIABILITY INSURANCE CLAIMS	IRMA JUL 2024	1,448.54
		Total For Dept 10001 GENERAL GOVERNMENT ADMINISTRATION		1,448.54
		Total For Fund 603 RISK MANAGEMENT		**1,450.24**
	Fund 615 EQUIPMENT REPLACEMENT			
	Dept 10001 GENERAL GOVERNMENT ADMINISTRATION			
1	615-10001-55254	MACHINERY & EQUIPMENT	LENOVO THINKPAD	1,583.70
2	615-10001-55255	COMPUTER SOFTWARE	OPTIPLEX SMALL FORM FACTOR 7020	3,887.90
		Total For Dept 10001 GENERAL GOVERNMENT ADMINISTRATION		5,471.60
		Total For Fund 615 EQUIPMENT REPLACEMENT		**5,471.60**
	Fund 710 PERFORMANCE ESCROW			
	Dept 00000			
1	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD24-0018 - 24 CRESCENT RD	500.00
2	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD24-0365 - 469 RUSH CT	500.00
3	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD24-0199 - 938 PHEASANT RIDG	500.00
4	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD24-0273 - 925 S RAND RD	250.00
5	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD24-0235 - 765 SUMMIT RD	500.00
6	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD24-0110 - 1085 BERKSHIRE LN	300.00
7	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD24-0287 - 61 MILLER RD	500.00
8	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD24-0204 - 485 ANDREW LN	500.00
9	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD24-0116 - 787 INTERLAKEN DR	500.00
10	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD24-0151 - 535 RAMBLEWOOD	300.00
11	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD24-0264 - 7 HOLLYCOURT TER	500.00

VILLAGE OF LAKE ZURICH

WARRANT REPORT - 08/5/2024

$1,327,483.25

Item	*GL Number*	*GL Desc*	*Invoice Description*	*Amount*
12	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD24-0120 - 237 WASHO DR	300.00
13	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD24-0309 - 195 ALPINE DR	500.00
14	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD24-0334 - 665 GINGER TRL	500.00
15	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD24-0336 - 240 HOBBLE BUSH	500.00
16	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD24-0282 - 985 CEDAR CREEK	500.00
17	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD24-0312 - 875 WARWICK LN	500.00
18	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD24-0031 - 471 S RAND RD	250.00
19	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD24-0276 - 24 GOLF VIEW RD	500.00
20	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD24-0169 - 740 PHEASANT RIDG	500.00
21	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD24-0195 - 597 BRAEMAR LN	500.00
22	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD24-0144 - 284 VICTOR LN	500.00
23	710-00000-25201	BUILDING PERMIT DEPOSITS	BOND REF #BBD24-0206 - 740 PHEASANT RIDG	500.00
		Total For Dept 00000		10,400.00
	Dept 17001 TECHNOLOGY ADMINISTRATION			
1	710-17001-53214	PEG CABLE EXPENSE	WEB STREAMING	131.22
2	710-17001-53214	PEG CABLE EXPENSE	PEG CHANNEL CONFIGURATION FILES	2.99
3	710-17001-53214	PEG CABLE EXPENSE	DIGITAL WIRELESS MICROPHONES	1,379.00
4	710-17001-53214	PEG CABLE EXPENSE	DIGITAL WIRELESS MICROPHONES	1,379.00
5	710-17001-53214	PEG CABLE EXPENSE	MEDIA CREW - AUG 2024	97.50
6	710-17001-53214	PEG CABLE EXPENSE	REMOTE SUPPORT FOR PEG STUDIO	611.00
		Total For Dept 17001 TECHNOLOGY ADMINISTRATION		3,600.71
		Total For Fund 710 PERFORMANCE ESCROW		**14,000.71**
	Fund 720 PAYROLL CLEARING			
	Dept 00000			
1	720-00000-22253	IMRF W/H	PR DEDUCTIONS - JUL	53,974.74
2	720-00000-22301	DENTAL / VISION BENEFITS	VISION INSURANCE - AUG	2,196.47
3	720-00000-22301	DENTAL / VISION BENEFITS	DENTAL INSURANCE - AUG	12,813.96
4	720-00000-22403	AFLAC PLANS PAYABLE	AFLAC INSURANCE PREMIUM - JUL	5,931.98

VILLAGE OF LAKE ZURICH

WARRANT REPORT - 08/5/2024

$1,327,483.25

Item	*GL Number*	*GL Desc*	*Invoice Description*	*Amount*
5	720-00000-22404	SUPPLEMENTAL LIFE INS PAYABLE	IPBC INSURANCE COVERAGE - AUG	2,106.48
		Total For Dept 00000		77,023.63
		Total For Fund 720 PAYROLL CLEARING		**77,023.63**
	Fund 735 SSA #13 CONVENTRY CRK SUB			
	Dept 10099 GENERAL GOVERNMENT SSA ACTIVITY			
1	735-10099-52603	LAKE/WATER QUALITY MGMT	2024 NATURAL AREA MAINT SSA #13	3,750.00
		Total For Dept 10099 GENERAL GOVERNMENT SSA ACTIVITY		3,750.00
		Total For Fund 735 SSA #13 CONVENTRY CRK SUB		**3,750.00**

VILLAGE OF LAKE ZURICH

WARRANT REPORT - 08/5/2024

$1,327,483.25

Item	*GL Number*	*GL Desc*	*Invoice Description*	*Amount*

Fund Totals:

Fund 101 GENERAL	202,492.69
Fund 207 SPECIAL EVENTS FUND	16,923.92
Fund 214 TIF #2 DOWNTOWN	687.64
Fund 227 DISPATCH CENTER	812.45
Fund 401 VILLAGE CAPITAL PROJECTS	288,596.09
Fund 405 NHR CAPITAL PROJECTS	270,142.25
Fund 501 WATER & SEWER	182,717.80
Fund 601 MEDICAL INSURANCE	263,414.23
Fund 603 RISK MANAGEMENT	1,450.24
Fund 615 EQUIPMENT REPLACEMENT	5,471.60
Fund 710 PERFORMANCE ESCROW	14,000.71
Fund 720 PAYROLL CLEARING	77,023.63
Fund 735 SSA #13 CONVENTRY CRK SUB	3,750.00
	$ 1,327,483.25

COMMUNITY DEVELOPMENT DEPARTMENT

505 Telser Road
Lake Zurich, Illinois 60047

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

At the Heart of Community

MEMORANDUM

AGENDA ITEM 6C

Date: September 3, 2024

To: Ray Keller, Village Manager RK

From: Sarosh Saher, Community Development Director

CC: Colleen McCauley, Village Planner
Mary Meyer, Building Services Supervisor

Re: Zoning Application for 189 South Rand Road – "The Simulation Zone"
Special Use Permit for an Establishment Offering Coin Operated Amusement Devices

Issue. Mr. Viktor Magula and Mr. Taras Bezruchko of The Simulation Zone, (the "Applicant"), have filed a zoning application for the property at 189 South Rand Road ("Rental Space") within Lakeview Plaza Shopping Center (the "Subject Property"). Specifically, the applicant is seeking:

- Special Use Permit approval for "Coin Operated Amusement Devices" – SIC #7993 which falls under the major group "Amusement and Recreation Services" – SIC #79 within the B-3 Regional Shopping District

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

- 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

Analysis. The Subject Property is located within the Village's B-3 Regional Shopping Business District. The proposed use will be located within a 4,700 square-foot rental space located within the 5.6-acre Lakeview Plaza Shopping Center.

The Applicant is proposing to operate an establishment offering realistic racing, golf, flight, and other experiences through simulation technology. The primary type of simulator will cater to racing enthusiasts, with each racing simulator equipped with technology that includes motion platforms, high-resolution displays, and realistic steering wheels and pedals.

Customers can pay per race or reserve time slots for two or three hours. They will offer a variety of racing sessions, host events, leagues, and tournaments. There will be a party room to host private parties along with reserved racing sessions for customers to celebrate events. The space will additionally be equipped with a kitchen, bar offering alcoholic beverages, a party room, and a large central area where the simulators will be located.

The hours of operation will be from 2:00 p.m. – 10:00 p.m. on Monday through Thursday and 10:00 a.m. – 10:00 p.m. on Friday through Sunday. There will be four employees on site during the hours of operation.

The Planning and Zoning Commission (PZC) held public hearing on August 21, 2024, to consider the application and did not receive any comment or objection to the application. Following the close of the hearing, the PZC voted 6-0 in favor of recommending approval of the Special Use Permit. No additional conditions were added by the PZC other than those initially recommended by staff. The video stream from the PZC meetings can be accessed via the following links: https://play.champds.com/lakezurichil/event/131

A detailed evaluation and summary of the project can be found in the Staff Report that was provided to the Planning and Zoning Commission, which is made a part of the attached Ordinance.

Recommendation. At their meeting on August 21, 2024, the Planning and Zoning Commission recommended approval of the Special Use Permit incorporating the conditions for approval provided by staff in its report.

Staff therefore recommends approval of the attached ordinance, with its specific attachments based on the following conditions for approval that are contained within said ordinance:

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, Cover Letter, and business plan information dated June 26, 2024, and prepared by Mr. Viktor Magula and Mr. Taras Bezruchko, including Basic Lease Terms between the landlord, Knapp Investments, LLC, a Missouri limited liability company, and the tenant, Simulation Zoe, Inc., an Illinois corporation.
   b. Exhibit A – Legal Description of the Subject Property
   c. Exhibit B – Existing Floor plan, on page 5 of 11 of the business plan prepared by Mr. Viktor Magula and Mr. Taras Bezruchko, dated June 26, 2024, showing proposed room configuration and layout of the proposed establishment.

2. All activity related to the operation of the business shall be conducted within the enclosed commercial Rental Space addressed at 189 South Rand Road within Lakeview Plaza

Shopping Center at parcel number 14-19-104-001. The special use constituting this amusement establishment:

a. Shall be located within the approximately 4,700 square feet of space within the retail shopping center addressed at 189 South Rand Road as depicted on the ALTA/ACSM Title Survey of the Subject Property, as attached to this report and on Exhibit B;
b. Shall be allowed to continue under successive ownership so long as the location, design and operation of the land use pursuant to this special use and related conditions does not change;
c. Shall not be allowed to relocate to any of the remaining tenant spaces within the multi-tenant shopping center known as Lakeview Plaza, without the express approval of the Lake Zurich Village Board; and
d. Shall expire if this establishment ceases operations at the Rental Space within the Subject Property for a period of more than 6 months.

3. The development shall be in compliance at all times with all other applicable codes and ordinances of the Village of Lake Zurich and with Illinois statutory and regulatory provisions and requirements related to coin operated amusement devices, including the timely payment of taxes and affixing and displaying such decals or permits as may be required.

- Approval Ordinance including the following exhibits
  - Exhibit A – Legal description of the Subject Property
  - Exhibit B – Rental Space Floor Plan and overall site plan of Shopping Center
  - Exhibit C – August 21, 2024 staff reports and planning and zoning commission recommendation/conditions and accompanying documentation

VILLAGE OF LAKE ZURICH

ORDINANCE NO. 2024-09-583

AN ORDINANCE APPROVING A SPECIAL USE PERMIT
(The Simulation Zone, 189 South Rand Road)

WHEREAS, Mr. Viktor Magula and Mr. Taras Bezruchko as owners and operators of "The Simulation Zone" are the applicants ("Applicant") for a special use permit for that rental space comprised of approximately 4,700 square feet of space ("Rental Space") located within the existing multi-tenant building ("Subject Property") at 189 South Rand Road, said Rental Space as depicted and located on that plan attached hereto as Exhibit B and legally described in Exhibit A hereto; and

WHEREAS, Knapp Investments, LLC is the owner of the Subject Property ("Owner") and wishes to lease the Rental Space to Applicant; and

WHEREAS, Applicant as owner and operator of "The Simulation Zone," wishes to lease the Rental Space from Owner to operate an establishment offering coin operated amusement devices at the Subject Property as described in the preceding paragraph, such use being classified as a special use in the B-3 Regional Shopping District; and

WHEREAS, Applicant seeks a special use permit to establish such amusement establishment within the Rental Space on the Subject Property; and

WHEREAS, the Applicant has filed zoning application PZC 2024-11, dated June 26, 2024 (the "Application") seeking the approval of the following:

- Special Use Permit approval for "Coin Operated Amusement Devices" – SIC #7993 which falls under the major group "Amusement and Recreation Services" – SIC #79.

WHEREAS, in compliance with the law, and the requirements of the Village of Lake Zurich Zoning Code, notice was published on July 27, 2024, in The Daily Herald, and the Village posted a public hearing sign on July 24, 2024 at the Subject Property, both the newspaper and sign notices informing the public of a public hearing to be held before the Lake Zurich Planning and Zoning Commission ("PZC") on August 21, 2024, to consider the Application for this requested zoning authority and approval; and

WHEREAS, at its August 21, 2024 meeting, the PZC held a public hearing and received and considered the report prepared by Village staff August 21, 2024, setting forth the background information regarding this Application, the general evaluation of the Application and proposed findings and recommendations of the staff of the Village's Development Review Team of the development against the applicable and required standards and provisions of the Lake Zurich Municipal Code ("STAFF REPORT") which was provided to the PZC for the meeting, addressing the request for approval of said Special Use Permit to allow for the establishment and operation of this coin operated amusement devices within the Rental Space at the Subject Property in the B-3 Regional Shopping District; and

WHEREAS, the PZC considered all information presented by the Applicant, and the applicable factors required under of the Zoning Code; and, after the conclusion of the public hearing, the PZC recommended that the Board of Trustees approve the special use requested in this Application, subject to those conditions of approval recommended in the STAFF REPORT; and

WHEREAS, the Mayor and Board of Trustees of the Village of Lake Zurich met on September 3, 2024, and considered the findings and recommendations of the PZC, including the STAFF REPORT, all consisting of 9 pages, said required zoning standards, findings and recommendations attached hereto as Exhibit C and having considered all of the facts and circumstances affecting the Application and these recommended approvals, the Mayor and Board of Trustees have determined that the applicable standards related to this special use approval have been met.

NOW, THEREFORE, BE IT ORDAINED by the Mayor 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 the findings and requirements of the Mayor and Board of Trustees, and the Exhibits referenced herein are made a part of and incorporated into this Ordinance and related approval, except as otherwise provided below.

SECTION 2: GRANT OF SPECIAL USE PERMIT. The Mayor and Board of Trustees, pursuant to the authority vested in them under the laws of the State of Illinois and Chapter 4 (Section 9-4-3) and Chapter 19 (Sections 9-19-3 through 9-19-5) of the Lake Zurich Zoning Code, hereby grant the following approval, by approving and adopting the STAFF REPORT, and final findings and recommendations of the PZC dated August 21, 2024, all consisting of 9 pages, attached hereto as **Exhibit C**, and submitted as part of the Application:

- Special Use Permit approval for "Coin Operated Amusement Devices" – SIC #7993 which falls under the major group "Amusement and Recreation Services" – SIC #79. within the B-3 Regional Shopping District

And subject to the following conditions for approval:

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, Cover Letter, and business plan information dated June 26, 2024, and prepared by Mr. Viktor Magula and Mr. Taras Bezruchko, including Basic Lease Terms between the landlord, Knapp Investments, LLC, a Missouri limited liability company, and the tenant, Simulation Zoe, Inc., an Illinois corporation.
   b. Exhibit A – Legal Description of the Subject Property
   c. Exhibit B – Existing Floor plan, on page 5 of 11 of the business plan prepared by Mr. Viktor Magula and Mr. Taras Bezruchko, dated June 26, 2024, showing proposed room configuration and layout of the proposed establishment.

2. All activity related to the operation of the business shall be conducted within the enclosed commercial Rental Space addressed at 189 South Rand Road within Lakeview Plaza Shopping Center at parcel number 14-19-104-001. The special use constituting this amusement establishment:
   a. Shall be located within the approximately 4,700 square feet of space within the retail shopping center addressed at 189 South Rand Road as depicted on the ALTA/ACSM Title Survey of the Subject Property, as attached to this report and on Exhibit B;
   b. Shall be allowed to continue under successive ownership so long as the location, design and operation of the land use pursuant to this special use and related conditions does not change;
   c. Shall not be allowed to relocate to any of the remaining tenant spaces within the multi-tenant shopping center known as Lakeview Plaza, without the express approval of the Lake Zurich Village Board; and
   d. Shall expire if this establishment ceases operations at the Rental Space within the Subject Property for a period of more than 6 months.

3. The development shall be in compliance at all times with all other applicable codes and ordinances of the Village of Lake Zurich and with Illinois statutory and regulatory provisions and requirements related to coin operated amusement devices, including the timely payment of taxes and affixing and displaying such decals or permits as may be required.

SECTION 3: FINDINGS IN SUPPORT OF APPROVAL OF GRANT OF SPECIAL USE PERMITS. The findings, conditions and recommendations as set forth in the STAFF REPORT dated August 21, 2024, and the PZC recommendations, all consisting of 9 pages, along with the filings provided to the PZC, Chapter 4 (Section 9-4-3) and Chapter 19 of the Lake Zurich Zoning Code, are hereby accepted as the Board's

own, are incorporated herein by this reference and shall be made a part of the official record for the Application.

SECTION 4: 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 5: CONFLICTS**.** All ordinances or parts of ordinances in conflict herewith are hereby repealed to the extent of such conflict.

SECTION 6: EFFECTIVE DATE. This Ordinance shall be in full force and effect upon its passage and approval, as provided by law.

PASSED THIS _____ day of _____, 2024.

Ayes:

Nays:

Absent:

Abstain:

APPROVED this _____ day of _____, 2024.

_____
Mayor Tom Poynton

ATTEST:

_____
Village Clerk
Kathleen Johnson

417574_1

EXHIBIT A

Legal description of the Subject Property

PARCEL 1: LOT 1 IN THE FINAL PLAT OF LAKEVIEW SUBDIVISION, A SUBDIVISION OF PART OF THE NORTH 1/2 OF SECTION 19, TOWNSHIP 43 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED APRIL 23, 1997 AS DOCUMENT 3960071 IN LAKE COUNTY, ILLINOIS.

Common Street Address: 189 South Rand Road

Property Index Number (PIN): 14-19-104-001

417574_1

EXHIBIT B

Rental Space Floor Plan
Overall Site Plan

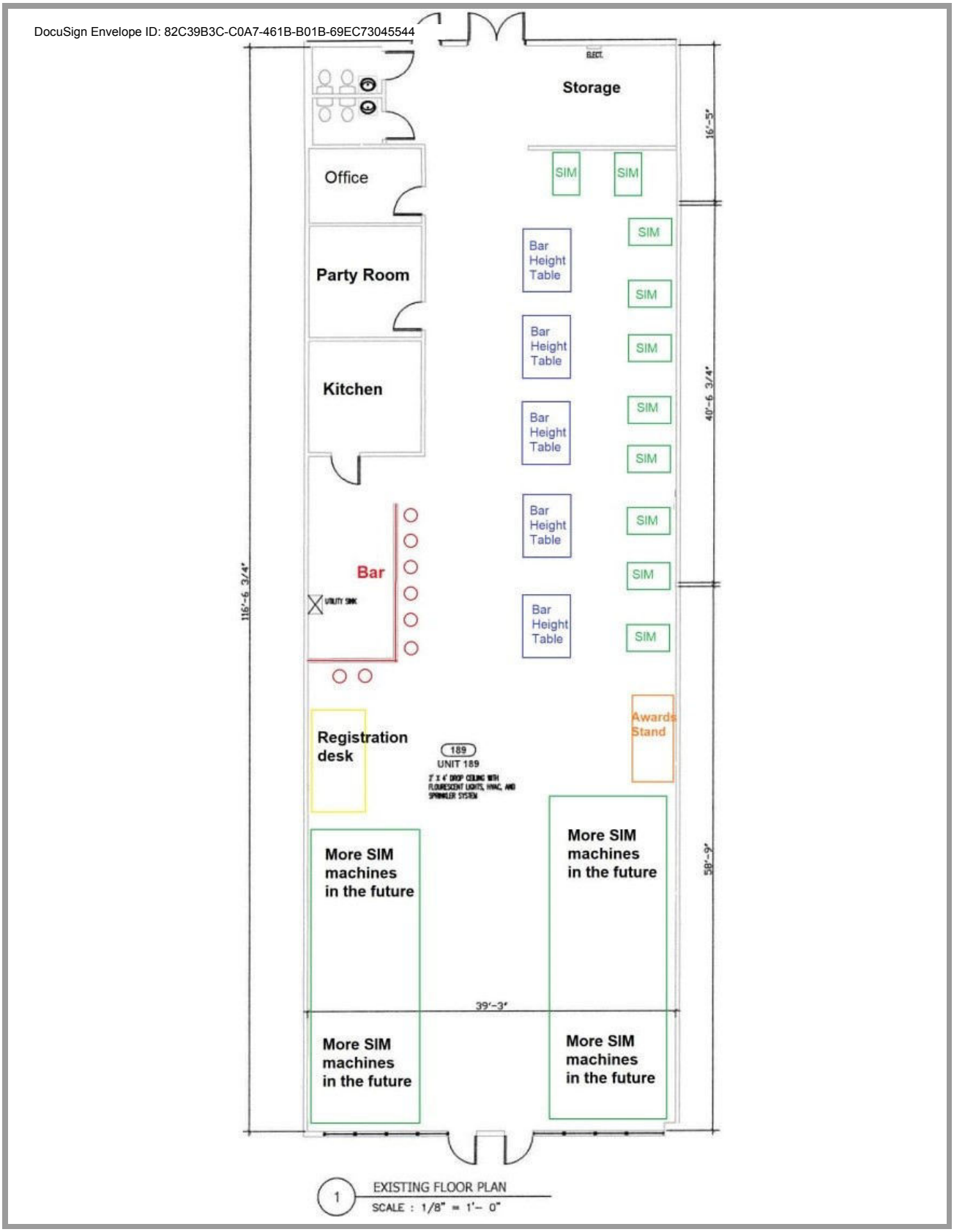
417574_1

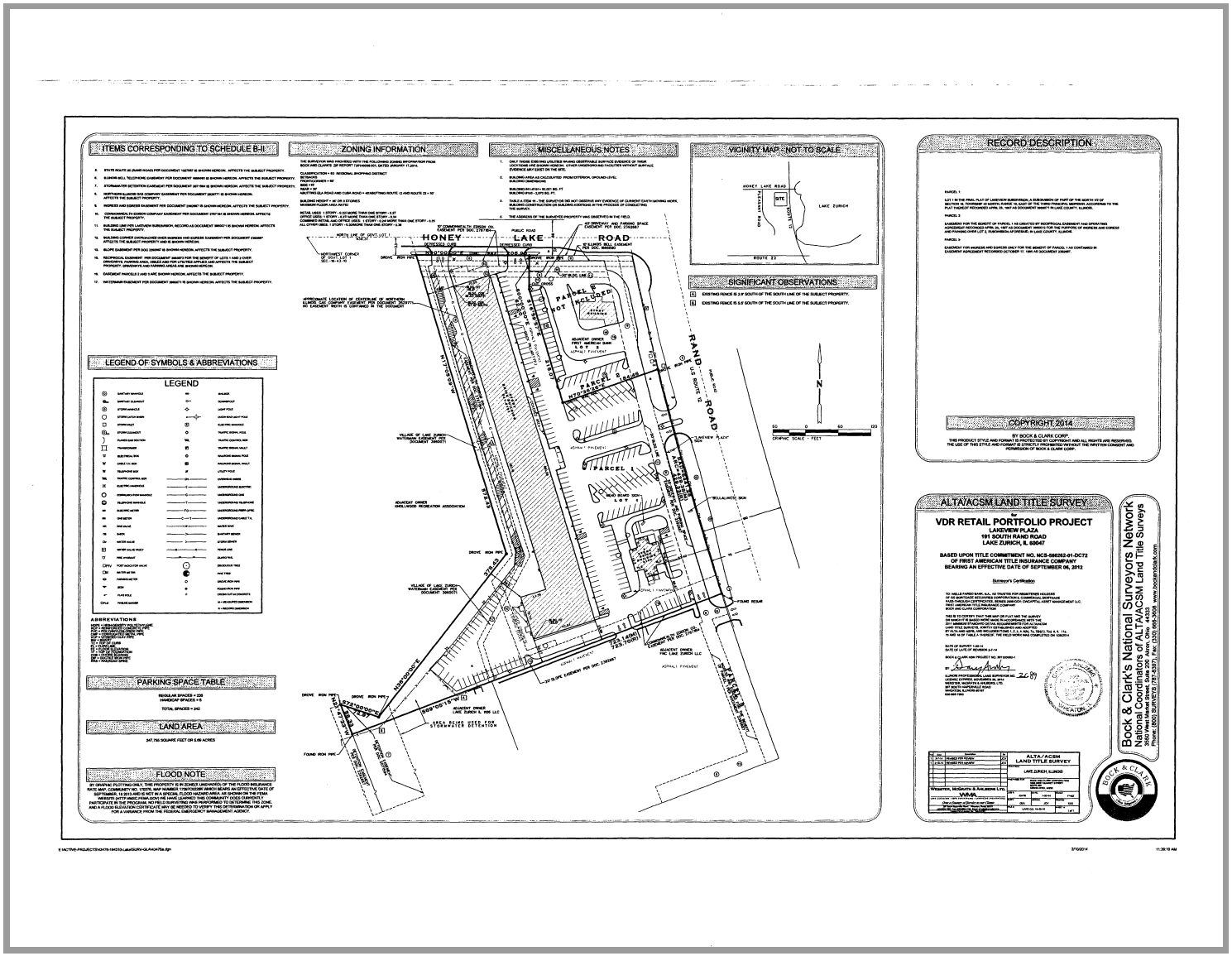
EXHIBIT C

August 21, 2024 staff reports and PZC recommendation/conditions and accompanying documentation

417574_1

DocuSign Envelope ID: 82C39B3C-C0A7-461B-B01B-69EC73045544




ITEMS CORRESPONDING TO SCHEDULE B-II
ZONING INFORMATION
MISCELLANEOUS NOTES
VICINITY MAP - NOT TO SCALE
RECORD DESCRIPTION
SIGNIFICANT OBSERVATIONS
LEGEND OF SYMBOLS & ABBREVIATIONS
LEGEND
ABBREVIATIONS
PARKING SPACE TABLE
REGULAR SPACES = 226
HANDICAP SPACES = 6
TOTAL SPACES = 242
LAND AREA
347,756 SQUARE FEET OR 8.06 ACRES
FLOOD NOTE
COPYRIGHT 2014
ALTA/ACSM LAND TITLE SURVEY
VDR RETAIL PORTFOLIO PROJECT
LAKEVIEW PLAZA
191 SOUTH RAND ROAD
LAKE ZURICH, IL 60047
BASED UPON TITLE COMMITMENT NO. NCS-586262-01-DC72
OF FIRST AMERICAN TITLE INSURANCE COMPANY
BEARING AN EFFECTIVE DATE OF SEPTEMBER 06, 2012
Surveyor's Certification
Wheeler, McGrath & Ahlberg, Ltd.
ALTA/ACSM LAND TITLE SURVEY
LAKE ZURICH, ILLINOIS
Bock & Clark's National Surveyors Network
National Coordinators of ALTA/ACSM Land Title Surveys
HONEY LAKE ROAD
RAND ROAD
ROUTE 22
LAKE ZURICH
PARCEL 1
PARCEL 2
PARCEL 3
PARCEL 4
PARCEL 5
PARCEL 6
PARCEL 7
PARCEL 8
PARCEL 9
PARCEL 10
PARCEL 11
PARCEL 12
PARCEL 13
PARCEL 14
PARCEL 15
PARCEL 16
PARCEL 17
PARCEL 18
PARCEL 19
PARCEL 20
PARCEL 21
PARCEL 22
PARCEL 23
PARCEL 24
PARCEL 25
PARCEL 26
PARCEL 27
PARCEL 28
PARCEL 29
PARCEL 30
PARCEL 31
PARCEL 32
PARCEL 33
PARCEL 34
PARCEL 35
PARCEL 36
PARCEL 37
PARCEL 38
PARCEL 39
PARCEL 40
PARCEL 41
PARCEL 42
PARCEL 43
PARCEL 44
PARCEL 45
PARCEL 46
PARCEL 47
PARCEL 48
PARCEL 49
PARCEL 50
PARCEL 51
PARCEL 52
PARCEL 53
PARCEL 54
PARCEL 55
PARCEL 56
PARCEL 57
PARCEL 58
PARCEL 59
PARCEL 60
PARCEL 61
PARCEL 62
PARCEL 63
PARCEL 64
PARCEL 65
PARCEL 66
PARCEL 67
PARCEL 68
PARCEL 69
PARCEL 70
PARCEL 71
PARCEL 72
PARCEL 73
PARCEL 74
PARCEL 75
PARCEL 76
PARCEL 77
PARCEL 78
PARCEL 79
PARCEL 80
PARCEL 81
PARCEL 82
PARCEL 83
PARCEL 84
PARCEL 85
PARCEL 86
PARCEL 87
PARCEL 88
PARCEL 89
PARCEL 90
PARCEL 91
PARCEL 92
PARCEL 93
PARCEL 94
PARCEL 95
PARCEL 96
PARCEL 97
PARCEL 98
PARCEL 99
PARCEL 100
PARCEL 101
PARCEL 102
PARCEL 103
PARCEL 104
PARCEL 105
PARCEL 106
PARCEL 107
PARCEL 108
PARCEL 109
PARCEL 110
PARCEL 111
PARCEL 112
PARCEL 113
PARCEL 114
PARCEL 115
PARCEL 116
PARCEL 117
PARCEL 118
PARCEL 119
PARCEL 120
PARCEL 121
PARCEL 122
PARCEL 123
PARCEL 124
PARCEL 125
PARCEL 126
PARCEL 127
PARCEL 128
PARCEL 129
PARCEL 130
PARCEL 131
PARCEL 132
PARCEL 133
PARCEL 134
PARCEL 135
PARCEL 136
PARCEL 137
PARCEL 138
PARCEL 139
PARCEL 140
PARCEL 141
PARCEL 142
PARCEL 143
PARCEL 144
PARCEL 145
PARCEL 146
PARCEL 147
PARCEL 148
PARCEL 149
PARCEL 150
PARCEL 151
PARCEL 152
PARCEL 153
PARCEL 154
PARCEL 155
PARCEL 156
PARCEL 157
PARCEL 158
PARCEL 159
PARCEL 160
PARCEL 161
PARCEL 162
PARCEL 163
PARCEL 164
PARCEL 165
PARCEL 166
PARCEL 167
PARCEL 168
PARCEL 169
PARCEL 170
PARCEL 171
PARCEL 172
PARCEL 173
PARCEL 174
PARCEL 175
PARCEL 176
PARCEL 177
PARCEL 178
PARCEL 179
PARCEL 180
PARCEL 181
PARCEL 182
PARCEL 183
PARCEL 184
PARCEL 185
PARCEL 186
PARCEL 187
PARCEL 188
PARCEL 189
PARCEL 190
PARCEL 191
PARCEL 192
PARCEL 193
PARCEL 194
PARCEL 195
PARCEL 196
PARCEL 197
PARCEL 198
PARCEL 199
PARCEL 200
PARCEL 201
PARCEL 202
PARCEL 203
PARCEL 204
PARCEL 205
PARCEL 206
PARCEL 207
PARCEL 208
PARCEL 209
PARCEL 210
PARCEL 211
PARCEL 212
PARCEL 213
PARCEL 214
PARCEL 215
PARCEL 216
PARCEL 217
PARCEL 218
PARCEL 219
PARCEL 220
PARCEL 221
PARCEL 222
PARCEL 223
PARCEL 224
PARCEL 225
PARCEL 226
PARCEL 227
PARCEL 228
PARCEL 229
PARCEL 230
PARCEL 231
PARCEL 232
PARCEL 233
PARCEL 234
PARCEL 235
PARCEL 236
PARCEL 237
PARCEL 238
PARCEL 239
PARCEL 240
PARCEL 241
PARCEL 242
PARCEL 243
PARCEL 244
PARCEL 245
PARCEL 246
PARCEL 247
PARCEL 248
PARCEL 249
PARCEL 250
PARCEL 251
PARCEL 252
PARCEL 253
PARCEL 254
PARCEL 255
PARCEL 256
PARCEL 257
PARCEL 258
PARCEL 259
PARCEL 260
PARCEL 261
PARCEL 262
PARCEL 263
PARCEL 264
PARCEL 265
PARCEL 266
PARCEL 267
PARCEL 268
PARCEL 269
PARCEL 270
PARCEL 271
PARCEL 272
PARCEL 273
PARCEL 274
PARCEL 275
PARCEL 276
PARCEL 277
PARCEL 278
PARCEL 279
PARCEL 280
PARCEL 281
PARCEL 282
PARCEL 283
PARCEL 284
PARCEL 285
PARCEL 286
PARCEL 287
PARCEL 288
PARCEL 289
PARCEL 290
PARCEL 291
PARCEL 292
PARCEL 293
PARCEL 294
PARCEL 295
PARCEL 296
PARCEL 297
PARCEL 298
PARCEL 299
PARCEL 300
PARCEL 301
PARCEL 302
PARCEL 303
PARCEL 304
PARCEL 305
PARCEL 306
PARCEL 307
PARCEL 308
PARCEL 309
PARCEL 310
PARCEL 311
PARCEL 312
PARCEL 313
PARCEL 314
PARCEL 315
PARCEL 316
PARCEL 317
PARCEL 318
PARCEL 319
PARCEL 320
PARCEL 321
PARCEL 322
PARCEL 323
PARCEL 324
PARCEL 325
PARCEL 326
PARCEL 327
PARCEL 328
PARCEL 329
PARCEL 330
PARCEL 331
PARCEL 332
PARCEL 333
PARCEL 334
PARCEL 335
PARCEL 336
PARCEL 337
PARCEL 338
PARCEL 339
PARCEL 340
PARCEL 341
PARCEL 342
PARCEL 343
PARCEL 344
PARCEL 345
PARCEL 346
PARCEL 347
PARCEL 348
PARCEL 349
PARCEL 350
PARCEL 351
PARCEL 352
PARCEL 353
PARCEL 354
PARCEL 355
PARCEL 356
PARCEL 357
PARCEL 358
PARCEL 359
PARCEL 360
PARCEL 361
PARCEL 362
PARCEL 363
PARCEL 364
PARCEL 365
PARCEL 366
PARCEL 367
PARCEL 368
PARCEL 369
PARCEL 370
PARCEL 371
PARCEL 372
PARCEL 373
PARCEL 374
PARCEL 375
PARCEL 376
PARCEL 377
PARCEL 378
PARCEL 379
PARCEL 380
PARCEL 381
PARCEL 382
PARCEL 383
PARCEL 384
PARCEL 385
PARCEL 386
PARCEL 387
PARCEL 388
PARCEL 389
PARCEL 390
PARCEL 391
PARCEL 392
PARCEL 393
PARCEL 394
PARCEL 395
PARCEL 396
PARCEL 397
PARCEL 398
PARCEL 399
PARCEL 400
PARCEL 401
PARCEL 402
PARCEL 403
PARCEL 404
PARCEL 405
PARCEL 406
PARCEL 407
PARCEL 408
PARCEL 409
PARCEL 410
PARCEL 411
PARCEL 412
PARCEL 413
PARCEL 414
PARCEL 415
PARCEL 416
PARCEL 417
PARCEL 418
PARCEL 419
PARCEL 420
PARCEL 421
PARCEL 422
PARCEL 423
PARCEL 424
PARCEL 425
PARCEL 426
PARCEL 427
PARCEL 428
PARCEL 429
PARCEL 430
PARCEL 431
PARCEL 432
PARCEL 433
PARCEL 434
PARCEL 435
PARCEL 436
PARCEL 437
PARCEL 438
PARCEL 439
PARCEL 440
PARCEL 441
PARCEL 442
PARCEL 443
PARCEL 444
PARCEL 445
PARCEL 446
PARCEL 447
PARCEL 448
PARCEL 449
PARCEL 450
PARCEL 451
PARCEL 452
PARCEL 453
PARCEL 454
PARCEL 455
PARCEL 456
PARCEL 457
PARCEL 458
PARCEL 459
PARCEL 460
PARCEL 461
PARCEL 462
PARCEL 463
PARCEL 464
PARCEL 465
PARCEL 466
PARCEL 467
PARCEL 468
PARCEL 469
PARCEL 470
PARCEL 471
PARCEL 472
PARCEL 473
PARCEL 474
PARCEL 475
PARCEL 476
PARCEL 477
PARCEL 478
PARCEL 479
PARCEL 480
PARCEL 481
PARCEL 482
PARCEL 483
PARCEL 484
PARCEL 485
PARCEL 486
PARCEL 487
PARCEL 488
PARCEL 489
PARCEL 490
PARCEL 491
PARCEL 492
PARCEL 493
PARCEL 494
PARCEL 495
PARCEL 496
PARCEL 497
PARCEL 498
PARCEL 499
PARCEL 500
PARCEL 501
PARCEL 502
PARCEL 503
PARCEL 504
PARCEL 505
PARCEL 506
PARCEL 507
PARCEL 508
PARCEL 509
PARCEL 510
PARCEL 511
PARCEL 512
PARCEL 513
PARCEL 514
PARCEL 515
PARCEL 516
PARCEL 517
PARCEL 518
PARCEL 519
PARCEL 520
PARCEL 521
PARCEL 522
PARCEL 523
PARCEL 524
PARCEL 525
PARCEL 526
PARCEL 527
PARCEL 528
PARCEL 529
PARCEL 530
PARCEL 531
PARCEL 532
PARCEL 533
PARCEL 534
PARCEL 535
PARCEL 536
PARCEL 537
PARCEL 538
PARCEL 539
PARCEL 540
PARCEL 541
PARCEL 542
PARCEL 543
PARCEL 544
PARCEL 545
PARCEL 546
PARCEL 547
PARCEL 548
PARCEL 549
PARCEL 550
PARCEL 551
PARCEL 552
PARCEL 553
PARCEL 554
PARCEL 555
PARCEL 556
PARCEL 557
PARCEL 558
PARCEL 559
PARCEL 560
PARCEL 561
PARCEL 562
PARCEL 563
PARCEL 564
PARCEL 565
PARCEL 566
PARCEL 567
PARCEL 568
PARCEL 569
PARCEL 570
PARCEL 571
PARCEL 572
PARCEL 573
PARCEL 574
PARCEL 575
PARCEL 576
PARCEL 577
PARCEL 578
PARCEL 579
PARCEL 580
PARCEL 581
PARCEL 582
PARCEL 583
PARCEL 584
PARCEL 585
PARCEL 586
PARCEL 587
PARCEL 588
PARCEL 589
PARCEL 590
PARCEL 591
PARCEL 592
PARCEL 593
PARCEL 594
PARCEL 595
PARCEL 596
PARCEL 597
PARCEL 598
PARCEL 599
PARCEL 600
PARCEL 601
PARCEL 602
PARCEL 603
PARCEL 604
PARCEL 605
PARCEL 606
PARCEL 607
PARCEL 608
PARCEL 609
PARCEL 610
PARCEL 611
PARCEL 612
PARCEL 613
PARCEL 614
PARCEL 615
PARCEL 616
PARCEL 617
PARCEL 618
PARCEL 619
PARCEL 620
PARCEL 621
PARCEL 622
PARCEL 623
PARCEL 624
PARCEL 625
PARCEL 626
PARCEL 627
PARCEL 628
PARCEL 629
PARCEL 630
PARCEL 631
PARCEL 632
PARCEL 633
PARCEL 634
PARCEL 635
PARCEL 636
PARCEL 637
PARCEL 638
PARCEL 639
PARCEL 640
PARCEL 641
PARCEL 642
PARCEL 643
PARCEL 644
PARCEL 645
PARCEL 646
PARCEL 647
PARCEL 648
PARCEL 649
PARCEL 650
PARCEL 651
PARCEL 652
PARCEL 653
PARCEL 654
PARCEL 655
PARCEL 656
PARCEL 657
PARCEL 658
PARCEL 659
PARCEL 660
PARCEL 661
PARCEL 662
PARCEL 663
PARCEL 664
PARCEL 665
PARCEL 666
PARCEL 667
PARCEL 668
PARCEL 669
PARCEL 670
PARCEL 671
PARCEL 672
PARCEL 673
PARCEL 674
PARCEL 675
PARCEL 676
PARCEL 677
PARCEL 678
PARCEL 679
PARCEL 680
PARCEL 681
PARCEL 682
PARCEL 683
PARCEL 684
PARCEL 685
PARCEL 686
PARCEL 687
PARCEL 688
PARCEL 689
PARCEL 690
PARCEL 691
PARCEL 692
PARCEL 693
PARCEL 694
PARCEL 695
PARCEL 696
PARCEL 697
PARCEL 698
PARCEL 699
PARCEL 700
PARCEL 701
PARCEL 702
PARCEL 703
PARCEL 704
PARCEL 705
PARCEL 706
PARCEL 707
PARCEL 708
PARCEL 709
PARCEL 710
PARCEL 711
PARCEL 712
PARCEL 713
PARCEL 714
PARCEL 715
PARCEL 716
PARCEL 717
PARCEL 718
PARCEL 719
PARCEL 720
PARCEL 721
PARCEL 722
PARCEL 723
PARCEL 724
PARCEL 725
PARCEL 726
PARCEL 727
PARCEL 728
PARCEL 729
PARCEL 730
PARCEL 731
PARCEL 732
PARCEL 733
PARCEL 734
PARCEL 735
PARCEL 736
PARCEL 737
PARCEL 738
PARCEL 739
PARCEL 740
PARCEL 741
PARCEL 742
PARCEL 743
PARCEL 744
PARCEL 745
PARCEL 746
PARCEL 747
PARCEL 748
PARCEL 749
PARCEL 750
PARCEL 751
PARCEL 752
PARCEL 753
PARCEL 754
PARCEL 755
PARCEL 756
PARCEL 757
PARCEL 758
PARCEL 759
PARCEL 760
PARCEL 761
PARCEL 762
PARCEL 763
PARCEL 764
PARCEL 765
PARCEL 766
PARCEL 767
PARCEL 768
PARCEL 769
PARCEL 770
PARCEL 771
PARCEL 772
PARCEL 773
PARCEL 774
PARCEL 775
PARCEL 776
PARCEL 777
PARCEL 778
PARCEL 779
PARCEL 780
PARCEL 781
PARCEL 782
PARCEL 783
PARCEL 784
PARCEL 785
PARCEL 786
PARCEL 787
PARCEL 788
PARCEL 789
PARCEL 790
PARCEL 791
PARCEL 792
PARCEL 793
PARCEL 794
PARCEL 795
PARCEL 796
PARCEL 797
PARCEL 798
PARCEL 799
PARCEL 800
PARCEL 801
PARCEL 802
PARCEL 803
PARCEL 804
PARCEL 805
PARCEL 806
PARCEL 807
PARCEL 808
PARCEL 809
PARCEL 810
PARCEL 811
PARCEL 812
PARCEL 813
PARCEL 814
PARCEL 815
PARCEL 816
PARCEL 817
PARCEL 818
PARCEL 819
PARCEL 820
PARCEL 821
PARCEL 822
PARCEL 823
PARCEL 824
PARCEL 825
PARCEL 826
PARCEL 827
PARCEL 828
PARCEL 829
PARCEL 830
PARCEL 831
PARCEL 832
PARCEL 833
PARCEL 834
PARCEL 835
PARCEL 836
PARCEL 837
PARCEL 838
PARCEL 839
PARCEL 840
PARCEL 841
PARCEL 842
PARCEL 843
PARCEL 844
PARCEL 845
PARCEL 846
PARCEL 847
PARCEL 848
PARCEL 849
PARCEL 850
PARCEL 851
PARCEL 852
PARCEL 853
PARCEL 854
PARCEL 855
PARCEL 856
PARCEL 857
PARCEL 858
PARCEL 859
PARCEL 860
PARCEL 861
PARCEL 862
PARCEL 863
PARCEL 864
PARCEL 865
PARCEL 866
PARCEL 867
PARCEL 868
PARCEL 869
PARCEL 870
PARCEL 871
PARCEL 872
PARCEL 873
PARCEL 874
PARCEL 875
PARCEL 876
PARCEL 877
PARCEL 878
PARCEL 879
PARCEL 880
PARCEL 881
PARCEL 882
PARCEL 883
PARCEL 884
PARCEL 885
PARCEL 886
PARCEL 887
PARCEL 888
PARCEL 889
PARCEL 890
PARCEL 891
PARCEL 892
PARCEL 893
PARCEL 894
PARCEL 895
PARCEL 896
PARCEL 897
PARCEL 898
PARCEL 899
PARCEL 900
PARCEL 901
PARCEL 902
PARCEL 903
PARCEL 904
PARCEL 905
PARCEL 906
PARCEL 907
PARCEL 908
PARCEL 909
PARCEL 910
PARCEL 911
PARCEL 912
PARCEL 913
PARCEL 914
PARCEL 915
PARCEL 916
PARCEL 917
PARCEL 918
PARCEL 919
PARCEL 920
PARCEL 921
PARCEL 922
PARCEL 923
PARCEL 924
PARCEL 925
PARCEL 926
PARCEL 927
PARCEL 928
PARCEL 929
PARCEL 930
PARCEL 931
PARCEL 932
PARCEL 933
PARCEL 934
PARCEL 935
PARCEL 936
PARCEL 937
PARCEL 938
PARCEL 939
PARCEL 940
PARCEL 941
PARCEL 942
PARCEL 943
PARCEL 944
PARCEL 945
PARCEL 946
PARCEL 947
PARCEL 948
PARCEL 949
PARCEL 950
PARCEL 951
PARCEL 952
PARCEL 953
PARCEL 954
PARCEL 955
PARCEL 956
PARCEL 957
PARCEL 958
PARCEL 959
PARCEL 960
PARCEL 961
PARCEL 962
PARCEL 963
PARCEL 964
PARCEL 965
PARCEL 966
PARCEL 967
PARCEL 968
PARCEL 969
PARCEL 970
PARCEL 971
PARCEL 972
PARCEL 973
PARCEL 974
PARCEL 975
PARCEL 976
PARCEL 977
PARCEL 978
PARCEL 979
PARCEL 980
PARCEL 981
PARCEL 982
PARCEL 983
PARCEL 984
PARCEL 985
PARCEL 986
PARCEL 987
PARCEL 988
PARCEL 989
PARCEL 990
PARCEL 991
PARCEL 992
PARCEL 993
PARCEL 994
PARCEL 995
PARCEL 996
PARCEL 997
PARCEL 998
PARCEL 999
PARCEL 1000

At the Heart of Community

COMMUNITY DEVELOPMENT DEPARTMENT

505 Telser Road
Lake Zurich, Illinois 60047

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

APPLICATION PZC 2024-11 **AGENDA ITEM 4.A**
PZC Hearing Date: August 21, 2024

STAFF REPORT

To: Chairperson Stratman and Members of the Planning & Zoning Commission

From: Sarosh Saher, Community Development Director

CC: Colleen McCauley, Village Planner
Mary Meyer, Building Services Supervisor

Date: August 21, 2024

Re: PZC 2024-11:– Special Use Permit for an Establishment that Offers Coin Operated Amusement Devices (including, but not limited to, racecar, golf, and flight simulators)
189 South Rand Road – The Simulation Zone

SUBJECT

Mr. Viktor Magula and Mr. Taras Bezruchko of The Simulation Zone, (the "Applicant"), with the consent of Knapp Investments, (the "Owner"), request a Special Use Permit to allow for an establishment offering coin operated amusement devices (including, but not limited to, racecar, golf, and flight simulators), at the property commonly known as 189 South Rand Road and legally described in Exhibit A attached hereto (the "Subject Property").

GENERAL INFORMATION

Requested Action:	Special Use Permit
Current Zoning:	B-3 Regional Shopping
Current Use:	Vacant
Proposed Use:	Coin Operated Amusement Devices (7993)
Property Location:	189 South Rand Road

Staff Report **Community Development Department**
APPLICATION PZC 2024-11 **PZC Hearing Date: August 21, 2024**

Applicants: Viktor Magula and Taras Bezruchko, The Simulation Zone

Owner: Knapp Investments, LLC

Staff Coordinator: Colleen McCauley, Village Planner

LIST OF EXHIBITS

A. Legal Description
B. Public Hearing Sign
C. Site Photos
D. Aerial Map
E. Zoning Map
F. Parcel Map
G. Development Application and Attachments
H. Development Review Comments

BACKGROUND

Mr. Viktor Magula and Mr. Taras Bezruchko of The Simulation Zone (the "Applicant"), are applying with the permission of the owner of the property, Knapp Investments, LLC, for approval of a Special Use Permit to operate an establishment that offers coin operated amusement devices (including, but not limited to, racecar, golf, and flight simulators), to be located at 189 South Rand Road, and legally described in Exhibit A attached hereto (the "Subject Property"). The Applicant filed an application with the Village of Lake Zurich received on June 24, 2024 (the "Application") seeking:

- Special Use Permit approval for "Coin Operated Amusement Devices" – SIC #7993 which falls under the major group "Amusement and Recreation Services" – SIC #79.

The Subject Property is located within the Village's B-3 Regional Shopping District. The multi-tenant building, Lakeview Plaza Shopping Center, is approximately 52,400 square feet and is comprised of twenty-five rental units. The suite at 189 South Rand Road is approximately 4,700 square feet, and will be equipped with a kitchen, bar, party room, and a large central area where the simulators will be located.

The Simulation Zone will offer realistic racing, golf, flight, and other experiences through simulation technology. The primary type of simulator will cater to racing enthusiasts, with each racing simulator equipped with technology that includes motion platforms, high-resolution displays, and realistic steering wheels and pedals.

Customers can pay per race or reserve time slots for two or three hours. They will offer a variety of racing sessions, host events, leagues, and tournaments. There will be a party room to host private parties along with reserved racing sessions for customers to celebrate events. Pricing packages will

vary to accommodate different preferences and budgets. Choices include single sessions, multi-session passes, and group discounts. The Simulation Zone will encourage repeat business by providing incentives such as loyalty programs and referral bonuses.

The Simulation Zone will have a lounge area where customers who are not using the simulators can socialize, watch races on the TVs, and order food and beverages. Additionally, after obtaining a liquor license from the Village Manager's Office, The Simulation Zone will offer alcoholic beverages from the bar.

The hours of operation will be from 2:00 p.m. – 10:00 p.m. on Monday through Thursday and 10:00 a.m. – 10:00 p.m. on Friday through Sunday.

There will be four employees on site during the hours of operation.

Pursuant to public notice published on July 27, 2024, in the Daily Herald, a public hearing has been scheduled with the Lake Zurich Planning & Zoning Commission for August 21, 2024, to consider the Application. On July 24, 2024 the Village posted a public hearing sign on the Subject Property (Exhibit B).

Staff offers the following additional information:

A. **Courtesy Review.** Due to the low impact, courtesy review was not recommended.

B. **Zoning History.** The property is located on Lot 1 in the Lakeview Subdivision and is zoned within the B-3 Regional Shopping Business District, which permits coin operated amusement devices as a special use. The property is within a multi-tenant commercial strip mall building known as Lakeview Plaza, which has historically been zoned for commercial uses.

Records indicate the building on the property was constructed in 1988.

C. **Surrounding Land Use and Zoning.** The subject property is located on South Rand Road on the west side of Lake Zurich. The areas surrounding the Subject Property to the north and to the south are also zoned within the B-3 Regional Shopping Business District. The properties to the east, across US Highway Route 12, are zoned within the R-5 Single-Family Residential District and the OS Open Space District, with Paulus Park located across the street. To the west and rear of the Subject Property, properties are zoned within the R-6 Multiple Family Residential District and the OS Open Space District.

D. **Trend of Development.** The subject property is located within a well-established retail center along the Rand Road corridor. Rand Road is a regional arterial street that connects a number of communities in Southwest Lake County and surroundings counties to Lake Zurich.

The Subject Property is also adjacent to the rear yard of the Knollwood Subdivision Clubhouse. The properties are separated by a grade change containing a retaining wall topped by a fence accompanied by a landscape buffer between the two properties.

E. **Zoning District**. The zoning code provides for three (3) zoning districts for business and commercial uses. When taken together, these districts are intended to permit development of property for the full range of business and commercial uses needed to serve the citizens of Lake Zurich and the surrounding suburban area.

The B-3 Regional Shopping Business District is intended to provide locations for major retail centers. The regulations are designed to encourage a broad range of attractive retail and compatible service uses in those centers.

GENERAL FINDINGS

Staff has evaluated the requested Special Use Permit individually for the current and proposed operations of the business and offers findings and recommendation on specific sections of the Code, in particular, provided recommendations and conditions on how the proposed operations can be conducted in compliance with the Standards for Special Use Permits.

9-19-3: STANDARDS FOR SPECIAL USE PERMITS.

Staff has reviewed the application and found that the proposal will continue to remain in substantial conformance with the standards for Special Use Permits as outlined below.

A. General Standards: No special use permit shall be recommended or granted unless the applicant shall establish substantial conformance with the following:

1. Zoning Code and Plan Purposes: The proposed use and development will be in harmony with the general and specific purposes for which this zoning code was enacted and for which the regulations of the district in question were established and with the general purpose and intent of the official comprehensive plan.

Staff Response: Standard met. The proposed land use for a coin operated amusement device establishment is classified as a special use within the B-3 Regional Shopping Business District, and in conformance with the "Commercial" land use designation of the currently adopted Comprehensive Plan.

2. No Undue Adverse Impact. The proposed use and development will not have a substantial or undue adverse effect upon adjacent property, the character of the area, or the public health, safety, and general welfare.

Staff Response: Standard met. The proposed land use is consistent with other uses within the Lakeview Plaza Shopping. All activities will take place within

the enclosed commercial building and will have minimal impact to the immediately adjacent parcels.

3. No Interference with Surrounding Development. The proposed use and development will be constructed, arranged, and operated so as not to dominate the immediate vicinity or to interfere with the use and development of neighboring property in accordance with the applicable district regulations.

   Staff Response: Standard met. The land use will be operated entirely within the enclosed building on the property. All parking will be accommodated for on the property, with the Lakeview Plaza Shopping Center having an ample amount of parking on site. Based on the frequency of customers to the proposed business, there is sufficient parking to accommodate the customers and employees on the property without interfering with the use, development and operations of adjacent properties.

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

   Staff Response: Standard met. The proposed development is currently served by and will continue to be served adequately by essential public facilities and services such as streets, utilities and other municipal services. No change in impact are anticipated at this time.

5. No Traffic Congestion. The proposed use and development will not cause undue traffic congestion nor draw significant amounts of traffic through the surrounding streets.

   Staff Response: Standard met. The subject property is accessible via Rand Road, a regional arterial street that links several communities in Southwest Lake County and nearby areas to Lake Zurich. For those traveling south on Rand Road, direct access to the building is available. Travelers heading north can turn left onto Honey Lake Road to reach the drive on the property's north side.

   The Lakeview Plaza Shopping Center has ample parking spaces and accessible spaces to support the new business at the Subject Property.

6. No Destruction of Significant Features. The proposed use and development will not result in the destruction, loss, or damage of any natural, scenic, or historic feature of significant importance.

   Staff Response: Standard met. The proposed use will not result in the destruction or removal of any natural features.

7. Compliance with Standards. The proposed use and development complies with all additional standards imposed on it by the particular provision of this Code authorizing such use.

   Staff Response: Standard met. This request for a Special Use Permit is to establish a business that offers coin operated amusement devices (including, but not limited to, racecar, golf, and flight simulators). There are no additional standards imposed on this proposed land use.

8. Positive Effect. The proposed special use creating a positive effect for the zoning district, its purpose, and adjacent properties shall be placed before the benefits of the petitioner.

   Staff Response: Standard met. The proposed development will continue to uphold the established character of the Rand Road commercial corridor. The proposed business will fill a vacancy in an established shopping center.

   The proposed land use will provide a unique entertainment option for the Village's residents. Additionally, with the granting of the Special Use Permit, a new business will be able to operate along the commercial corridor in the Village of Lake Zurich.

B. Special Standards for Specified Special Uses. When the district regulations authorizing any special use in a particular district impose special standards to be met by such use in such district, a permit for such use in such district shall not be recommended or granted unless the applicant shall establish compliance with such special standards.

   Staff Response: Standard met. The proposed use is not accompanied by any special standards for its establishment. Staff will ensure that compliance is established before any additional permits are issued.

C. Considerations. In determining whether the applicant's evidence establishes that the foregoing standards have been met, the Plan Commission and the Board of Trustees shall consider:

1. Benefit. Whether and to what extent the proposed use and development at the particular location requested is necessary or desirable to provide a service or a facility that is in the interest of the public convenience or that will contribute to the general welfare of the neighborhood or community.

   Staff Response: Standard met. The business will provide a convenient location for a unique amenity within the community.

2. Alternative Locations. Whether the purposes of the zoning code can be met by the location of the proposed use and development in some other area or zoning district that may be more appropriate than the proposed site.

Staff Response: Coin operated amusement devices (SIC #7993) are a special use within the Village's Business districts.

The applicants have not indicated an intention of looking for an alternative location. Any alternative location in a business district would be subject to requirements that are no different from the current location.

There is no evidence that the proposed location at the Subject Property is inappropriate for the proposed land use, so an alternative location would not be any more appropriate than the proposed location.

3. Mitigation of Adverse Impacts. Whether all steps possible have been taken to minimize any substantial or undue adverse effects of the proposed use and development on the immediate vicinity through building design, site design, landscaping, and screening.

Staff Response: Standard met. The coin operated amusement device establishment will function in a way to prevent any undue adverse effect on itself or on surrounding property in relation to its location, design and operation. All primary activities of the proposed use are located within the enclosed tenant space.

RECOMMENDATION

The recommendation of the Planning and Zoning Commission should be based on the standards included in the following Sections of the Lake Zurich Municipal Code:

- Section 9-19-3: Standards for Special Use Permits

Based on the review of staff, the standards for approval have been met and therefore staff recommends that the Planning and Zoning Commission make these standards a part of the official record of the Application.

Staff of the Community Development Department therefore recommends the approval of Application PZC 2024-11, 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, Cover Letter, and business plan information dated June 26, 2024, and prepared by Mr. Viktor Magula and Mr. Taras Bezruchko.
   b. Exhibit A: Basic Lease Terms between the landlord, Knapp Investments, LLC, a Missouri limited liability company, and the tenant, Simulation Zoe, Inc., an Illinois corporation.
   c. Exhibit B – Existing Floor plan, on page 5 of 11 of the business plan prepared by Mr. Viktor Magula and Mr. Taras Bezruchko, dated June 26, 2024, showing proposed room configuration and layout of the proposed establishment.

2. The Special Use Permit is granted to allow The Simulation Zone to establish a coin operated amusement device business within the tenant space located in the building at 189 South Rand Road, and such special use shall expire if this business ceases operating at the subject property. However, such use may continue without further consideration with a change in ownership as long as the location, design and operation of the land use remains substantially unchanged.

3. The development shall be in compliance with all other applicable codes and ordinances of the Village of Lake Zurich.

Respectfully Submitted,

Colleen McCauley, Village Planner

Staff Report
APPLICATION PZC 2024-11

Community Development Department
PZC Hearing Date: August 21, 2024

LAKE ZURICH PLANNING & ZONING COMMISSION
FINAL FINDINGS & RECOMMENDATIONS

189 South Rand Road
August 21, 2024

The Planning & Zoning Commission recommends approval of Application PZC 2024-11, and the Planning & Zoning Commission adopts the findings as contained within the Staff Report dated August 21, 2024 for this Application and subject to any changes or approval conditions as listed below:

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, Cover Letter, and business plan information dated June 26, 2024, and prepared by Mr. Viktor Magula and Mr. Taras Bezruchko.
   b. Exhibit A: Basic Lease Terms between the landlord, Knapp Investments, LLC, a Missouri limited liability company, and the tenant, Simulation Zoe, Inc., an Illinois corporation.
   c. Exhibit B – Existing Floor plan, on page 5 of 11 of the business plan prepared by Mr. Viktor Magula and Mr. Taras Bezruchko, dated June 26, 2024, showing proposed room configuration and layout of the proposed establishment.

2. The Special Use Permit is granted to allow The Simulation Zone to establish a coin operated amusement device business within the tenant space located in the building at 189 South Rand Road, and such special use shall expire if this business ceases operating at the subject property. However, such use may continue without further consideration with a change in ownership as long as the location, design and operation of the land use remains substantially unchanged.

3. The development shall be in compliance with all other applicable codes and ordinances of the Village of Lake Zurich.

☒ Without any further additions, changes, modifications and/or approval conditions.

☐ With the following additions, changes, modifications and/or approval conditions:

Planning & Zoning Commission Chairman

9

EXHIBIT A
LEGAL DESCRIPTION OF SUBJECT PROPERTY

PARCEL 1: LOT 1 IN THE FINAL PLAT OF LAKEVIEW SUBDIVISION, A SUBDIVISION OF PART OF THE NORTH 1/2 OF SECTION 19, TOWNSHIP 43 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED APRIL 23, 1997 AS DOCUMENT 3960071 IN LAKE COUNTY, ILLINOIS.

Common Street Address: 189 South Rand Road
Property Index Number (PIN): 14-19-104-001

EXHIBIT B

PUBLIC HEARING SIGNS PRESENT AT SUBJECT PROPERTY

NAPA
AUTO PARTS
50/50 BARBERSHOP
JOYCE'S
Google

189 S Rand Road

Special Use Permit

N

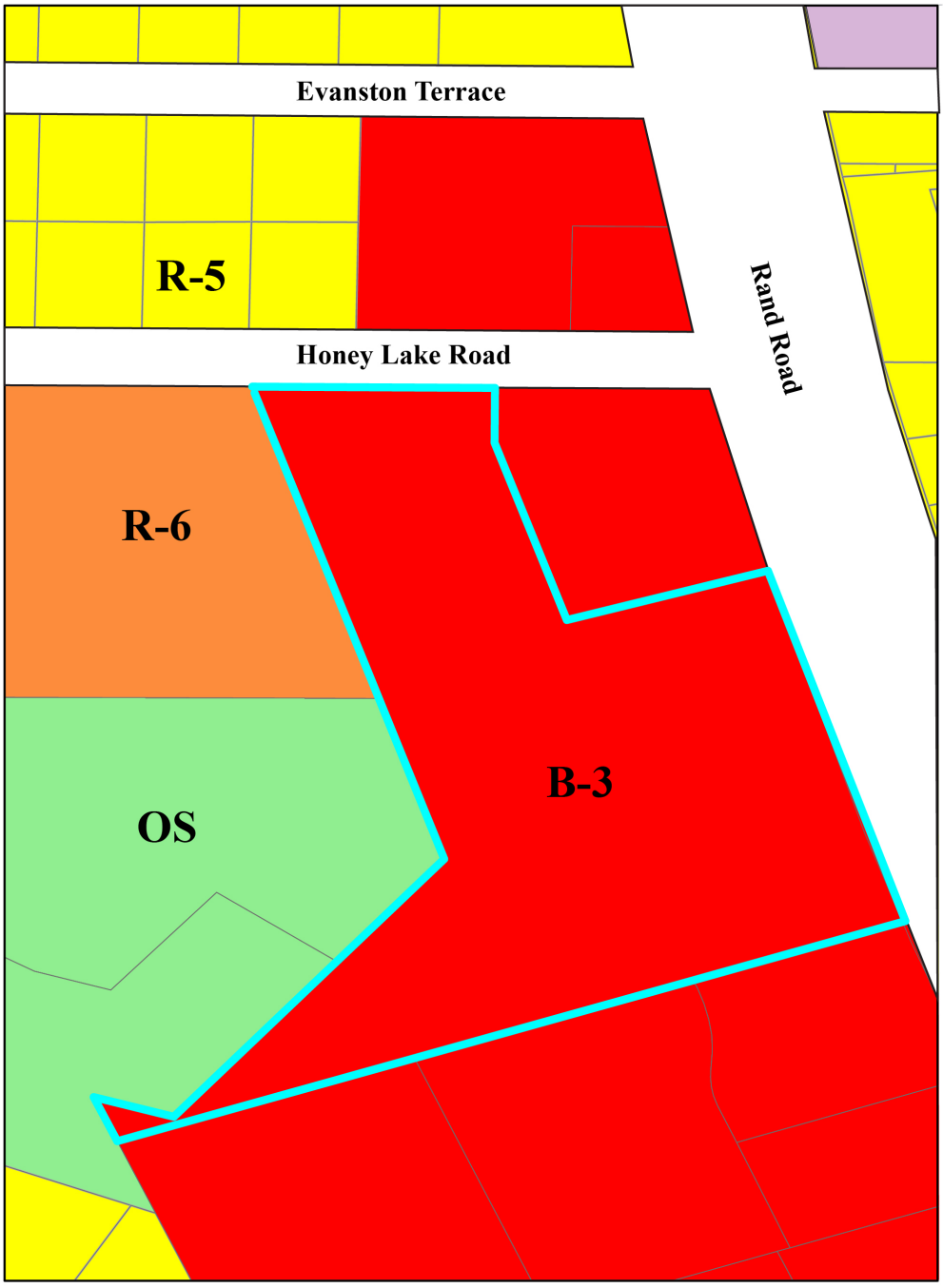
0 50 100 200 feet

Tax Parcel Lines

Subject Property

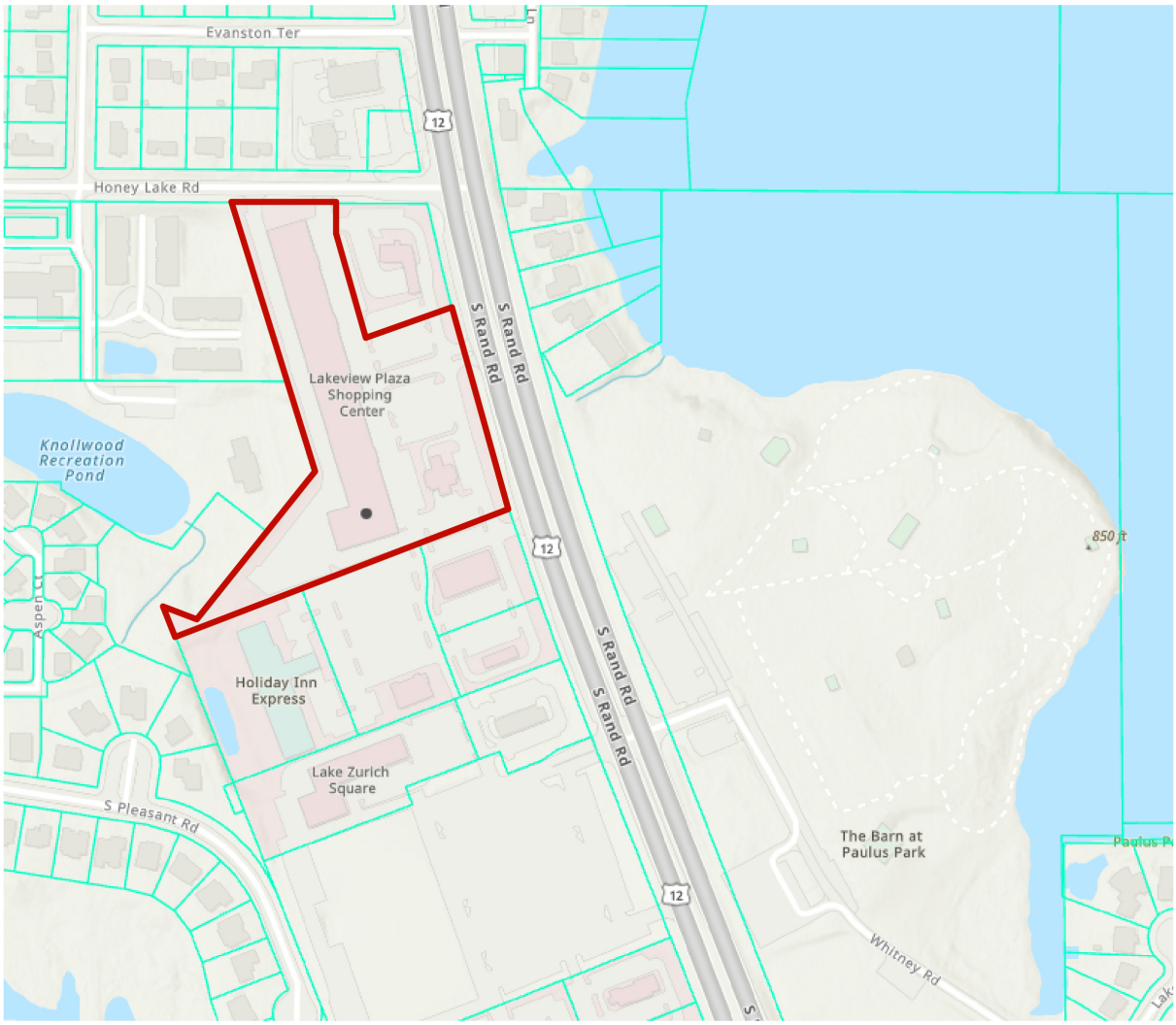
189 S Rand Road

Special Use Permit



189 S Rand Road

Special Use Permit



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: 189 S Rand Road, Lake Zurich, IL 60047
2. **Please attach complete legal description**
3. Property Identification number(s): 14-19-104-001
4. Owner of record is: Knapp Investments LLC Phone: 630-212-6587
   E-Mail Dan@CambiumRE.com Address: 3S221 Route 59, Warrenville, IL 60555
5. Applicant is (**if different from owner**): Viktor Magula & Taras Bezruchko Phone: 312-515-9944
   E-Mail magulainc@gmail.com Address: 5105 Tollview Dr, Ste 110, Rolling Meadows, IL 60008
6. Applicant's interest in the property (owner, agent, realtor, etc.): Leasehold
7. All existing uses and improvements on the property are: Outlined in the narrative attachment.
8. The proposed uses on the property are: Same as above.
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 date of expiration of said restrictions:
   N/A
10. Describe any contract or agreement of any nature relevant to the sale or disposal of the Subject Property:
    Tenant has entered into a 66 month lease with the owners of record.
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.

VIKTOR MAGULA
(Name of applicant)

(Signature of applicant)

Subscribed and sworn to before me this 26 day of June, 2024.

VITA BEZRUCHKO
Official Seal
Notary Public - State of Illinois
My Commission Expires Mar 1, 2026

(Notary Public)

My Commission Expires 03/01/2026

(**Name of Owner, if different**)

(Signature of Owner, if different)

Subscribed and sworn to before me this _____ day of _____, 2024.

(Notary Public)

My Commission Expires _____

DocuSign Envelope ID: 82C39B3C-C0A7-461B-B01B-69EC73045544

Business Plan: Simulation Zone Inc.

Location: 33-193 S Rand Rd, Lake Zurich, IL 60047

1. Executive Summary: Simulation Zone is a state-of-the-art entertainment venue offering realistic racing experiences through high-end simulation technology using advanced custom build machines and operated by the most up-to-date hardware and software. Our center will cater to racing enthusiasts, gamers, corporate team-building events, and parties, engaging racing tournaments and events. Located in a high-traffic area with ample parking, our goal is to provide an immersive and thrilling experience for customers of all ages and skill levels.

2. Business Description: Simulation Zone will offer a range of racing simulators equipped with cutting-edge technology, including motion platforms, high-resolution displays, and realistic steering wheels and pedals. Customers can choose from a variety of racing experiences, including iRacing, Formula 1, NASCAR, rally racing, and more. In addition to individual racing sessions, we will host competitive events, leagues, and tournaments for both casual and professional racers. Our facility will also have a lounge area where customers can socialize, watch live races on big screens, and enjoy refreshments including alcoholic beverages. Also we will have private party rooms that can be ranted along with racing sessions to celebrate all kind of events for our customers.

2.1 Business Model: A combination of pay-per-race and 2-3 hours' time slots reservations, with additional revenue from in-house food and beverage purchases and merchandise sales with providers on the contract basis.

3. Market Analysis: The market for simulation racing has been growing rapidly, fueled by the popularity of racing video games, esports, and the desire for immersive experiences. The global racing simulator market size and share are currently valued at USD 479.06 million in 2023. It is anticipated to generate an estimated revenue of USD 1,713.16 million by 2032, according to the latest study by Polaris Market Research. Racing enthusiasts, gamers, corporate groups, and event planners represent our target demographic. With a diverse range of offerings, we aim to appeal to both hardcore racing fans and casual gamers looking for a fun and unique entertainment experience.

DocuSign Envelope ID: 82C39B3C-C0A7-461B-B01B-69EC73045544

4. Marketing and Sales Strategy: Our marketing efforts will focus on both online and offline channels. This will include social media campaigns, targeted advertising on gaming platforms and forums, partnerships with local businesses and event organizers, and hosting promotional events to generate buzz and attract customers, and hosting tournaments to attract users. We will offer various pricing packages to accommodate different budgets and preferences, including single sessions, multi-session passes and group discounts. Additionally, we will provide incentives such as loyalty programs (coupons) and referral bonuses to encourage repeat business and customer referrals.

5. Operations Plan: Simulation Zone will be open seven days a week, with flexible hours to accommodate customer demand. We plan to be opened Monday - Thursday from 4pm till 10pm and Friday - Sunday from 11 am till 10 pm. Our facility will be staffed by experienced racing enthusiasts who are passionate about providing exceptional service and ensuring that customers have an enjoyable and memorable experience. We will invest in regular maintenance and upgrades to keep our simulators running smoothly and up-to-date with the latest racing software and hardware developments. Safety protocols will be implemented to ensure that customers can race with confidence and peace of mind.

6. Financial Plan (first 6-9 months): The initial startup costs will include leasing a suitable location, acquiring racing simulators and equipment, furnishing the facility, marketing expenses, and operational costs. We will secure funding through a combination of personal investment, loans, and potentially seeking investors or partnerships in future growth. Revenue will be generated through session fees, event bookings, merchandise sales, concessions, and sponsorship opportunities as well as selling to order food and beverages. We will carefully monitor expenses and revenue streams to ensure profitability and sustainability as we scale our operations and expand our customer base.

Based on our calculations, we can estimate the following (full capacity) revenue generation by Sim Machines only at the start of business:

2 (3 hrs time slots) X $50 = $100 per day X 10 units = $1000 a weekday X 4 = $4,000

3 (3 hrs time slots) X $50 = $150 per day X 10 units = $1500 a weekend X 3 = $4,500

So, in total we have $8,500 a week x 52 weeks = $442,000 a year or $36,800/month

DocuSign Envelope ID: 82C39B3C-C0A7-461B-B01B-69EC73045544

6.1. Racing simulators (Rigs): The approximate cost of one machine is around $25-30K

WHAT'S INCLUDED
Seat Slider Rails and Adjustment Bar
4 x Floor Saving Rubber Feet
Red Profile Strips
10 x Cable Clips

Other Parts Included
160mm x 40mm Black Anodized Aluminium Chassis
120mm x 40mm Black Anodized Aluminium Wheel Supports
4-Way Fully Adjustable Pedal Mount (pre-drilled for pedals)
All Mounting Fixtures
Upgraded 40x40mm Corner Brackets
Strengthened 160x40mm Corner Brackets
Assembly Tool Kit Included

Seat Options
GT Race Seat, Rally Seat, Recline Seat or No Seat

Wheel Mount Options
Heavy Duty, no Flex Wheel Deck, Direct Drive Front Mount or Fanatec Podium DD1 DD2 - All with full slide and angle adjustment.

D-Box Gen 5 4250I Motions System

3 High Resolution 32” LED Monitors with 144 Hz Refresh Rates

Last Generation PC operated by Intel i9 Processor with custom build accessories.

6.2. Secondary gears for revenue generation (9-12 months):

In the lounge zone we will have PS5 system setups that can allow people play while waiting for the available time slot or machine. Also, we are planning on getting VR systems in the special dedicated zones that can allow to raise traffic for people with younger children. Plus having dedicated party rooms will be beneficial.

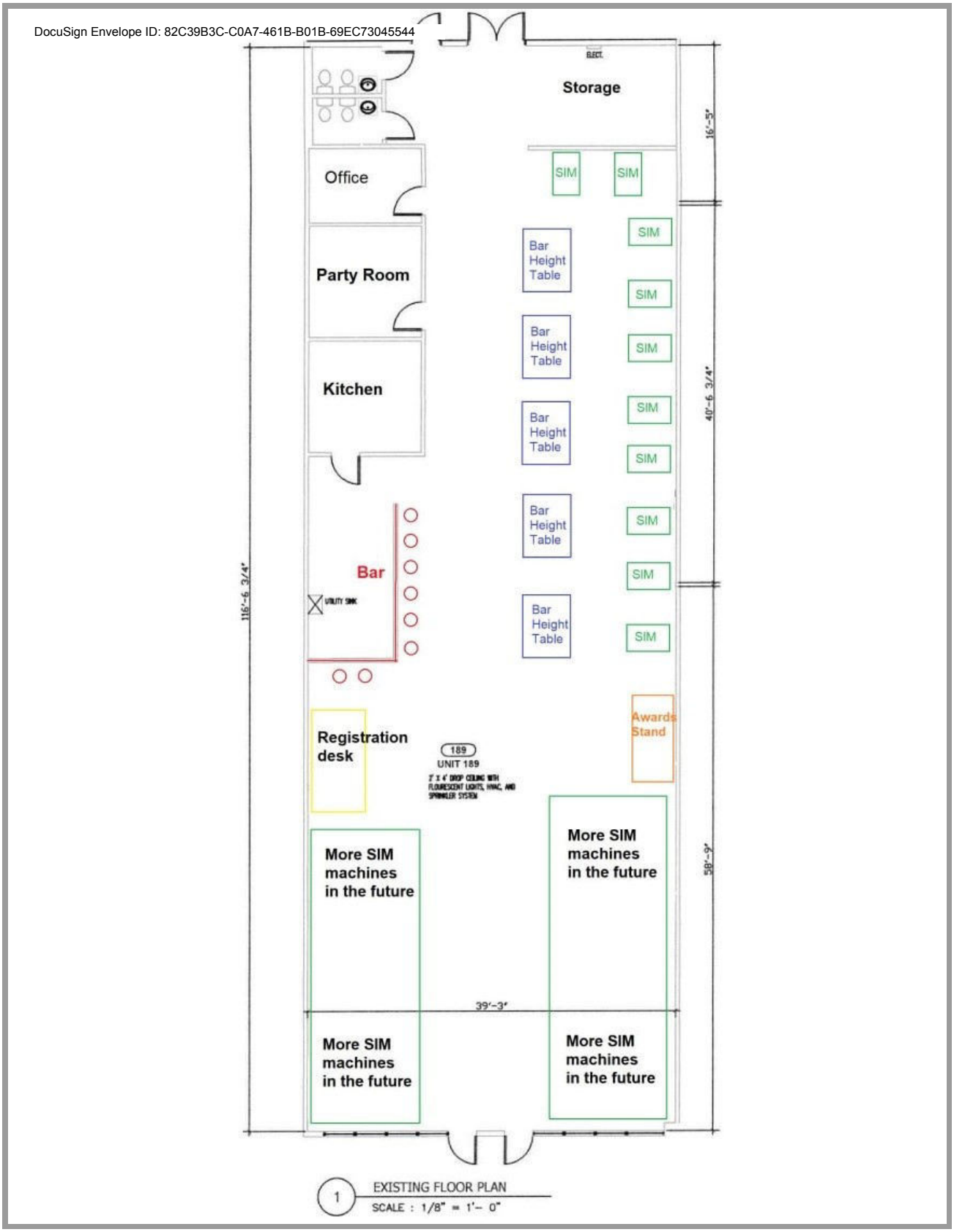
DocuSign Envelope ID: 82C39B3C-C0A7-461B-B01B-69EC73045544

6.3. Third step setup (12-18 months):

After deploying the first stage with all the racing machines we would like to introduce to our customers full bar with alcoholic beverages and kitchen with food and snacks. That will increase our revenue and will have a great addition to services offered in the lounge zone.

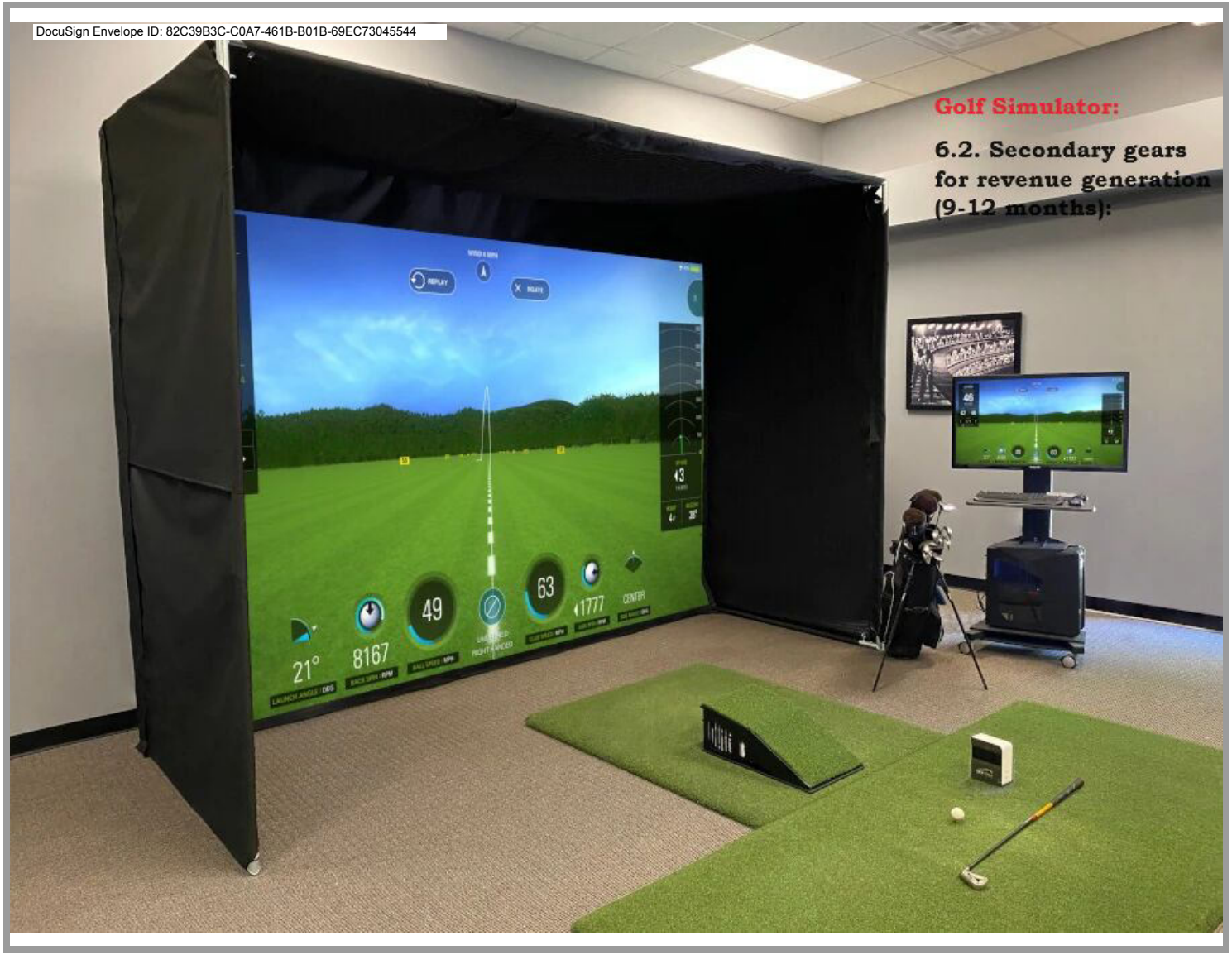
7. Conclusion: Simulation Zone aims to become the premier destination for simulation racing enthusiasts and gamers in our region. By offering high-quality experiences, excellent customer service, and a dynamic entertainment environment, we are confident that we can achieve success and become a valuable asset to the local community.

DocuSign Envelope ID: 82C39B3C-C0A7-461B-B01B-69EC73045544



DocuSign Envelope ID: 82C39B3C-C0A7-461B-B01B-69EC73045544
Main Simulation - 10 ps
OMP
OMP
ILLINOIS
SIM 8

DocuSign Envelope ID: 82C39B3C-C0A7-461B-B01B-69EC73045544



DocuSign Envelope ID: 82C39B3C-C0A7-461B-B01B-69EC73045544

Flight simulator

6.2. Secondary gears for revenue generation (9-12 months)

DocuSign Envelope ID: 82C39B3C-C0A7-461B-B01B-69EC73045544

DocuSign Envelope ID: 82C39B3C-C0A7-461B-B01B-69EC73045544
Virtual Reality 9D Egg
Simulator VR Motion
Ride 720 Degree
Sanctum
Tony/Eve/Frank

DocuSign Envelope ID: 82C39B3C-C0A7-461B-B01B-69EC73045544

DocuSign Envelope ID: CB76AA75-AA02-4434-B260-E6D5FA84CDAF

BASIC LEASE TERMS

A). Shopping Center:	Lakeview Plaza 41-193 South Rand Road Lake Zurich, Illinois 60047 52,400 total rentable square feet
B). Premises:	Suite 189, consisting of approximately 4,700 rentable square feet
C). Landlord:	Knapp Investments, LLC, a Missouri limited liability company
D). Tenant:	Simulation Zone, Inc., an Illinois corporation
E). Permitted Use:	Retail offering Simulation/video entertainment with food and bar service
F). Term:	66 Months
G). Commencement Date:	The Completion Date. Additionally, Commencement Date of the Lease shall be contingent upon Tenant obtaining special use permit, business license and other required municipal approvals for its Permitted Use from the Village of Lake Zurich ("Governmental Approvals"). If such Governmental Approvals are not granted, this Lease shall be terminated and any deposits or payment made by Tenant under the Lease shall be returned. See Section 3.
H). Expiration Date:	11:59 p.m. on the date which is 66 full calendar months following the Completion Date; see Section 3
I). Rent Commencement Date:	180 days following the Commencement Date

J). Base Rent:

TERM	**MONTHLY RATE**	**RENT/SF**
Months 1-6	Abated	Abated
Months 7-12	$5,483.34	$14.00
Months 13-24	$5,875.00	$15.00
Months 25-66	$6,266.67	$16.00

K). Rent Abatement Period:	Months 1 - 6
L). Reserved	
M). Reserved	
N). Tenant's Pro Rata Share:	8.97%
O). Security Deposit:	$14,000 _____ [TBD upon Landlord's review of Tenant/Guarantor financials]
P). Allowance:	None, however Landlord shall be responsible for the cost of Landlord's Work; see Section 13.
Q). Notice Address:	**If to Landlord:** Knapp Investments, LLC c/o Cambium Realty 3S221 Route 59 Warrenville, IL 60555

DocuSign Envelope ID: CB76AA75-AA02-4434-B260-E6D5FA84CDAF

Attn: Dan Shafron

If to Tenant:
Simulation Zone Inc
5105 Tollview Dr Ste 110 Rolling Meadows, IL 60008
Attn: Viktor Magula

R). Authorized Broker: Vertical Brokerage, Inc.

S). Guarantor:
Viktor Magula
Taras Bezruchko

DocuSign Envelope ID: CB76AA75-AA02-4434-B260-E6D5FA84CDAF

RETAIL LEASE AGREEMENT

This Lease ("Lease") is made and entered into as of 6/12/2024 (the "Effective Date") by and between Landlord and Tenant. The Basic Lease Terms provisions set forth above shall be incorporated as if fully set forth herein and all capitalized terms used but not otherwise defined in this Lease shall have the meaning ascribed to the in the Basic Lease Terms provisions.

In consideration of the mutual covenants and agreements herein stated, Landlord hereby leases to Tenant and Tenant hereby leases from Landlord solely for the below purpose the Premises, together with the appurtenances thereto.

1. PREMISES and SHOPPING CENTER:

A. The Shopping Center shall include therewith any buildings, parking areas, sidewalks, drive lanes, service areas, detention areas and other improvements thereon and made a part thereof (collectively hereinafter, the "Shopping Center"). The Premises is identified on the diagram attached hereto as Exhibit A.

B. The "Common Areas" of the Shopping Center shall consist of all portions of the Shopping Center not occupied by buildings and made available for the nonexclusive use of all occupants of the Shopping Center and their respective customers, employees and invitees including, without limitation, all parking areas and facilities, driveways, roadways, entrances, exits, walkways, sidewalks, loading areas, lighting facilities, traffic control signs and fences. Landlord hereby gives and grants to Tenant during the Term, for the benefit of Tenant and Tenant's permitted subtenants, licensees and concessionaires and their respective employees, agents, customers and invitees, the non-exclusive irrevocable right to use all of the Common Areas in common with Landlord and all other tenants and occupants of the Shopping Center.

2. USE. The Premises shall be used and occupied for the Permitted Use only, and for no other use or purposes whatsoever without Landlord's prior written consent in Landlord's sole and absolute discretion. Tenant shall comply with all laws, ordinances, orders, rules and regulations (state, federal, municipal, or promulgated by other agencies or bodies having any jurisdiction thereof) relating to the use, condition or occupancy of the Premises.

3. TERM. This Lease shall be effective upon the full execution hereof. Landlord shall deliver the Premises to Tenant, and the initial Term of this Lease shall commence on the Commencement Date and shall terminate at 11:59 p.m. on the Expiration Date, unless sooner terminated pursuant to the terms of this Lease. For the purposes hereof, a "Lease Year" shall be the period commencing on the Commencement Date and ending on the day immediately preceding the first anniversary of the Commencement Date and thereafter, a Lease Year shall consist of successive periods of twelve (12) calendar months. If the Commencement Date is other than the first day of a calendar month, the first Lease Year shall be the period of time from said Commencement Date to the end of the month in which said Commencement Date occurs plus the following twelve (12) calendar months. Promptly following the Commencement Date, Landlord and Tenant shall execute a commencement memorandum substantially in the form as Exhibit B, attached hereto, memorializing the Commencement Date, Completion Date, Expiration Date, Rent Abatement Period, and any other relevant provision hereof. Notwithstanding anything herein contained to the contrary, Commencement Date of the Lease shall be contingent upon Tenant obtaining required Governmental Approvals. If such Governmental Approvals are not granted, this Lease shall be terminated and any deposits or payment made by Tenant under the Lease shall be returned. Tenant shall promptly apply for all Governmental Approvals following the execution of this Lease and shall thereafter diligently pursue the same. In the event Tenant has not received the Governmental Approvals within 90 days of the Effective Date of this Lease (the "Approvals Deadline"), Tenant may terminate this Lease by providing written notice to Landlord prior to the Approvals Deadline. If Tenant receives the Governmental Approvals or fails to terminate this Lease as set forth herein prior to the Approvals Deadline, the termination right of Tenant hereunder shall no null and void and of no further force or effect, and this Lease shall continue throughout the Term and any extension(s) thereof. If Tenant properly terminates this Lease as set forth in this Section, the Lease shall be of no

DocuSign Envelope ID: CB76AA75-AA02-4434-B260-E6D5FA84CDAF

further force or effect, and Landlord shall promptly return the Security Deposit to Tenant. Tenant shall promptly and continuously keep Landlord apprised of its efforts to obtain the Governmental Approvals.

4. RENT.

A. BASE RENT. Tenant shall pay Landlord (or Landlord's agent, if so specified) as rent ("Base Rent") for the Premises the sum set forth in the Basic Lease Terms above, monthly in advance, beginning on the Rent Commencement Date through the Expiration Date, at Landlord's address stated below or such other address as Landlord may designate in writing.

B. PAYMENT. Rent payable hereunder shall be paid in advance on the first day of each and every calendar month during the Term hereof. Base Rent and all other rent provided herein shall be paid to Landlord without deduction or offset in lawful money of the United States of America. All amounts under this Lease shall be payable to Landlord at Landlord's Notice Address or to such other person or at such other place as Landlord may from time to time designate in writing. All sums due and payable under this Lease shall be deemed Rent for the purpose of this Lease.

C. RENT ABATEMENT. Base Rent and Additional Rent shall be abated during the first one hundred eighty (180) days following the Commencement Date (the "Rent Abatement Period"). During the Rent Abatement Period, Tenant shall be responsible for the payment of all utilities and any other charges owed pursuant to this Lease. In the event Tenant is in default of this Lease beyond any applicable notice and cure period, at any time during the Rent Abatement Period, the Rent abated hereunder shall cease and Tenant's obligation to pay Rent shall continue as if no Rent Abatement Period exists until such time as Tenant's default is cured.

D. LATE PAYMENT. Any Base Rent, additional rents, as hereinafter provided, and any other amounts due from Tenant to Landlord under this Lease shall be collectively known as "Rent". All Rent and other sums payable hereunder by Tenant which are not paid within five (5) days of the date on which it is due, shall incur a "Late Charge" equal to five percent (5%) of the amount past due. Landlord and Tenant agree that such Late Charge represents a fair and reasonable estimate of the expenses that Landlord will incur by reason of such late payment by Tenant. Acceptance of such Late Charge by Landlord shall not constitute a waiver of Tenant's default with respect to any such past due amounts, nor prevent Landlord from exercising any other rights and remedies granted to Landlord under this Lease or at law or in equity. Such Late Charge shall constitute additional rental payable by Tenant under this Lease and is in addition to, and separate from, the Rent and other charges payable under this Lease by Tenant. Further, all Rent not paid within five (5) days of the date on which it is due shall bear interest from the date due to the date paid at the rate of fifteen percent (15%) per annum.

E. The covenants herein to pay Base Rent and Additional Rent (collectively, "Rent") shall be independent of any other covenants set forth in this Lease.

5. RESERVED.

6. ADDITIONAL RENT.

A. TAXES. Landlord shall cause to be paid all taxes levied or assessed against the Shopping Center before they become delinquent and the parties further agree as follows:

(i) As Additional Rent Tenant shall pay Landlord an amount equal to the taxes applicable to Tenant's pro rata share (as hereinafter defined) of the Shopping Center for each calendar year of the Term except that the amount to be paid by Tenant with respect to the calendar years during which the Term begins and ends shall be adjusted pro rata on the basis of the number of days of the term falling within said years.

(ii) For the purposes of this Section, "taxes" shall include but not be limited to the following: Real estate taxes, general and special (including interest payable with any installments); any other such taxes, charges and assessments which are levied with respect to the buildings and any improvements, fixtures and equipment on the premises; any taxes with respect to the possession, leasing, operation, management, alteration, repair or use of the Premises or any portion thereof, fees or assessments for any governmental services to the premises; any gross receipts tax and/or any

DocuSign Envelope ID: CB76AA75-AA02-4434-B260-E6D5FA84CDAF

tax which shall be levied in addition to or in lieu of real estate possessory interest or personal property taxes under this lease; and any fees, expenses or costs incurred by Landlord in protesting any assessments, levies or tax rate that result in the reduction of tax liability.

(iii) From time to time, but in no event less than once a year, Landlord shall deliver to Tenant a statement estimating Tenant's pro rata share of taxes for the current or following calendar year, as the case may be, and Tenant shall pay to Landlord, together with the installments of Base Rent due hereunder, an amount equal to one twelfth ($1/12^{th}$) of such estimated amount; provided, however, that Landlord shall deliver to Tenant a statement in reasonable detail showing the actual amount due from Tenant for each year, and if Tenant's share as per such statement is greater than the installments paid by Tenant on account thereof Tenant shall promptly remit such deficiency to Landlord. If Tenant's pro rata share as per such statement is less than the installments paid by Tenant, Landlord shall retain such excess sum to be applied towards Tenant's share of any current or future taxes for the following year.

B. INSURANCE PREMIUMS.

(i) As Additional Rent, upon the commencement of the Term hereof (subject to any rent abatement), Tenant covenants to pay Tenant's pro rata share of the insurance premiums applicable to the Shopping Center for each calendar year of the Term except that the amount to be paid by Tenant with respect to the calendar years during which the Term begins and ends shall be adjusted pro rata on the basis of the number of days of the Term falling within said years.

(ii) From time to time, but in no event less than once a year, Landlord shall deliver to Tenant a statement, and Tenant shall pay to Landlord, together with the installments of Base Rent due hereunder, an amount equal to one-twelfth ($1/12^{th}$) of such estimated amount of the insurance premiums; provided, however that Landlord shall deliver to Tenant a copy of the actual insurance premiums for each such year, together with a statement in reasonable detail showing the actual amount due from Tenant for insurance premiums for each such year, and if Tenant's share as per such statement is greater than the installments paid by Tenant on account thereof, Tenant shall promptly remit such deficiency to Landlord. If Tenant's pro rata share as per such statement is less than the insurance premium installments paid by Tenant, Landlord shall retain such excess sum to be applied towards Tenant's pro rata share of insurance premiums for the following year.

C. COMMON AREA MAINTENANCE AND OPERATING COSTS.

(i) Operating Costs shall mean any and all costs and expenses of every kind and nature paid or incurred by Landlord (including appropriate reserves) in operating, managing, equipping, policing and protecting (if and to the extent provided by Landlord), insuring, servicing, lighting, repairing, replacing, cleaning and maintaining the Common Areas of the Shopping Center, including but limited to such maintenance and repair as shall be required in Landlord's judgment to upgrade, maintain and preserve the Common Areas in suitable condition and status, management fees for the Shopping Center, an administrative fee equal to fifteen percent (15%) of all Additional Rent in a given calendar year, all cost related to roof repairs, all expenses of security and fire protection including at the option of the Landlord servicing Tenant with fire extinguishers (if and to the extent such service provided by Landlord), pedestrian and vehicular traffic direction and control, all costs and expenses of cleaning, removing of rubbish, dirt, debris, snow and ice, all costs and expense of maintaining, planting, replanting and replacing flowers and landscaping; water and sewerage charges; professional fees including, but not limited to, accounting and legal fees relating to the common areas, required licenses and permits; all costs and expenses for supplies and operation of loud speakers and any other sound equipment; all costs and expenses incurred by Landlord in the testing, maintaining and repairing of sprinkler and other systems in any located in the Common Areas or at Landlord's option in the Premises; all charges for the use and service of utility services for the Common Areas, including, but not limited to, heating, ventilating and air conditioning costs and all costs and expenses of maintaining lighting fixtures including the light bulbs and electric current, maintenance of all utility facilities not maintained by the utility company, all costs, expenses, surcharges or other impositions or assessments incurred by Landlord in connection with environmental protection legislation or regulations or assessed against or imposed on the Common Areas or any part thereof with regard or in connection with impacts on public services, facilities or infrastructure; depreciation, interest and all other costs resulting from improvement or additions imposed and required by regulatory agencies; cost of equipment, machinery and facilities not properly chargeable to capital; reasonable depreciation of equipment, machinery and

DocuSign Envelope ID: CB76AA75-AA02-4434-B260-E6D5FA84CDAF

facilities; rents paid for the leasing of equipment, machinery and facilities and finance charges paid for the purchase of equipment, machines and facilities which are capital assets and are used in the operation of the Common Areas, and other costs as Landlord may reasonably determine for the proper operation and maintenance of the Common Areas; all costs and expenses directly relating to the parking facilities.

(ii) The provisions of this Lease notwithstanding, Operating Costs shall not include the following:

(a) Costs incurred with respect to the installation of leasehold improvements for tenants in the Shopping Center or incurred in renovating or otherwise improving, decorating, painting, or redecorating vacant space for tenants of the Shopping Center or costs associated with correcting defects in the initial design or construction of the Shopping Center or the common areas of the Shopping Center;

(b) Costs and expenses incurred in connection with negotiations or disputes with present or prospective tenants of the Shopping Center;

(c) Capital costs except for those that reduce other operating costs of the Shopping Center, amortized over the useful life of the asset, but only to the extent of the reduction of other operating costs;

(d) Expenses in connection with services or other benefits offered to other tenants in the Shopping Center, but not to Tenant;

(e) Costs of services provided by Landlord affiliates to the extent that such costs exceed the cost of such services rendered by unaffiliated third parties on a competitive basis;

(f) Legal fees, space planner fees, real estate broker leasing commissions, and advertising expenses incurred in connection with the original development or original leasing of the Shopping Center or future leasing of the Shopping Center;

(g) Depreciation, interest, principal, points and fees on debts or amortization on any mortgage or mortgages or any other debt instrument encumbering the Shopping Center;

(h) Fines or penalties, and interest accrued thereon, incurred as a result of late payments by Landlord;

(i) Any income, capital levy, capital stock, succession, transfer, franchise, gift, estate or inheritance taxes;

(j) Any ground lease rental;

(k) Depreciation, amortization and interest payments;

(l) Costs arising from Landlord's charitable or political contributions;

(m) Costs arising from condemnation that are not reimbursed by condemnation awards and that do not otherwise constitute an operating cost of the Shopping Center;

(n) Any bad debt loss, rent loss, or reserves for bad debt or rent loss;

(o) Landlord's entertainment expenses and travel expenses, except for those travel expenses that are necessary, reasonable and incurred in connection with Landlord's operation of the Shopping Center;

(p) Costs incurred by Landlord in connection with Landlord electing to cause the operating costs to be audited by an independent accounting firm; and

(q) Expenses directly resulting from the negligence of the Landlord, its agents, servant or employees.

DocuSign Envelope ID: CB76AA75-AA02-4434-B260-E6D5FA84CDAF

(iii) From time to time, but in no event less than once a year, Landlord shall deliver to Tenant a statement, and Tenant shall pay to Landlord, together with the installments of Base Rent due hereunder, an amount equal to one-twelfth ($1/12^{th}$) of such estimated amount of the Operating Costs; provided, however that Landlord shall deliver to Tenant a copy of the actual Operating Costs for each such year, together with a statement in reasonable detail showing the actual amount due from Tenant for Operating Costs for each such year, and if Tenant's share as per such statement is greater than the installments paid by Tenant on account thereof, Tenant shall promptly remit such deficiency to Landlord. If Tenant's pro rata share as per such statement is less than the Operating Costs installments paid by Tenant, Landlord shall retain such excess sum to be applied towards Tenant's pro rata share of Operating Costs for the following year.

(iv) The amounts payable by Tenant pursuant to this Section 6 shall collectively be referred to as "Additional Rent," and together with Base Rent, the "Rent." Landlord, at the end of the term, shall be entitled upon thirty (30) days' prior written notice to charge Tenant's security deposit, if any, for Additional Rent payments due hereunder but not paid.

(v) Notwithstanding anything to the contrary herein contained, should any of the services provided by Landlord under the Lease are interrupted or terminated (a "Service Interruption") and if as a result of such Service Interruption, the Premises or any portion thereof are rendered untenantable and such Service Interruption continues for a period in excess of five (5) days, then all Rent shall abate as to those portions of the Premises rendered untenantable from and after the date of the Service Interruption and shall continue until such service is restored to such space and such space is again tenantable. The foregoing rental abatement shall constitute Tenant's sole and exclusive remedy involving or with respect to a Service Interruption. Tenant shall give Landlord prompt notice of any Service Interruption.

7. **UTILITIES.** The Premises are separately metered and Tenant shall be solely responsible for and promptly pay all charges for heat, gas, electricity, water and any other utilities consumed in the Premises. Should Landlord elect to supply the water, gas, heat, electricity or any other utility used or consumed in the Premises, Tenant agrees to purchase and pay for the same as Additional Rent at the rate paid by the Landlord, which rate shall be market competitive. In no event shall Landlord be liable for any interruption in the supply of any such utilities to the Premises, unless Landlord elects to supply the same. Additionally, Tenant shall be solely responsible for the removal of Tenant's trash and Tenant shall at all times throughout the Term and any extension thereof, maintain in full force and effect a trash removal contract providing for the regular and timely removal of Tenant's trash.

8. **SECURITY DEPOSIT.** Upon the execution of this Lease, Tenant shall deposit with Landlord the Security Deposit as security for the full and faithful performance of every provision of this Lease to be performed by Tenant. If Tenant defaults with respect to any provision of this Lease, including but not limited to the provisions relating to the payment of Rent, Landlord may use, apply or retain all or any part of the Security Deposit for the payment of any Rent or any other sum in default or for the payment of any other amount which the Landlord may spend or become obligated to spend by reason of Tenant's default or to compensate Landlord for any other loss or damage which Landlord may suffer by reason of Tenant's default. If any portion of the Security Deposit is used or applied, Tenant shall within five (5) days after written demand therefor deposit cash with Landlord in an amount sufficient to restore the Security Deposit to its original amount, and Tenant's failure to do so shall be a material breach of and default under this Lease affording Landlord all remedies reserved herein. Landlord shall not be required to keep the Security Deposit separate from its general funds, and Tenant shall not be entitled to interest thereon. If Tenant shall fully and faithfully perform every provision of this Lease to be performed by it, the Security Deposit or any balance thereof shall be returned to Tenant (or at Landlord's option to the last assignee of Tenant's interest hereunder) at the Expiration Date and upon Tenant's vacation of the Premises.

9. **ASSIGNMENT AND SUBLETTING.** Tenant shall not, and shall not be permitted to at any time or for any reason, assign this Lease or mortgage, pledge, transfer, encumber or hypothecate its leasehold interest or grant any concession or license within the Premises or sublease the Premises or any part thereof, without the express prior written consent of Landlord which consent shall be in Landlord's sole and absolute discretion, but shall not be unreasonably withheld, and any attempt to do any of the foregoing shall be void and of no effect. Notwithstanding the preceding sentence to the contrary, Tenant may, without Landlord's consent, assign the Lease or sublet all or a part of the Premises to an Affiliate of Tenant; or to any entity which either (i) acquires all or substantially all of the stores of Tenant operating under a permitted trade name of Tenant, or (ii) acquires the Premises as part of a "Regional Sale" of other locations

DocuSign Envelope ID: CB76AA75-AA02-4434-B260-E6D5FA84CDAF

in the same general geographic area of the Premises; or in connection with a merger, consolidation, or public offering by Tenant or an Affiliate of Tenant. For purposes of this Section, the term "Affiliate" shall mean an entity that is directly or indirectly controlled by Tenant, or is the successor-in-interest to Tenant by way of merger, consolidation, reorganization, sale of stock of Tenant or sale of all or substantially all of the assets of Tenant. Any subletting of the Premises or any portion thereof, notwithstanding the consent of the Landlord, (a) shall not constitute a waiver of Landlord's rights hereunder, (b) shall not be for any use which will violate the exclusive use, restrictions, or rights granted to or inuring to the benefit of any other tenant in the Shopping Center, (c) shall not in any manner release Tenant from its continued liability and responsibility for the performance of and compliance with the provisions of this Lease and its covenants and obligations hereunder, (d) upon the acceptance of any rental payments or other remuneration by Landlord from any sublessee, shall not constitute approval of any sublease by Landlord, and (e) as to any sublessee, such sublessee shall comply with the provisions of this Lease as if such sublessee was the tenant hereunder.

10. COLLECTION OF RENT AFTER ASSIGNMENT. If Tenant: (a) assigns its interest in this Lease to another party, (b) subleases any portion of the Premises to another party, (c) grants or conveys to another party Tenant's interest in this Lease for purposes of a loan or extension of credit to Tenant or any mortgage, pledge, transfer, encumbrance or hypothecation of Tenant's interest in this Lease, or (d) grants to another party the right to use, occupy or enjoy the Leases Premises including, without limitation, as a concessionaire or licensee, Landlord may collect Base Rent, Additional Rent and any and all other sums and charges of whatsoever nature required to be paid by Tenant to Landlord pursuant to the terms of this Lease from such assignee, sublessee, mortgagee, party to whom the leasehold interest was pledged, transferred, encumbered or hypothecated, such concessionee or licensee, or such other party, user or occupant and apply the amounts to the amounts owed by Tenant to Landlord under this Lease at Landlord's discretion, but any such transaction or collection of rent and other charges and sums or application thereof by Landlord shall not release Tenant from (or be deemed a waiver by Landlord of) the provisions this Lease or release Tenant from Tenant's obligations for payment of Base Rent, Additional Rent and any and all other sums and charges of whatsoever nature required to be paid by Tenant to Landlord pursuant to the terms of this Lease or release Tenant from any other covenants, duties and obligations under this Lease.

11. TENANT NOT TO MISUSE. Tenant will not permit any unlawful or immoral practice, with or without Tenant's knowledge or consent, to be committed or carried on in the Premises by Tenant or by any other person. Tenant will not allow the Premises to be used for any purpose that will increase the rate of insurance thereon, nor for any purpose other than that hereinbefore specified. Tenant will not keep or use or permit to be kept or used in or on the Premises or any place contiguous thereto any flammable fluids or explosives, without the written permission of Landlord first had and obtained. Tenant will not load floors beyond the floor load rating prescribed by applicable municipal ordinances. Tenant will not use or allow the use of the Premises for any purpose whatsoever that will injure the reputation of the Premises or of the building of which they are a part.

12. USE RESTRICTIONS. Tenant further agrees to conform to the following provisions during the entire Term: (a) Tenant will not conduct any auction or bankruptcy or fire or "lost-our-lease" or "going-out-of-business" or similar sale or make any unlawful use of the Premises or permit any unlawful use thereof; (b) Tenant shall not use the malls, parking areas, sidewalks adjacent to the Premises or other Common Areas on the Shopping Center for business purposes without the previous written consent of the Landlord; (c) Tenant shall keep the doors and display windows of the Premises clean and shall keep the same electrically lighted during such periods of time as Tenant is required to operate its business in the Premises pursuant to paragraph (g) of this Section; (d) Tenant shall receive and deliver goods and merchandise only in the manner, at such times, and in such areas, as may be reasonably designated by Landlord; (e) Landlord shall have the right, at Landlord's sole discretion, to require Tenant to remove any sign visible from any portion of the Premises that is not in keeping with the standards of the Shopping Center or the community in which it sits. Any signs desired by Tenant for Landlord approval shall be indicated in Tenant's Plans and Specs to be submitted to Landlord for approval; (f) Tenant shall not perform any act or carry on any practice which may injure the Premises or any other part of the Shopping Center, or cause any offensive, excessive or obnoxious odors or loud noise (including the use of loudspeakers), or constitute a nuisance or menace to any other occupant or other persons in the Shopping Center or adjacent thereto; (g) Tenant binds and obligates itself to occupy and use the entire Premises continuously during the entire Term at least six (6) days per week during reasonable business hours for the purpose provided above and will operate such business during such period with diligence, in accordance with the best standards of operation of such business, and in a manner reasonably calculated to produce maximum sales in the Premises; (h)

DocuSign Envelope ID: CB76AA75-AA02-4434-B260-E6D5FA84CDAF

Tenant shall at all times fully and adequately heat and/or air condition (as the circumstances require) the Premises; (i) Tenant shall replace promptly, at its expense, any broken door closure and any cracked or broken glass on the Premises with glass of like kind and quality; (j) Tenant shall install and maintain a locking system for the Premises in accordance with Landlord's standard requirements; (k) All trash, refuse, and the like, shall be kept in covered metal cans, which metal cans shall be kept within the Premises at all times, and in no event stored outside of the same. Tenant shall be responsible, at its sole cost and expense, for the removal of its trash and rubbish. In the event Landlord has established or should establish a common trash and rubbish removal or disposal program at the Shopping Center, Tenant shall participate in such program; (l) Tenant agrees to cause its employees to park their cars only on areas designated by Landlord for parking in or on the Premises; (m) Tenant shall not use the Premises for any of the uses set forth in Exhibit C attached hereto and incorporated herein or in contradiction or violation of any exclusive or restricted use in any lease of any tenant of the Shopping Center (or any encumbrance of record affecting the Shopping Center) as of the Effective Date, and shall indemnify, defend and hold Landlord harmless for any breach or violation (including any anticipated or attempted breach or violation) by Tenant hereof; (n) Tenant shall keep the Premises in safe, sanitary and good condition and repair at all times during the Term of this Lease; (o) Tenant shall be authorized to use the Premises for the Use set forth in Paragraph 2 herein. For all purposes of this Section, in each instance where Landlord's consent may be required, Landlord may provide such consent in Landlord's sole and absolute discretion.

13. LANDLORD'S WORK. Landlord shall deliver the Premises to Tenant in compliance with all applicable laws and with the work shown on the initial space plan (the "Space Plan") and accompanying scope notes set forth on Exhibit D, attached hereto and incorporated herein ("Landlord's Work") substantially completed. Promptly following the execution of this Lease, Landlord and Tenant shall cooperate to obtain a full set of construction drawings based upon the Space Plan (the "Working Drawings"). The materials, scope of Landlord's Work and Working Drawings shall be subject to the mutual approval of Landlord and Tenant. Landlord shall perform Landlord's Work at Landlord's cost pursuant to the mutually agreed upon Working Drawings and shall substantially complete Landlord's Work as soon as is reasonably practicable following the Effective Date utilizing a general contractor of Landlord's choice. Landlord's Work shall be deemed to be "substantially completed" for all purposes under this Lease if and when (i) Landlord tenders possession of the Premises to Tenant, with Landlord's Work completed except for so-called "punchlist items" (e.g., minor details of construction or decoration or mechanical adjustments that can be completed within thirty (30) days, except for such matters which are beyond Landlord's reasonable control, so long as Landlord is pursuing such matters with commercially reasonable diligence) which do not materially interfere with Tenant's operation of its business from the Premises, Tenant's ability to complete any improvements to the Premises to be made by Tenant, or Tenant's ability to install furniture, fixtures or equipment at the Premises), irrespective of whether Tenant accepts possession of the Premises at that time. Landlord shall apply for all necessary building permits for Landlord's Work (the "Permits") promptly following the execution of this Lease and shall diligently pursue the same. Landlord's Work shall be completed by licensed contractors and all plans, architectural and otherwise, shall be approved in writing by Landlord prior to the commencement of Tenant's Work, which approval will not be unreasonably withheld, conditioned or delayed. The date on which Landlord substantially completes Landlord's Work shall be the "Completion Date. Landlord's Work shall conform to the requirements of all governmental authorities having jurisdiction over the Shopping Center and shall comply with all applicable laws, rules and regulations applicable to the Shopping Center.

14. TENANT'S WORK AND APPROVALS. Prior to opening for business to the public, Tenant, at Tenant's sole cost and expense, agrees to complete the construction of its Premises to a finished condition required for a Certificate of Occupancy and opening for business to the public (collectively referred to as "Tenant's Work"). Tenant shall be responsible, at Tenant's sole cost and expense for installing and providing all furniture, fixtures, equipment and décor not provided as part of Landlord's Work.

15. RESERVED.

16. ACCEPTANCE OF PREMISES. Except as expressly provided herein, for the purposes of this Lease, Landlord's knowledge and phrases of similar import shall mean the actual knowledge of Landlord, without independent verification or investigation, and shall not mean that Landlord is charged with knowledge of the acts, omissions and/or knowledge of Landlord's predecessors-in-title to the Premises and/or the Shopping Center (hereinafter collectively, the "Property"). Except as specifically and expressly set forth herein, Landlord makes no warranty or representation whatsoever, express or implied, regarding the condition, or the fitness for any particular purpose or use, of the Property

DocuSign Envelope ID: CB76AA75-AA02-4434-B260-E6D5FA84CDAF

leased hereunder. Tenant acknowledges and agrees that it is leasing the Property "AS IS, WHERE IS, WITH ALL FAULTS" on the Effective Date. Tenant acknowledges and agrees that upon the Effective Date, Landlord shall lease to Tenant and Tenant shall lease from Landlord accept the Property from Landlord "AS IS, WHERE IS, WITH ALL FAULTS," except to the extent expressly provided otherwise in this Lease and any document executed by Landlord and delivered to Tenant at the Effective Date. Except as expressly set forth in this Lease, Tenant has not relied and will not rely on, and Landlord has not made and is not liable for or bound by, any express or implied warranties, guarantees, statements, representations or information pertaining to the Property or relating thereto made or furnished by Landlord or any real estate broker, attorney, agent or third party representing or purporting to represent Landlord, to whomever made or given, directly or indirectly, orally or in writing. TENANT FURTHER ACKNOWLEDGES AND AGREES THAT ANY INFORMATION PROVIDED OR TO BE PROVIDED WITH RESPECT TO THE PROPERTY WAS OBTAINED FROM A VARIETY OF SOURCES AND THAT LANDLORD HAS NOT MADE ANY INDEPENDENT INVESTIGATION OR VERIFICATION OF SUCH INFORMATION AND MAKES NO REPRESENTATIONS AS TO THE ACCURACY OR COMPLETENESS OF SUCH INFORMATION. Tenant represents that it is a knowledgeable, experienced and sophisticated Tenant of real estate and that, except as expressly set forth in this Lease, it is relying solely on its own expertise and that of Tenant's consultants in leasing the Property and shall make an independent verification of the accuracy of any documents and information provided by Landlord. Tenant will conduct such inspections and investigations of the Property as Tenant deems necessary prior to executing the Lease, including, but not limited to, the title, physical and environmental conditions thereof, and shall rely upon same. By executing this Lease, Tenant acknowledges that Landlord has afforded Tenant a full opportunity to conduct such investigations of the Property as Tenant deemed necessary to satisfy itself as to the condition of the Property and the existence or non-existence or curative action to be taken with respect to any defects or Hazardous Materials on or discharged from the Property, and will rely solely upon same and not upon any information provided by or on behalf of Landlord, or its attorneys, agents or employees with respect thereto, other than such representations, warranties and covenants of Landlord as are expressly set forth in this Lease. At the Effective Date, Tenant shall assume the risk that adverse matters, including, but not limited to, adverse title, physical or construction defects or adverse environmental, health or safety conditions, may not have been revealed by Tenant's inspections and investigations. THE PROVISIONS OF THIS PARAGRAPH SHALL SURVIVE THE EXPIRATION OR ANY EARLIER TERMINATION OF THIS LEASE.

17. REPAIRS AND MAINTENANCE. Tenant shall keep the Premises and appurtenances thereto in a clean, sightly and healthy condition, and in good repair, and according to the statutes and ordinances in such cases made and provided, and the directions of public officers thereunto duly authorized, all at Tenant's own expense, and shall yield the same back to Landlord upon the termination of this Lease, whether such termination shall occur by expiration of the Term, or in any other manner whatsoever, in the same condition of cleanliness, repair and sightlines as at the date of the execution hereof, loss by fire and reasonable wear and tear excepted. Tenant shall make all necessary repairs and renewals upon the Premises including to the plumbing and electrical systems serving the Premises, exterior glass doors, rear, side or other exterior metal doors and related weather stripping, plate glass, and replace broken globes, glass (including doors and windows) and fixtures with materials of the same size and quality as that broken, and shall insure all glass in windows and doors of the Premises at Tenant's own expense. If, however, the Premises shall not thus be kept in good repair and in a clean, slightly and healthy conditions by Tenant, as aforesaid, Landlord may enter the same, or by Landlord's agents, servants or employees, without such entering causing or constituting a termination of this Lease or an interference with the possession of the Premises by Tenant, and Landlord may replace the same in the condition of repair, sightliness, healthiness and cleanliness as existed at the date of execution hereof, and Tenant agrees to pay Landlord in thus replacing the Premises in that condition. Tenant shall not cause or permit any waste, misuse or neglect of the water, or of the water, gas or electric fixtures. Notwithstanding anything contained in this Section, or elsewhere in this Lease to the contrary, Landlord shall not be responsible for, and shall have no obligation or liability for any costs and expenses for any maintenance, repair, replacement and/or damage costs and expenses of or to the HVAC system or any other systems or part of the Premises anywhere under this Lease that is caused by, occasioned by, the fault of, or due to, the errors, omissions, willful misconduct or negligence, or default or breach or violation of any provision of this Lease by, Tenant and/or its agents, servants, employees, contractors, customers, licensees, designees and/or invitees and/or any Tenant Parties, or for any reason within Tenant's control or due to any theft or vandalism or similar damage thereto, for which Tenant shall bear the sole cost and expense of such maintenance, repairs, replacements and/or damage as Tenant's sole and absolute responsibility, liability and obligation.

DocuSign Envelope ID: CB76AA75-AA02-4434-B260-E6D5FA84CDAF

Throughout the Term, Tenant shall be responsible, at Tenant's cost, for the maintenance, repair and replacement of the water heater unit(s) serving the Premises. Tenant shall be responsible, at Tenant's cost, for the maintenance and repair of the HVAC unit(s) serving the Premises. Tenant, at Tenant's cost, shall maintain throughout the Term and any extension(s) thereof an annual HVAC service contract for the HVAC unit(s) serving the Premises, which shall require at least quarterly inspection/preventative maintenance calls each year throughout the Term. Provided that Tenant maintains in effect the HVAC service contract as set forth herein, Landlord shall be responsible, at Landlord's cost for the replacement of the HVAC unit(s) serving the Premises.

Tenant shall not make or permit any penetration in the roof above the Premises or elsewhere above the Shopping Center, and Tenant shall not make or permit any modification or work to the flashing around the rooftop air conditioning units. If any roof penetration is required in connection with Tenant's obligations hereunder, Tenant shall first notify Landlord prior to any work being performed and Landlord shall have the first right (but shall not be obligated) to perform such roof penetration at Tenant's sole cost and expense, which shall be paid upon demand, otherwise such roof penetration shall be made by Tenant at Tenant's sole cost and expense after Tenant receives Landlord's prior written consent and which shall be made to Landlord's satisfaction. In no event shall Tenant (and its agents, servants, employees, contractors, customers, designees, licensees and invitees) make, permit or cause any violation of or to Landlord's roof warranty(ies).

If Landlord considers necessary any repairs, maintenance or replacements required to be performed by Tenant, under this Lease, and if Tenant refuses or neglects to perform same after reasonable notice (except in the event of an emergency, when no prior notice shall be required), Landlord shall have the right (but shall not be obligated), to perform such repair, maintenance or replacement and Tenant will pay the cost thereof on demand.

Tenant will not commit waste but will maintain the Premises in a clean, and reasonably attractive condition and in good repair, and shall also keep adjacent sidewalks clean. Upon termination of this Lease, Tenant will surrender the Premises to Landlord in broom-clean and sanitary condition, and otherwise in the condition which existed at the commencement of this Lease, excepting only ordinary wear and tear, damage arising from acts of God, modifications to the Premises approved by Landlord, and any damage required hereunder to be repaired by Landlord. Upon termination or expiration of this Lease, Tenant will also surrender to Landlord all keys, codes and manuals to the Premises and the systems and property contained or situated therein.

Throughout the Term and any extension(s) thereof, Landlord shall be responsible for the maintenance, repair and replacement of the exterior walls and structural portions of the Shopping Center, including the foundation, plumbing and utility systems providing service up to the Premises (provided, however, than any repairs or replacements to the same resulting from the gross negligence, willful misconduct of Tenant or Tenant's agents, employees or invitees shall be the sole responsibility of Tenant). Further, throughout the Term and any extension(s) thereof, Landlord shall be responsible for the replacement of the parking lot and roof of the Shopping Center.

18. ACCESS TO PREMISES. Tenant shall allow Landlord or any person authorized by Landlord free access to the Premises for the purpose of examining or exhibiting the same, or to make any repairs or alterations thereof which Landlord may see fit to make, and Tenant will allow Landlord to have placed upon the Premises at all times notices of "For Sale" and "For Rent", and Tenant will not interfere with the same.

19. NON-LIABILITY OF LANDLORD. Except as provided by law of the state in which the Shopping Center is located, and except for the negligence or willful misconduct of Landlord, its agents or employees, Landlord shall not be liable to Tenant for any damages or injury to Tenant or its property occasioned by the failure of Landlord to keep the Premises in repair, and shall not be liable for any injury done or occasioned by wind or by or from any defect of plumbing, electric wiring or of insulation thereof, gas pipes, water pipes, or steam pipes, or from broken stairs, porches, railing or walks, or from the backing up of any sewer pipe or down-spout, or from the bursting, leaking or running of any tank, tub, washstand, water closet or waste pipe, drain, or any other pipe or tank in, upon or about the Premises or the building of which they are a part nor from the escape of steam or hot water from any radiator, it being agreed that said radiators are under the control of Tenant, nor for any such damage or injury occasioned by water, snow or ice being upon or coming through the roof, skylight, trap-door, stairs, walks or any other place upon or near the Premises, or otherwise, nor for any such damage or injury done occasioned by the falling of any fixture, plaster or stucco, nor for the damage or injury arising from any act, omission or negligence of co-tenants or of other persons, occupants of

DocuSign Envelope ID: CB76AA75-AA02-4434-B260-E6D5FA84CDAF

the same building or of adjoining or contiguous buildings or of owners of adjacent or contiguous property, or of Landlord's agents or Landlord, all claims for any such damage or injury being hereby expressly waived by Tenant.

Notwithstanding anything to the contrary herein, Landlord shall (i) repair any and all damage to the Premises, and (ii) reimburse Tenant for any and all damages to Tenant's leasehold improvements, furniture, fixture, equipment and inventory, as a result of any water infiltration, fire, or casualty not caused by Tenant or its employees or invitees.

20. RESTRICTIONS (SIGNS, ALTERATIONS, FIXTURES). Tenant, at Tenant's sole cost and expense, shall be allowed to install building signage over the exterior of the Premises in accordance with Exhibit E, attached hereto. Tenant's signage shall at all times comply with all applicable laws, regulations and ordinances. Tenant shall not otherwise attach, affix or exhibit or permit to be attached, affixed or exhibited, except by Landlord or its agent, any articles of permanent character or any sign, attached or detached, with any writing or printing thereon, to any window, floor, ceiling, door or wall in a any place in or about the Premises, or upon any of the appurtenances thereto, without in each case the written consent of Landlord first had and obtained, such consent to be at Landlord's sole and absolute discretion; and shall not commit or suffer any waste in or about said Premises; and shall make no changes or alterations in the Premises by the erection of partitions or the papering of walls, or otherwise, without the consent in writing of Landlord, such consent to be at Landlord's sole and absolute discretion; and in case Tenant shall affix additional locks or bolts on doors or window, or shall place in the Premises lighting fixtures or any fixtures of any kind, without the consent of Landlord first had and obtained, such locks, bolts and fixtures shall remain for the benefit of Landlord, and without expense of removal or maintenance to Landlord. Landlord shall have the privilege of retaining the same if Landlord desires. If Landlord does not desire to retain the same, Landlord may remove and store the same, and Tenant agrees to pay the expenses of removal and storage thereof. The provisions of this paragraph shall not however apply to Tenant's trade fixtures, equipment and movable furniture.

21. LIABILITY INSURANCE. From and after the date on which Landlord tenders possession of the Premises to Tenant, and during the Term and at any other time that Tenant enters upon or has access to the Premises, Tenant, at Tenant's sole expense, shall keep in full force and effect a policy of public liability and property damage insurance from a A-company or better as determined by A.M. Best & Company rating bureau, with respect to the Premises, and also shall keep in full force an insurance policy for worker's compensation on any all employees of the Tenant and shall provide evidence of said insurance policy for to Landlord prior to Tenant's entry upon the Premises, and with each policy renewal period and the business operated by Tenant and any subtenants of the Tenant in the Premises in which the limits of public liability shall not be less than $1,000,000.00 per person and $1,000,000.00 per accident and $2,000,000.00 aggregate and in which the property damage liability shall not be less than $300,000.00. The policy shall name Landlord, any person, firm or corporations designated by Landlord and Tenant as insured, and shall contain a clause that the insurer will not cancel or change the insurance without first giving Landlord ten (10) days prior written notice. A copy of the policy of a certificate of insurance shall be delivered to Landlord within thirty (30) days from the date of this Lease. If such certificate is not provided within thirty (30) days from the date of this Lease, Landlord has the right, but not the obligation, to secure such coverage and bill Tenant for the premium as additional Rent. Landlord bears the risk of and shall insure, as practical or required by a lender of Landlord, the operation of the Shopping Center as a whole and the common facilities. Such insurance shall include, but is not limited to, general liability, umbrella liability, bodily injury, public liability, property damage liability, automobile insurance, sign insurance and the like in limits selected by Landlord. Landlord bears the risk of and shall keep the buildings of the Shopping Center and any improvements forming at any time a part of the Common Areas insured against loss or damage by fire, with extended coverage and vandalism and malicious mischief endorsement or their equivalents, with such insurance companies as Landlord shall select and in amounts not less than ninety-five percent (95%) of the replacement cost of the building and structures insured with loss payable thereunder to Landlord and to any authorized encumbrances of Landlord (with standard mortgagee loss payable clause) in accordance with their respective interests. Landlord reserves the right to place other coverage as may be required by a mortgagee or as determined necessary by Landlord, similar to other commercial buildings in the area.

22. INCREASE IN FIRE INSURANCE PREMIUM. Tenant agrees that it will not keep, use, sell or offer for sale in or upon the Premises any article that may be prohibited by the standard form of fire insurance policy. Tenant further agrees to comply with recommendations as issued from time to time by Landlord's insurance carrier. Tenant agrees to pay any increase in premiums for fire and extended insurance that may be charged during the Term on the amount

DocuSign Envelope ID: CB76AA75-AA02-4434-B260-E6D5FA84CDAF

of such insurance which may be carried by Landlord on said Premises or the building of which they are a part, resulting from the type of merchandise sold, or the type of business activity conducted by Tenant in the Premises (except for the Permitted Use). In determining whether increased premiums are the result of Tenant's use of the Premises, a schedule issued by the organization setting the insurance rate on the Premises, showing the various components of such rate, shall be conclusive evidence of the several items and charges which make up the fire and extended coverage insurance rate on the Premises.

In the event Tenant's occupancy (except for the Permitted Use) causes an increase of premium for the fire, boiler, and/or casualty rates on the Premises or any part thereof above the rate for the least hazardous type of occupancy legally permitted in the Premises, Tenant shall pay the additional premium on the fire, boiler and/or casualty insurance policies by reason, thereof. Tenant also shall pay in such event; any additional premium on the rent insurance policy that may be carried by Landlord for its protection against rent loss through fire. Bills for such additional premiums shall be rendered by Landlord to Tenant at such times as Landlord may elect and shall be due from, and payable by Tenant when rendered, and the amount thereof shall be deemed to be, and paid as, Additional Rent.

23. **INDEMNIFICATION OF LANDLORD**. Tenant hereby indemnifies Landlord, Landlord's beneficiaries (if any), Landlord's mortgagee (if any) and Landlord's property manager, if any, and their respective agents, officers, employees and contractors (collectively, the "Landlord Indemnified Parties"), and saves the Landlord Indemnified Parties harmless from and against any and all claims, actions, damages, liability and expense in connection with loss of life, personal injury and/or damage to property arising from or out of any occurrence in, upon or at the Premises, or the occupancy or use by Tenant of the Premises or any part thereof, or occasioned wholly or in part by any act or omission of Tenant, its agents, contractors, employees, servants, Tenants or concessionaries. In case any Landlord Indemnified Parties shall, without fault on their part, by made parties to any litigation commenced by or against Tenant, the Tenant shall protect and hold Landlord and any of Landlord Indemnified Parties (and each of them) harmless and shall pay all costs, expenses and reasonable attorney's fees incurred or paid by Landlord and Landlord's beneficiaries in connection with such litigation. Tenant shall also pay all costs, expenses and attorney's fees that may be incurred or paid by Landlord and any of Landlord Indemnified Parties in enforcing the covenants and agreements in this Lease.

24. **ENVIRONMENTAL RESTRICTIONS**. During the Term, except for cleaning supplies used in the ordinary course of Tenant's business, Tenant agrees not to use or permit the use of the Premises for any activities involving, directly or indirectly, the use, generation, treatment, storage or disposal of any hazardous or toxic chemical, material, substance or waste, except as is normally generated in compliance with all applicable law, including but not limited to regulations under OSHA, and Tenant shall indemnify and hold Landlord and Landlord's mortgagees (lenders) harmless from any and all costs, expenses, losses, actions, suits, claims, judgments, and any other liability whatsoever in connection with a breach by Tenant of any federal, state or local environmental protection laws and regulations.

25. **FIRE AND CASUALTY.** In case the Premises shall be rendered untenantable by fire, explosion or other casualty, Landlord may, at its option, terminate this Lease or repair the Premises within sixty (60) days. If Landlord does not repair the Premises within said time, or the building containing the Premises shall have been wholly destroyed, the Term hereby created shall cease and terminate.

26. **TERMINATION; HOLDING OVER.** At the termination of the Term of this lease, by lapse of time or otherwise, Tenant will yield up immediate possession of the Premises to Landlord, in good condition and repair, loss by fire and ordinary wear expected, and will return the keys therefore to Landlord at the place of payment of Rent. If Tenant retains possession of the Premises or any part thereof after the termination of the Term by lapse of time or otherwise, then Landlord may at its option within thirty (30) days after termination of the Term serve written notice upon Tenant that such holding over constitutes either (a) a renewal of this Lease for one year, and from year to year thereafter, at double the rental (computed on an annual basis) specified in Section 1, or (b) creation of a month to month tenancy, upon the terms of this Lease except at double the monthly rental specified in Section 1, or (c) creation of a tenancy at sufferance, at a rental rate of 150% of the previous year's rent, for the time Tenant remains in possession. If no such written notice is served then a tenancy a tenancy at sufferance with rental as stated at (c) shall have been created. Tenant shall also pay to Landlord all damages sustained by Landlord resulting from retention of possession by Tenant. The provisions of this paragraph shall not constitute a waiver by Landlord of any right of re-entry as hereinafter set

DocuSign Envelope ID: CB76AA75-AA02-4434-B260-E6D5FA84CDAF

forth; nor shall receipt of any Rent or any other act in apparent affirmance of tenancy operate as a waiver of the right to terminate this Lease for a breach of any of the covenants herein.

27. LANDLORD'S REMEDIES. If Tenant shall vacate or abandon the Premises or permit the same to remain vacant or unoccupied for a period of ten (10) days, or in case of the non-payment of the Rent reserved hereby, or any part thereof and such non-payment continues for a period of five (5) days after Tenant's receipt of written notice from Landlord, or of the breach of any covenant in this Lease contained, Tenant's right to the possession of the Premises thereupon shall terminate with or (to the extent permitted by law) without any notice or demand whatsoever, and the mere retention of possession thereafter by Tenant shall constitute a forcible detainer of the Premises; and if the Landlord so elects, but not otherwise, and with or without notice of such election or any notice or demand whatsoever, this Lease shall thereupon terminate, and upon the termination of the Tenant's right of possession, as aforesaid, whether this Lease be terminated or not, Tenant agrees to surrender the Premises immediately, without the receipt of any demand for Rent, notice to quit or demand for possession of the Premises whatsoever, and hereby grants to Landlord full and free license to enter into and upon the Premises or any part thereof, to take possession thereof with or (to the extent permitted by law) without a process of law, and to expel and to remove Tenant or any other person who may be occupying the Premises or any part thereof, and Landlord may use such force in and about expelling and removing Tenant and other persons as may reasonably be necessary, and Landlord may re-possess itself of the Premises as of Landlord's former estate, but such entry of the Premises shall not constitute a trespass of forcible entry or detainer, nor shall it cause a forfeiture of Rents due by virtue thereof, nor a waiver of any covenant, agreement or promise in this Lease contained, to be performed by Tenant. Tenant hereby waives all notice of any election made by Landlord hereunder, demand for Rent, noticed to quit, demand for possession, and any and all notices and demand whatsoever, of any and every nature, which may or shall be required by any statue of this state relating to forcible entry and detainer, or to landlord and Tenant, or by the common law, during the term of this Lease or any extension thereof. The acceptance of Rent, whether in a single instance or repeatedly, after it falls due, or after knowledge of any breach by Tenant, or the giving or making of any or demand, whether according to any statutory provisions or not, or any act or series of acts except an express written waiver, shall not be construed as a waiver of Landlord's rights to act without notice or demand or of any other right hereby given Landlord, or as an election not to proceed under the provisions of this Lease.

28. RIGHT TO RELET. If Tenant's right to the possession of the Premises shall be terminated in any way, the Premises, or any part thereof, may but need not (except as provided by Illinois statute), be relet by Landlord, for the account and benefit of Tenant, for such rent and upon such terms and to such person and for such period or periods as may seem fit to the Landlord, but Landlord shall not be required to accept or receive any tenant offered by the Tenant, not to do any act whatsoever or exercise any diligence whatsoever, in or about the procuring of any care or diligence by Landlord in the reletting thereof; and if a sufficient sum shall not be received from such reletting to satisfy the Rent hereby reserved, after paying the expenses of reletting and collection, including commissions to agents, and including also expenses of returning the space to the condition it was in when originally leased, Tenant agrees to pay and satisfy all deficiency; but the acceptance of a tenant by Landlord, in place of Tenant, shall not operate as a cancellation hereof, nor to release Tenant from the performance of any covenant, promise or agreement herein contained, and performance by any substituted tenant by the payment of Rent, or otherwise, shall constitute only satisfaction pro tanto of the obligations of Tenant arising hereunder.

29. COST AND FEES. Tenant shall pay upon demand all of Landlord's costs, charges and expenses, including fees of attorneys, agents and others retained by Landlord, incurred in enforcing any of the obligations of Tenant under this Lease or in any litigation, negotiation, or transaction in which Landlord shall, without Landlord's fault, become involved through or on account of this Lease.

30. LANDLORD'S LIEN. Landlord shall have a first lien upon the interest of Tenant under this Lease (except for Tenant's personal property and equipment), to secure the payment of all moneys due under this Lease, which lien may be foreclosed in equity at any time when money is overdue under this Lease: and the Landlord shall be entitled to name a receiver of said leasehold interest, to be appointed in any such foreclosure proceeding, who shall take possession of said Premises and who may relet the same under the orders of the court appointing him.

31. REMOVAL OF OTHER LIENS. In the event any lien upon Landlord's title results from any act or neglect of Tenant, and Tenant fails to remove said lien within fifteen (15) days after Landlord's notice to do so, Landlord may

DocuSign Envelope ID: CB76AA75-AA02-4434-B260-E6D5FA84CDAF

remove the lien by paying the full amount thereof or otherwise and without any investigation or consent of the validity thereof, and Tenant shall pay Landlord upon request the amount paid out by Landlord in such behalf, including Landlord's costs, expense and counsel fees.

32. REMEDIES NOT EXCLUSIVE. The obligation of Tenant to pay the Rent reserved hereby during the balance of the Term hereof, or during any extension hereof, shall not be deemed to be waived, released or terminated, nor shall the right and power to confess judgment given in paragraph 16 hereof be deemed to be waived or terminated by the service of any five-day notice, other notice to collect, demand for possession, or notice that the tenancy hereby created will be terminated on the date therein named, the institution of any action of forcible detainer or ejectment or any judgment for possession that may be rendered in such action, or any other act or acts resulting in the termination of Tenant's right to possession of the Premises. The Landlord may collect and receive any Rent due from Tenant, and payment or receipt thereof shall not waive or affect any such notice, demand, suit, or judgment, or in any manner whatsoever waive, affect, change, modify or alter any rights or remedies which Landlord may have by virtue hereof.

33. ESTOPPEL CERTIFICATES. Tenant agrees that, from time to time, within ten (10) days of a written request by Landlord, Tenant will execute and deliver to Landlord or to any mortgagee of Landlord's interest in the Building or any purchaser or prospective purchaser of Landlord's interest in the Shopping Center or the Premises a statement in form and content supplied by Landlord certifying: (a) that this Lease is unmodified and in full force and effect (or if there have been any modifications, identifying the modifications and certifying that the Lease as modified is in full force and effect, or an explanation as to why this Lease is not in full force and effect, as may be the case); (b) the dates to which Rent and any other charges have been paid; (c) the Commencement Date and the Expiration Date; (d) that Landlord is not in default in the performance of any of its obligations under the terms of this Lease or, if any such default is claimed, the exact nature thereof in detail; and (e) such other matters as Landlord or any such other party may reasonably request.

34. SUBORDINATION TO MORTGAGES. This Lease, and the rights of Tenant hereunder, shall be subordinate to the lien or liens of any mortgage or mortgages which now or at any time hereafter encumber the Shopping Center and to all advances made or hereafter to be made upon the security thereof. Tenant acknowledges that the current mortgage holder has the unilateral right to subordinate the lien and security interest of the mortgage and the other loan documents to this Lease. If requested by the holder of any such mortgage or mortgages, Tenant shall execute and deliver to such holder an instrument in commercially reasonable form and substance within ten (10) days of Tenant's receipt of the same, specifically subordinating this Lease to the lien of such mortgage or mortgages, provided, however, Tenant's quiet use and enjoyment and possession of the Premises under this Lease shall not be disturbed so long as Tenant is not in default beyond any applicable notice and cure periods, nor shall the rights and obligation of the parties be modified. Landlord shall use reasonable efforts to cause any new mortgagee to execute a subordination, non-disturbance and attornment agreement on the mortgagee's standard form which shall provide in general that so long as Tenant does not default under this Lease and complies with all provisions in this Lease and attorns to the mortgagee in the event mortgagee takes possession of the Premises that Tenant's quiet use and enjoyment and possession of the Premises under this Lease shall not be disturbed so long as Tenant is not in default beyond any applicable notice and cure periods, nor shall the rights and obligation of the parties be modified. In the event the lien of any mortgage is foreclosed upon or the Shopping Center is conveyed to any mortgagee, such mortgagee will not have any liability for any breach of the Lease by Landlord which occurs prior to the date the mortgagee (or its designee) acquires title to the Shopping Center.

35. BROKERS. Landlord and Tenant represent and warrant that they have not dealt with any broker other than Authorized Broker. Landlord shall be responsible for the payment of a commission to the Authorized Broker pursuant to a separate written agreement. Tenant shall hold harmless and indemnify Landlord from and against any and all costs (including attorneys' fees), expense or liability for any compensation, commission, and charges claimed by any broker by, through or under Tenant other than the Authorized Broker with respect to this Lease or the negotiation thereof. Landlord shall hold harmless and indemnify Tenant from and against any and all costs (including attorneys' fees), expense or liability for any compensation, commission, and charges claimed by any broker by, through or under Landlord other than the Authorized Broker with respect to this Lease or the negotiation thereof.

DocuSign Envelope ID: CB76AA75-AA02-4434-B260-E6D5FA84CDAF

36. NOTICES. Notices or demands required or permitted to be given hereunder shall be given in writing by United States registered or certified mail, return receipt requested, with postage prepaid, or by a nationally recognized overnight courier and addressed to the receiving party at the notice address set forth in the Basic Lease Terms above.

37. MISCELLANEOUS. (a) Provisions typed on this Lease and all riders attached to this Lease and signed by Landlord and Tenant are hereby made part of this Lease; (b) Tenant shall keep and observe such reasonable rules and regulations now or hereafter required by Landlord, which may be necessary for the proper and orderly care of the building of which the Premises are a part. The Rules and Regulations are attached hereto as Exhibit F; (c) All covenants, promises, representations and agreements herein contained shall be binding upon, apply and inure to the benefit of Landlord and Tenant and their respective heirs, legal representatives, successors and assigns; (d) The rights and remedies hereby created are cumulative and the use of one remedy shall not be taken to exclude or waive the right to the use of another; (e) The words "Landlord" and "Tenant" wherever used in this Lease shall be construed to mean Landlords and Tenants in all cases where there is more than one Landlord or Tenant, and to apply to individuals, male or female, or to firms or corporations, as the same may be described as Landlord or Tenant herein, and the necessary grammatical changes shall be assumed in each case as though fully expressed. If there is more than one Tenant the warrant of attorney is given jointly and severally and shall authorize the entry of appearance of, and waiver of issuance of process and trial by jury by, and confession of judgment against any one or more of such Tenants, and shall authorize the performance of every other act in the name of and on behalf of any one or more of such Tenants.

38. SEVERABILITY. If any clause, phrase, provision or portion of this Lease or the application thereof to any person or circumstance shall be invalid, or unenforceable under applicable law, such event shall not affect, impair or render invalid or unenforceable the remainder of this lease nor any other clause, phrase, provision or portion hereof, nor shall it affect the application of any clause, phrase, provision or portion hereof to other persons or circumstances.

39. HOURS OF OPERATION/CONTINUOUS OPERATIONS. Notwithstanding anything contained in this Lease to the contrary, Tenant shall operate its business in the Premises at least at such hours and on such days and in such months as are standard for similar retail uses in the geographical area of the Shopping Center. Landlord shall not have any right to dictate Tenant's hours of operations. Tenant shall not be required to observe extended holiday or seasonal hours, but may choose to do so if Landlord extends the operating hours of the Shopping Center.

THE SUBMISSION OF THIS LEASE FOR EXAMINATION BY TENANT AND/OR EXECUTION THEREOF BY TENANT DOES NOT CONSTITUTE A RESERVATION OF OR OPTION FOR THE PREMISES OR A RIGHT TO TENANT TO LEASE THE PREMISES. THIS LEASE SHALL BECOME EFFECTIVE ONLY UPON THE EXECUTION BY ALL PARTIES HERETO, LANDLORD'S RECEIPT OF TENANT'S FULLY EXECUTED COUNTERPART OF THIS LEASE, LANDLORD'S RECEIPT OF ANY GUARANTOR'S FULLY EXECUTED GUARANTY UNDER THIS LEASE, LANDLORD'S RECEIPT OF ANY ADVANCE RENT, LANDLORD'S RECEIPT OF ANY SECURITY DEPOSIT, AND LANDLORD'S DELIVERY TO TENANT OF LANDLORD'S FULLY EXECUTED COUNTERPART OF THIS LEASE.

[Remainder of page intentionally left blank; signature page to follow]

DocuSign Envelope ID: CB76AA75-AA02-4434-B260-E6D5FA84CDAF

WITNESS the execution hereof, in any number of counterpart copies, each of which counterpart copies shall be deemed to be an original for all purposes, as of the day and year first above written.

LANDLORD:

KNAPP INVESTMENTS, LLC,
a Missouri limited liability company

By: DocuSigned by: Mel Yarmat
Name: Mel Yarmat
Title: Member

TENANT:

SIMULATION ZONE, INC.,
a(n) Illinois Corporation

By: DocuSigned by: Viktor Magula
Name: Viktor Magula
Title: Officer

DocuSign Envelope ID: CB76AA75-AA02-4434-B260-E6D5FA84CDAF

EXHIBIT A
Premises

(Attached)

DocuSign Envelope ID: CB76AA75-AA02-4434-B260-E6D5FA84CDAF

EXHIBIT B

FORM OF COMMENCEMENT DATE MEMORANDUM

THIS COMMENCEMENT DATE MEMORANDUM, made as of _____, 20___, by and between **Knapp Investments, LLC** ("**Landlord"**), and **Simulation Zone, Inc.** ("**Tenant"**).

Recitals:

A. Landlord and Tenant are parties to that certain Retail Lease Agreement (the "**Lease**") dated as of _____, 20___, for Unit 189 containing approximately 4,700 rentable square feet located in the _____ Shopping Center (the "**Shopping Center**").

B. Tenant is in possession of the Premises and the Term has commenced.

C. Landlord and Tenant desire to enter into this Commencement Date Memorandum confirming, among other things, the Commencement Date.

NOW, THEREFORE, Landlord and Tenant agree as follows:

1. The actual Commencement Date is _____, 20___.

2. The actual Expiration Date is _____, 20___.

3. The Rent Abatement Period shall commence on _____, 20___, and expire on _____, 20___.

4. The Base Rent table set forth in the Basic Provisions is deleted in its entirety and replaced with the following: [Existing Base Rent table to be updated with dates instead of Lease Years].

(signature page follows)

DocuSign Envelope ID: CB76AA75-AA02-4434-B260-E6D5FA84CDAF

IN WITNESS WHEREOF, the parties hereto have caused this Commencement Date Memorandum to be executed as of the date and year first above written.

LANDLORD:	**TENANT:**
KNAPP INVESTMENTS, LLC, a Missouri limited liability company	**SIMULATION ZONE, INC.**, a(n) _____
By: _____ Name: _____ Title: _____	By: _____ Name: _____ Title: _____

DocuSign Envelope ID: CB76AA75-AA02-4434-B260-E6D5FA84CDAF

EXHIBIT C

RESTRICTED USES AND EXCLUSIVE USES

A. RESTRICTED USES: Tenant agrees that no portion of the Premises shall be used or operated:

1. A tavern, bar, nightclub, discotheque or any other establishment selling alcoholic beverages for on-premises consumption; provided, however, the foregoing shall not prohibit the operation of a restaurant in which the sale of alcoholic beverages therein comprises not more than thirty-three (33%) percent of gross sales of food and beverages;

2. A bowling alley or pool hall;

3. A theater (motion picture or live performance);

4. A health club, spa or gymnasium;

5. An automobile or truck repair service station or truck stop; car rental agency;

6. A flea market;

7. A school (which does not include a day care center for children);

8. A car wash;

9. An adult type bookstore or other establishment selling or exhibiting pornographic materials or live nudity;

10. A massage parlor;

11. A skating rink;

12. A mortuary;

13. Any mobile home park, trailer court, labor camp, junkyard, or stockyard (except that this provision shall not prohibit the temporary use of construction trailers during periods of construction);

14. A landfill, garbage dump or for the dumping, disposing, incineration or reduction of garbage (exclusive of dumpsters located in the rear of any building);

15. Any fire sale, going out of business sale, bankruptcy sale, auction house operation or similar sale (unless pursuant to a court order);

16. Any central laundry, dry cleaning plant, or laundromat; provided, however, this prohibition shall not be applicable to on-site service oriented to pick up and deliver by the ultimate consumer, including nominal supporting facilities, as the same may be found in retail shopping districts in the metropolitan area where the Shopping Center is located;

17. Any automobile, truck, trailer, R.V. or other motor vehicle sales, leasing, display or repair;

DocuSign Envelope ID: CB76AA75-AA02-4434-B260-E6D5FA84CDAF

18. Any living quarters, sleeping apartments, or lodging rooms;

19. Veterinary hospital or animal raising or boarding facilities (except that this restriction shall not be deemed to preclude the operation of pet shops);

20. Any establishment renting, selling or exhibiting pornographic materials (except that a national movie store similar to a Blockbuster Video or Hollywood Video, or a national bookstore such as a Barnes & Noble or Borders Books, shall not be prohibited provided they operate their stores in the Shopping Center in a similar manner as their other stores);

21. Industrial or manufacturing facility;

22. Off track betting facility or gaming establishment;

23. Gun store;

24. Ballroom, dance hall, bingo hall or parlor, auditorium, meeting hall or other place of public assembly;

25. Warehouse, storage or for any assembling, manufacturing, distilling, refining, smelting, agricultural or mining operation;

26. "Second-hand" store whose principal business is selling used merchandise, thrift shops, Salvation Army type stores, "goodwill" type stores, and similar businesses;

27. A tire sales and service, oil and lube shop, and paint and/or body shop;

28. Any establishment which stocks, displays, sells, rents or offers for sale or rent any merchandise or material commonly used or intended for use with or in consumption of any narcotic, dangerous drug or other controlled substance, including without limitation, any hashish pipe, waterpipe, bong, cilium, pipe screens, rolling papers, rolling devices, coke spoons or roach clips;

29. Tattoo parlor;

30. Restaurant, medical, office (unless incidental to the Permitted Use under the Lease), or other commercial uses;

31. Use, or permit to be used, the sidewalks adjacent to any tenant's space, or any other portion of the Common Area for the sale or display of any merchandise or for any other business, occupation, or undertaking; provided, however, the foregoing restrictions shall not be deemed to limit or restrict, subject to Landlord's prior written approval which approval shall not be unreasonably withheld, conditioned or delayed (a) outdoor restaurant seating, (b) occasional outdoor seasonal sales by a grocery store or supermarket, or (c) occasional outdoor promotional events, subject to all applicable laws, codes, statutes, rules and regulations;

32. Use, or permit to be used, any sound broadcasting system or amplifying device which can be heard outside of such tenant's space.

33. Church or related religious facility or religious reading room;

B. EXCLUSIVE USES: Tenant acknowledges receipt by, and disclosure to, Tenant from and by Landlord of any and all encumbrances, exclusives and restrictions affecting the Premises, the Shopping Center and Tenant's Permitted Use of the Premises hereunder, and further Tenant hereby agrees that the Premises or any portion thereof or any assignee or subtenant thereof (or any interest thereunder) shall not be used or operated by Tenant or any assignee or subtenant thereof in a manner that would violate such

DocuSign Envelope ID: CB76AA75-AA02-4434-B260-E6D5FA84CDAF

encumbrances, exclusives and restrictions. Landlord will not lease space within the Plaza to anyone where the primary purpose of operating is the manufacturing, production, or sale of coffee or coffee beans without Tenant's prior written consent.

DocuSign Envelope ID: CB76AA75-AA02-4434-B260-E6D5FA84CDAF

EXHIBIT D

LANDLORD'S WORK

Prior to the Commencement Date Landlord shall, at Landlord's cost, perform the following:

1. Architectural drawings for scope of work of the Working Drawings.
2. Demolition per Working Drawings.
3. Construct rooms per Working Drawings.
4. Update bathrooms to meet space requirements per Working Drawings.
5. Construct a kitchenette room per Working Drawings that at minimum includes a double sink, hand sink, counter tops and cabinets.
6. Provide rough-in plumbing for future bar.
7. Distribute electrical for Tenant's equipment per Working Drawings.
8. Provide drop ceiling throughout the Premises painted black.
9. Install LED lighting throughout the Premises per Working Drawings.
10. Paint walls in Tenant's specified colors.
11. Install epoxy flooring throughout the Premises.
12. Bring up to code all plumbing, electrical and ensure Premises is up to code including sprinklers.

DocuSign Envelope ID: CB76AA75-AA02-4434-B260-E6D5FA84CDAF

EXHIBIT E

SIGN CRITERIA

The Sign Criteria set forth herein shall govern the design, construction and installation of all signs to be installed by Tenant. Concerning any questions of interpretation of these sign criteria, Landlord shall make the final and controlling determination.

DESIGN CRITERIA FOR TENANT SIGNAGE

1. Tenant shall be required to identify its premises by signs which shall be attached only to the building fascia per Landlord approved drawings. Each Tenant shall be allowed one sign (except for end units).

2. Uniform store identification sign for Tenant's service door shall be supplied by Landlord at Tenant's expense. Tenant shall not post any additional signs in service area. The signs will consist of the store address and store name. They will be 4" vinyl letters of one color for the total center and mounted at a uniform height for consistency.

3. The stamps, or decals of manufacturers or installers on signs shall not be visible.

4. No "box" or self-enclosed signs shall be allowed at the Property, channel lettering only.

5. Each sign should utilize photometric timers to properly turn "on" and "off" at dusk and dawn.

6. Signs should be designed with the latest energy efficient bulbs, preferably LED if possible

CRITERIA FOR FASCIA IDENTIFICATION SIGNS

The content of identification signs shall be limited to the store name. The use of a crest, shield, logo or other established corporate insignia which has been customarily displayed or associated with the store name shall be permitted subject to Landlord's written approval and its area shall be within the allowable sign area.

APPROVAL OF LOCAL GOVERNMENTAL AUTHORITIES

Tenant shall not commence to install any signage until Tenant has received full and final written approval from all applicable governmental and quasi-governmental bodies in conformance and compliance with their rules, regulations, laws and ordinances governing the signage including, without limitation, the quantity, placement, design, construction and installation thereof.

ALL DEVIATIONS FROM THESE SIGN CRITERIA ARE STRICTLY SUBJECT TO THE PRIOR WRITTEN APPROVAL BY THE LANDLORD OR IT'S AUTHORIZED REPRESENTIVE.

DocuSign Envelope ID: CB76AA75-AA02-4434-B260-E6D5FA84CDAF

EXHIBIT F

RULES AND REGULATIONS OF THE SHOPPING CENTER

1. Any sign, lettering, picture, notice or advertisement installed on or in any part of the Premises and visible from the exterior of the Shopping Center, or visible from the exterior of the Premises, shall be installed at Tenant's sole cost and expense, and in such manner, character and style as Landlord may approve in writing. Anything herein to the contrary notwithstanding, approval as to signs shall be subject to Landlord's approval which may be withheld in Landlord's sole discretion. In the event of a violation of the foregoing by Tenant, Landlord may remove the same without any liability and may charge the expense incurred by such removal to Tenant.

2. No awning or other projection shall be attached to the outside walls of the Shopping Center or the Premises. No curtains, blinds, shades or screens visible from the exterior or the Shopping Center or visible from the exterior of the Premises, shall be attached to or hung in, or used in connection with any window or door of the Premises without the prior written consent of Landlord. Such curtains, blinds, shades, screens or other fixtures must be of a quality, type, design and color, and attached in the manner approved by Landlord. Tenant shall not permit any holiday oriented decorations to be displayed outside the Premises or on sidewalks without Landlord written approval.

3. Tenant, its servants, employees, customers, invitees and guests shall not obstruct Common Areas of the Shopping Center. Tenant shall not place objects against glass partitions or doors or windows which would be unsightly from the Shopping Center Common Areas or from the exterior of the Shopping Center, and will promptly remove any such objects upon notice from Landlord.

4. Tenant shall not make excessive noises, cause disturbances or vibrations or use or operate any electrical or mechanical devices that emit excessive sound or other waves or disturbances or create obnoxious odors, any of which may be offensive to the other tenants and occupants of the Shopping Center, or that would interfere with the operation of any device, equipment, radio, television broadcasting or reception from or within the Shopping Center or elsewhere, and shall not place or install any projections, antennas, aerials or similar devices inside or outside of the Premises or on the Shopping Center.

5. Tenant shall not waste electricity, water or air conditioning furnished by Landlord, if any, and shall cooperate fully with Landlord to insure the most effective operation of the Shopping Center's heating and air conditioning systems.

6. Tenant assumes full responsibility for protecting its space from theft, robbery and pilferage, which includes keeping doors locked and other means of entry to the Premises closed and secured after normal business hours.

7. In no event shall Tenant bring into the Shopping Center inflammables, such as gasoline, kerosene, naphtha and benzene, or explosives or any other article of intrinsically dangerous nature or inflammable or combustible fluid (except for ordinary cleaning products used in the normal course of business) or material, or use any method of heating or air conditioning other than that supplied by Landlord. If, by reason of the failure of Tenant to comply with the provisions of this paragraph, any insurance premium for all or any part of the Shopping Center shall at any time be increased, Tenant shall make immediate payment of the whole of the increased insurance premium, without waiver of any of the Landlord's other rights at law or in equity for Tenant's breach of this Lease.

8. Tenant shall comply with all applicable federal, state and municipal laws, ordinances and regulations, and building rules, and shall not directly or indirectly make any use of the Premises which may be prohibited by any of the foregoing or which may be dangerous to persons or property or may increase the cost of insurance or require additional insurance coverage.

DocuSign Envelope ID: CB76AA75-AA02-4434-B260-E6D5FA84CDAF

9. Landlord shall have the right to prohibit any advertising by Tenant which in Landlord's reasonable opinion tends to impair the reputation of the Shopping Center or its desirability as a Shopping Center, and upon written notice from Landlord, Tenant shall refrain from or discontinue such advertising.

10. The Premises shall not be used for cooking (as opposed to heating of food), lodging, sleeping or for any immoral or illegal purposes.

11. Unless expressly permitted by the Landlord, no additional locks or similar devices shall be attached to any door or window. In the event Tenant installs additional locks on any doors at the Premises, Tenant shall provide Landlord with keys thereto. Upon termination of this Lease or of the Tenant's possession, the Tenant shall surrender all keys of the Premises and shall explain to the Landlord all combination locks on safes, cabinets and vaults.

12. Any carpeting cemented down shall be installed with a releasable adhesive. In the event of a violation of the foregoing by Tenant, Landlord may charge the expense incurred by such removal to Tenant.

13. The water and wash closets, drinking fountains and other plumbing fixtures shall not be used for any purpose other than those for which they were constructed, and no sweepings, rubbish, rags, coffee grounds or other substances shall be thrown therein. The bathrooms, mop sinks, toilet rooms, urinals, wash bowls or other apparatus shall not be used for any purpose other than that which they were constructed and no foreign substance of any kind whatsoever shall be thrown therein and the expense of any breakage, stoppage or damage resulting from the violation of this rule shall be borne by the Tenant who, or whose employees or invitees, shall have caused such breakage, stoppage or damage. All damages resulting from any misuse of the fixtures shall be borne by the Tenant who, or whose employees, agents, guests, concessionaire, visitors or licensees, shall be caused the same. No person shall waste water by interfering or tampering with the faucets or otherwise.

14. No electric or other wires for any purpose shall be brought into the Premises without Landlord's written permission specifying the manner in which the same may be done. Tenant shall not overload any utilities serving the Premises. Landlord will direct electricians as to where and how telephone and telegraph wires are to be introduced. No boring or cutting for wires will be allowed without the consent of the Landlord. The location of telephones, call boxes and other office equipment affixed to the Premises shall be subject to the approval of Landlord.

15. Tenant employee parking is limited to areas specifically designated as "Employee Parking". At no time and for no reason shall Tenant or its employees park in any other area of the Shopping Center unless solely as a customer. Landlord reserves the right to tow, without notice and at vehicle owner's expense, any tenant or employee vehicle parked in any area of the Shopping Center not expressly designated as Employee Parking.

16. No dog or other animal shall be allowed in the Shopping Center by Tenant.

17. All loading, unloading, receiving or delivery of goods, supplies or disposal of garbage or refuse shall be made only through entryways provided for such purposes. Tenant shall be responsible for any damage to the Shopping Center or the property of its employees or others and injuries sustained by any person whomsoever resulting from the use or moving of such articles in or out of the Premises, and shall make all repairs and improvements required by Landlord or governmental authorities in connection with the use or moving of such articles.

18. All safes, equipment or other heavy articles shall be carried in or out of the Premises only in such manner as shall be prescribed in writing by Landlord, and Landlord shall in all cases have the right to specify the proper position of any such safe, equipment or other heavy article, which shall only be used by Tenant in a manner which will not interfere with or cause damage to the Premises or the Shopping Center in which it is located, or to the other tenants or occupants of the Shopping Center. Tenant shall be responsible for any damage to the building or the property of its employees or others and injuries sustained by any person

DocuSign Envelope ID: CB76AA75-AA02-4434-B260-E6D5FA84CDAF

whomsoever resulting from the use or moving of such articles in or out of the Premises, and shall make all repairs and improvements required by Landlord or governmental authorities in connection with the use or moving of such articles.

19. Canvassing, soliciting, and peddling in or about the Shopping Center is prohibited and Tenant shall cooperate to prevent the same.

20. Wherever in these Rules and Regulations the word "Tenant" occurs, it is understood and agreed that it shall mean Tenant's associates, employees, agents, clerks, invitees, and visitors and Tenant Parties. Wherever in these Rules and Regulations the word "Landlord" occurs, it is understood and agreed that it shall mean Landlord's successors, assigns, agents, clerks, servants, and visitors.

21. Tenant, its servants, employees, customers, invitees and guests shall, when using the parking facilities in and around the Shopping Center, observe and obey all signs regarding fire lanes and no parking zones, and when parking always park between the designated lines. Landlord reserves the right to tow away, at the expense of the owner, any vehicle which is improperly parked or parked in a no parking zone. All vehicles shall be parked at the sole risk of the owner, and Landlord assumes no responsibility for any damage to or loss of vehicles. No vehicle shall be parked overnight.

22. In case of invasion, mob, riot, public excitement, or other commotion, Landlord reserves the right to prevent access to the Shopping Center during the continuance of the same by closing the doors or otherwise, for the safety of the tenants or the protection of the Shopping Center and the property therein. Landlord shall in no case be liable for damages for any error or other action taken with regard to the admission to or exclusion from the Shopping Center of any person.

23. All entrance doors to the Premises shall be locked when the Premises is not in use. All common corridor doors, if any, shall also be closed during times when the air conditioning equipment in the Shopping Center is operating so as not to dissipate the effectiveness of the system or place an overload thereon.

24. If the Premises are equipped with heating facilities separate from those in the remainder of the Shopping Center, Tenant shall keep the Premises at a temperature sufficiently high to prevent freezing of water in pipes and fixtures.

25. Tenant and Tenant's employees, agents, visitors and licensees shall observe faithfully and comply strictly with the foregoing rules and regulations and such other and further appropriate rules and regulations as Landlord or Landlord's agents may from time to time adopt. Notice of any additional rules and regulations shall be given in such manner as Landlord may elect.

26. Landlord reserves the right at any time and from time to time to rescind, alter or waive, in whole or in part, any of these Rules and Regulations when it is deemed necessary, desirable, or proper, in Landlord's reasonable judgment, for the best interest of the tenants of the Shopping Center.

DocuSign Envelope ID: CB76AA75-AA02-4434-B260-E6D5FA84CDAF

EXHIBIT G

GUARANTY

THIS GUARANTY (this "**Guaranty**") is made as of 6/12/2024 by Taras Bezruchko Viktor Magula, an individual ("**Guarantor**"), in favor of **Knapp Investments, LLC**, a Missouri limited liability company ("**Landlord**").

W I T N E S S E T H:

WHEREAS, Landlord and Simulation Zone, Inc., a(n) Illinois corporation ("**Tenant**"), entered into that certain Retail Lease, dated as of the date hereof (the "**Lease**"), pursuant to which Tenant leases that certain Premises from Landlord, as more particularly set forth in the Lease.

WHEREAS, to induce Landlord to execute and deliver the Lease, Guarantor has agreed to guaranty, and be responsible for, Tenant's obligations under the Lease as more particularly set forth herein.

NOW, THEREFORE, in consideration of the foregoing, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, it is hereby agreed as follows:

Guarantor hereby guarantees, absolutely, unconditionally, to Landlord the full payment when due and performance of all obligations of Tenant pursuant to the Lease, including, without limitation, (i) the payment of Rent, (ii) the costs incurred in seeking a termination of the Lease and recovering vacant possession of the Premises after a default by Tenant under the Lease, including, without limitation, reasonable attorneys' fees and disbursements, and (iii) the costs incurred to satisfy any mechanic's liens arising out of any improvements or alterations performed by or on behalf of Tenant in the Premises.

This Guaranty is an absolute and unconditional guaranty of payment (and not of collection) and of performance. The liability of Guarantor is coextensive with that of Tenant and this Guaranty shall be enforceable against Guarantor without the necessity of any suit or proceeding on Landlord's part of any kind or nature whatsoever against Tenant and without the necessity of any notice of non-payment, non-performance or non-observance or of any notice of acceptance of this Guaranty or of any other notice or demand to which Guarantor might otherwise be entitled, all of which Guarantor hereby expressly waive. Guarantor hereby expressly agrees that the validity of this Guaranty and the obligations of Guarantor hereunder shall in no way be terminated, affected, diminished or impaired by reason of (x) the assertion or the failure to assert by Landlord against Tenant of any of the rights or remedies reserved to Landlord pursuant to the terms, covenants and conditions of the Lease, or (y) any non-liability of Tenant under the Lease, whether by insolvency, discharge in bankruptcy or any other defect or defense that may now or hereafter exist in favor of Tenant.

This Guaranty shall be a continuing guaranty, and the liability of Guarantor hereunder shall in no way be affected, modified or diminished by reason of (a) any modification, amendment, extension, renewal or assignment of the Lease, or (b) any modification or waiver of any of the terms, covenants or conditions of the Lease by Landlord and Tenant, or (c) any extension of time that may be granted by Landlord to Tenant, or (d) any consent, release, indulgence or other action, inaction or omission under or with respect to the Lease, or (e) any dealings or transactions or matter or thing occurring between Landlord and Tenant, or (f) any bankruptcy, insolvency, reorganization, liquidation, arrangement, assignment for the benefit of creditors, receivership, trusteeship or similar proceeding affecting Tenant, whether or not notice thereof is given to Guarantor.

No delay on the part of Landlord in exercising any right, power or privilege under this Guaranty or failure to exercise the same shall operate as a waiver of or otherwise affect any such right, power or privilege, nor shall any single or partial exercise thereof preclude any other or further exercise thereof or the exercise of any other right, power or privilege.

DocuSign Envelope ID: CB76AA75-AA02-4434-B260-E6D5FA84CDAF

No waiver or modification of any provision of this Guaranty or any termination of this Guaranty shall be effective unless in writing, signed by Landlord, nor shall any such waiver be applicable except in the specific instance for which given.

All of Landlord's rights and remedies under the Lease and this Guaranty, now or hereafter existing, at law, in equity or by statute or otherwise, are intended to be distinct, separate and cumulative and no exercise or partial exercise of any such right or remedy therein or herein mentioned is intended to be in exclusion of or a waiver of any of the others.

As a further inducement to Landlord to make and enter into the Lease, and in consideration thereof, Landlord and Guarantor covenant and agree that in any action or proceeding brought on, under or by virtue of this Guaranty, LANDLORD AND GUARANTOR SHALL AND DO HEREBY WAIVE TRIAL BY JURY. Without regard to principles of conflicts of laws, the validity, interpretation, performance and enforcement of this Guaranty shall be governed by and construed in accordance with the laws of the State of Illinois.

IN WITNESS WHEREOF, Guarantor have executed this Guaranty as of the date first above written.

DocuSigned by:
Taras Bezruchko
ED09BB28E87648D...

Taras Bezruchko

33 Wedgewood Dr

Hawthorn Wood, IL 60047

086981461

GUARANTOR:

DocuSigned by:
Viktor Magula
3AF80D1D4946476...

Name: Viktor Magula

ADDRESS: 1011 Glacier Pkwy

Algonquin, IL 60102

SSN: 324080737

June 24, 2024

TO: Mr. Orlando Stratman, Chairperson
Planning & Zoning Commission

Dear Mr. Stratman,
We are applying for a Special Use Permit to operate a business located at 189 Rand Road, Lake Zurich, Illinois. The business, The Simulation Zone, is described in an attached business plan along with a preliminary floor plan. We have entered into a long-term lease (see attached, fully executed Lease) and the renovation of the space will be performed by the property owner.
Parking will be satisfied by the adjacent shopping center lot, which has approximately 4.6 spaces per 1,000 square feet of leasable building space.
We anticipate 4 employees and hours of operation as follows:
Monday - Thursday - 2 pm till 10 pm.
Friday - Sunday - 10 am till 10 pm.

COMMUNITY DEVELOPMENT DEPARTMENT

505 Telser Road
Lake Zurich, Illinois 60047

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

At the Heart of Community

MEMORANDUM

AGENDA ITEM 6d

Date: September 3, 2024

To: Ray Keller, Village Manager RK

From: Sarosh Saher, Community Development Director

CC: Colleen McCauley, Village Planner
Mary Meyer, Building Services Supervisor

Re: Zoning Application for a Variation – 474 Rush Court
Chad and Michelle Pratt

Issue. Mr. Chad and Ms. Michelle Pratt (the "Applicants" and "Owners"), have filed a zoning application for the property at 474 Rush Court (the "Subject Property"). Specifically, the Applicants are seeking:

- A Variation from Code Section 9-3-11-E-6-h, "Specified Structures and Uses in Required Yards" pursuant to Section 9-3-11-C-3, Residential Minimum Yards: Rear Yard to authorize a terrace (patio) to encroach into the Rear Yard of the Subject Property under the current R-5 Zoning.

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

- Become more business friendly and customer oriented.

Analysis. The Subject Property is located within the Village's R-5 Residential District that provides for single-family homes. The R-5 zoning district requires a 30-foot setback from the rear lot line for primary and accessory structures. Terraces may be located no less than 20 feet from the rear lot line or 5 feet from any interior side lot line (as provided for in Item 6-h).

The Applicant is proposing to install a paver patio that is 16.5 feet in length and 29 feet in width to replace an existing deck. The proposed paver patio will be built in line with the west side of the house and extend 29 feet to the east. In the case of the Subject Property, the terrace is proposed to be constructed 15.5 feet from the rear lot line which will encroach into the rear yard setback by 4.5 feet. The terrace will not encroach into the interior side yard or front yard setback.

The Planning and Zoning Commission (PZC) held a public hearing on August 21, 2024 to consider the application and voted 6-0 in favor of recommending approval of the variation to allow for the construction of the terrace. No additional conditions were added other than those initially recommended by staff, and no further additional changes were required of the applicant. The video stream from the PZC meeting can be accessed via the link:
https://play.champds.com/lakezurichil/event/131

A detailed evaluation and summary of the project can be found in the Staff Report that was provided to the Planning and Zoning Commission, which is a part of the attached Ordinance.

Recommendation. The Planning and Zoning Commission opened the public hearing on August 21, 2024 and recommended approval of the variation incorporating the conditions for approval provided by staff in its report with no further conditions.

Staff therefore recommends approval of the attached ordinance, with its specific attachments based on the following conditions for approval that are contained within said ordinance:

1. Substantial conformance with the following documentation submitted as part of the application and subject to revisions required by Village Staff, Village Engineer, and any applicable governmental agencies:
   a. Zoning Application dated July 18, 2024, prepared by the Applicants Chad and Michelle Pratt, homeowners of 474 Rush Court; and Cover Letter.
   b. Exhibit A: Legal Description of the Subject Property.
   c. Plat of Survey provided by Chad and Michelle Pratt.
   d. Letters of Consent from neighbors submitted July 18, 2024.
   e. Terrace proposal prepared by Chad and Michelle Pratt, submitted July 18, 2024.

2. As further mitigation for construction of the terrace, the applicant shall agree not to further reduce the setback of the terrace in the rear yard or increase its depth beyond what is being proposed.

3. The terrace and its construction shall be in compliance with all other applicable codes and ordinances of the Village of Lake Zurich.

- Approval Ordinance including the following exhibits
  - Exhibit A – Legal description of the subject property
  - Exhibit B – August 21, 2024 staff report and planning and zoning commission final recommendation/conditions and its referenced exhibits

VILLAGE OF LAKE ZURICH

ORDINANCE NO. 2024-09-584

A VARIATION GRANTING A VARIATION TO ALLOW FOR THE CONSTURCTION OF A TERRACE WITHIN THE REAR YARD
(474 Rush Court)

WHEREAS, Chad and Ms. Michelle Pratt are the applicants and owners ("Applicant") for a variation for the property at 474 Rush Court, said property legally described in Exhibit A hereto ("Subject Property"):

WHEREAS, Applicant has filed zoning application PZC 2024-12, dated July 18, 2024, (the "*Application*") seeking the grant and approval of the following for the Subject Property:

- A Variation from Code Section 9-3-11-E-6-h, "Specified Structures and Uses in Required Yards" pursuant to Section 9-3-11-C-3, Residential Minimum Yards: Rear Yard to authorize a terrace (patio) to encroach into the Rear Yard of the Subject Property under the current R-5 Zoning.

WHEREAS, the Applicant seeks this variation under Chapter 17 of the Zoning Code of the Village of Lake Zurich for the Subject Property, said Subject Property currently within the Village's R-5 Single Family Residential Zoning District; and

WHEREAS, in compliance with the law, and the requirements of the Village of Lake Zurich Zoning Code, notice was published on July 27, 2024, in *The Daily Herald,* and the Village posted a public hearing sign on the Subject Property on June 24, 2024, both the newspaper and sign notices informing the public of a public hearing to be held before the Lake Zurich Planning and Zoning Commission ("PZC") on August 21, 2024, to consider the Application for this requested zoning relief; and

WHEREAS, at its August 21, 2024 meeting, the PZC held a public hearing on this matter and considered the report prepared by Village staff, consisting of 9 pages, dated August 21, 2024, addressing the request for a variation to construct the proposed terrace which will encroach into the rear yard ("STAFF REPORT"); and considered all information presented by the Applicant, and the applicable factors required under of the Zoning Code; and, after the conclusion of the public hearing, the PZC recommended that the Board of

Trustees approve the zoning relief and approval requested in this Application, with no additional conditions of approval, except those set forth hereinafter; and

WHEREAS, the President and Board of Trustees of the Village of Lake Zurich met on September 3, 2024, and considered the findings and recommendations of the PZC, including the STAFF REPORT, including final findings and recommendations of the PZC with no additional conditions, said required zoning standards, findings and recommendations attached hereto as Exhibit B 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 related to this zoning approval under the Village Zoning Code, Title 9, Chapter 17, have been met.

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 the 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 VARIATION. The President and Board of Trustees, pursuant to the authority vested in them under the laws of the State of Illinois and the provisions of Chapter 17 authorizing such variations and the standards for such variations of the Lake Zurich Zoning Code, hereby grant the following approval for the requested variation to allow for the construction of a terrace, as shown and provided in the STAFF REPORT dated August 21, 2024, and PZC findings and recommendation, all consisting of 9 pages:

- A Variation from Code Section 9-3-11-E-6-h, "Specified Structures and Uses in Required Yards" pursuant to Section 9-3-11-C-3, Residential Minimum Yards: Rear Yard which establishes the minimum allowable setback of twenty (20) feet for the construction of terraces within Rear Yards, in accordance with the standards for the grant of a variation set forth at Chapter 17 of the Zoning Code, Section 9-17-4, entitled "Standards for Variation", to authorize the requested variation to a terrace to encroach by 4.5 feet within the Rear Yard.

SECTION 3: FINDINGS IN SUPPORT OF APPROVAL OF VARIATION. The findings, conditions and recommendations of the PZC as set forth in the STAFF REPORT dated August 21, 2024, and PZC recommendation, all consisting of 9 pages, are hereby accepted as the Board's own and shall be made a part of the official record for the Application and this grant of approval and subject to the following conditions for approval:

1. Substantial conformance with the following documentation submitted as part of the application and subject to revisions required by Village Staff, Village Engineer,

and any applicable governmental agencies:

a. Zoning Application dated July 18, 2024, prepared by the Applicants Chad and Michelle Pratt, homeowners of 474 Rush Court; and Cover Letter.
b. Exhibit A: Legal Description of the Subject Property.
c. Plat of Survey provided by Chad and Michelle Pratt.
d. Letters of Consent from neighbors submitted July 18, 2024.
e. Terrace proposal prepared by Chad and Michelle Pratt, submitted July 18, 2024.

2. As further mitigation for construction of the terrace, the applicant shall agree not to further reduce the setback of the terrace in the rear yard or increase its depth beyond what is being proposed.

3. The terrace and its construction shall be in compliance with all other applicable codes and ordinances of the Village of Lake Zurich.

SECTION 4: 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 Subject 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.

SECTION 5: 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 6: CONFLICTS. All ordinances or parts of ordinances in conflict herewith are hereby repealed to the extent of such conflict.

SECTION 7: EFFECTIVE DATE. This Ordinance shall be in full force and effect upon its passage and approval, as provided by law.

PASSED THIS _____ day of _____, 2024.

Ayes:

Nays:

Absent:

Abstain:

APPROVED this _____ day of _____, 2024.

_____
Mayor Tom Poynton

ATTEST:

_____
Village Clerk
Kathleen Johnson

EXHIBIT A

Legal description of the Subject Property

LOT 24 IN BLOCK 5 IN SPARROW RIDGE UNIT II, BEING A SUBDIVISION IN THE SOUTH HALF OF THE NORTHWEST QUARTER OF SECTION 28, TOWNSHIP 43 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, RECORDED MARCH 14, 1988 AS DOCUMENT 2664163, IN LAKE COUNTY, ILLINOIS.

Common Street Address: 474 Rush Court

Property Index Number (PIN): 14-28-110-014

EXHIBIT B

August 21, 2024 staff report and PZC recommendation/conditions consisting of 9 total pages and accompanying Exhibits

At the Heart of Community

COMMUNITY DEVELOPMENT DEPARTMENT

505 Telser Road
Lake Zurich, Illinois 60047

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

APPLICATION PZC 2024-12 **AGENDA ITEM 4.B**
PZC Meeting Date: August 21, 2024

STAFF REPORT

To: Chairperson Stratman and Members of the Planning & Zoning Commission

From: Sarosh Saher, Community Development Director

CC: Colleen McCauley, Village Planner
Mary Meyer, Building Services Supervisor

Date: August 21, 2024

Re: PZC 2024-12 – Zoning Variation for a Patio
474 Rush Court

SUBJECT

Mr. Chad and Ms. Michelle Pratt (the "Applicant" and "Owner") request a Variation from Zoning Code Section 9-3-11-6-h, "Specified Structures and Uses in Required Yards" pursuant to section 9-3-11-C-3, Residential Minimum Yards: Rear Yard, to allow for the construction of a patio (referred to as a "Terrace" in the Lake Zurich Zoning Code) that will encroach into the required 20-foot rear yard setback at the property commonly known as 474 Rush Court, legally described in Exhibit A attached hereto (the "Subject Property"). The property is located in the Sparrow Ridge Subdivision.

GENERAL INFORMATION

Requested Action:	Variation of Rear Yard Setback for Terraces (Patios)
Current Zoning:	R-5 Single Family Residential District
Current Use	Single Family Home
Property Location:	474 Rush Court
Applicant and Owner:	Mr. Chad and Ms. Michelle Pratt
Staff Coordinator:	Colleen McCauley, Village Planner

LIST OF EXHIBITS

A. Legal Description
B. Public Meeting Sign
C. Site Photos
D. Aerial Map
E. Zoning Map
F. Parcel Map
G. Development Application and Attachments
H. Development Review Comments

BACKGROUND

Mr. Chad and Ms. Michelle Pratt (the "Applicant" and "Owner") are the owners of the property located at 474 Rush Court, and legally described in Exhibit A attached hereto (the "Subject Property"). The Applicant filed an application with the Village of Lake Zurich received on July 18, 2024 (the "Application") seeking:

- A Variation from Code Section 9-3-11-E-6-h, "Specified Structures and Uses in Required Yards" pursuant to Section 9-3-11-C-3, Residential Minimum Yards: Rear Yard

The Subject Property is located within the Village's R-5 Residential District that provides for single-family homes. The R-5 zoning district requires a 30-foot setback from the rear lot line for primary and accessory structures. Terraces may be located no less than 20 feet from the rear lot line or 5 feet from any interior side lot line (as provided for in Item 6-h). In the case of the Subject Property, the terrace is proposed to be constructed 15.5 feet from the rear lot line which will encroach into the rear yard setback by 4.5 feet. The terrace will not encroach into the interior side yard or front yard setback.

Note: the term "Terrace" is used in place of "Patio" within Title 9 "Zoning" of the Lake Zurich Municipal Code. The definition of "Terrace" is as follows:

TERRACE: A level plane or surfaced patio, abutting a principal building at grade with no railings or other vertical structural elements and not covered by any permanent structure.

No definition for "Patio" is provided in the Municipal Code.

Terraces are additionally subject to the provisions of the Village of Lake Zurich Zoning Code and the 2012 International Building Code. Such provisions require a concrete terrace to have a 6x6 #10 wire mesh with a minimum of 4" of compacted gravel base, CA-6, and a minimum of 4 inches of poured concrete. A brick paver patio, which the Applicant is proposing, requires a minimum of 6-12 inches of base gravel and 1-1 ½ inches of bedding. The bedding must be installed on 4-inch-high lifts with the appropriate edge restraints.

The Subject Property currently has a legally nonconforming deck in the rear yard that is 16.5 feet in length and 24 feet in width, locating the deck 15.5 feet from the rear yard lot line. The proposed patio will replace the existing deck and maintain these current setbacks.

The Applicant is proposing to install a paver patio that is 16.5 feet in length and 29 feet in width. The proposed paver patio will be built in line with the west side of the house and extend 29 feet to the east.

The Applicant will obtain the clearance from all utility companies to install the paver patio in their rear yard prior to construction. There are no Village utility easement requirements or grade concerns that would prevent a patio from being constructed in the rear portion of this lot. The Applicant has obtained the consent of the owners of the two adjacent neighbors for the construction of the patio.

Pursuant to public notice published on July 27, 2024, in the Daily Herald, a public hearing has been scheduled with the Lake Zurich Planning & Zoning Commission for August 21, 2024, to consider the Application. On July 24, 2024, the Village posted a public hearing sign on the Subject Property (Exhibit B).

Staff offers the following additional information:

A. **Courtesy Review.** Due to the low impact of this project, courtesy review was not recommended.

B. **Zoning History.** The property is located within the Sparrow Ridge Subdivision on Lot 24, which was recorded on March 14, 1988 in Lake County and is zoned within the R-5 Single Family Residential District. The home was built in 1988.

C. **Surrounding Land Use and Zoning.** The subject property is zoned within the R-5 Single Family Residential District. All surrounding properties are zoned within the R-5 Single Family Residential District and are improved with residences within Sparrow Ridge's Subdivision which developed in the late 1980s.

D. **Trend of Development.** The residence at 474 Rush Court was constructed in 1988. It is a two-story home and is similar to the other homes in the subdivision that were also constructed in the late 1980s.

E. **Zoning District**. The zoning code provides for four (4) zoning districts for single-family residential development. The single-family districts provide for a limited range of single-family detached housing densities consistent with the village's established single-family residential neighborhoods. The R-5 district allows for somewhat higher density residential use and smaller lot sizes.

Taken as a whole, the residential district regulations are intended to preserve established neighborhoods and encourage new residential development, but only in a manner consistent with the overall character of the village.

GENERAL FINDINGS

Staff of the Community Development Department's development review team has evaluated the development against the various standards and provisions of the Lake Zurich Municipal Code and offers findings on the following specific sections of the Code.

9-17-4: STANDARDS FOR VARIATIONS.

A. General Standard: No variation shall be granted pursuant to this chapter unless the applicant shall establish that carrying out the strict letter of the provisions of this zoning code would create a particular hardship or a practical difficulty. Such a showing shall require proof that the variation being sought satisfies each of the standards set forth in this section.

Staff Response: Standard met. Applicant has shown proof that there is a practical difficulty in constructing the terrace in compliance with the provisions of the current zoning code. The terrace would be restricted in size due to the rear yard dimensions and setbacks. The Subject Property having a depth of 90 feet makes it difficult to construct a conforming terrace of an average depth. The variation being sought will provide utility to the proposed terrace and satisfy each of the standards set forth in this section.

B. Unique Physical Condition: The subject property is exceptional as compared to other lots subject to the same provision by reason of a unique physical condition, including presence of an existing use or structure, whether conforming or nonconforming; irregular or substandard shape or size; exceptional topographical features; or other extraordinary physical conditions peculiar to and inherent in the subject property that amount to more than a mere inconvenience to the owner and that relate to or arise out of the lot rather than the personal situation of the current owner of the lot.

Staff Response: Standard met. Lot 24 of the Sparrow Ridge Subdivision is on a corner lot and is comparatively the same size as the neighboring properties. The lot has a relatively smaller rear yard, with its 90-foot lot depth, compared to the lots within the subdivision across Lexington Lane which have a depth of 100 feet.

This configuration is not conducive to accommodating most types of backyard accessory structures. The proposed terrace therefore requires a variation to encroach into the rear yard setback and give it the necessary depth to make it a usable feature.

C. Not Self-Created: The aforesaid unique physical condition is not the result of any action or inaction of the owner, or of the owner's predecessors in title and known to the owner prior to acquisition of the subject property, and existed at the time of the enactment of the

provisions from which a variation is sought or was created by natural forces or was the result of governmental action, other than the adoption of this zoning code, for which no compensation was paid.

Staff Response: Standard met. The unique or extraordinary physical condition was not the result of any action of the property owner, rather a result of the design and configuration of the original developer.

D. Denied Substantial Rights: The carrying out of the strict letter of the provision from which a variation is sought would deprive the owner of the subject property of substantial rights commonly enjoyed by owners of other lots subject to the same provision.

Staff Response: Standard met. The owners are requesting an outdoor 16.5-foot by 29-foot terrace on their property. Denying the terrace to be built would deny the property owners the opportunity to enjoy a feature offered to other residents in the community.

E. Not Merely Special Privilege: The alleged hardship or difficulty is not merely the inability of the owner or occupant to enjoy some special privilege or additional right not available to owners or occupants of other lots subject to the same provision, nor merely an inability to make more money from the use of the subject property; provided, however, that where the standards herein set out exist, the existence of an economic hardship shall not be a prerequisite to the grant of an authorized variation.

Staff Response: Standard met. The hardship does not involve the inability of the owner to enjoy any special privilege in using the property. Granting the variation will allow the current owner to enjoy the paved outdoor space that is traditional and customary to the enjoyment and use of a residential property.

F. Code and Plan Purposes: The variation would not result in a use or development of the subject property that would be not in harmony with the general and specific purposes for which this zoning code and the provision from which a variation is sought were enacted or the general purpose and intent of the official comprehensive plan.

Staff Response: Standard met. Granting the variation would not change the residential use of the Subject Property. The location and design of the home, the patio and other accessory structures will continue to remain in harmony with the residential purpose of the zoning code and comprehensive plan.

G. Essential Character of the Area: The variation would not result in a use or development on the subject property that:

1. Detrimental to Enjoyment: Would be materially detrimental to the public welfare or materially injurious to the enjoyment, use, development, or value of property or improvements permitted in the vicinity; or

Staff Response: Standard met. If the Applicant is granted the requested variation, it will not create a negative effect on public welfare, enjoyment, development, or value of property.

2. Light and Air: Would materially impair an adequate supply of light and air to the properties and improvements in the vicinity; or

Staff Response: Standard met. Granting of the variation would have no effect on the supply of light and air to the subject property or those properties in the vicinity as the Applicants only wish to construct a terrace that encroaches 4.5 feet into the rear yard setback. The terrace is proposed to be built to modern standards of the building and zoning code.

3. Congestion: Would substantially increase congestion in the public streets due to traffic or parking; or

Staff Response: Not Applicable. Granting of the variation would not affect any congestion due to traffic or parking as the land use or density of the property is not being altered.

4. Flood or Fire: Would unduly increase the danger of flood or fire; or

Staff Response: Standard met. The proposed terrace will conform to current zoning building codes and therefore would not impede the drainage flow on the property.

5. Tax Public Facilities: Would unduly tax public utilities and facilities in the area; or

Staff Response: Standard met. No utilities are proposed to be connected to the proposed terrace. Granting of the variation would therefore not cause the property to unduly tax public utilities or facilities in the area since its function would not change.

6. Endangerment: Would endanger the public health or safety.

Staff Response: Standard met. The proposed variation would not affect the public's health, safety or welfare.

H. No Other Remedy: There is no means other than the requested variation by which the alleged hardship or difficulty can be avoided or remedied to a degree sufficient to permit a reasonable use of the subject property.

Staff Response: Standard partially met. The patio is only being constructed in the proposed location to give the rear yard the desired utility.

However, the patio could be constructed at a depth of 12 feet to maintain the required 20-foot rear yard setback.

However, this would diminish the amount of usable space, as the existing deck on the property has a depth of 16.5 feet. The Applicants have had this deck since they moved into the home in 2002. They have grown accustomed to using and enjoying this outdoor space. The proposed patio, by virtue of it being constructed at grade will further diminish the bulk previously created by the deck that was constructed above grade. It will retain the same 16.5 feet depth from the house and will be 15.5 feet from the rear lot line.

Further, the owners of the adjacent properties have not objected to the construction of the terrace as proposed and have all submitted letters of support.

Staff therefore recommends approval of the variation, despite the partial compliance with this standard.

RECOMMENDATION

The recommendation of the Planning and Zoning Commission should be based on the standards included in the following Sections of the Lake Zurich Municipal Code:

- Section 9-17-4: Standards for Variations

Section 9-17-5 entitled "Variation less than requested" provides the PZC with the option of granting a variation less than or different from that requested when the record supports the applicant's right to some relief but not to the relief requested.

Based on the review of the standards for approval which have been met with the exception of Standard H, staff recommends that the Planning and Zoning Commission make these standards a part of the official record of the Application.

Further, based on the existing conditions and mitigation (reduction in bulk) proposed by the owner as further described in the staff response to Standard H, Staff of the Community Development Department recommends the approval of PZC 2024-12, subject to the following conditions:

1. Substantial conformance with the following documentation submitted as part of the application and subject to revisions required by Village Staff, Village Engineer, and any applicable governmental agencies:
   a. Zoning Application dated July 18, 2024, prepared by the Applicants Chad and Michelle Pratt, homeowners of 474 Rush Court; and Cover Letter.
   b. Exhibit A: Legal Description of the Subject Property.
   c. Plat of Survey provided by Chad and Michelle Pratt.
   d. Letters of Consent from neighbors submitted July 18, 2024.
   e. Terrace proposal prepared by Chad and Michelle Pratt, submitted July 18, 2024.

2. As further mitigation for construction of the terrace, the applicant shall agree not to further reduce the setback of the terrace in the rear yard or increase its depth beyond what is being proposed.

3. The development shall be in compliance with all other applicable codes and ordinances of the Village of Lake Zurich.

Respectfully submitted,

Colleen McCauley, Village Planner

Staff Report
APPLICATION PZC 2024-12

Community Development Department
PZC Meeting Date: August 21, 2024

LAKE ZURICH PLANNING & ZONING COMMISSION
FINAL FINDINGS & RECOMMENDATIONS

474 RUSH COURT
AUGUST 21, 2024

The Planning & Zoning Commission recommends approval of Application PZC 2024-12, and the Planning & Zoning Commission adopts the findings as contained within the Staff Report dated August 21, 2024 for this Application and subject to any changes or approval conditions as listed below:

1. Substantial conformance with the following documentation submitted as part of the application and subject to revisions required by Village Staff, Village Engineer, and any applicable governmental agencies:
   f. Zoning Application dated July 18, 2024, prepared by the Applicants Chad and Michelle Pratt, homeowners of 474 Rush Court; and Cover Letter.
   g. Exhibit A: Legal Description of the Subject Property.
   h. Plat of Survey provided by Chad and Michelle Pratt.
   i. Letters of Consent from neighbors submitted July 18, 2024.
   j. Terrace proposal prepared by Chad and Michelle Pratt, submitted July 18, 2024.

2. As further mitigation for construction of the terrace, the applicant shall agree not to further reduce the setback of the terrace in the rear yard or increase its depth beyond what is being proposed.

3. The development shall be in compliance with all other applicable codes and ordinances of the Village of Lake Zurich.

☒ Without any further additions, changes, modifications and/or approval conditions.

☐ With the following additions, changes, modifications and/or approval conditions:

Planning & Zoning Commission Chairman

9

EXHIBIT A
LEGAL DESCRIPTION OF SUBJECT PROPERTY

LOT 24 IN BLOCK 5 IN SPARROW RIDGE UNIT II, BEING A SUBDIVISION IN THE SOUTH HALF OF THE NORTHWEST QUARTER OF SECTION 28, TOWNSHIP 43 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, RECORDED MARCH 14, 1988 AS DOCUMENT 2664163, IN LAKE COUNTY, ILLINOIS.

Common Street Address: 474 Rush Court
Property Index Number (PIN): 14-28-110-014

EXHIBIT B

PUBLIC HEARING SIGNS PRESENT AT SUBJECT PROPERTY

View of the house and backyard from the side street W Lexington Ln.

View of the backyard from the rear yard of adjoining neighbor at 477 Newberry Ct.

474 Rush Court

Terrace Variation

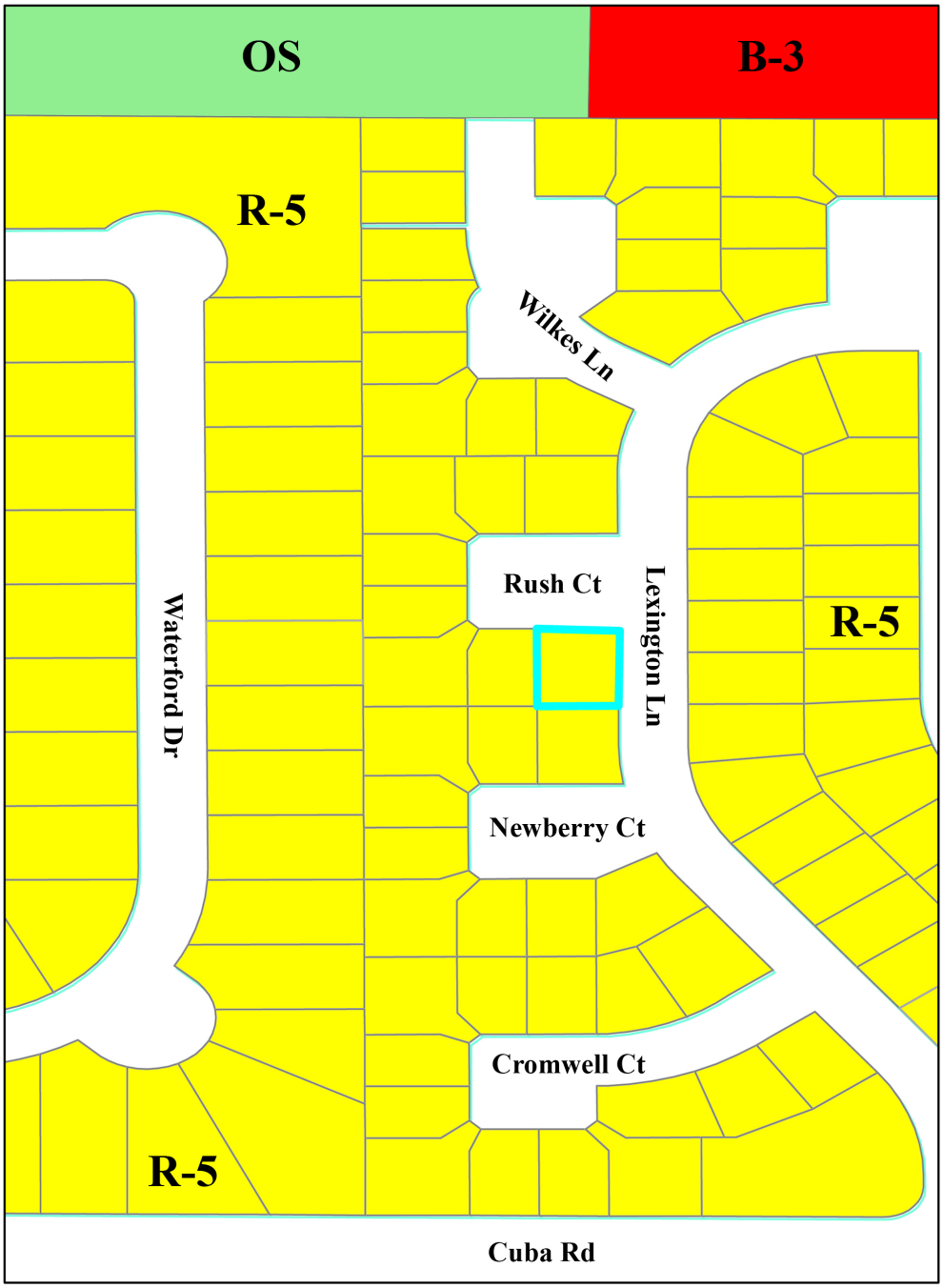
N

0 50 100 200 feet

Subject Property

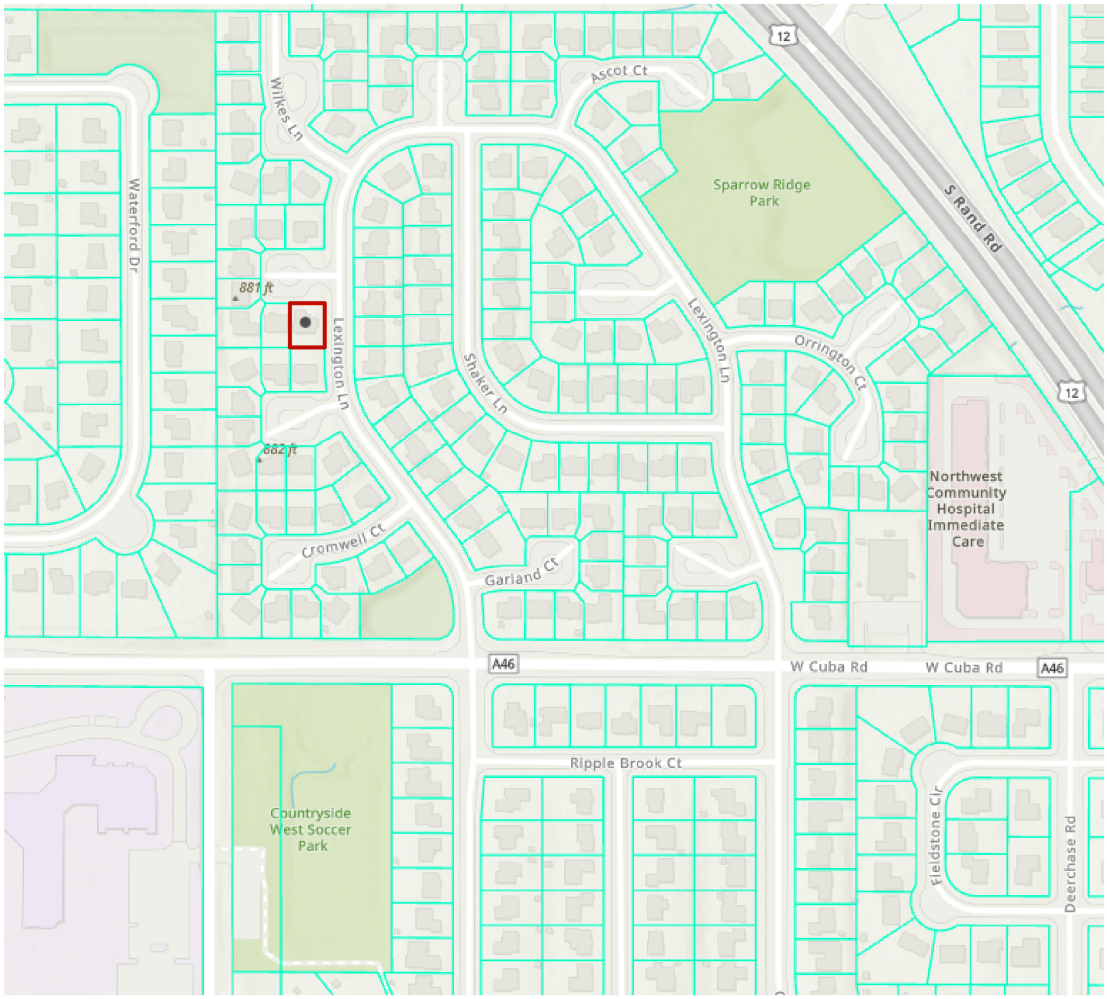
474 Rush Court

Terrace Variation



474 Rush Court

Terrace Variation



Community Development Department
505 Telser Road
Lake Zurich, IL 60047
P: (847) 540-1696 F: (847) 726-2182
www.LakeZurich.org
Permits@LakeZurich.org

Permit Application

Date of Application 7/18/24

Project Information

Property Address: 474 Rush Ct, Lake Zurich, IL 60047

Type of Project: Paver Patio Install

Business Name: _____
(For commercial/industrial applications only)

Owner's Name/Address: Chad & Michelle Pratt
(If different from above)

Owner's Phone: 847.668.9211

Value of proposed construction/improvements: $ 6500

Owner's Email: chadpratt8@gmail.com

Description of Work

Replace existing deck of 16.5' x 24' with paver patio of same length 16.5' x 29'
Paver sub-base will consist of 3/4" crushed rock 6-8" in depth with a 1.5" leveling base on top. Concrete pavers are 2 3/8" thick with varying LxW for interlocking layout. A double step of 7.5" rise and 12" run from the rear sliding door to patio

Contractor Information

Contractors are required to be registered with the Village of Lake Zurich. Please refer to the Contractor Registration Application.

General Contractor: home owner **Phone:** _____

Address: _____ **E-mail:** _____

Other Contractor: _____ **Type:** _____ **Phone:** _____

Address: _____ **E-mail:** _____

Other Contractor: _____ **Type:** _____ **Phone:** _____

Address: _____ **E-mail:** _____

I hereby certify that I am the owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his/her authorized agent and I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in this application is issued, I certify that the code official's authorized representative shall have the authority to enter areas covered by such permit at any reasonable hour to enforce the provisions of the code(s) applicable to such permit.

Printed Applicant Name: Chad Pratt **Phone:** 847.668.9211

Applicant Signature: Chad Pratt

Property Owner Signature: Chad Pratt

Owner or Contractor
(Please Select One)

Application must be signed by the property owner. A signed letter of authorization/contract from the property owner must be submitted with the application in lieu of signature on application.

Director of Building and Zoning Signature: _____ **Date:** _____

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: 474 Rush Ct, Lake Zurich, IL 60047
2. **Please attach complete legal description**
3. Property Identification number(s): 1428110014
4. Owner of record is: Chad & Michelle Pratt Phone: 847.668.9211
   E-Mail chadpratt8@gmail.com Address: 474 Rush Ct, Lake Zurich, IL 60047
5. Applicant is (**if different from owner**): same as above Phone: _____
   E-Mail _____ Address: _____
6. Applicant's interest in the property (owner, agent, realtor, etc.): Owner
7. All existing uses and improvements on the property are: Residential
8. The proposed uses on the property are: replace existing deck with a paver patio
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 date of expiration of said restrictions:
   current rear lot line setbacks fall within the existing deck that is grandfathered in
10. Describe any contract or agreement of any nature relevant to the sale or disposal of the Subject Property:
    none
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.

Chad Pratt
(Name of applicant)

(Signature of applicant)

"OFFICIAL SEAL"
LINDSEY CESAR
Notary Public, State Of Illinois
Commission No. 975790
My Commission Expires 07/28/2027

Subscribed and sworn to before me this 19 day of July, 2024.

Lindsey Cesar
(Notary Public)

My Commission Expires 07/28/2027

Chad Pratt Michelle Pratt
(Name of Owner, if different)

(Signature of Owner, if different)

Subscribed and sworn to before me this 19 day of July, 2024.

Lindsey Cesar
(Notary Public)

"OFFICIAL SEAL"
LINDSEY CESAR
Notary Public, State Of Illinois
Commission No. 975790
My Commission Expires 07/28/2027

My Commission Expires 07/28/2027

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

☐ Zoning Code **Map** Amendment to change zoning of Subject Property from _____ to _____

☐ 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 a paver patio to replace deck that is grandfathered in from current code guidelines for rear lot line setback

(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 _____

_____

To:
Orlando Stratman
Chairperson of the Planning & Zoning Commission
Village of Lake Zurich
505 Telser Rd, Lake Zurich, IL 60047

Regarding:
Paver Patio Variance
474 Rush Ct, Lake Zurich, IL 60047

I am seeking a paver patio variation for my single-family home located at 474 Rush Ct in Lake Zurich, IL. My requested variance would involve replacing the existing deck and the current zoning rules require a 20' setback from the rear lot line.

The current deck measures 16.5' in length from the house and ~15.5' from the rear lot line, which is non-compliant to the current code of 23' setback from the rear lot line. The deck is grandfathered in since it was built prior to 1993. I am respectfully requesting to install a paver patio of 29' width by 16.5' length to replace the existing deck. The patio proposal retains the same 16.5' length from the house and 15.5' from the rear lot line as the current deck.

My wife and I have been residing at this residence since September 2002 and strive to make our home aesthetically pleasing and safe for our family and friends to enjoy spending time outdoors. The back of the house is South facing in full sun, so having a paver patio will be better suited to endure the sun for many years over the alternative of having to refurbish and maintain the deck. The current deck also covers a basement window well (non-egress), where as the patio will now expose that opening so it will be safer.

Our surrounding neighbors are in similar situations with narrow backyards and have patios and/or elevated 2nd story decks that do not meet current code. Not allowing outdoor living spaces of adequate size would be a detriment to the use of the space and value of our properties.

We have already spoken to our adjoining neighbors regarding the proposed project and they have assured us they do not have any concerns with the proposal.

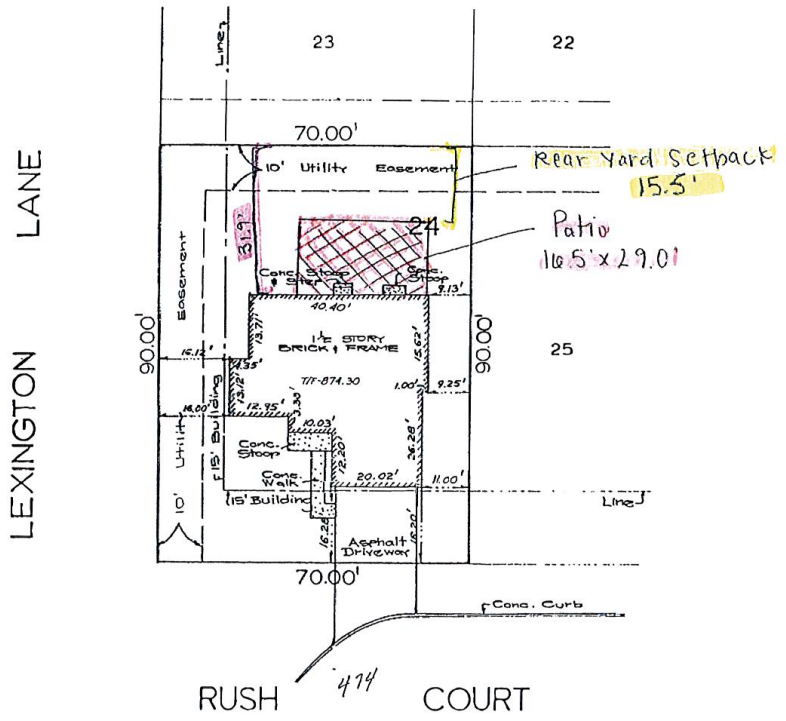
Thank you for your time concerning this variance.

Respectfully,
Chad & Michelle Pratt
m: 847.668.9211

LUDLOW AND ASSOCIATES, INC.
Construction and Land Surveyors
7225 Caldwell, Niles, Ill., 60648.
Tel. (312) 647-7757

PLAT OF SURVEY

LOT 24 IN BLOCK 5 IN SPARROW RIDGE-UNIT 2 SUBDIVISION, BEING A SUBDIVISION OF THAT PART OF THE SOUTH HALF OF THE NORTHWEST QUARTER OF SECTION 28, TOWNSHIP 43 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED MARCH 14TH 1988 AS DOCUMENT NO. 2664163 IN THE VILLAGE OF LAKE ZURICH, LAKE COUNTY, ILLINOIS.



N

SCALE: 1" = 20'

Compare all points before building by same and at once report any difference. Structure located APRIL 5TH 1988

Allen D. Ludlow
ILLINOIS REGISTERED LAND SURVEYOR NO 35 1954

UPDATED: July 16, 1988.

STATE OF ILLINOIS } SS
COUNTY OF COOK }

I, ALLEN D. LUDLOW Do hereby Certify that the above described property has been surveyed under my supervision, in the manner represented on the plat hereon drawn.
Dimensions are shown in feet and decimals and are corrected to a temperature of 62° Fahrenheit.

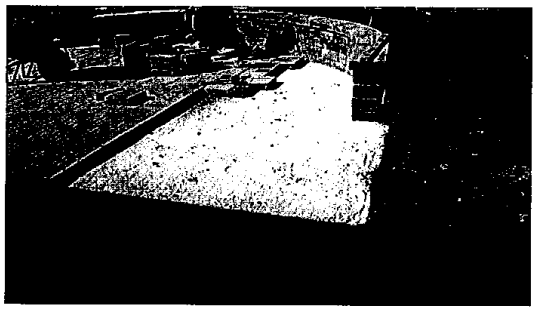
Niles, Illinois, APRIL 5TH A.D.1988

Allen D. Ludlow
ILLINOIS REGISTERED LAND SURVEYOR NO 35 1954

At the Heart of Community

Patios

Residential
Concrete & Brick



Concrete Materials

*6 x 6 #10 wire mesh

*4" (minimum) of compacted gravel base is required, CA-6.

*4"(minimum) of concrete is required. A 6-bag mix per cubic yard, with 3%-6% air entrainment is required.

Locations

*Patios cannot be placed within 20 feet of any front, corner side, or rear lot line, and not within 5 feet of any interior side lot line.

***Patios may not be placed in any easements,** regardless if it complies with setbacks.

Rules & Restrictions

*Plans for patios shall include all measurements of the proposed patio showing all adjacent structures and equipment and setbacks.

*Proper clearances shall be maintained around all Com Ed service pedestals to allow the removal of the lower front covers.

*Concrete shall not hinder the natural flow of drainage away from foundations.

*A gravel base is required.

*All vegetation shall be removed before the gravel base is installed. Provide grading details if the removed soil is planned to be used on site.

*All concrete patios shall be formed, with mesh installed and string lines in place at the time of inspection. Provide proper control joints.

*Call J.U.L.I.E. (800-892-0123) before digging.

*Provide code compliant graspable handrails for 3 or more risers.

Additional Paver Brick Rules & Restrictions

*Submit specifications indicating the amount of base and the amount of bedding. Patios require a minimum of 6-12" of base and 1-11/2" of bedding. Install the base in 4" lifts.

*Edge restraints must be installed.

*The base, bedding, and paver bricks shall be compacted.

What to Submit (both types)

*Completed application.

*1 copy of a Certified Plat of Survey showing all existing structures with the proposed location of the patio and the setbacks (all sides).

*1 copy of a plan showing all required measurements of the patio with all installation details noted. This includes: change in grade, stairs with tread/riser detail, any hand/guard rails, any electric or gas proposed and fire pit if applicable, and any drainage improvements including sump pump lines. Indicate any seatwalls.

Inspections

*Inspections are scheduled for A.M. or P.M. Monday through Friday with 48 hours advance notice 847-540-1696 x8150. Call before 1:00 P.M. two days before you want your inspection. Same day re-inspections are not available.

*A Pre-pour/base inspection is required before pouring concrete or installing brick.

*Underground electric/plumbing inspections may be required, depending on project.

*In some cases, a final inspection may be needed by the building and/or engineering department(s).

Costs

$30.00 Plan Review Fee
$45.00 Permit Fee

Additional fees for electric/ plumbing, or engineering may apply depending on the project.

Note:

*Steps- Maximum riser height of a step is 7 ¾" and the minimum depth is 10".

*Maximum riser difference allowed is 3/8".

*If an inspector needs to return more than once for the same phase of any required inspection, a $90.00 re-inspection fee will be required to be paid before the re-inspection takes place.

Rev. 1/12/2024

I have read and reviewed these requirements. Chad Pre 7/19/24

Signature of Applicant Date

AFFIDAVIT OF TITLE
COVENANT AND WARRANTY

STATE OF Illinois)
) SS.
COUNTY OF Lake)

The undersigned affiant, being first duly sworn, on oath says, and also covenants with and warrants to the grantee hereinafter named:

Chad A. Pratt and Michelle S. Pratt

That affiant has an interest in the premises described below or in the proceeds thereof or is the grantor in the deed dated August 30, 2002, to Chad A. Pratt and Michelle S. Pratt, grantee, conveying the following described premises:

See Legal Description Attached Hereto As Exhibit A

That no labor or material has been furnished for premises within the last four months, that is not fully paid for.

That since the title date of July 12, 2002, in the report on title issued by Republic Title Company, affiant has not done or suffered to be done anything that could in any way affect the title to premises, and no proceedings have been filed by or against affiant, nor has any judgment or decree been rendered against affiant, nor is there any judgment, note or other instrument that can result in a judgment or decree against affiant within five days from the date hereof.

That the parties, if any, in possession of premises are bona fide tenants only, and have paid promptly and in full their rent to date, and are renting from n/a to n/a, and not for any longer term, and have no other or further interest whatsoever in premises.

That all water taxes, except the current bill, have been paid, and that all the insurance policies assigned have been paid for.

That this instrument is made to induce, and in consideration of, the said grantee's consummation of the purchase of premises.

Anthony J. Martins _____ (SEAL) _____ (SEAL)

Kathleen M. Martins _____ (SEAL) _____ (SEAL)

Subscribed and sworn to before me this 30 day of August, 2002.

_____
Notary Public

Chicago Title Insurance Company

"OFFICIAL SEAL"
DANIEL E. LEVY
Notary Public, State of Illinois
My Commission Exp. 01/10/2003

Letter of Consent from Adjoining Neighbors

I, JAMES D HAFF, am the legal owner of the property located at 422 N NEWBERRY CT, LAKE ZURICH, IL, 60047, which is an adjoining property to the petitioner's address: 474 Rush Ct, Lake Zurich, IL 60047. I am aware that a variation to install a paver patio to replace the existing deck that extends 16' in length from the house and I have reviewed the plans as presented to me by the property owners, Chad & Michelle Pratt, for the proposed paver patio project plan.

I have NO OBJECTION to granting my consent for their request to install a patio that is 12' from the rear lot line.

JAMES D HAFF
Neighbors Name

James D Haff
Neighbors Signature

Letter of Consent from Adjoining Neighbors

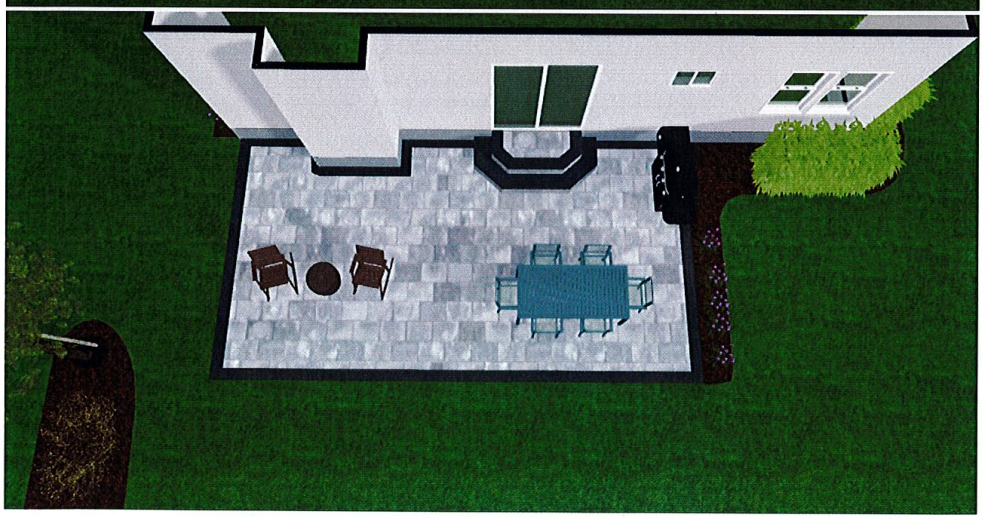
I, Josephine Teuber, am the legal owner of the property located at 468 Rush Ct, Lake Zurich 60047, which is an adjoining property to the petitioner's address: 474 Rush Ct, Lake Zurich, IL 60047. I am aware that a variation to install a paver patio to replace the existing deck that extends 16' in length from the house and I have reviewed the plans as presented to me by the property owners, Chad & Michelle Pratt, for the proposed paver patio project plan.

I have NO OBJECTION to granting my consent for their request to install a patio that is 12' from the rear lot line.

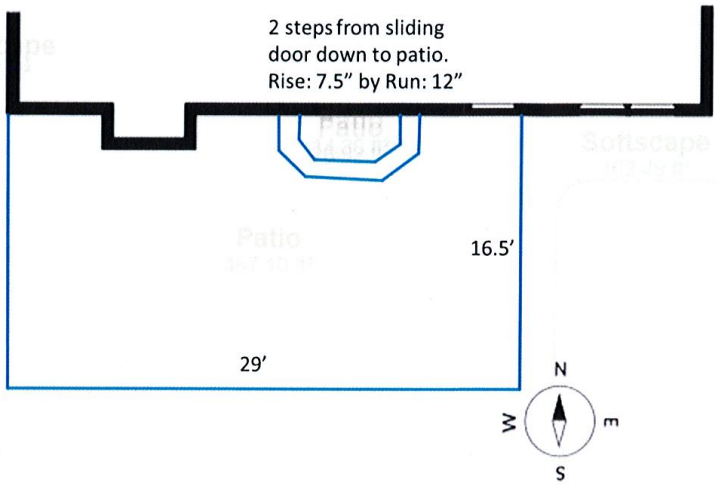
Josephine Teuber — Neighbors Name

Josephine Teuber — Neighbors Signature

Proposed paver patio renderings

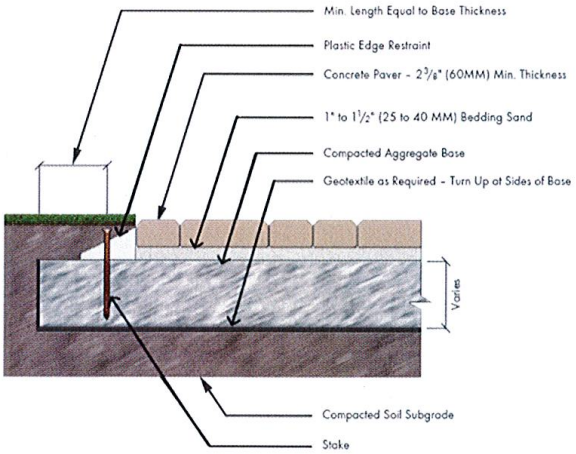


Paver Patio Plans



Paver Installation:

- Compacted Soil with geotextile underlayment
- Sub-base will consist of 3/4" crushed rock 6-8" in depth
- Leveling base of 3/8" crushed limestone 1.5" in depth
- Concrete Paver : 2 3/8" thickness, varying LxW to interlock pattern
- Use plastic edging with stakes to lock in pavers



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 6e

MEMORANDUM

Date: August 22, 2024

To: Ray Keller, Village Manager RK

From: Adam Hartmann, Project Manager Public Works

Subject: **Award Recommendation**
Park and Recreation Department Buffalo Creek Building A Floor

Issue: The Village Board awarded a contract with NPN Flooring of Brookfield, Illinois for the flooring replacement at the Buffalo Creek A building on the May 20th, 2024 in the amount not to exceed $34,196.40. During construction, a change order was issued to address moisture concerns that were not included in the original scope of the project.

Analysis: Construction began on August 1, 2024. Following removal of the existing floor a moisture test was conducted. The test determined the levels of moisture in the concrete subfloor to be at a level too high to allow the adhesive to properly bond the new flooring to the concrete. As a result, a recommendation was provided to apply a moisture sealer coat to the concrete to assure the adhesive would seal properly to the new flooring. After review of the test results, staff concurred and approved the recommended to apply the sealer.

The proposed change order resulted in a cost increase of $439.60 over the awarded amount of $34,196.40 bringing the final project cost to be $34,636.00.

Recommendation: Amend the awarded contract for the Buffalo Creek Building A Floor Replacement to NPN Flooring of Brookfield, Illinois, in an amount of $34,636.00

W/Attachments:

1. Project Change Order

NPN Flooring
9311 Ogden Ave
Brookfield, IL 60513

NPN FLOORING

CHANGE ORDER

Project Name	Buffalo Creek Flooring Project
Change Order No.	LZ01 - PO 24-25129
Requesting Party	NPN Flooring
Date of Request	08/23/2024

Client	Public Works - General Service
Company Name	Village of Lake Zurich
Address	505 Telser Rd, Lake Zurich IL
Phone Number	847-550-1776

Description of Changes	The entire project was installed with a moisture barrier(Ardex VB100, 2 5 GAL Pails, Double Coat).
Reasons for Change	The concrete moisture readings were above the normal range. If the floor had been laid down without the moisture barrier, the glue would have eventually given out, and the vinyl floor would have bubbled and buckled.
Additional Information	Material: $2,500; Labor: $2,400

Price	Original Price	New Price	Total
	NOT ON ORIGINAL QUOTE	$4,900.00	$4,900.00
Time	Original Due Date	New Due Date	Total Days
	UNCHANGED	UNCHACHGED	NA

Approved By	**Date and Signature**
	NPN Flooring:
	Juan Negrete
	Village of Lake Zurich:

r-

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

AGENDA ITEM 7a

Date: September 3, 2024

To: Ray Keller, Village Manager RK

From: Sarosh Saher, Community Development Director

CC: Colleen McCauley, Village Planner
Mary Meyer, Building Services Supervisor

Re: Zoning Application for a Planned Unit Development
OSK Residential Subdivision – 670 South Old Rand Road

Issue. Mr. Lawrence M. Freedman, of Ash, Anos, Freedman & Logan, LLC, the attorney for OSK Capital Partners, LLC, a Real Estate Developer of Highland Park, (the "Applicant"), requests approval of a Planned Unit Development, Zoning Map Amendment and Preliminary Plat of Subdivision to construct a new residential subdivision at 670 South Old Rand Road legally described in Exhibit A attached hereto (the "Subject Property").

OSK Capital Partners, LLC is the contract purchaser of the property. The owner of the property is Mr. Henry C. Joern of Ingleside, IL.

Specifically, the Applicant is seeking approval of the following:

- A Special Use Permit for a Planned Unit Development (PUD) and approval of a Development Concept Plan to develop the property with multiple-family residences and single-family homes
- Rezoning the property within the R-6 Multiple-Family Residential District and the Chairman Stratman open Space District
- Exterior Appearance and Site Plan Approval consistent with a Development Concept Plan
- The grant of modifications to the Zoning Code under the PUD, related to Bulk requirements for single-family residential development

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

- Become more business friendly and customer oriented.

Background. The subject property is a 9-acre zoning lot, zoned R-1/2 Single-Family Residential and contains a single residential structure of approximately 2,060 square feet, with related improvements. Current frontage access is via South Old Rand Road. The subject property also contains a 2.16-acre wetland area along the north, which includes a pond and drainage creek. The wetlands are part of the Lake County Wetland Inventory, and the creek is under jurisdiction of the US Army Corps of Engineers. The drainage system connects Heatherleigh Pond to the west to detention areas within the Red Bridge Farm subdivision to the east, via culverts across South Old Rand Road and Buesching Road.

Previous Proposal. In July 2022, the Applicant submitted an application requesting approval of a Planned Unit Development (PUD) to develop the property with 50 Townhouses within 12 buildings. That application was considered by the Village Board on January 3, 2023 but denied due to concerns related to density, parking, wetlands, and structures within the creek area.

Current Proposal

The submitted plans include a complete redevelopment of the existing site, featuring a mix of detached single-family homes and attached single-family townhouses. Also included in the proposed plans is the development of a private road system with access from South Old Rand and South Buesching Road, improvements along the wetland/creek area respecting the 50-foot buffer, water/sewer improvements, streetlighting on-site, and creation of common open space areas with gazebos or similar structures.

The architect has submitted plans proposing three types of units:

- Single-family detached residences: 12 units proposed along the North side of the developed area, approximately 2,790 square feet of living space containing 3 bedrooms, featuring a 2-story layout with an attached 2-car garage facing the internal street.
- Single-family detached residences: 6 units proposed along the East with frontage along South Buesching Road, approximately 2,100 square feet of living space containing 3 bedrooms, featuring a 2-story layout. These units feature a 400 square-foot detached garage located at the rear of the lot and accessible from the internal roadway.
- Single-family attached townhouses (multiple-family residential buildings): 18 townhouses within 5 buildings, two of which have frontage on South Old Rand Road.
    - The townhouses located within the interior of the development will be designed with a 3-story layout with 3-bedrooms, a 2-car attached garage, and approximately 2,640 square feet of living space.
    - The townhouses located along the frontage of Old Rand Road will be designed with a 2-story layout with 2 bedrooms, 2-car attached garage, and approximately 1,640 square feet of living space.

Architectural Details. The proposed buildings will be finished with fiber cement siding and shakes as the predominant material, with modular masonry brick, cast stone and wood used as accents along foundations, facades, railings and sills. The northerly single-family units also have a fiber cement shake detail on the porch roofs. Select east single-family units (along Buesching Road)

will have a cast stone element at the base of the structure. Only front elevations for the townhouse and single-family units were provided in the architectural plans, and no elevations were provided for the proposed detached garages on site, although a three-dimensional rendering is included in the submission packet. The details of side and rear elevations will be provided when the Final Plan of the development is reviewed.

The southerly two-thirds of the property will be cleared of existing vegetation to make way for the development and new landscape material. The northerly one-third of the property will be reconfigured with a detention basin while maintaining the existing wetland and the vegetation that surrounds it.

Density
The Developer is proposing to redevelop the property with 18 attached single-family townhouses and 18 detached single-family residences. The density of the development is proposed at 4.0 units per acre which is reduced from 5.32 units/acre that was initially presented.

As a comparison, the densities of other townhouse developments in the area (gross densities – number of units per gross acre) are as follows:

1. Meadow Wood – 6.6 units/acre (along N Rand Road)
2. Flint Crossing – 4.8 units/acre (along N Rand Road)
3. Canterbury Estates – 11.5 units/acre (adjacent to the Main Street Area)
4. Main Street townhouses - 19 units/acre (within the Main Street Area)

Parking
Parking is proposed in conformance with the requirements of the zoning code:

- 12 northerly single-family residences: 2 enclosed spaces within an attached garage and 2 spaces on the front driveway – 48 spaces.
- 6 easterly single-family residences facing Buesching Road: 2 enclosed spaces within a detached garage at the rear and 1 space adjacent to the garage – 18 spaces.
- 18 townhouses, both interior to the site and along Old Rand Road: 2 enclosed spaces within an attached garage and 2 spaces on the driveway – 72 spaces
- Visitor parking – 22 spaces (1 space for every 6 required spaces; requirement is 1 for every 10 spaces)
  Total parking available within development = 160 spaces

Stormwater and Wetland Management
The southerly two-thirds of the property will largely be cleared of existing vegetation and graded to make way for the development and new landscape material. The northerly one-third of the property will be reconfigured with a detention basin while maintaining the existing wetland and the vegetation that surrounds it. All development will be located outside of wetland and wetland buffers, no longer requiring a retaining wall. The detention area designed with a natural slope. Additionally, a pedestrian path will connect to an amenity (gazebo) overlooking the wetlands and proposed detention basin.

As a condition for approval, staff has required that the streambanks of the drainageway (creek) associated with the wetland and pond in this area be stabilized and restored.

Analysis. The Planning and Zoning Commission (PZC) considered the application at public hearings held on June 19 and July 17, 2024.

In response to testimony provided at hearings, the applicant revised the site plan to redesign and reconfigure the townhouses facing Old Rand Road with 2-story townhouses within 2 buildings. By means of these revisions, the Applicant accomplished the following:

- Reduced the bulk (height and volume) of the townhouse buildings that face Old Rand Road, thereby reducing their impact on the street; and
- Mitigated the bulk (height and volume) of the townhouses against the adjacent residences to the south. The nearest residence is currently 45 feet to the south of the Subject Property line.

The Applicant also provided site distance studies with profiles of both Old Rand Road and Buesching Road to demonstrate that traffic along these roads would not be negatively impacted by residential traffic entering and leaving the subdivision.

Following the close of the hearing the PZC voted 6-0 to recommend approval of the project with no additional conditions other than those presented by staff.

The videos from the two PZC meeting can be accessed via the following links:
June 19, 2024
July 17, 2024

The detailed evaluation and summary of the project can be found in the Staff Reports that were provided to the Planning and Zoning Commission, which are a part of the attached Ordinance.

Recommendation. At their meeting on July 17, 2024, the Planning and Zoning Commission recommended approval of the development concept plan incorporating the conditions for approval provided by staff in its report.

Staff therefore recommends approval of the attached ordinance based on the following conditions for approval that are contained within the accompanying approval ordinance.

Should the Village Board move to approve the proposed development concept plan and map amendment, staff recommends the consideration and approval of the attached ordinance with its specific attachments contingent upon the following conditions for approval, and any additional conditions of the Village Board as required:

1. Substantial conformance with the following documentation submitted as part of the application for the development subject to revisions required by Village Staff, Village Engineer, Village Landscape Consultants and applicable governmental agencies:

a. Zoning Application, Cover Letter and attachments dated May 17, 2024, prepared by Mr. Lawrence M. Freedman, of Ash, Anos, Freedman & Logan, LLC, the agent and attorney for OSK Capital Partners, LLC.
b. Legal Description of the Subject Property.
c. ALTA/NSPS Land Title Survey prepared by Regional Land Services, dated June 21, 2022.
d. ALTA Commitment for Title Insurance Issued by Chicago Title Insurance Company dated April 20, 2022.
e. Planning and Zoning Commission Submittal prepared by Pappageorge Haymes Partners last dated July 17, 2024 consisting of the Cover and Index, Current Site Plan, Single-family Home Plans and Elevations, Row Home (multiple-family) Plans and Elevations, views from neighboring properties, Aerial Rendering, various views including – from central green space, from Buesching Road.
f. Preliminary Civil Engineering Exhibits prepared by Eriksson Engineering Associates, Ltd., dated May 17, 2024 and updated on August 20, 2024, including the following and as updated per the current overall site plan:
    i. Site Demolition Plan – Sheet C100
    ii. Site Geometry Plan – Sheet C200
    iii. Site Utility Plan – Sheet C300
    iv. Grading and Paving Plan – Sheet C400
    v. Site work details – Sheets C500-C503
g. Landscape Exhibits prepared by Eriksson Engineering Associates, Ltd., dated May 17, 2024 and updated on August 20, 2024, including the following and as updated per the current overall site plan
    i. Rendered Landscape Plan – Sheet L100 (color)
    ii. Landscape Narrative
    iii. Landscape Plan – Sheet L100
    iv. Landscape Details Sheet L200
h. Site Lighting exhibits including
    i. Photometric Plan prepared by LSI, dated May 17, 2024, models 1 and 2
    ii. Light Fixture Specification prepared by LSI for Standard Lexington (LXM4).
i. Site distance Studies Sheets CX1.0-2.0 prepared by Eriksson Engineering Associates, Ltd., dated July 1, 2024.
j. Stormwater Management Report Prepared By: Melanie Carollo & Laura Rosenbauer, dated May 17, 2024.
k. Traffic and Parking Study prepared by Eriksson Engineering Associates, Ltd., dated May 14, 2024.
l. Tree Inventory and Report prepared by Urban Forest Management, Inc. dated June 24, 2022.
m. Site Development Budget prepared by McShane Construction Company, dated May 9, 2024.
n. Wetland Determination Report prepared by Gary R. Weber and Associates.
o. Ecological Compliance Assessment Tool (EcoCAT), prepared by Advantage Consulting Engineers, dated July 18, 2022.

2. 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 continuously maintained in good condition.

3. All trees, hedges, signs or other obstructions which could prevent persons driving vehicles on Buesching Road and Old Rand Road from obtaining a clear view of traffic when approaching the intersection or a pedestrian crosswalk shall be continuously maintained at a low height and signs shall be adequately set back from the corner.

4. The Developer shall submit a Final Plan pursuant to the standards and provision of Section 9-22-4.C of the Zoning Code, to particularize the details of the on-site and off-site improvements related to the development of the site including private and public roadway construction, private and public utility construction and installation, stormwater management and flood mitigation, and pedestrian sidewalk and crosswalk construction. Such Final Plan shall also include a Final Plat of Subdivision delineating the final configuration of lots within the subdivision.

5. Prior to Final Plan approval, detailed landscape plans shall be submitted indicating compliance with the perimeter landscape requirements for the subdivisions, in this case as a PUD for development of the Subject Property prescribed by Section 9-8A-5 of the Lake Zurich Municipal Code, with particular reference to the boundaries of the Subject Property along the south lot lines. The trees classified as "heritage trees" in the tree survey shall be incorporated into the plans to the greatest extent possible. A tree survey map shall be provided to denote existing trees and trees to be removed. The Developer shall utilize the "Village of Lake Zurich Tree Replacement Worksheet" to determine the replacement value in the form of either replacement trees within the Development or fee in lieu of replacement trees at the "average market value" for a >2.5-inch Replacement Tree as denoted in the worksheet as updated from time to time.

6. The Property line along the south of the project will be landscaped and screened from adjacent properties to the south with a combination of a 6-foot high solid privacy fence and landscape plant material consisting of canopy trees, evergreen trees, deciduous trees and shrubs. In order to accommodate the additional landscape material, the width of the landscape area along the south lot line of the project should be designed with adequate width.

7. The drainageway (creek) that runs along the northerly portion of the Subject Property that is associated with the wetland and pond shall have its banks stabilized and restored in accordance with a plan prepared by the Applicant that is approved by the Village. Such stabilization and restoration plan shall be submitted for review and approval prior to Final Plan Approval and shall be conducted in conjunction with the earthwork related to the project and completed prior to the construction of the first residential building on the property.

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

9. 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').

10. A 5-foot wide sidewalk shall be constructed along the frontage of the Subject Property along Old Rand Road. In lieu of the absence of such sidewalk, a fee shall be paid by the Developer to be used by the Village for sidewalk construction, replacement or repair within the village corporate boundaries. Such fee will be calculated at the rate of $20.00 per square-foot for a 5-foot wide sidewalk meeting Village standards for the length of frontage of the Subject Property where no sidewalk is proposed.

11. A pedestrian crosswalk shall additionally be provided across Old Rand Road to connect the subject PUD to the existing sidewalk on the west side of Old Rand Road at a location immediately north of the main entrance and shall be constructed per village standards and accompanied by flashing beacons to warn of pedestrians within the crosswalk as depicted on the Preliminary Civil Engineering Exhibits prepared by Eriksson Engineering Associates, Ltd., dated May 17, 2024 and updated on August 20, 2024.

12. All off-site utility and street improvements, including location and alignment of off-site utilities shall be completed per the requirements of the Village including but not limited to resurfacing of Old Rand Road, installation of curb and gutter as required by the Village, relocation and installation of utilities within right-of-way as required by the Village and installation and energizing of street lights in locations with specifications as determined and required by the Village.

13. The existing carriage walk along Buesching Road may be pulled off the back of curb and incorporated into the walk for the single-family homes facing the street. The sidewalk proposed along the frontage of Old Rand Road shall similarly be located closer to the building. Utility pole conflicts to accommodate the sidewalk shall require the removal of such poles and burying existing utility lines within those areas.

14. The Developer shall establish a Home Owners Association (HOA), 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. The provisions for such HOA 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.

15. As part of Final Plan approval, the Developer shall enter into a binding development 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 provisions:
    a. Prior to the sale of any single-family or multiple-family townhouse residence, at Developer cost, Village Establishment of a "backup" or dormant 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 HOA dissolution or its lack of required maintenance of these areas with Developer Consent.

16. The Developer shall be responsible for payment of all Development Impact Fees, Water and Sanitary Connection Fees and Contributions as a condition of the approval of the PUD and Final Plat. The school impact fees, park impact fees, library impact fees, 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 residential building.

17. 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.

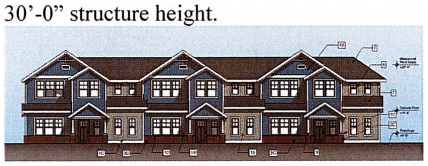
- Correspondence following the close of the public hearings
- Approval Ordinance including the following exhibits:
    - Exhibit A – Legal description of the Subject Property
    - Exhibit B – PUD Ordinance Exhibits - Preliminary Plan
    - Exhibit C – June 19 and July 17, 2024 staff reports and planning and zoning commission final recommendation/conditions

Appendix A
Chart comparing the 2022 Development and the current 2024 Development

August 2022 Initial Proposal revised in October 2022 Denied by Village Board in January 2023	**May 17, 2024 – Current Proposal**
Density and number of Units	

52 units within eight 4-unit buildings and four 5-unit buildings
 	
Revised to 50 units within ten 4-unit buildings and two 5-unit buildings
	36 units as follows:
	- 18 single-family homes with 6 units facing Buesching Road, and 12 along the north of the property;
	- 18 townhouses within 5 buildings as follows:
	  - 5 2-story townhouses within two buildings facing Old Rand Road
	  - 13 3-story townhouses in the interior of the property within 3 buildings.

12 buildings	18 single-family homes 5 townhouse buildings
5.59 units/acre	4 units/acre
3-story Townhouse Buildings facing Old Rand Road and Buesching Road set back to 40 feet	2-story townhouses and 2 story Single-family homes facing Buesching road setback 25 feet. These homes face the street and following the standard setback requirement for residential districts.
Visitor parking combined into three areas.	Visitor parking provided in three areas surrounding the townhouses.
Sidewalks	
Continuous sidewalk (Carriage walk) between Old Rand Road and Buesching Road. *Note: Carriage walk in front of Building 7 does not leave adequate room for off-street parking in front of garages.*	***Sidewalks similarly provided as in 2022***
A separate Public sidewalk along property line added in addition to the service walk in front of the units facing Old Rand Road.	***Sidewalks similarly provided as in 2022***
Building Elevations	
	 Single-family Elevations facing interior Road. 26'-0" structure height.

3 Story townhouse Elevation 33'-0" structure height. 3-story, "Mid-level" entries proposed to reduce front elevation height by approx 3-4 feet 29' to 30' structure height.	 Single-family elevations facing Buesching Road. 30'-0" structure height.  2-story townhomes facing Old Rand Road 22'-4" structure height 3-story townhouses facing interior of property. 33'-2" structure height.
Landscaping and Amenities	
Increased (continuous) landscaping provided along Old Rand Road and Buesching Road within 40-foot wide setback.	Due to front facing single-family homes along Buesching Road and 2-story townhouses facing Old Rand Road, regular front-yard landscaping provided.
Significant trees within central open space and high-quality trees to be preserved where possible.	Trees proposed within oval central open space and high-quality trees to be preserved where possible.
Central open space 12,500 sq.ft. with gazebo as amenity.	Central open space 17,500 sq.ft. with gazebo amenity.
Stormwater management	
Construction extended up to wetland boundary, in some area within wetland buffer, requiring a retaining wall to allow for calculated detention.	Construction outside of wetland and wetland buffer no longer requiring a retaining wall. Detention area designed with natural slope. New path leading to an amenity (gazebo) overlooking the wetlands and detention proposed.

Appendix B
Public Meeting/Hearing chronology

A. Original Proposal – (50 townhouse residential units)
1. *February 22, 2022* – Courtesy Review; feedback provided
2. *August 17, 2022* – PZC public hearing; recommendation for approval (6 yeas; 1 nay)
3. *October 3, 2022* – Village Board Meeting 1. Item continued to November 7, 2022 to give applicant opportunity to address questions and comments of the Village Board with a revised proposal.
4. *November 7, 2022* – Village Board Meeting 2. Applicant requested additional time. Item continued to December 5, 2022
5. *December 5, 2022* – Village Board Meeting 3. Applicant unable to prepare all the necessary documents to address all the questions of the Village Board. Requested additional time. Item continued to January 3, 2023.
6. *January 3, 2023* – Village Board Meeting 4. Applicant returned to Village Board with a revised proposal. Proposal was denied by Village Board.

B. Revised Proposal – (40 townhouse residential units)
1. *August 17, 2023* – Courtesy Review. Feedback provided. Did not proceed with this concept.

C. Current Proposal – (18 single-family residential units; 18 townhouse units – total 36 units)
1. *June 19, 2024* – PZC public hearing. Continued to July 17, 2024 to allow applicant to address comments, questions and requested changes
2. *July 17, 2024* – PZC continued public hearing. Applicant presented revised proposal. Recommendation for approval (6 yeas -0 nays).
3. *September 3, 2024* – Application scheduled for presentation to the Village Board for approval.

Benchmarks Announcements on *December 1, 2022 and July 13, 2023*

Social Media Announcements
1. *February 18, 2022* - Courtesy review announcement
2. *September 30, 2022* - Regular board meeting
3. *July 13, 2023* - Courtesy review (after denial)

VILLAGE OF LAKE ZURICH

ORDINANCE NO. 2024-09-585

AN ORDINANCE GRANTING APPROVAL OF A PLANNED UNIT DEVELOPMENT, AMENDMENT TO THE OFFICIAL ZONING MAP, PRELIMINARY PLAT, DEVELOPMENT CONCEPT PLAN, SPECIAL USE PERMITS AND MODIFICATIONS TO THE ZONING AND LAND DEVELOPMENT CODE FOR A RESIDENTIAL SUBDIVISION
OSK Residential Development – 670 South Old Rand Road

WHEREAS, Mr. Lawrence M. Freedman, of Ash, Anos, Freedman & Logan, LLC, the attorney for OSK Capital Partners, LLC, a Real Estate Developer of Highland Park, is the Applicant and Developer (the "Applicant" and "Developer") of certain property for a Planned Unit Development (the "PUD") for the property commonly referred to as 670 South Old Rand Road, said Property legally described in Exhibit A hereto ("Subject Property"); and

WHEREAS, the owner of the Subject Property is Mr. Henry C. Joern of Ingleside, Illinois and has provided his consent to allow Applicant to apply for the requested development approvals; and

WHEREAS, the Subject Property comprises 9 acres of which 2.16 acres comprises wetland area containing an open water pond and drainage creek extending along the northerly portion of the Property; and

WHEREAS, the Applicant proposes to develop the remaining approximately southerly 6.84 acres located between North Old Rand Road and Buesching Road with a residential development containing 18 single-family detached residences and 18 multiple-family townhouses within five (5) buildings, including private roadways, and access to South Old Rand Road and Buesching Road, installation of all utilities and construction of stormwater management facilities (the "Development"); and

WHEREAS, the Applicant seeks approval of its required development concept plan ("Development Concept Plan") meeting the standards for a planned unit development ("PUD"), said plan to be approved as a 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 a public meeting was published on June 1, 2024, in *The Daily Herald,* and the Village posted a public meeting sign on the Subject Property on June 4, 2024, both the newspaper and sign notices informing the public of a meeting to be held before the Lake Zurich Planning and Zoning Commission ("PZC") on June 19, 2024, to consider the Application for these requested zoning approvals; and

WHEREAS, the PZC opened the required public hearing on June 19, 2024, but continued the public hearing on July 17, 2024 to allow the Applicant additional time to address comments and testimony provided at the hearing; and

WHEREAS, the Applicant presented a revised development to the PZC at the continued public hearing on July 17, 2024; and

WHEREAS, the PZC received the reports prepared by the Village staff dated June 19, 2024 (consisting of 21 pages) and July 17, 2024 (consisting of 7 pages), (STAFF REPORTS") which were provided to the PZC for the hearings, and considered the request for the approval of the Development Concept Plan as a PUD, Zoning Map amendments, a special use permit and Site Plan and Exterior Appearance Review required under applicable provisions of the Village Zoning Code of the Village of Lake Zurich-("Code"), including Subsection E of Section 9-3-3 of Chapter 3, Section 9-18-3 of Chapter 18, Sections 9-19-3 and 9-19-4 of Chapter 19, Section 9-20-3 of Chapter 20, Section 9-21-3 of Chapter 21, and Sections 9-22-4 and 9-22-5 of Chapter 22, all contained within the Code, and after the conclusion of its public hearing on July 17, 2024, the PZC recommended that the Board of Trustees approve the zoning approvals requested in this Application, subject to those conditions of approval recommended by Village staff and as set forth herein; and

WHEREAS, the President and Board of Trustees of the Village of Lake Zurich met on September 3, 2024, to consider the Application, findings and conditions of the PZC; and

WHEREAS, the President and Board of Trustees considered the findings, conditions and recommendations of the PZC, including the STAFF REPORTS, and the additional Staff report to the Board dated September 3, 2024, said required zoning standards, findings and recommendations attached hereto as Exhibit C including:

1. A request for a Special Use Permit for a Planned Unit Development (PUD) and approval of the proposed Development Concept Plan to develop the Subject Property with a mix of multiple-family residences and single-family homes
2. Rezoning the Subject Property within the R-6 Multiple-Family Residential District and the OS Open Space District
3. Exterior Appearance and Site Plan Approval consistent with the proposed Development Concept Plan
4. The grant of modifications to the Zoning Code under the PUD, related to certain bulk requirements for single-family residential development

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 zoning standards have been met 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, required standards and plans as addressed by the PZC and in the STAFF REPORTS and additional September 3, 2024 Staff report, are incorporated herein as the 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: APPROVAL AND GRANT OF MAP AMENDMENT, THE DEVELOPMENT CONCEPT PLAN FOR A PUD, 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 and applicable standards and provisions of the Village Code, including Chapters 18, 19, 20,-21 and 22 of the Lake Zurich Zoning Code, hereby grant the following zoning approval(s), as shown and provided in the STAFF REPORTS, and final findings and recommendations of the PZC, and additional Staff report to the Board dated September 3, 2024:

A. An amendment to the Zoning Map of the Village of Lake Zurich to rezone the Subject Property from R-1/2 Single-Family Residential District to R-6 Multiple Family Residential District, and OS Open Space 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 Subject Property and the Village of Lake Zurich subject to the PUD and Development Concept Plan for the property.

B. The PUD and Development Concept Plan for the Property, attached hereto and made a part hereof as Exhibit B, to authorize a residential subdivision 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."

C. The foregoing approvals, including the Development Concept Plan for the PUD, pursuant to Section 9-19-4, shall be further subject to the following conditions:

1. Substantial conformance with the following documentation submitted as part of the application for the development subject to revisions required by Village Staff, Village Engineer, Village Landscape Consultants and applicable governmental agencies:
   a. Zoning Application, Cover Letter and attachments dated May 17, 2024, prepared by Mr. Lawrence M. Freedman, of Ash, Anos, Freedman & Logan, LLC, the agent and attorney for OSK Capital Partners, LLC.
   b. Legal Description of the Subject Property.
   c. ALTA/NSPS Land Title Survey prepared by Regional Land Services, dated June 21, 2022.
   d. ALTA Commitment for Title Insurance Issued by Chicago Title Insurance Company dated April 20, 2022.
   e. Planning and Zoning Commission Submittal prepared by Pappageorge Haymes Partners last dated July 17, 2024 consisting of the Cover and Index, Current Site Plan, Single-family Home Plans and Elevations, Row Home (multiple-family) Plans and Elevations, views from neighboring properties, Aerial Rendering, various views including – from central green space, from Buesching Road.
   f. Preliminary Civil Engineering Exhibits prepared by Eriksson Engineering Associates, Ltd., dated May 17, 2024 and updated on August 20, 2024, including the following and as updated per the current overall site plan:
      i. Site Demolition Plan – Sheet C100
      ii. Site Geometry Plan – Sheet C200
      iii. Site Utility Plan – Sheet C300
      iv. Grading and Paving Plan – Sheet C400
      v. Site work details – Sheets C500-C503
   g. Landscape Exhibits prepared by Eriksson Engineering Associates, Ltd., dated May 17, 2024 and updated on August 20, 2024, including the following and as updated per the current overall site plan
      i. Rendered Landscape Plan – Sheet L100 (color)
      ii. Landscape Narrative
      iii. Landscape Plan – Sheet L100
      iv. Landscape Details Sheet L200
   h. Site Lighting exhibits including
      i. Photometric Plan prepared by LSI, dated May 17, 2024, models 1 and 2
      ii. Light Fixture Specification prepared by LSI for Standard Lexington (LXM4).
   i. Site distance Studies Sheets CX1.0-2.0 prepared by Eriksson Engineering Associates, Ltd., dated July 1, 2024.
   j. Stormwater Management Report Prepared By: Melanie Carollo & Laura Rosenbauer, dated May 17, 2024.
   k. Traffic and Parking Study prepared by Eriksson Engineering Associates, Ltd., dated May 14, 2024.
   l. Tree Inventory and Report prepared by Urban Forest Management, Inc. dated June 24, 2022.
   m. Site Development Budget prepared by McShane Construction Company, dated May 9, 2024.

n. Wetland Determination Report prepared by Gary R. Weber and Associates.
o. Ecological Compliance Assessment Tool (EcoCAT), prepared by Advantage Consulting Engineers, dated July 18, 2022.

2. 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 continuously maintained in good condition.

3. All trees, hedges, signs or other obstructions which could prevent persons driving vehicles on Buesching Road and Old Rand Road from obtaining a clear view of traffic when approaching the intersection or a pedestrian crosswalk shall be continuously maintained at a low height and signs shall be adequately set back from the corner.

4. The Developer shall submit a Final Plan pursuant to the standards and provision of Section 9-22-4.C of the Zoning Code, to particularize the details of the on-site and off-site improvements related to the development of the site including private and public roadway construction, private and public utility construction and installation, stormwater management and flood mitigation, and pedestrian sidewalk and crosswalk construction. Such Final Plan shall also include a Final Plat of Subdivision delineating the final configuration of lots within the subdivision.

5. Prior to Final Plan approval, detailed landscape plans shall be submitted indicating compliance with the perimeter landscape requirements for the subdivisions, in this case as a PUD for development of the Subject Property prescribed by Section 9-8A-5 of the Lake Zurich Municipal Code, with particular reference to the boundaries of the Subject Property along the south lot lines. The trees classified as "heritage trees" in the tree survey shall be incorporated into the plans to the greatest extent possible. A tree survey map shall be provided to denote existing trees and trees to be removed. The Developer shall utilize the "Village of Lake Zurich Tree Replacement Worksheet" to determine the replacement value in the form of either replacement trees within the Development or fee in lieu of replacement trees at the "average market value" for a >2.5-inch Replacement Tree as denoted in the worksheet as updated from time to time.

6. The Property line along the south of the project will be landscaped and screened from adjacent properties to the south with a combination of a 6-foot high solid privacy fence and landscape plant material consisting of canopy trees, evergreen trees, deciduous trees and shrubs. In order to accommodate the additional landscape material, the width of the landscape area along the south lot line of the project should be designed with adequate width.

7. The drainageway (creek) that runs along the northerly portion of the Subject Property that is associated with the wetland and pond shall have its banks stabilized and restored in accordance with a plan prepared by the Applicant that is approved by the Village. Such stabilization and restoration plan shall be submitted

for review and approval prior to Final Plan Approval and shall be conducted in conjunction with the earthwork related to the project and completed prior to the construction of the first residential building on the property.

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

9. 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').

10. A 5-foot wide sidewalk shall be constructed along the frontage of the Subject Property along Old Rand Road. In lieu of the absence of such sidewalk, a fee shall be paid by the Developer to be used by the Village for sidewalk construction, replacement or repair within the village corporate boundaries. Such fee will be calculated at the rate of $20.00 per square-foot for a 5-foot wide sidewalk meeting Village standards for the length of frontage of the Subject Property where no sidewalk is proposed.

11. A pedestrian crosswalk shall additionally be provided across Old Rand Road to connect the subject PUD to the existing sidewalk on the west side of Old Rand Road at a location immediately north of the main entrance and shall be constructed per village standards and accompanied by flashing beacons to warn of pedestrians within the crosswalk as depicted on the Preliminary Civil Engineering Exhibits prepared by Eriksson Engineering Associates, Ltd., dated May 17, 2024 and updated on August 20, 2024.

12. All off-site utility and street improvements, including location and alignment of off-site utilities shall be completed per the requirements of the Village including but not limited to resurfacing of Old Rand Road, installation of curb and gutter as required by the Village, relocation and installation of utilities within right-of-way as required by the Village and installation and energizing of street lights in locations with specifications as determined and required by the Village.

13. The existing carriage walk along Buesching Road may be pulled off the back of curb and incorporated into the walk for the single-family homes facing the street. The sidewalk proposed along the frontage of Old Rand Road shall similarly be located closer to the building. Utility pole conflicts to accommodate the sidewalk shall require the removal of such poles and burying existing utility lines within those areas.

14. The Developer shall establish a Home Owners Association (HOA), 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. The provisions for such HOA 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.

15. As part of Final Plan approval, the Developer shall enter into a binding development 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 provisions:
    a. Prior to the sale of any single-family or multiple-family townhouse residence, at Developer cost, Village Establishment of a "backup" or dormant 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 HOA dissolution or its lack of required maintenance of these areas with Developer Consent.

16. The Developer shall be responsible for payment of all Development Impact Fees, Water and Sanitary Connection Fees and Contributions as a condition of the approval of the PUD and Final Plat. The school impact fees, park impact fees, library impact fees, 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 residential building.

17. 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: MODIFICATIONS FROM THE PROVISIONS OF THE ZONING 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 specifically including Chapter 22, hereby grant the following modifications to such Codes:

A. The Applicant is granted a modification to Sections 9-3-11.B.2 which provides for a minimum lot area per unit of no more than 5,000 square feet, said modification authorizing the construction of new single-family residential buildings with a minimum lot area of 4,680 square feet for the

northwesterly units, 4,455 square feet for the northeasterly units, and 3,680 square feet for the six easterly units facing Buesching Road.

B. The Applicant is granted a modification to Sections 9-3-11.B.3 which provides for a minimum lot width of 75 feet, said modification authorizing the construction of new single-family residential buildings with a minimum lot width of 44.82 feet for the northerly units and 31.8 feet for the six easterly units facing Buesching Road.

C. The Applicant is granted a modification to Sections 9-3-11.C.2.b which provides for a minimum interior side yard of 7 feet, said modification authorizing the construction of new single-family residential buildings with a minimum side yard of 4 feet for garages on the northerly lots (the principal residences meet the setback requirement of 7 feet), and 4 feet for the garages and single-family residential units for the six easterly units facing Buesching Road.

D. The Applicant is granted a modification to Sections 9-3-11.E.7 which provides for Front And Corner Side Yard Adjustment Next To Existing Structures (otherwise known as Average setbacks), which is 51 feet for its frontage along Old Rand Road, and 24 feet for Lots frontage along Buesching Road, said modification authorizing the location of the single-family buildings along Old Rand Road with a setback of 27 feet for the northerly lots and authorizing the location of the single-family buildings along Buesching road with a setback of 25 feet.

E. The Applicant is granted a modification to Sections 9-3-11.C.3 which provides for a minimum rear yard of 30 feet, said modification authorizing the construction of the principal building on the northerly lots with a minimum rear yard setback of 20 feet. The principal buildings on the easterly lots facing Buesching Road will meet the requirements of the code with a rear yard setback of 40 feet.

SECTION 4: FINDINGS IN SUPPORT OF APPROVAL OF GRANT OF SPECIAL USE PERMITS, PUD, MAP AMENDMENT, SITE PLAN AND EXTERIOR APPEARANCE REVIEWS. The findings, conditions and recommendations as set forth in the STAFF REPORTS, and final findings and recommendations of the PZC, and additional Staff report to the Board dated September 3, 2024, are hereby accepted as the Board's own, are incorporated herein by this reference and shall be made a part of the official record for the Application.

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 Subject 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 Subject Property until all work and requirements provided for hereinabove are properly completed. Ongoing maintenance in good repair, consistent with these approvals, shall be required at all times. Any failure or delay in the Village enforcing the above provisions of this Ordinance shall not act as a waiver of the right to enforce, nor affect the enforcement of any other requirement, condition or provision herein.

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 Final Plan for the planned unit development, 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 Subject 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 _____, 2024.

Ayes:

Nays:

Absent:

Abstain:

APPROVED this _____ day of _____, 2024.

_____
Mayor Tom Poynton

ATTEST:

_____
Village Clerk
Kathleen Johnson

EXHIBIT A

Legal description of Property

PARCEL 1:

THAT PART OF THE NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 20, TOWNSHIP 43 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: BEGINNING AT THE NORTHEAST CORNER OF SAID NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 20; THENCE SOUTH ALONG THE EAST LINE THEREOF 461.9 FEET; THENCE SOUTH 75 DEGREES 30 MINUTES WEST 347.9 FEET TO THE EASTERLY LINE OF PREMISES CONVEYED TO WAUKEGAN, ROCKFORD AND ELGIN TRACTION COMPANY BY DEED RECORDED OCTOBER 22, 1910, AS DOCUMENT 131910, IN BOOK 182 OF DEEDS, PAGE 4; THENCE NORTHWESTERLY ALONG THE EASTERLY LINE OF SAID PREMISES CONVEYED BY SAID DEED RECORDED AS DOCUMENT 131910, 695.5 FEET TO THE NORTH LINE OF SAID NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 20; THENCE EAST ALONG SAID NORTH LINE 760 FEET TO THE PLACE OF BEGINNING, IN LAKE COUNTY, ILLINOIS

PARCEL 2:

THAT PART OF THE NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 20, TOWNSHIP 43 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, FALLING WITHIN A STRIP OF LAND 133 FEET WIDE LYING EASTERLY AND NORTHERLY OF THE CENTER LINE OF LAKE ZURICH-PALATINE ROAD (NOW KNOWN AS RAND ROAD); SAID PREMISES BEING THE SAME AS CONVEYED BY JOHN ROBERTSON AND JULIA ROBERTSON, HIS WIFE, TO WAUKEGAN, ROCKFORD AND ELGIN TRACTION COMPANY BY DEED DATED OCTOBER 20, 1910 AND RECORDED OCTOBER 22, 1910, AS DOCUMENT 131910 IN BOOK 182 OF DEEDS, PAGE 4, AND SHOWN ON PLAT ATTACHED TO SAID DEED, (EXCEPT THAT PART OF THE NORTHEAST QUARTER, SOUTHEAST QUARTER, OF SECTION 20, TOWNSHIP 43 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS BEGINNING AT THE NORTHEAST CORNER OF SAID NORTHEAST QUARTER, SOUTHEAST QUARTER, SECTION 20, THENCE SOUTH ALONG THE EAST LINE THEREOF 461.9 FEET; THENCE SOUTH 75 DEGREES 30 MINUTES WEST 347.9 FEET TO THE EASTERLY RIGHT OF WAY LINE OF FORMER PALATINE, LAKE ZURICH AND WAUCONDA RAILROAD AND THE NORTHERNMOST CORNER AND POINT OF BEGINNING OF THIS DESCRIPTION; THENCE SOUTH 52 DEGREES 27 MINUTES WEST, 133 FEET TO CENTER OF RAND ROAD; THENCE SOUTH 37 DEGREES 33 MINUTES EAST, ALONG CENTER OF RAND ROAD 528 .7 FEET; THENCE NORTH 52 DEGREES 27 MINUTES EAST, 133 FEET TO EASTERLY RIGHT OF WAY LINE OF SAID FORMER PALATINE, LAKE ZURICH AND WAUCONDA RAILROAD; THENCE NORTH 37 DEGREES 33 MINUTES WEST, ALONG SAID RIGHT

OF WAY LINE 528.7 FEET TO THE PLACE OF BEGINNING), IN LAKE COUNTY, ILLINOIS.

PARCELS INVOLVED: 14-20-400-002, 14-20-400-003

EXHIBIT B

Preliminary 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 REPORTS AND FINDINGS
Staff Report - June 19, 2024 consisting of 21 pages, and
Staff Report - July 17, 2024, consisting of 7 pages, and
PZC Final Findings and recommendations – July 17, 2024, and
additional Staff report to the Board dated September 3, 2024

LAW OFFICES

ASH, ANOS, FREEDMAN & LOGAN, L.L.C.
95 REVERE DRIVE, SUITE G
NORTHBROOK, IL 60062

LAWRENCE M. FREEDMAN

BARRY ASH
BRUCE T. LOGAN, OF COUNSEL

TELEPHONE: 312-346-1390
FAX: 312-346-7847
LMFREEDMAN@AFLAW.COM

May 17, 2024

Mr. Orlando Stratman
Chairperson
Planning and Zoning Commission
Village of Lake Zurich
505 Telser Road
Lake Zurich, IL 60047

Re: 670 S. Old Rand Road, Lake Zurich, IL

Dear Chairperson Stratman:
:

We represent OSK Capital Partners, LLC ("OSK"), the contract purchaser of the subject property, which comprises approximately 8.8 acres with .92 acres of wetlands, and is currently under the R-1/2 zoning classification.

OSK is seeking to develop the subject property with 20 attached single family homes and 18 unattached single family homes. In conjunction therewith, OSK will be requesting Development Concept Plan Approval, which will include rezoning the property to the R-6 Multiple Family Residential District.

It is contemplated that Old Rand Road will provide primary access for the proposed development with secondary access on Buesching Road. All required utilities are available to the site.

The proposed development contains a number of features which will not only benefit the development but will enhance the surrounding neighborhood. Such features will include:

- a variety of detached and attached single homes with both attached and detached garages.
- a pedestrian path which will connect Old Rand Road to Buesching Road.
- Improvements to the wetlands' appearance and health of vegetation.
- A design which orients the front doors of the homes to face the development's main road with the detached single family homes backing up to the wetlands
- Providing easy fire truck access with no dead end streets
- Locating the 2.5 story detached single family homes along Buesching Road. across from existing detached single family homes, with the 3 story attached single family homes being located on the interior of the development or along Rand Road across from dense vegetation where there are no neighboring residences.

- Providing a landscaping buffer as well as fencing between our development and the property to the south

In support of our request we are providing the following:

1. Application
2. Architectural Drawings
    1. 4 renderings
    2. Current site plan
    3. Preliminary plat of subdivision
    4. Proposed house plans
    5. Proposed house elevations
3. Civil Drawings
    1. Site Demolition Plan
    2. Site Geometry Plan
    3. Site Utility Plan
    4. Grading and Paving Plan
    5. Site Work Details
4. Landscape Drawings
    1. Rendered Landscape Plan
    2. Landscape Plan
    3. Landscape Details
    4. Landscape Narrative
5. Estimated Cost/Budget
6. Site Lighting Drawings
    1. Photometric Site Plan
    2. Site Lighting Plan
    3. Light Fixture cut sheets
7. Stormwater Report

8. Survey and Legal Description
9. Traffic Study
10. Tree Inventory
11. Evidence of Title

We would appreciate being scheduled for a public hearing. Thank you.

Very truly yours,

ASH, ANOS, FREEDMAN & LOGAN, L.L.C.

BY: Lawrence M. Freedman

LMF:eas
Enclosure

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: 670 Old Rand Road
2. Please attach complete legal description
3. Property identification number(s): 14-20-400-002 and 1420-400-003
4. Owner of record is: Henry Joern Phone: 814-417-8732
   E-Mail _____ Address: 670 Old Rand Road, Lake Zurich, IL 60047
5. Applicant is (if different from owner): Lawrence M. Freedman Phone: 312-346-1390
   E-Mail lmfreedman@aflaw.com Address: 95 Revere Drive, Ste G, Northbrook, IL 60062
6. Applicant's interest in the property (owner, agent, realtor, etc.): Agent for OSK Capitol, LLC
7. All existing uses and improvements on the property are: R-1/2 Single Family
8. The proposed uses on the property are: R-6 Attached and Detached Single Family Rowhomes
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 date of expiration of said restrictions:
   None
10. Describe any contract or agreement of any nature relevant to the sale or disposal of the Subject Property:
    Sales contract pending zoning approval
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.

Lawrence M. Freedman _____
(Name of applicant) (Signature of applicant)

Subscribed and sworn to before me this ____ day of May, 2021.

Leslie M. Mercado My Commission Expires _____
(Notary Public)

Notary Public State of Illinois
Official Seal
Leslie M Mercado
Comm. # 980507
My Commission Expires 10/31/2027

Henry Joern _____
(Name of Owner, if different) (Signature of Owner, if different)

Subscribed and sworn to before me this 11th day of May, 2021.

Leslie M. Mercado My Commission Expires _____
(Notary Public)

Notary Public State of Illinois
Official Seal
Leslie M Mercado
Comm. # 980507
My Commission Expires 10/31/2027

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

☑ Zoning Code **Map** Amendment to change zoning of Subject Property from R-1/2 to R-6

☐ 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

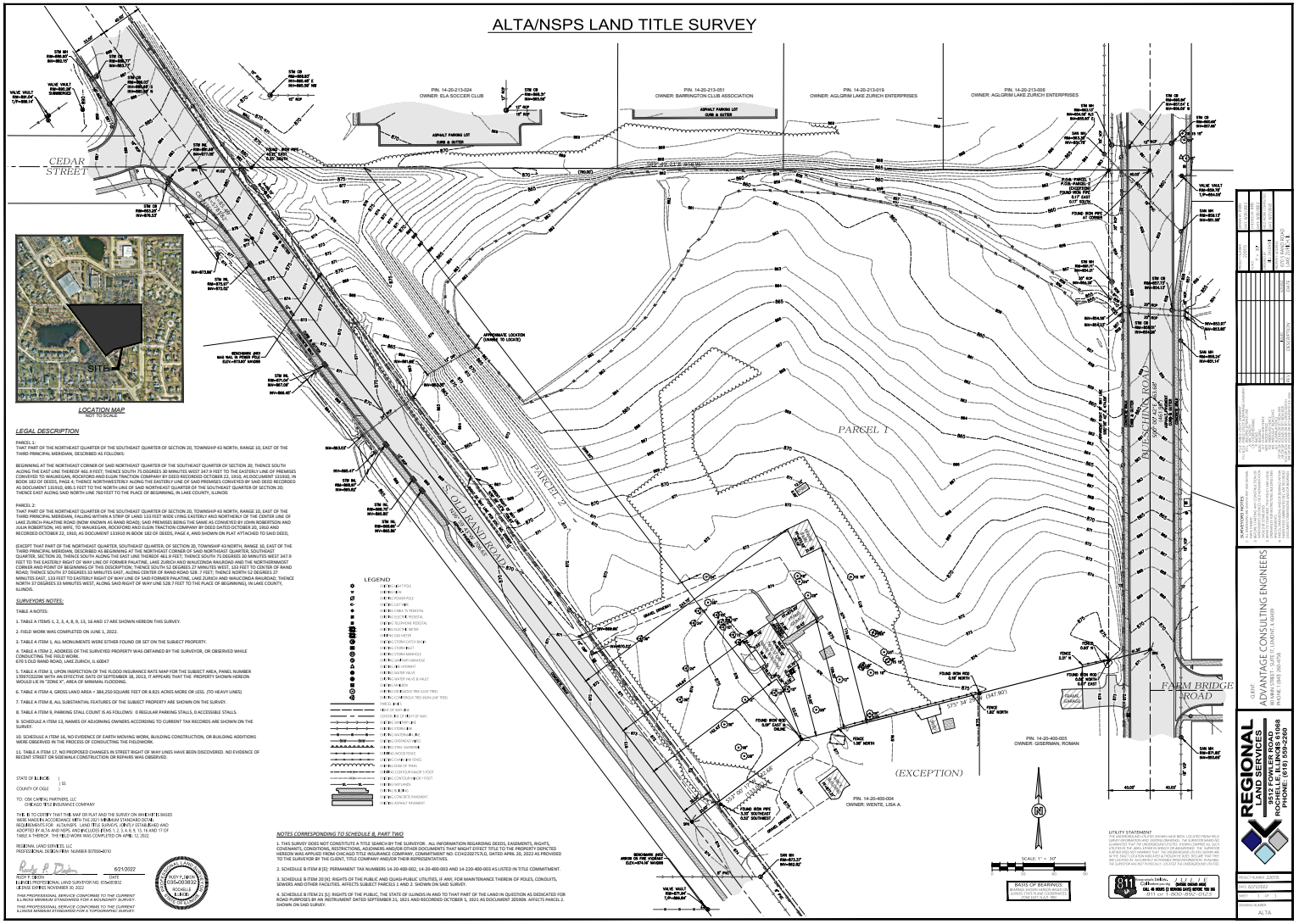
COMPREHENSIVE PLAN APPLICATION

☐ Comprehensive Plan **Map** Amendment for _____

_____

☐ Comprehensive Plan **Text** Amendment for _____

_____


ALTA/NSPS LAND TITLE SURVEY
CEDAR STREET
S. OLD RAND ROAD
PARCEL 1
PARCEL 2
FARM BRIDGE ROAD
(EXCEPTION)
PIN: 14-20-213-024
OWNER: ELA SOCCER CLUB
PIN: 14-20-213-051
OWNER: BARRINGTON CLUB ASSOCIATION
PIN: 14-20-213-019
OWNER: AGLGRIM LAKE ZURICH ENTERPRISES
PIN: 14-20-213-006
OWNER: AGLGRIM LAKE ZURICH ENTERPRISES
PIN: 14-20-400-005
OWNER: GISERMAN, ROMAN
PIN: 14-20-400-004
OWNER: WENTE, LISA A.
LOCATION MAP
NOT TO SCALE
LEGAL DESCRIPTION
SURVEYORS NOTES:
NOTES CORRESPONDING TO SCHEDULE B, PART TWO
LEGEND
BASIS OF BEARINGS
SCALE: 1" = 30'
UTILITY STATEMENT
REGIONAL LAND SERVICES
3512 FOWLER ROAD
ROCHELLE, ILLINOIS 61068
PHONE: (815) 562-2280
ADVANTAGE CONSULTING ENGINEERS
ALTA

ALTA COMMITMENT FOR TITLE INSURANCE

Issued By:

CHICAGO TITLE INSURANCE COMPANY

Commitment Number:

CCHI2202757LD

NOTICE

IMPORTANT - READ CAREFULLY: THIS COMMITMENT IS AN OFFER TO ISSUE ONE OR MORE TITLE INSURANCE POLICIES. ALL CLAIMS OR REMEDIES SOUGHT AGAINST THE COMPANY INVOLVING THE CONTENT OF THIS COMMITMENT OR THE POLICY MUST BE BASED SOLELY IN CONTRACT.

THIS COMMITMENT IS NOT AN ABSTRACT OF TITLE, REPORT OF THE CONDITION OF TITLE, LEGAL OPINION, OPINION OF TITLE, OR OTHER REPRESENTATION OF THE STATUS OF TITLE. THE PROCEDURES USED BY THE COMPANY TO DETERMINE INSURABILITY OF THE TITLE, INCLUDING ANY SEARCH AND EXAMINATION, ARE PROPRIETARY TO THE COMPANY, WERE PERFORMED SOLELY FOR THE BENEFIT OF THE COMPANY, AND CREATE NO EXTRACONTRACTUAL LIABILITY TO ANY PERSON, INCLUDING A PROPOSED INSURED.

THE COMPANY'S OBLIGATION UNDER THIS COMMITMENT IS TO ISSUE A POLICY TO A PROPOSED INSURED IDENTIFIED IN SCHEDULE A IN ACCORDANCE WITH THE TERMS AND PROVISIONS OF THIS COMMITMENT. THE COMPANY HAS NO LIABILITY OR OBLIGATION INVOLVING THE CONTENT OF THIS COMMITMENT TO ANY OTHER PERSON.

COMMITMENT TO ISSUE POLICY

Subject to the Notice; Schedule B, Part I-Requirements; Schedule B, Part II-Exceptions; and the Commitment Conditions, Chicago Title Insurance Company, a Florida corporation (the "Company"), commits to issue the Policy according to the terms and provisions of this Commitment. This Commitment is effective as of the Commitment Date shown in Schedule A for each Policy described in Schedule A, only when the Company has entered in Schedule A both the specified dollar amount as the Proposed Policy Amount and the name of the Proposed Insured.

If all of the Schedule B, Part I-Requirements have not been met within one hundred eighty (180) days after the Commitment Date, this Commitment terminates and the Company's liability and obligation end.

Chicago Title Insurance Company

By:

Michael J. Nolan, President

Attest:

Marjorie Nemzura, Secretary

Countersigned By:

Michael J. Nolan
Authorized Officer or Agent

This page is only a part of a 2016 ALTA® Commitment for Title Insurance issued by Chicago Title Insurance Company. This Commitment is not valid without the Notice; the Commitment to Issue Policy; the Commitment Conditions; Schedule A; Schedule B, Part I-Requirements; Schedule B, Part II-Exceptions; and a counter-signature by the Company or its issuing agent that may be in electronic form.

Copyright American Land Title Association. All rights reserved.

The use of this Form (or any derivative thereof) is restricted to ALTA licensees and ALTA members in good standing as of the date of use. All other uses are prohibited. Reprinted under license from the American Land Title Association.

CHICAGO TITLE INSURANCE COMPANY **COMMITMENT NO. CCHI2202757LD**

Transaction Identification Data for reference only:

ORIGINATING OFFICE:	FOR SETTLEMENT INQUIRIES, CONTACT:
Chicago Title Insurance Company 10 South LaSalle Street, Suite 3100 Chicago, IL 60603 Main Phone: (312)223-4627 Email: chicagocommercial@ctt.com	Chicago Title and Trust Company 10 South LaSalle Street, Suite 3100 Chicago, IL 60603 Main Phone: (312)223-4627 Main Fax: (312)223-3018

Order Number: CCHI2202757LD
Property Ref.: 670 S. Old Rand Road, Lake Zurich, IL 60047

SCHEDULE A

1. Commitment Date: April 20, 2022
2. Policy to be issued:

   (a) ALTA Owner's Policy 2006
   Proposed Insured: Osk Capital Partners, LLC
   Proposed Policy Amount: $2,950,000.00

3. The estate or interest in the Land described or referred to in this Commitment is:

   Fee Simple

4. The Title is, at the Commitment Date, vested in:

   Henry C. Joern and Rita Joern

5. The Land is described as follows:

   SEE EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF

END OF SCHEDULE A

This page is only a part of a 2016 ALTA® Commitment for Title Insurance issued by Chicago Title Insurance Company. This Commitment is not valid without the Notice; the Commitment to Issue Policy; the Commitment Conditions; Schedule A; Schedule B, Part I-Requirements; Schedule B, Part II-Exceptions; and a counter-signature by the Company or its issuing agent that may be in electronic form.

Copyright American Land Title Association. All rights reserved.

The use of this Form (or any derivative thereof) is restricted to ALTA licensees and ALTA members in good standing as of the date of use. All other uses are prohibited. Reprinted under license from the American Land Title Association.

EXHIBIT "A"

Legal Description

PARCEL 1:

THAT PART OF THE NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 20, TOWNSHIP 43 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHEAST CORNER OF SAID NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 20; THENCE SOUTH ALONG THE EAST LINE THEREOF 461.9 FEET; THENCE SOUTH 75 DEGREES 30 MINUTES WEST 347.9 FEET TO THE EASTERLY LINE OF PREMISES CONVEYED TO WAUKEGAN, ROCKFORD AND ELGIN TRACTION COMPANY BY DEED RECORDED OCTOBER 22, 1910, AS DOCUMENT 131910, IN BOOK 182 OF DEEDS, PAGE 4; THENCE NORTHWESTERLY ALONG THE EASTERLY LINE OF SAID PREMISES CONVEYED BY SAID DEED RECORDED AS DOCUMENT 131910, 695.5 FEET TO THE NORTH LINE OF SAID NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 20; THENCE EAST ALONG SAID NORTH LINE 760 FEET TO THE PLACE OF BEGINNING, IN LAKE COUNTY, ILLINOIS

PARCEL 2:

THAT PART OF THE NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 20, TOWNSHIP 43 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, FALLING WITHIN A STRIP OF LAND 133 FEET WIDE LYING EASTERLY AND NORTHERLY OF THE CENTER LINE OF LAKE ZURICH-PALATINE ROAD (NOW KNOWN AS RAND ROAD); SAID PREMISES BEING THE SAME AS CONVEYED BY JOHN ROBERTSON AND JULIA ROBERTSON, HIS WIFE, TO WAUKEGAN, ROCKFORD AND ELGIN TRACTION COMPANY BY DEED DATED OCTOBER 20, 1910 AND RECORDED OCTOBER 22, 1910, AS DOCUMENT 131910 IN BOOK 182 OF DEEDS, PAGE 4, AND SHOWN ON PLAT ATTACHED TO SAID DEED,

(EXCEPT THAT PART OF THE NORTHEAST QUARTER, SOUTHEAST QUARTER, OF SECTION 20, TOWNSHIP 43 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS BEGINNING AT THE NORTHEAST CORNER OF SAID NORTHEAST QUARTER, SOUTHEAST QUARTER, SECTION 20, THENCE SOUTH ALONG THE EAST LINE THEREOF 461.9 FEET; THENCE SOUTH 75 DEGREES 30 MINUTES WEST 347.9 FEET TO THE EASTERLY RIGHT OF WAY LINE OF FORMER PALATINE, LAKE ZURICH AND WAUCONDA RAILROAD AND THE NORTHERNMOST CORNER AND POINT OF BEGINNING OF THIS DESCRIPTION; THENCE SOUTH 52 DEGREES 27 MINUTES WEST, 133 FEET TO CENTER OF RAND ROAD; THENCE SOUTH 37 DEGREES 33 MINUTES EAST, ALONG CENTER OF RAND ROAD 528 .7 FEET; THENCE NORTH 52 DEGREES 27 MINUTES EAST, 133 FEET TO EASTERLY RIGHT OF WAY LINE OF SAID FORMER PALATINE, LAKE ZURICH AND WAUCONDA RAILROAD; THENCE NORTH 37 DEGREES 33 MINUTES WEST, ALONG SAID RIGHT OF WAY LINE 528.7 FEET TO THE PLACE OF BEGINNING), IN LAKE COUNTY, ILLINOIS.

This page is only a part of a 2016 ALTA® Commitment for Title Insurance issued by Chicago Title Insurance Company. This Commitment is not valid without the Notice; the Commitment to Issue Policy; the Commitment Conditions; Schedule A; Schedule B, Part I-Requirements; Schedule B, Part II-Exceptions; and a counter-signature by the Company or its issuing agent that may be in electronic form.

Copyright American Land Title Association. All rights reserved.

The use of this Form (or any derivative thereof) is restricted to ALTA licensees and ALTA members in good standing as of the date of use. All other uses are prohibited. Reprinted under license from the American Land Title Association.

SCHEDULE B, PART I
REQUIREMENTS

All of the following Requirements must be met:

1. The Proposed Insured must notify the Company in writing of the name of any party not referred to in this Commitment who will obtain an interest in the Land or who will make a loan on the Land. The Company may then make additional Requirements or Exceptions.

2. Pay the agreed amount for the estate or interest to be insured.

3. Pay the premiums, fees, and charges for the Policy to the Company.

4. Documents satisfactory to the Company that convey the Title or create the Mortgage to be insured, or both, must be properly authorized, executed, delivered, and recorded in the Public Records.

5. Notice: Please be aware that due to the conflict between federal and state laws concerning the cultivation, distribution, manufacture or sale of marijuana, the Company is not able to close or insure any transaction involving Land that is associated with these activities.

6. Be advised that the "good funds" of the title insurance act (215 ILCS 155/26) became effective 1-1-2010. This act places limitations upon the settlement agent's ability to accept certain types of deposits into escrow. Please contact your local Chicago Title office regarding the application of this new law to your transaction.

7. Effective June 1, 2009, pursuant to Public Act 95-988, satisfactory evidence of identification must be presented for the notarization of any and all documents notarized by an Illinois notary public. Satisfactory identification documents are documents that are valid at the time of the notarial act; are issued by a state or federal government agency; bear the photographic image of the individual's face; and bear the individual's signature.

8. **The Proposed Policy Amount(s) must be increased to the full value of the estate or interest being insured, and any additional premium must be paid at that time. An Owner's Policy should reflect the purchase price or full value of the Land. A Loan Policy should reflect the loan amount or value of the property as collateral. Proposed Policy Amount(s) will be revised and premiums charged consistent therewith when the final amounts are approved.**

END OF SCHEDULE B, PART I

This page is only a part of a 2016 ALTA® Commitment for Title Insurance issued by Chicago Title Insurance Company. This Commitment is not valid without the Notice; the Commitment to Issue Policy; the Commitment Conditions; Schedule A; Schedule B, Part I-Requirements; Schedule B, Part II-Exceptions; and a counter-signature by the Company or its issuing agent that may be in electronic form.

Copyright American Land Title Association. All rights reserved.

The use of this Form (or any derivative thereof) is restricted to ALTA licensees and ALTA members in good standing as of the date of use. All other uses are prohibited. Reprinted under license from the American Land Title Association.

SCHEDULE B, PART II
EXCEPTIONS

THIS COMMITMENT DOES NOT REPUBLISH ANY COVENANT, CONDITION, RESTRICTION, OR LIMITATION CONTAINED IN ANY DOCUMENT REFERRED TO IN THIS COMMITMENT TO THE EXTENT THAT THE SPECIFIC COVENANT, CONDITION, RESTRICTION, OR LIMITATION VIOLATES STATE OR FEDERAL LAW BASED ON RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, GENDER IDENTITY, HANDICAP, FAMILIAL STATUS, OR NATIONAL ORIGIN.

The Policy will not insure against loss or damage resulting from the terms and provisions of any lease or easement identified in Schedule A, and will include the following Exceptions unless cleared to the satisfaction of the Company:

General Exceptions

1. **Rights or claims of parties in possession not shown by Public Records.**

2. **Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the title that would be disclosed by an accurate and complete land survey of the Land.**

3. **Easements, or claims of easements, not shown by the Public Records.**

4. **Any lien, or right to a lien, for services, labor or material heretofore or hereafter furnished, imposed by law and not shown by the Public Records.**

5. **Taxes or special assessments which are not shown as existing liens by the Public Records.**

6. **We should be furnished a properly executed ALTA statement and, unless the land insured is a condominium unit, a survey if available. Matters disclosed by the above documentation will be shown specifically**

7. Any defect, lien, encumbrance, adverse claim, or other matter that appears for the first time in the Public Records or is created, attaches, or is disclosed between the Commitment Date and the date on which all of the Schedule B, Part I—Requirements are met.

E 8. Taxes for the year 2021 and 2022.

Taxes for the year 2021 and 2022 are not yet due or payable.

Taxes for the year 2020, amounting to $2,835.36 are marked paid of record.
Permanent Index Number: 14-20-400-002.
(Affects part of the Land)

Taxes for the year 2020, amounting to $11,303.46 are marked paid of record.
Permanent Index Number: 14-20-400-003.
(Affects part of the Land)

M 9. The following described portion of the Land apparently is not assessed for general real estate taxes for the

Copyright American Land Title Association. All rights reserved.

The use of this Form (or any derivative thereof) is restricted to ALTA licensees and ALTA members in good standing as of the date of use. All other uses are prohibited. Reprinted under license from the American Land Title Association.

SCHEDULE B, PART II
EXCEPTIONS
(continued)

year(s) 2020 and prior. This commitment/policy is subject to said taxes.

That part of Parcel 1 falling under S. Bueshing Road.
The West 33 feet of Parcel 2 falling under Rand Road.

G 10. Please be advised that our search did not disclose any open mortgages of record. If you should have knowledge of any outstanding obligation, please contact the Title Department immediately for further review prior to closing.

B 11. Existing unrecorded leases and all rights thereunder of the lessees and of any person or party claiming by, through or under the lessees.

A 12. The Company should be furnished a statement that there is no property manager employed to manage the Land, or, in the alternative, a final lien waiver from any such property manager.

F 13. Due to office closures in place or that might occur, we should be provided with our standard form of indemnity (GAP Indemnity) for defects, liens, encumbrances, adverse claims or other matters, if any, created, first appearing in the Public Records or attaching subsequent to the Commitment Date but prior to the date of recording of the instruments under which the Proposed Insured acquires the estate or interest or mortgage covered by this commitment. Note: Due to office closures related to covid-19 we may be temporarily unable to record documents in the normal course of business.

H 14. If applicable, the spouse or civil union partner of the party in title should join in the conveyance or mortgage for the purpose of releasing homestead.

D 15. The Company will require the following documents for review prior to the issuance of any title insurance predicated upon a conveyance or encumbrance from the entity named below.

Limited Liability Company: Osk Capital Partners, LLC

a. A copy of its operating agreement, if any, and any and all amendments, supplements and/or modifications thereto, certified by the appropriate manager or member.

b. If a domestic Limited Liability Company, a copy of its Articles of Organization and all amendment thereto with the appropriate filing stamps.

c. If the Limited Liability Company is member-managed a full and complete current list of members certified by the appropriate manager or member.

d. A current dated certificate of good standing from the proper governmental authority of the state in which the entity was created

e. If less than all members, or managers, as appropriate, will be executing the closing documents, furnish evidence of the authority of those signing.

This page is only a part of a 2016 ALTA® Commitment for Title Insurance issued by Chicago Title Insurance Company. This Commitment is not valid without the Notice; the Commitment to Issue Policy; the Commitment Conditions; Schedule A; Schedule B, Part I-Requirements; Schedule B, Part II-Exceptions; and a counter-signature by the Company or its issuing agent that may be in electronic form.

Copyright American Land Title Association. All rights reserved.

The use of this Form (or any derivative thereof) is restricted to ALTA licensees and ALTA members in good standing as of the date of use. All other uses are prohibited. Reprinted under license from the American Land Title Association.

SCHEDULE B, PART II
EXCEPTIONS
(continued)

The Company reserves the right to add additional items or make further requirements after review of the requested documentation.

C 16. The legal description provided in Schedule A is for convenience only. An ALTA survey that more particularly describes the property in question should be provided and this commitment is subject to further exceptions, if any, as may be deemed necessary.

P 17. Due to the COVID-19 pandemic, some or all of the recorded document necessary for our review were not available from the Lake County Recorder's office. As such, the title finding is for convenience only. Please consult with your local underwriter to discuss.

I 18. Rights of the public, the State of Illinois, the municipality and the adjoining owners in and to that part of the Land, if any, taken or used for road purposes.

J 19. Rights of Way for drainage tiles, ditches, feeders, laterals and underground pipes, if any.

K 20. Rights of the public and quasi-public utilities, if any, for maintenance therein of poles, conduits, sewers and other facilities.

L 21. Rights of the public, the State of Illinois in and to that part of the Land in question as dedicated for road purposes by an instrument dated September 21, 1921 and recorded October 5, 1921 as Document 205904.

(Affects Parcel 2)

N 22. Note for information (Endorsement Requests):

All endorsement requests should be made prior to closing to allow ample time for the company to examine required Documentation.

Note: before any endorsements can be approved, we should be informed as to the land use and as to what type of structure is on the land.

(This note will be waived for the policy,)

O 23. Informational Note:

To schedule any closings in the Chicago Commercial Center, please call (312)223-2707.

END OF SCHEDULE B, PART II

This page is only a part of a 2016 ALTA® Commitment for Title Insurance issued by Chicago Title Insurance Company. This Commitment is not valid without the Notice; the Commitment to Issue Policy; the Commitment Conditions; Schedule A; Schedule B, Part I-Requirements; Schedule B, Part II-Exceptions; and a counter-signature by the Company or its issuing agent that may be in electronic form.

Copyright American Land Title Association. All rights reserved.

The use of this Form (or any derivative thereof) is restricted to ALTA licensees and ALTA members in good standing as of the date of use. All other uses are prohibited. Reprinted under license from the American Land Title Association.

COMMITMENT CONDITIONS

1. DEFINITIONS

(a) "Knowledge" or "Known": Actual or imputed knowledge, but not constructive notice imparted by the Public Records.

(b) "Land": The land described in Schedule A and affixed improvements that by law constitute real property. The term "Land" does not include any property beyond the lines of the area described in Schedule A, nor any right, title, interest, estate, or easement in abutting streets, roads, avenues, alleys, lanes, ways, or waterways, but this does not modify or limit the extent that a right of access to and from the Land is to be insured by the Policy.

(c) "Mortgage": A mortgage, deed of trust, or other security instrument, including one evidenced by electronic means authorized by law.

(d) "Policy": Each contract of title insurance, in a form adopted by the American Land Title Association, issued or to be issued by the Company pursuant to this Commitment.

(e) "Proposed Insured": Each person identified in Schedule A as the Proposed Insured of each Policy to be issued pursuant to this Commitment.

(f) "Proposed Policy Amount": Each dollar amount specified in Schedule A as the Proposed Policy Amount of each Policy to be issued pursuant to this Commitment.

(g) "Public Records": Records established under state statutes at the Commitment Date for the purpose of imparting constructive notice of matters relating to real property to purchasers for value and without Knowledge.

(h) "Title": The estate or interest described in Schedule A.

2. If all of the Schedule B, Part I-Requirements have not been met within the time period specified in the Commitment to Issue Policy, this Commitment terminates and the Company's liability and obligation end.

3. The Company's liability and obligation is limited by and this Commitment is not valid without:

(a) the Notice;

(b) the Commitment to Issue Policy;

(c) the Commitment Conditions;

(d) Schedule A;

(e) Schedule B, Part I-Requirements;

(f) Schedule B, Part II-Exceptions; and

(g) a counter-signature by the Company or its issuing agent that may be in electronic form.

4. COMPANY'S RIGHT TO AMEND

The Company may amend this Commitment at any time. If the Company amends this Commitment to add a defect, lien, encumbrance, adverse claim, or other matter recorded in the Public Records prior to the Commitment Date, any liability of the Company is limited by Commitment Condition 5. The Company shall not be liable for any other amendment to this Commitment.

5. LIMITATIONS OF LIABILITY

(a) The Company's liability under Commitment Condition 4 is limited to the Proposed Insured's actual expense incurred in the interval between the Company's delivery to the Proposed Insured of the Commitment and the delivery of the amended Commitment, resulting from the Proposed Insured's good faith reliance to:

(i) comply with the Schedule B, Part I-Requirements;

(ii) eliminate, with the Company's written consent, any Schedule B, Part II-Exceptions; or

(iii) acquire the Title or create the Mortgage covered by this Commitment.

(b) The Company shall not be liable under Commitment Condition 5(a) if the Proposed Insured requested the amendment or had Knowledge of the matter and did not notify the Company about it in writing.

(c) The Company will only have liability under Commitment Condition 4 if the Proposed Insured would not have incurred the expense had the Commitment included the added matter when the Commitment was first delivered to the Proposed Insured.

(d) The Company's liability shall not exceed the lesser of the Proposed Insured's actual expense incurred in good faith and described in Commitment Conditions 5(a)(i) through 5(a)(iii) or the Proposed Policy Amount.

(e) The Company shall not be liable for the content of the Transaction Identification Data, if any.

(f) In no event shall the Company be obligated to issue the Policy referred to in this Commitment unless all of the Schedule B, Part I-Requirements have been met to the satisfaction of the Company.

(g) In any event, the Company's liability is limited by the terms and provisions of the Policy.

6. LIABILITY OF THE COMPANY MUST BE BASED ON THIS COMMITMENT

(a) Only a Proposed Insured identified in Schedule A, and no other person, may make a claim under this Commitment.

(b) Any claim must be based in contract and must be restricted solely to the terms and provisions of this Commitment.

This page is only a part of a 2016 ALTA® Commitment for Title Insurance issued by Chicago Title Insurance Company. This Commitment is not valid without the Notice; the Commitment to Issue Policy; the Commitment Conditions; Schedule A; Schedule B, Part I-Requirements; Schedule B, Part II-Exceptions; and a counter-signature by the Company or its issuing agent that may be in electronic form.

Copyright American Land Title Association. All rights reserved.

The use of this Form (or any derivative thereof) is restricted to ALTA licensees and ALTA members in good standing as of the date of use. All other uses are prohibited. Reprinted under license from the American Land Title Association.

(continued)

(c) Until the Policy is issued, this Commitment, as last revised, is the exclusive and entire agreement between the parties with respect to the subject matter of this Commitment and supersedes all prior commitment negotiations, representations, and proposals of any kind, whether written or oral, express or implied, relating to the subject matter of this Commitment.

(d) The deletion or modification of any Schedule B, Part II-Exception does not constitute an agreement or obligation to provide coverage beyond the terms and provisions of this Commitment or the Policy.

(e) Any amendment or endorsement to this Commitment must be in writing and authenticated by a person authorized by the Company.

(f) When the Policy is issued, all liability and obligation under this Commitment will end and the Company's only liability will be under the Policy.

7. IF THIS COMMITMENT HAS BEEN ISSUED BY AN ISSUING AGENT

The issuing agent is the Company's agent only for the limited purpose of issuing title insurance commitments and policies. The issuing agent is not the Company's agent for the purpose of providing closing or settlement services.

8. PRO-FORMA POLICY

The Company may provide, at the request of a Proposed Insured, a pro-forma policy illustrating the coverage that the Company may provide. A pro-forma policy neither reflects the status of Title at the time that the pro-forma policy is delivered to a Proposed Insured, nor is it a commitment to insure.

9. ARBITRATION

The Policy contains an arbitration clause. All arbitrable matters when the Proposed Policy Amount is Two Million And No/100 Dollars ($2,000,000.00) or less shall be arbitrated at the option of either the Company or the Proposed Insured as the exclusive remedy of the parties. A Proposed Insured may review a copy of the arbitration rules at http://www.alta.org/arbitration.

END OF CONDITIONS

1031 EXCHANGE SERVICES

If your transaction involves a tax deferred exchange, we offer this service through our 1031 division, IPX1031. As the nation's largest 1031 company, IPX1031 offers guidance and expertise. Security for Exchange funds includes segregated bank accounts and a 100 million dollar Fidelity Bond. Fidelity National Title Group also provides a 50 million dollar Performance Guaranty for each Exchange. For additional information, or to set-up an Exchange, please call Scott Nathanson at (312)223-2178 or Anna Barsky at (312)223-2169.

This page is only a part of a 2016 ALTA® Commitment for Title Insurance issued by Chicago Title Insurance Company. This Commitment is not valid without the Notice; the Commitment to Issue Policy; the Commitment Conditions; Schedule A; Schedule B, Part I-Requirements; Schedule B, Part II-Exceptions; and a counter-signature by the Company or its issuing agent that may be in electronic form.

Copyright American Land Title Association. All rights reserved.

The use of this Form (or any derivative thereof) is restricted to ALTA licensees and ALTA members in good standing as of the date of use. All other uses are prohibited. Reprinted under license from the American Land Title Association.

670 South Old Rand Road

Lake Zurich

Planning and Zoning Commission Submittal

July 17, 2024

OSK Capital Partners

670 Old Rand Rd LLC
Lake Zurich, IL

Cover Page
7/12/24

N

Pappageorge Haymes Partners

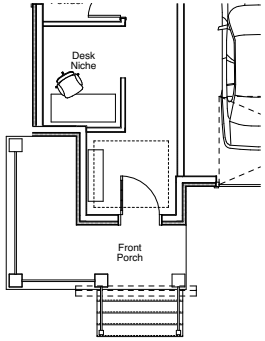
OSK Capital Partners

670 Old Rand Rd LLC
Lake Zurich, IL

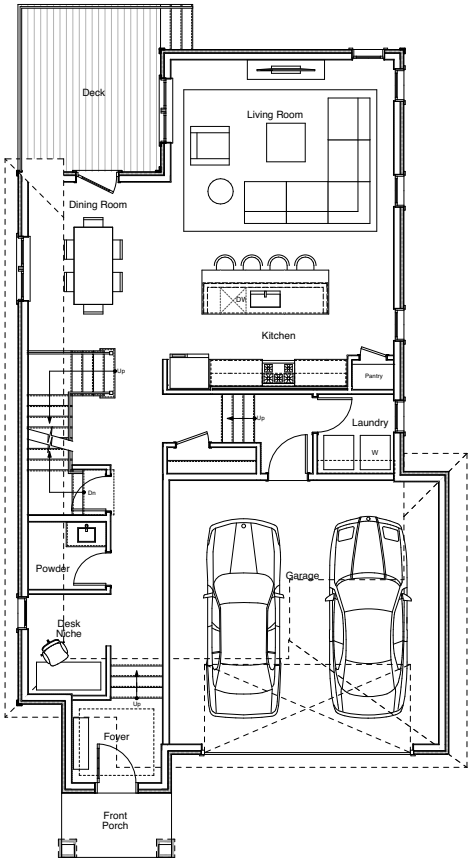
Current Site Plan
7/12/24

N

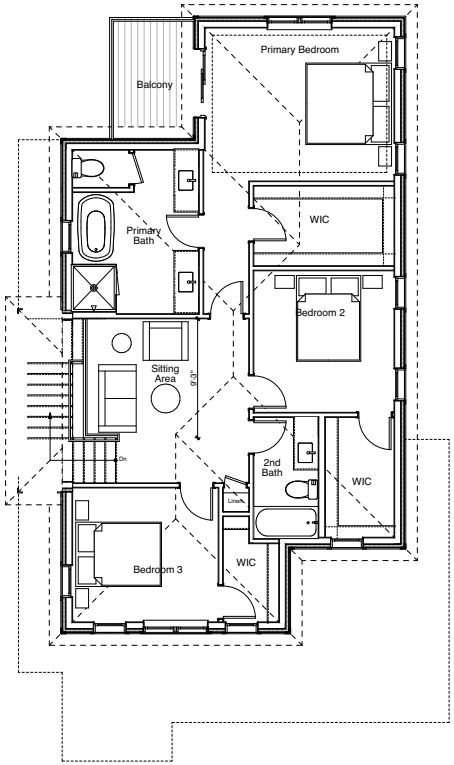
Pappageorge Haymes Partners



Alternate Entry



1st Floor Plan



2nd Floor Plan

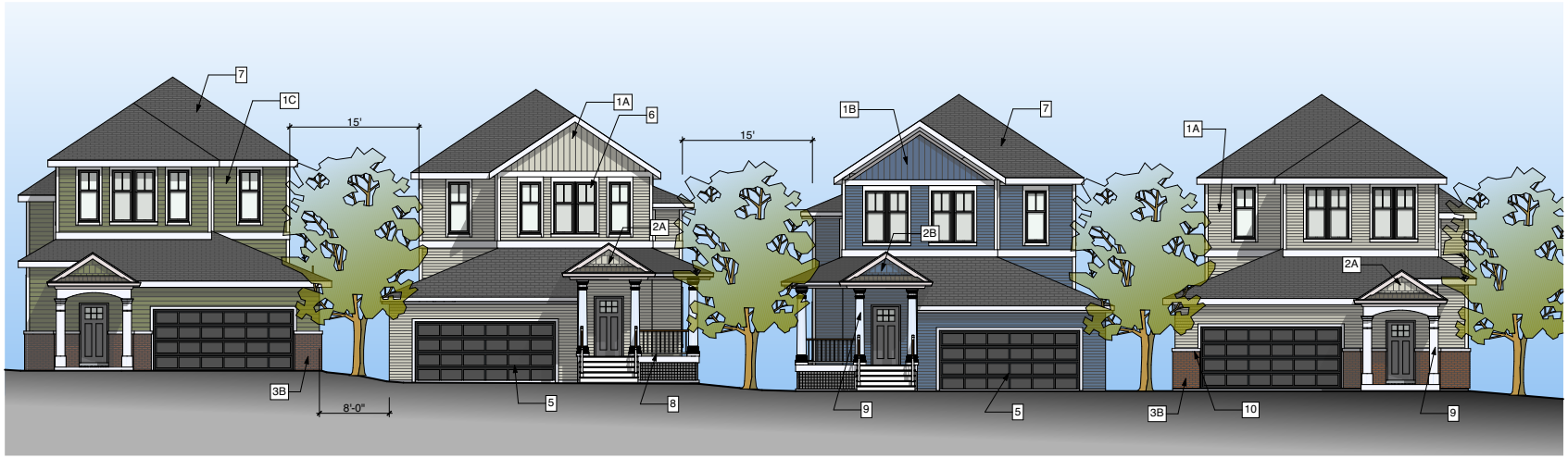
OSK Capital Partners

670 Old Rand Rd LLC
Lake Zurich, IL

Single Family Home Plan Type 1
7/12/24

N

Pappageorge Haymes Partners



Front Elevations of SIngle Family Homes at Interior Road

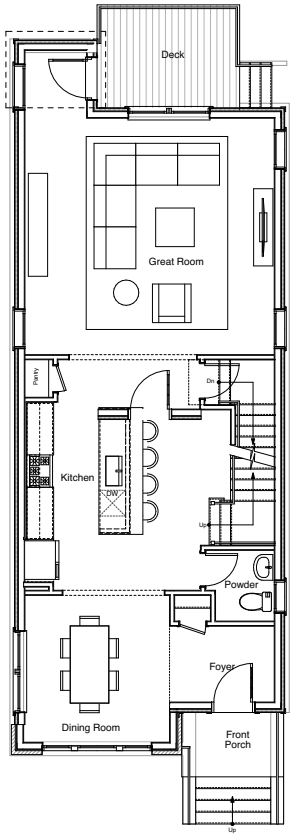
OSK Capital Partners

670 Old Rand Rd LLC
Lake Zurich, IL

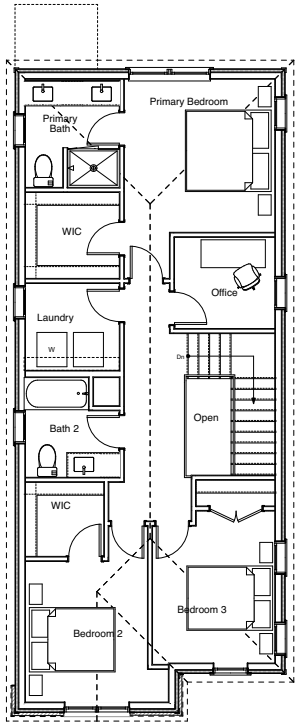
Single Family Home Type 1 Elevations
7/12/24

N

Pappageorge Haymes Partners



1st Floor Plan



2nd Floor Plan

OSK Capital Partners

670 Old Rand Rd LLC
Lake Zurich, IL

Single Family Home Plan Type 2
7/12/24

N

Pappageorge Haymes Partners

Single Family Home Elevations along Buesching Road

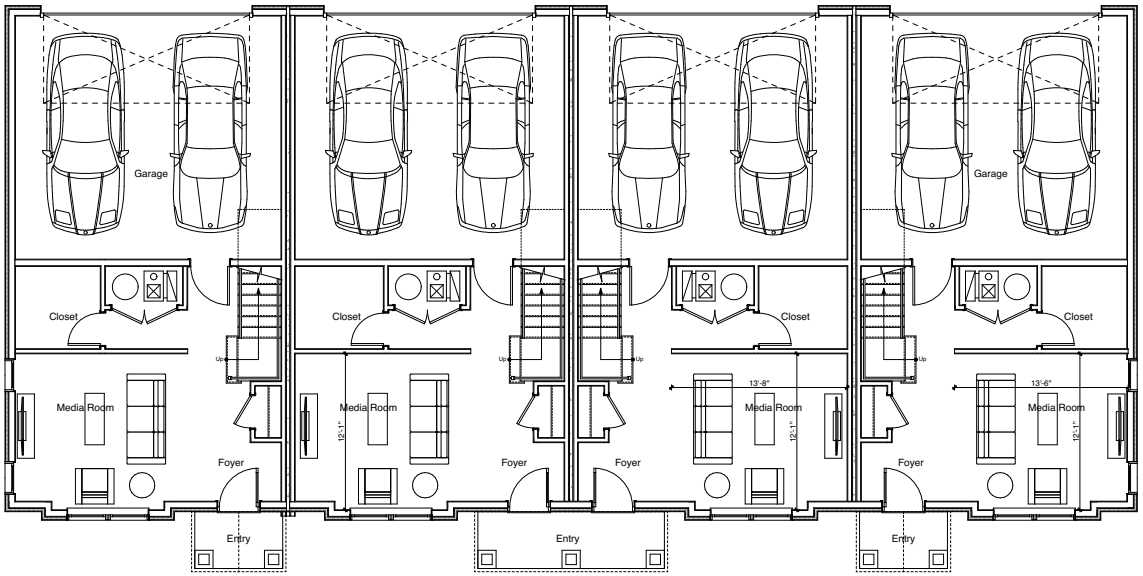
OSK Capital Partners

670 Old Rand Rd LLC
Lake Zurich, IL

Single Family Home Type 2 Elevations
7/12/24

N

Pappageorge Haymes Partners



1st Floor Plan

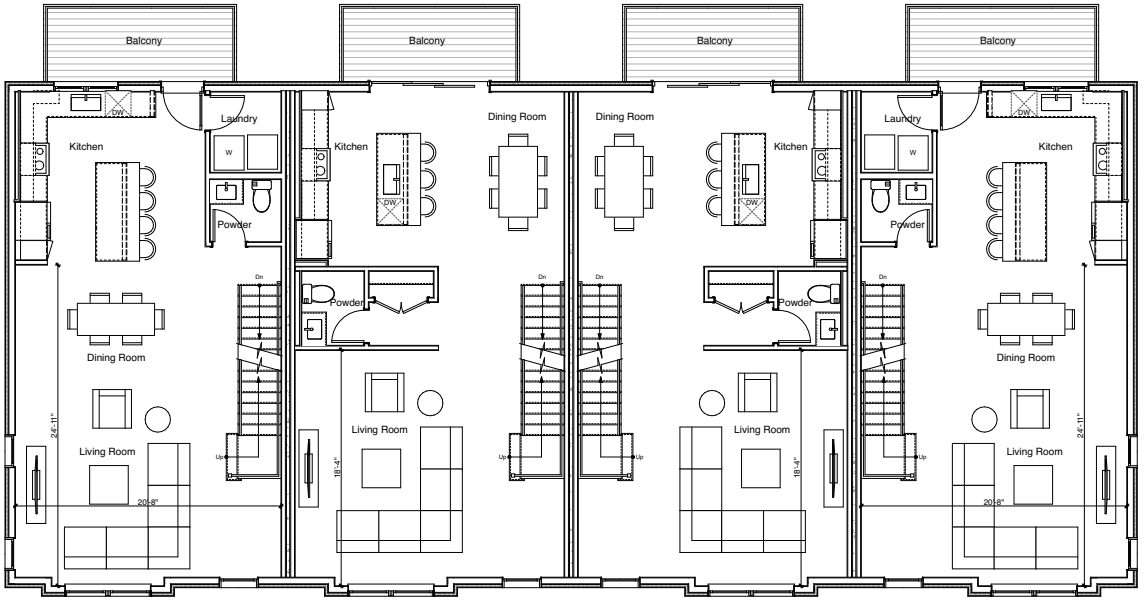
OSK Capital Partners

670 Old Rand Rd LLC
Lake Zurich, IL

Rowhome Building First Floor Plan
7/12/24

N

Pappageorge Haymes Partners



2nd Floor Plan

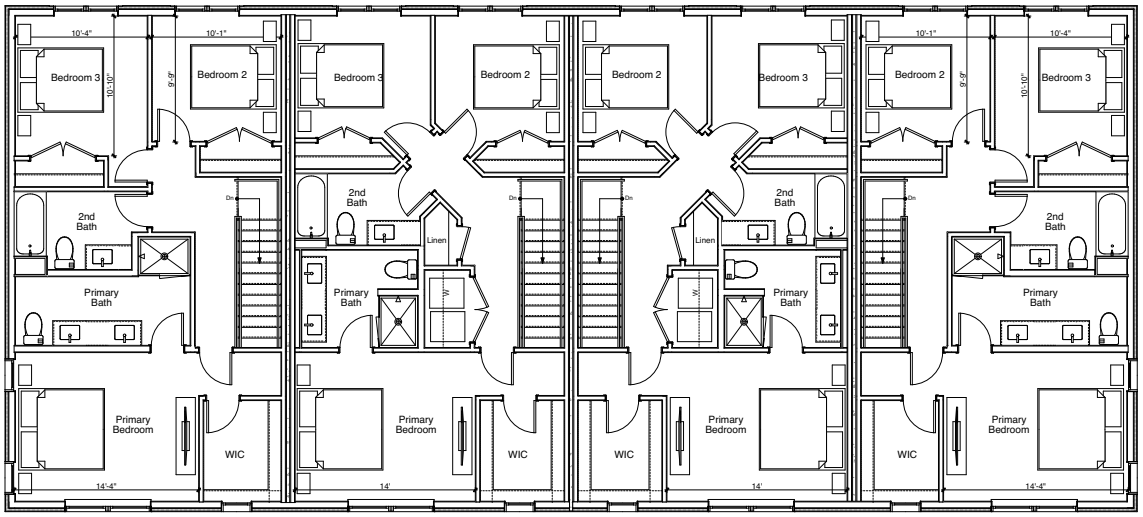
OSK Capital Partners

670 Old Rand Rd LLC
Lake Zurich, IL

Rowhome Building Second Floor Plan
7/12/24

N

Pappageorge Haymes Partners



3rd Floor Plan

OSK Capital Partners

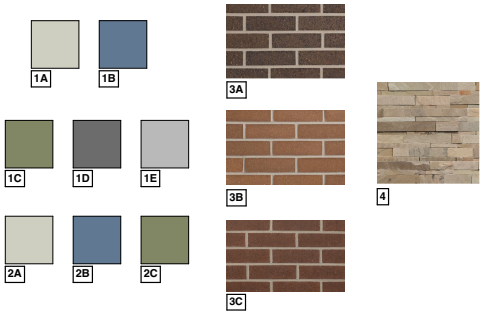
670 Old Rand Rd LLC
Lake Zurich, IL

Rowhome Building Third Floor Plan
7/12/24

N

Pappageorge Haymes Partners

Material Legend	
1	Prefinished Fiber Cement Siding
1A	Color A
1B	Color B
1C	Color C
1D	Color D
1E	Color E
2	Prefinished Fiber Cement Shakes
2A	Color A
2B	Color B
2C	Color C
3	Modular Masonry Brick
3A	Color A
3B	Color B
4	Cast Stone Base
5	Overhead Hollow Metal Door
6	Premium Vinyl Windows
7	Asphalt Shingles
8	Painted Wood Railing
9	Painted PVC Manufactured Column
10	Cast Stone Sill



OSK Capital Partners

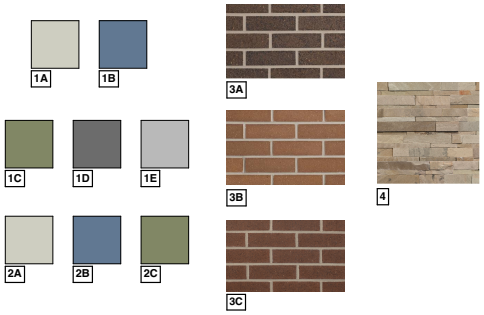
670 Old Rand Rd LLC
Lake Zurich, IL

Interior Rowhome Front Elevation
7/12/24

N

Pappageorge Haymes Partners

Material Legend	
1	Prefinished Fiber Cement Siding
1A	Color A
1B	Color B
1C	Color C
1D	Color D
1E	Color E
2	Prefinished Fiber Cement Shakes
2A	Color A
2B	Color B
2C	Color C
3	Modular Masonry Brick
3A	Color A
3B	Color B
4	Cast Stone Base
5	Overhead Hollow Metal Door
6	Premium Vinyl Windows
7	Asphalt Shingles
8	Painted Wood Railing
9	Painted PVC Manufactured Column
10	Cast Stone Sill



OSK Capital Partners

670 Old Rand Rd LLC
Lake Zurich, IL

Rand Rd Rowhome Front Elevation
7/12/24

N

Pappageorge Haymes Partners

Current View from 749 S Old Rand Rd

Current View from Farm Bridge Rd

Proposed View from 749 S Old Rand Rd

Proposed View from Farm Bridge Rd

OSK Capital Partners

670 Old Rand Rd LLC
Lake Zurich, IL

View from Neighboring Properties
7/12/24

N

Pappageorge Haymes Partners

Current View from Handley Court

Proposed View from Handley Court

OSK Capital Partners

670 Old Rand Rd LLC
Lake Zurich, IL

View from Neighboring Properties
7/12/24

N

Pappageorge Haymes Partners

OSK Capital Partners

670 Old Rand Rd LLC
Lake Zurich, IL

Rendering Aerial
7/12/24

N

Pappageorge Haymes Partners

OSK Capital Partners

670 Old Rand Rd LLC
Lake Zurich, IL

View at Central Green Space
7/12/24

N

Pappageorge Haymes Partners

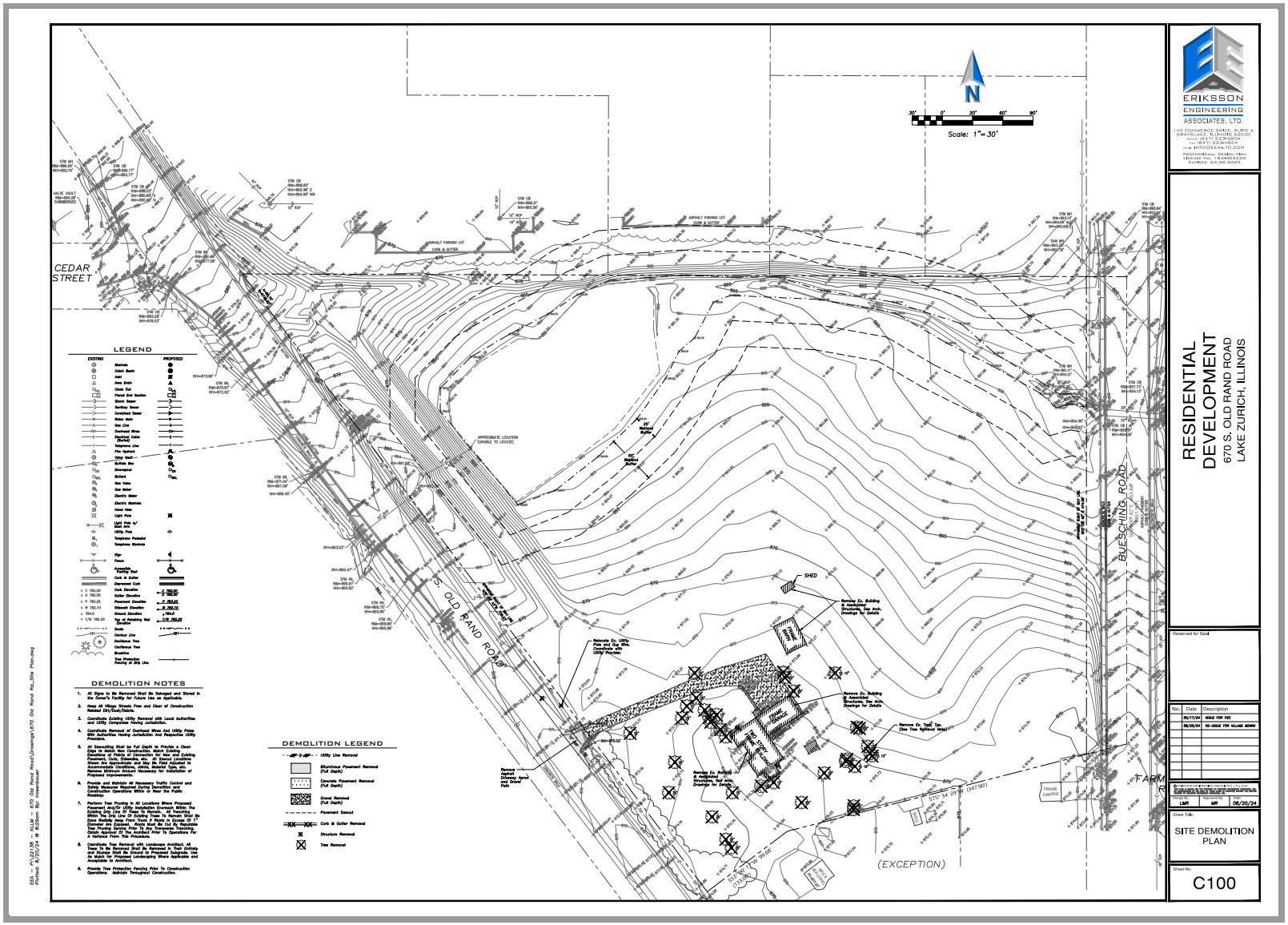
OSK Capital Partners

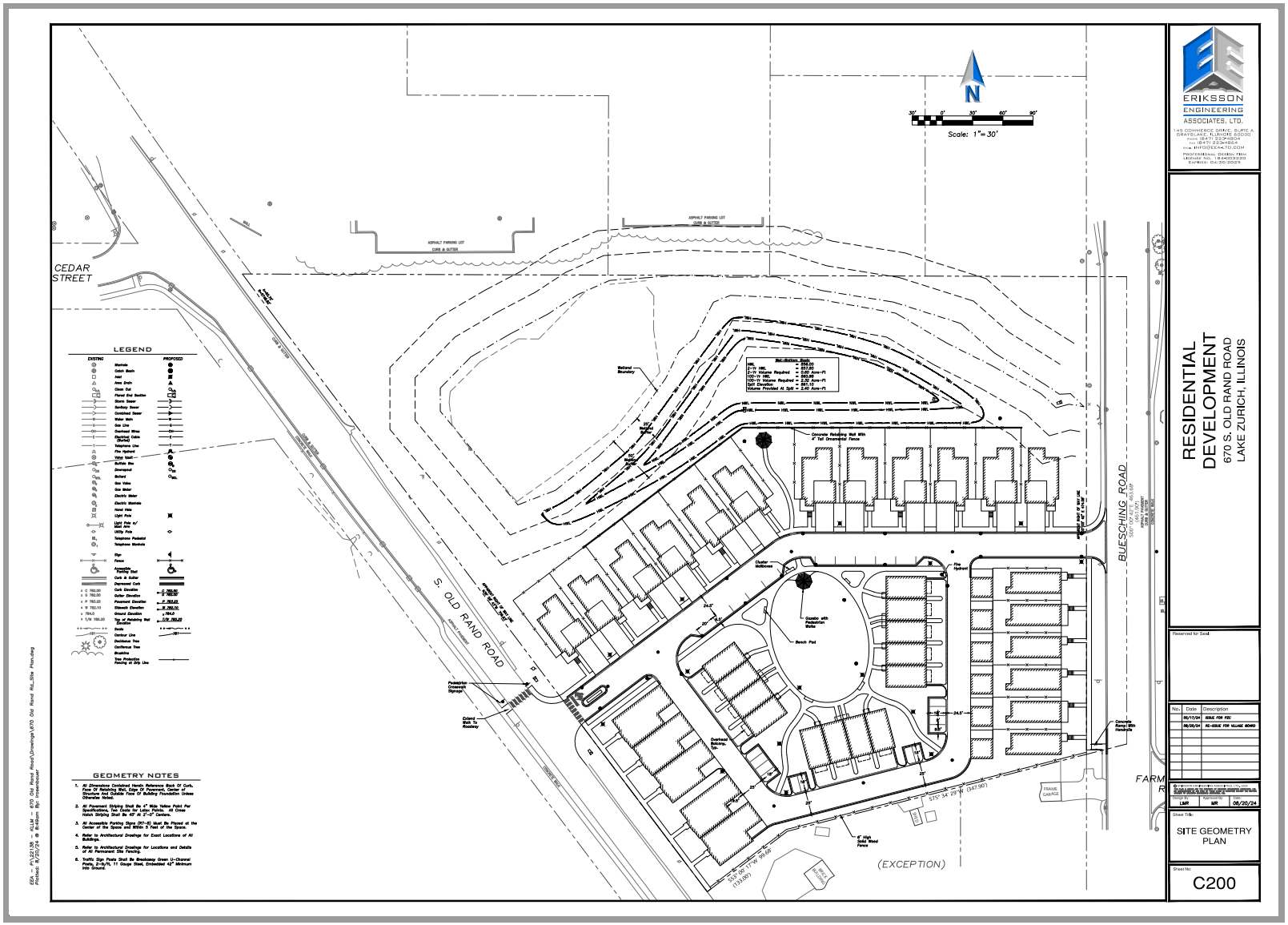
670 Old Rand Rd LLC
Lake Zurich, IL

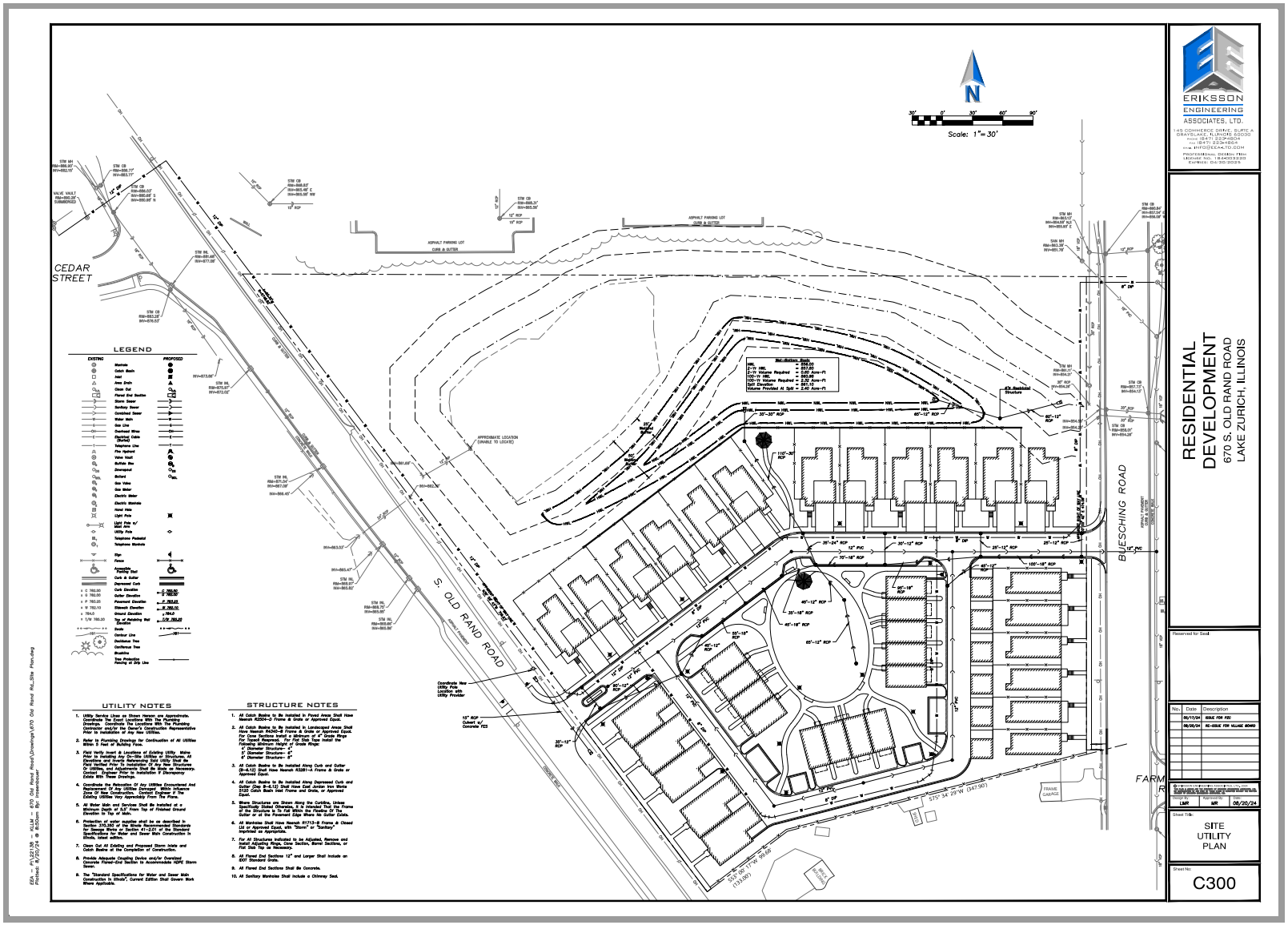
View from Buesching Rd
7/12/24

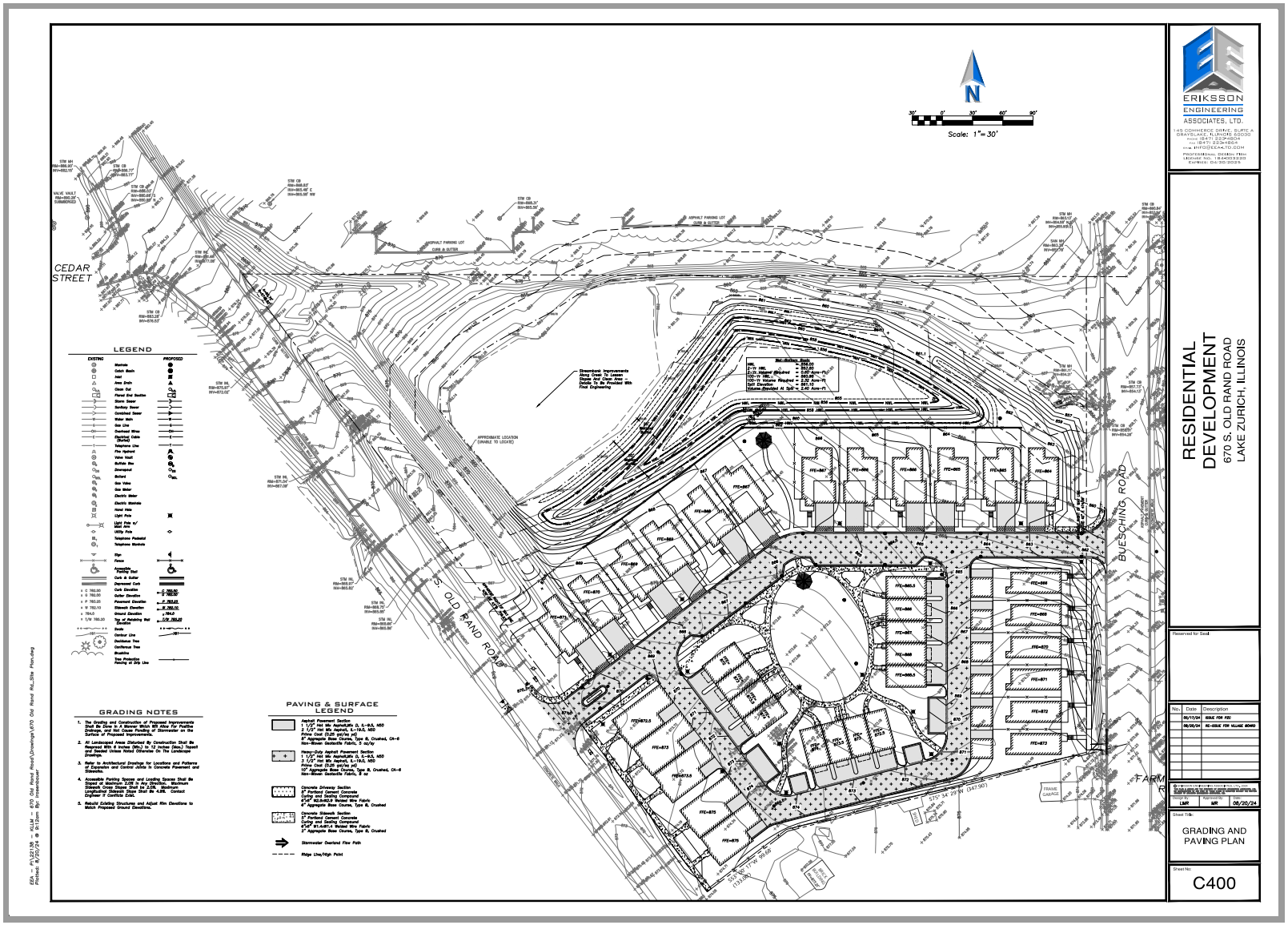
N

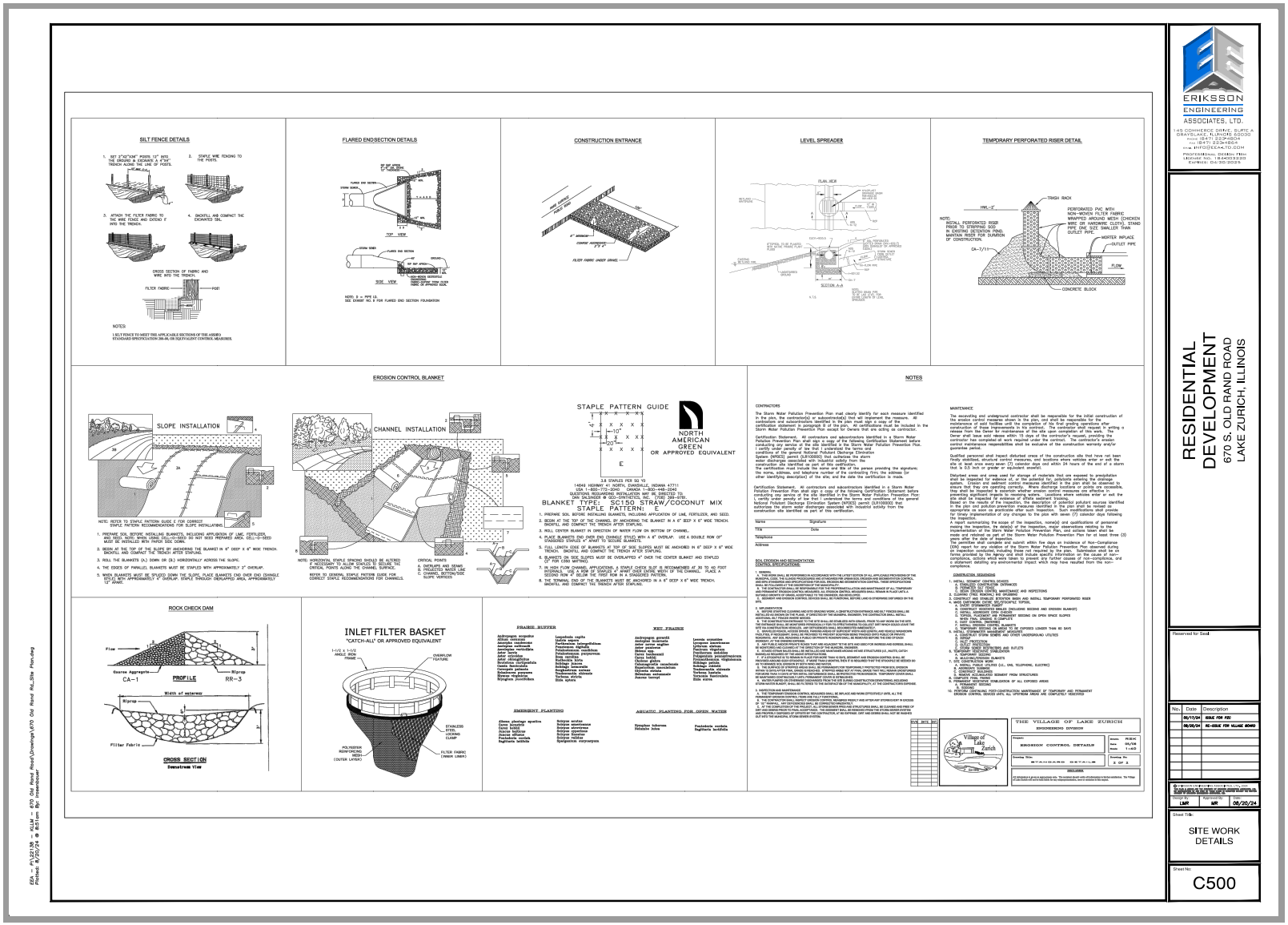
Pappageorge Haymes Partners


CEDAR STREET
S. OLD RAND ROAD
BUESCHING ROAD
FARM R
(EXCEPTION)
N
Scale: 1" = 30'
LEGEND
EXISTING
PROPOSED
DEMOLITION NOTES
DEMOLITION LEGEND
Utility Line Removal
Bituminous Pavement Removal (Full Depth)
Concrete Pavement Removal (Full Depth)
Gravel Removal (Full Depth)
Pavement Sawcut
Curb & Gutter Removal
Structure Removal
Tree Removal
ERIKSSON ENGINEERING ASSOCIATES, LTD.
RESIDENTIAL DEVELOPMENT
670 S. OLD RAND ROAD
LAKE ZURICH, ILLINOIS
Reserved for Seal
SITE DEMOLITION PLAN
C100


CEDAR STREET
S. OLD RAND ROAD
BUESCHING ROAD
LEGEND
EXISTING
PROPOSED
GEOMETRY NOTES
1. All Dimensions Contained Herein Reference Back Of Curb, Face Of Retaining Wall, Edge Of Pavement, Center of Structure Or Outside Face Of Building Foundation Unless Otherwise Noted.
2. All Pavement Striking Shall Be 4" Wide Yellow Paint Per Specifications, Two Coats Or Later Points. All Cross Hatch Striping Shall Be 40' At 2'-0" Centers.
3. All Accessible Parking Signs (R7-8) Must Be Placed at the Center of the Space and Within 3 Feet of the Space.
4. Refer to Architectural Drawings for Exact Locations of All Buildings.
5. Refer to Architectural Drawings for Locations and Details of All Permanent Site Fencing.
6. Traffic Sign Posts Shall Be Breakaway Green U-Channel Posts, 2-lb/ft, 11 Gauge Steel, Embedded 42" Minimum Into Ground.
Scale: 1"=30'
(EXCEPTION)
ERIKSSON ENGINEERING ASSOCIATES, LTD.
RESIDENTIAL DEVELOPMENT
670 S. OLD RAND ROAD
LAKE ZURICH, ILLINOIS
Reserved for Seal
No. | Date | Description
05/17/24 | ISSUE FOR PZC
06/20/24 | RE-ISSUE FOR VILLAGE BOARD
LMR | MR | 06/20/24
SITE GEOMETRY PLAN
C200

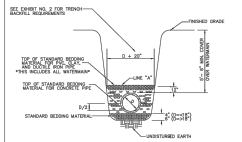

CEDAR STREET
S. OLD RAND ROAD
BUESCHING ROAD
FARM
Scale: 1" = 30'
LEGEND
EXISTING
PROPOSED
UTILITY NOTES
STRUCTURE NOTES
ERIKSSON ENGINEERING ASSOCIATES, LTD.
RESIDENTIAL DEVELOPMENT
670 S. OLD RAND ROAD
LAKE ZURICH, ILLINOIS
SITE UTILITY PLAN
C300


CEDAR STREET
S. OLD RAND ROAD
BUESCHING ROAD
FARM
N
Scale: 1"=30'
LEGEND
EXISTING
PROPOSED
GRADING NOTES
PAVING & SURFACE LEGEND
ERIKSSON ENGINEERING ASSOCIATES, LTD.
RESIDENTIAL DEVELOPMENT
670 S. OLD RAND ROAD
LAKE ZURICH, ILLINOIS
GRADING AND PAVING PLAN
C400


SILT FENCE DETAILS
FLARED ENDSECTION DETAILS
CONSTRUCTION ENTRANCE
LEVEL SPREADER
TEMPORARY PERFORATED RISER DETAIL
EROSION CONTROL BLANKET
SLOPE INSTALLATION
CHANNEL INSTALLATION
STAPLE PATTERN GUIDE
NORTH AMERICAN GREEN
OR APPROVED EQUIVALENT
BLANKET TYPE: SC150 STRAW/COCONUT MIX
STAPLE PATTERN: E
NOTES
ROCK CHECK DAM
CROSS SECTION
INLET FILTER BASKET
"CATCH-ALL" OR APPROVED EQUIVALENT
PRAIRIE BUFFER
WET PRAIRIE
EMERGENT PLANTING
AQUATIC PLANTING FOR OPEN WATER
ERIKSSON ENGINEERING ASSOCIATES, LTD.
RESIDENTIAL DEVELOPMENT
670 S. OLD RAND ROAD
LAKE ZURICH, ILLINOIS
THE VILLAGE OF LAKE ZURICH
ENGINEERING DIVISION
EROSION CONTROL DETAILS
SITE WORK DETAILS
C500

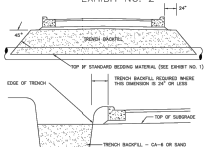
NOTE: DETAILS ARE NOT TO BE CHANGED IN ANY WAY. LEAVE ALL DETAILS ON SHEET EVEN IF THEY DO NOT APPLY TO CURRENT IMPROVEMENTS. CHANGING OF DETAILS DOES NOT CHANGE REQUIREMENTS.

EXHIBIT NO. 1



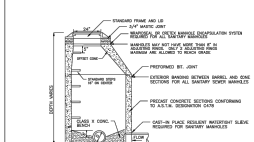
TYPICAL TRENCH AND STANDARD BEDDING

EXHIBIT NO. 2



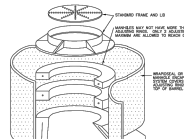
TRENCH BACKFILL

EXHIBIT NO. 3



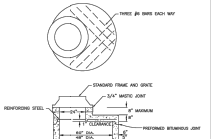
STANDARD MANHOLE

EXHIBIT NO. 4



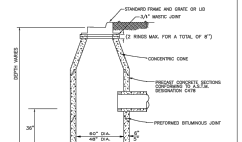
WRAPIDSEAL MANHOLE ENCAPSULATION SYSTEM

EXHIBIT NO. 5



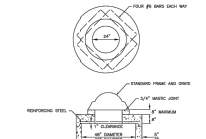
FLAT TOP FOR RESTRICTED DEPTH MANHOLE

EXHIBIT NO. 7



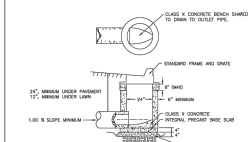
CATCH BASIN

EXHIBIT NO. 8



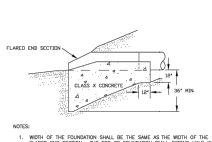
FLAT SLAB TOP FOR RESTRICTED DEPTH C.B.

EXHIBIT NO. 9



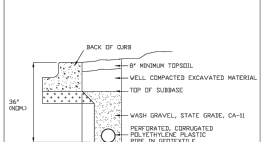
INLET

EXHIBIT NO. 10



FOUNDATION FOR FLARED END SECTION

EXHIBIT NO. 11



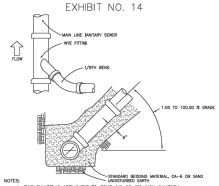
UNDERDRAIN

EXHIBIT NO. 12

STREET	PAVEMENT DESIGN
MAJOR	4" GRANULAR SUB-BASE 9" BITUMINOUS AGGREGATE MIXTURE 2" BITUMINOUS BINDER COURSE 2" BITUMINOUS SURFACE COURSE
COLLECTOR	3" GRANULAR SUB-BASE 6" BITUMINOUS AGGREGATE MIXTURE 2" BITUMINOUS BINDER COURSE 1 1/2" BITUMINOUS SURFACE COURSE
MINOR	3" AGGREGATE BASE COURSE 5" BITUMINOUS AGGREGATE MIXTURE 2" 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

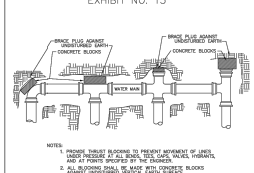
MINIMUM STANDARDS FOR STREET DESIGN

EXHIBIT NO. 14



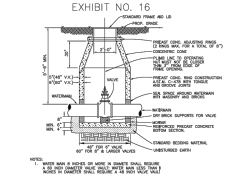
SANITARY SERVICE CONNECTION

EXHIBIT NO. 15



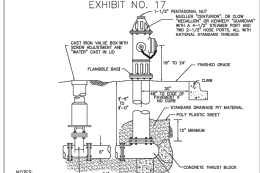
THRUST BLOCK

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 1/10/03
SCALE NTS
DESIGNED BY DESIGN
DRAWN BY DTM
CHECKED BY EL

SHEET 1 / 3

© COPYRIGHT 2003 VILLAGE OF LAKE ZURICH DETAILS

ERIKSSON ENGINEERING ASSOCIATES, LTD.
45 COMMERCE DRIVE, SUITE A
GRAYSLAKE, ILLINOIS 60030
PHONE (847) 223-4804
FAX (847) 223-4864
WWW.ERIKSSONLTD.COM
PROFESSIONAL DESIGN FIRM
LICENSE NO.: 184.003220
EXPIRES: 04/30/2025

RESIDENTIAL DEVELOPMENT
670 S. OLD RAND ROAD
LAKE ZURICH, ILLINOIS

Reserved for Seal

No.	Date	Description
	05/17/24	ISSUE FOR PZC
	06/20/24	RE-ISSUE FOR VILLAGE BOARD

DESIGNED LMR | DRAWN MR | CHECKED 06/20/24

Sheet Title: SITE WORK DETAILS

Sheet No: C501

EEA – P\25238 – KLLM – 670 Old Rand Road\Drawings\670 Old Rand Rd_Site Plan.dwg
Plotted: 6/20/24 @ 8:50am By: lroseboom

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. 13

THESE STANDARDS SUPERCEDE ALL OTHER STANDARDS

LAKE ZURICH UTILITY MATERIAL STANDARDS

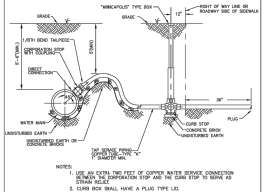
SANITARY SEWER

Pipe	PVC, SDR – 26, meeting requirements of ASTM – 3034 Gasketed Joint / Cell Classification 12454 – B Ductile Iron Pipe, Class 52 with Service Laterals: PVC, SDR 42 or better, SDR 35 or 26
Bedding Materials	1/4" to 3/4" crushed stone, size CA–7 to CA–11, 12" over the top of pipe
Manholes	Pre–Cast Concrete with Bench and Rubber Boots Cast Iron Frames and Lids: Neenah Type 1 self–sealing Marked "Sanitary Sewer" Manufactured Manhole Encapsulation System is required on all sanitary manholes Contractor shall be qualified by manufacturer to apply the Manufactured Concrete manholes must be watertight and sealed as required Manhole must be water tight and sealed from the outside
Casting	Fiberglass straps Casting must be ductile iron or steel Manufactured pipe stocks must be used between the pipe and casting Pea gravel must be jetted through the casing, with concrete mortar on the ends Casing to be installed as required by the "Standard Specifications for Water and Sewer Construction in Illinois" 5th Edition, 1996, 4th all services considered as mains If PVC pipe (DR35) is used, #8 solid copper tracing wire is required for locating purposes
Forcemain	
WATERMAIN	
Fire Hydrants	Clow Medallion, 5 1/4 " with Auxiliary Valve Kennedy Guardian, 5 1/4 " with Auxiliary Valve Waterous Pacer WB–67–250, 5 1/4 " with Auxiliary Valve 5 1/4 " three–way (2 hose nozzles and 1 pumper nozzle) Painted Safety Red
Pipe	Class 52 Ductile Iron, cement lined, Megalugs Series 1100 required at all fittings Polywrap (8 mil minimum with polyethylene film is not permitted
Bedding Materials	1/4" to 3/4" crushed stone, size CA–7 to CA–11, 12" over the top of pipe
Valves	Clow, American Flow Control Kennedy Resilient Wedge Mueller Resilient Wedge, M&H series 500 MRS Resilient Wedge Valve UL/FM Gerared Mueller Resilient Wedge Valve Non–Rising Stem, Mechanical Joint Gate valves must be used on 6" and smaller Type 1 self–sealing Marked "Water"
Manholes	Cast Iron or Ductile Iron or steel Cast sealing manhole cover cast iron or steel Manufactured pipe stocks must be used between the pipe and casting Pea gravel must be jetted through the casing, with concrete mortar on the ends Casing to be installed as required by the "Standard Specifications for Water and Sewer Construction in Illinois" 5th Edition, 1996, 4th all services considered as mains
Corporation Stop	Mueller H – 15000 – 1" Size AY McDonald 4701
Roundarg	Mueller H–15014 – 1" Stop, Minneapolis Pattern
B–Box	AY McDonald 6101
	Mueller H – 10360 Upper section inside diameter 1 1/4" Mueller H – 10302 Upper section inside diameter 1 1/2"
Service Line	Type K Copper, or as required by plumbing code
Tapping Sleeve	Double banded Stainless Steel Tapping Sleeve with 1" corporation stop
Hardware	All nuts and bolts below grade shall be stainless steel

WATERMAIN INSTALLATION SPECIFICATIONS

1. Watermains shall not be exposed for any reason without the approval of the Superintendent – Utilities.
2. Filling mains, pressure connections, pressure tests, tie–ins, and chlorinations require 48–hour notification to the Superintendent – Utilities.
3. Pressure connections and tie–ins to the Village systems will be scheduled and witnessed by the Utilities Division personnel.
4. Once mains are tied to the Village system, no valves or hydrants shall be operated by anyone other than Utility Division personnel.
5. Filling and flushing will be done by the Utilities Division only.
6. Water for pressure tests will be supplied by the Utilities Division, but it is the responsibility of the contractor to provide a backflow preventer or an approved anti–siphon method before the pump.
7. Corporation cocks and 1" copper lines for the chlorination and sampling shall be installed at locations determined by the Utilities Division.
8. Chlorination will not be performed on service lines until all final permanent water valves are installed.
9. Water vaults for 6" valves and larger must have on inside diameter of 60".

EXHIBIT NO. 18



NOTES:
1. USE AN EXTRA TWO FEET OF COPPER WATER SERVICE CONNECTION BETWEEN THE CORPORATION STOP AND THE CURB STOP TO SERVE AS STRAIN RELIEF.
2. CURB BOX SHALL HAVE A PLUG TYPE LID.
3. SEE EXHIBIT NO. 13 FOR APPROVED FITTING DESCRIPTIONS.

WATER SERVICE CONNECTION

EXHIBIT NO. 19

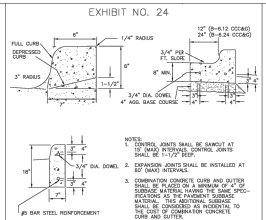
STREET	RIGHT–OF WAY WIDTH	PAVEMENT WIDTH	RADIUS OF HORZ. CURVES	LENGTH OF VERT. CURVES	TANGENT BETWEEN REVERSE CURVES	MAXIMUM GRADE	MINIMUM GRADE	SIGHT DISTANCE
MAJOR	100 FT.	64 FT.	500 FT.	200 FT.	200 FT.	8%	0.5%	500 FT.
COLLECTOR	80 FT.	44 FT.	400 FT.	200 FT.	200 FT.	8%	0.5%	400 FT.
MINOR	60 FT.	30 FT.	150 FT.	100 FT.	—	8%	0.5%	200 FT.
CUL–DE–SAC	100 FT.	84 FT.	150 FT.	100 FT.	—	8%	0.5%	200 FT.
MARGINAL ACCESS	60 FT.	30 FT.	400 FT.	200 FT.	100 FT.	8%	0.5%	200 FT.
IN BUSINESS AND RO–100	100 FT.	54 FT.	500 FT.	200 FT.	200 FT.	8%	0.5%	500 FT.
INDUSTRIAL SOD								

*PAVEMENT WIDTHS ARE MEASURED BACK OF CURB TO BACK OF CURB AND INCLUDE ADDITIONAL WIDTH FOR ON–STREET PARKING.

(a) FIFTY (50) FEET FOR EACH ONE (1) PERCENT ALGEBRAIC DIFFERENCE OF GRADE BUT IN NO CASE LESS THAN TWO HUNDRED (200) FEET.
(b) FIFTY (50) FEET FOR EACH ONE (1) PERCENT ALGEBRAIC DIFFERENCE OF GRADE BUT IN NO CASE LESS THAN ONE HUNDRED (100) FEET.

MINIMUM STANDARDS FOR STREET DESIGN

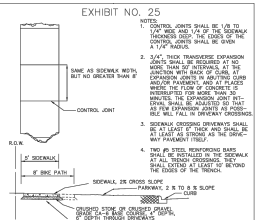
EXHIBIT NO. 24



NOTES:
1. CONTROL JOINTS SHALL BE SAWCUT AT 10' (MAX) INTERVALS. CONTROL JOINTS SHALL BE 1–1/2" DEEP.
2. EXPANSION JOINTS SHALL BE INSTALLED AT 80' (MAX) INTERVALS.
3. COMBINATION CONCRETE CURB AND GUTTER SHALL BE PLACED ON A MINIMUM OF 4" OF CRUSHED STONE CA–6 OR GRADE CA–4 BASE COURSE, AS SPECIFICATIONS ALL THE PAVEMENT SUBBASE MATERIAL. THIS ADDITIONAL SUBBASE SHALL BE CONSIDERED AS INCIDENTAL TO THE COST OF COMBINATION CONCRETE CURB AND GUTTER.
4. SUBBASE IS TO BE CA–6 OR GRADE 9.

BARRIER CURB

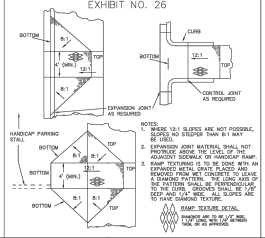
EXHIBIT NO. 25



NOTES:
1. CONTROL JOINTS SHALL BE 1/8 TO 1/4" WIDE AND 1/4 OF THE SIDEWALK THICKNESS DEEP. AT CURVES ON THE CONTROL JOINTS SHALL BE EVEN A 1–1/4" RADIUS.
2. 3/4" THICK TRANSVERSE EXPANSION JOINTS SHALL BE REQUIRED AT NO MORE THAN 50' INTERVALS, AT THE JUNCTION WITH BACK OF CURB, AT JUNCTIONS WITH CURB AND GUTTER AND/OR PAVEMENT, AND AT PLACES WHERE THE FLOW OF CONCRETE IS INTERRUPTED BY OTHER WORK OR MANHOLES. THE EXPANSION JOINT INTERVAL SHALL BE ADJUSTED SO THAT AS FEW EXPANSION JOINTS AS POSSIBLE WILL FALL IN DRIVEWAY CROSSINGS.
3. SIDEWALK CROSSING DRIVEWAYS SHALL BE AT LEAST 6" THICK AND SHALL BE REINFORCED AS REQUIRED BY THE DRIVEWAY PAVEMENT ITSELF.
4. TWO #5 STEEL REINFORCING BARS SHALL BE INSTALLED IN THE SIDEWALK AT ALL TRENCH CROSSINGS. THEY SHALL EXTEND AT LEAST 10' BEYOND THE EDGES OF THE TRENCH.

SIDEWALK

EXHIBIT NO. 26

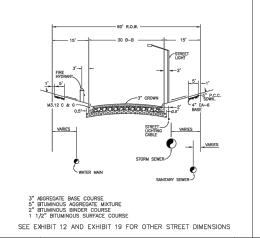


NOTES:
1. WHERE 12:1 SLOPES ARE NOT POSSIBLE, SLOPES NO STEEPER THAN 8:1 MAY BE USED.
2. EXPANSION JOINT MATERIAL SHALL NOT PROTRUDE ABOVE THE LEVEL OF THE ADJACENT SIDEWALK OR HANDICAP RAMP.
3. RAMP TEXTURING IS TO BE DONE WITH AN EXPANDED METAL GRATE PLACED AND REMOVED WHILE THE CONCRETE IS STILL IN A SHAKING PATTERN. THE LONG AXIS OF THE PATTERN SHALL BE PERPENDICULAR TO THE RAMP. THE GRATE SHALL BE 1/8" DEEP AND 1/4" WIDE. ALL SLOPES ARE TO HAVE DIAMOND TEXTURE.

RAMP TEXTURE DETAIL
*RAMPS ARE TO BE 1/2" WIDE, 1/4" DEEP WITH 1/4" BETWEEN THEM, OR AS APPROVED.

UTILITY MATERIAL STANDARDS

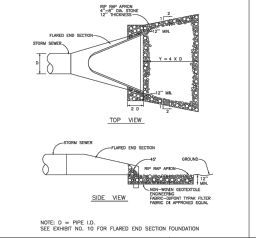
HANDICAP RAMP



3" AGGREGATE BASE COURSE
5" BITUMINOUS AGGREGATE MIXTURE
2" BITUMINOUS BINDER COURSE
1 1/2" BITUMINOUS SURFACE COURSE

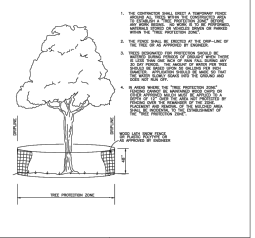
SEE EXHIBIT 12 AND EXHIBIT 19 FOR OTHER STREET DIMENSIONS

TYPICAL MINOR STREET DESIGN DETAIL

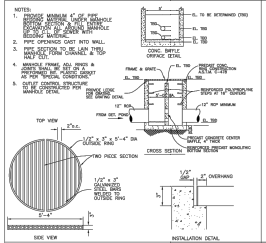


NOTE: D = PIPE I.D.
SEE EXHIBIT NO. 10 FOR FLARED END SECTION FOUNDATION

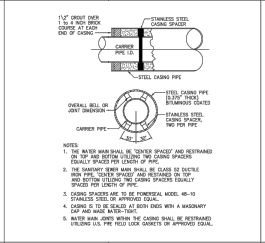
FLARED END SECTION RIP RAP



TREE PROTECTION FENCE

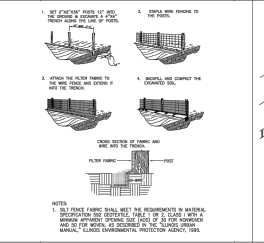


OUTLET CONTROL STRUCTURE



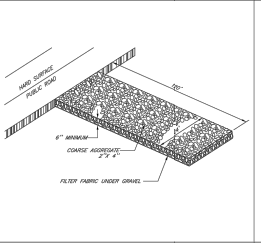
NOTES:
1. THE WATER MAIN SHALL BE "CENTER SPACED" AND RESTRAINED ON "TOP" AND BOTTOM UTILIZING TWO CASING SPACERS EQUALLY SPACED PER LENGTH OF PIPE.
2. THE SANITARY SEWER MAIN SHALL BE CLASS 52 DUCTILE IRON PIPE, "CENTER SPACED" AND RESTRAINED ON TOP AND BOTTOM UTILIZING TWO CASING SPACERS EQUALLY SPACED PER LENGTH OF PIPE.
3. CASING SPACERS ARE TO BE POWERSEAL MODEL 4S–10 STAINLESS STEEL OR APPROVED EQUAL.
4. CASING IS TO BE SEALED AT BOTH ENDS WITH A MASONRY SEAL OR APPROVED EQUAL.
5. WATER MAIN JOINTS WITHIN THE CASING SHALL BE RESTRAINED USING U.S. PIPE FIELD LOCK GASKETS OR APPROVED EQUAL.

PIPE CASING DETAIL

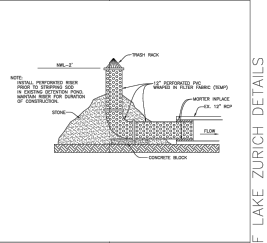


NOTES:
1. SILT FENCE FABRIC SHALL MEET THE REQUIREMENTS IN MATERIAL SPECIFICATION 592 (GEOTEXTILE, TABLE 1 OR 2, CLASS 1 WITH A MINIMUM APPARENT OPENING SIZE (AOS) OF 30 FOR NONWOVEN AND 70 FOR WOVEN) OF THE "ILLINOIS URBAN MANUAL," ILLINOIS ENVIRONMENTAL PROTECTION AGENCY, 1995.

SILT FENCE DETAIL



GRAVEL CONSTRUCTION ENTRANCE



TEMPORARY PERFORATED RISER DETAIL

VILLAGE OF LAKE ZURICH 70 EAST MAIN STREET LAKE ZURICH, IL 60047 (847) 540–1694	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

© COPYRIGHT 2003

ERIKSSON ENGINEERING ASSOCIATES, LTD.
45 COMMERCE DRIVE, SUITE A
GRAYSLAKE, ILLINOIS 60030
PHONE (847) 223–4804
FAX (847) 223–4864
www.ERIKSSONENGR.COM
PROFESSIONAL DESIGN FIRM
LICENSE NO.: 184.003220
EXPIRES: 04/30/2025

RESIDENTIAL DEVELOPMENT
670 S. OLD RAND ROAD
LAKE ZURICH, ILLINOIS

Reserved for Seal

No.	Date	Description
	05/17/24	ISSUE FOR PZC
	06/20/24	RE–ISSUE FOR VILLAGE BOARD

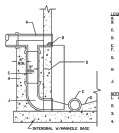
Drawn By	Approved By	Date
LMR	MR	06/20/24

Sheet Title: SITE WORK DETAILS

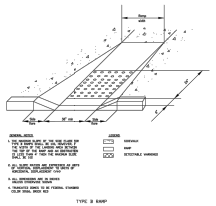
Sheet No: C502

EEA – P:\2021\21-XXX – 670 Old Rand Road\Drawings\670 Old Rand Rd_Site Plan.dwg
Plotted: 6/20/24 @ 8:57am By: lmeinhaber

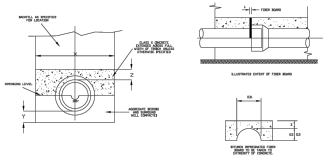
NOTE: DETAILS ARE NOT TO BE CHANGED IN ANY WAY. LEAVE ALL DETAILS ON SHEET EVEN IF THEY DO NOT APPLY TO CURRENT IMPROVEMENTS. CHANGING OF DETAILS DOES NOT CHANGE REQUIREMENTS.



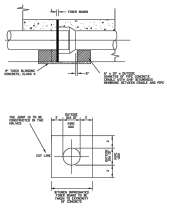
OUTSIDE DROP PIPE DETAIL



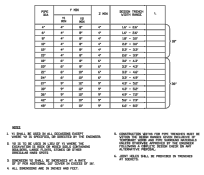
HANDICAP RAMP DETAIL



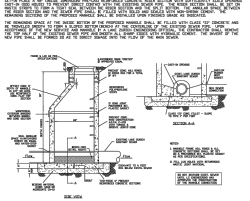
MASS CONCRETE ARCH



FLEXIBLE JOINT



BEDDING DETAILS: PIPES IN SINGLE TRENCHES



STANDARD MH CONSTRN. OVER EXSTG SEWER

VILLAGE OF LAKE ZURICH
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 EL

SHEET 3

VILLAGE OF LAKE ZURICH DETAILS

© COPYRIGHT 2003

ERIKSSON ENGINEERING ASSOCIATES, LTD.
45 COMMERCE DRIVE, SUITE A
GRAYSLAKE, ILLINOIS 60030
PHONE (847) 223-4804
FAX (847) 223-4864
WWW.ERIKSSONLTD.COM
PROFESSIONAL DESIGN FIRM
LICENSE NO.: 184.003220
EXPIRES: 04/30/2025

RESIDENTIAL DEVELOPMENT
670 S. OLD RAND ROAD
LAKE ZURICH, ILLINOIS

Reserved for Seal

No.	Date	Description
	05/17/24	ISSUE FOR PZC
	06/20/24	RE-ISSUE FOR VILLAGE BOARD

All information contained herein is the property of Eriksson Engineering Associates, Ltd. and is not to be used in any way without the written permission of Eriksson Engineering Associates, Ltd.

Project Engineer	Approved By	Date
LMR	MR	06/20/24

Sheet Title:
SITE WORK DETAILS

Sheet No:
C503

EEA — P\122.38 — ALLM — 670 Old Rand Road\Drawings\670 Old Rand Rd_Site Plan.dwg
Plotted: 6/20/24 @ 8:57am By: lmeinhauser

PLANT SCHEDULE

CODE	BOTANICAL / COMMON NAME	COND	SIZE	QTY
CANOPY TREES				
ACE SYM	ACER X FREEMANII / FREEMAN MAPLE	B & B	2.5" CAL.	15
CEL OCC	CELTIS OCCIDENTALIS / COMMON HACKBERRY	B & B	2.5" CAL.	13
GLE TRI	GLEDITSIA TRIACANTHOS INERMIS 'SKYLINE' / INDERMLESS SKYLINE HONEYLOCUST	B & B	2.5" CAL.	18
GYM DIO	GYMNOCLADUS DIOICA 'ESPRESSO' / KENTUCKY COFFEETREE	B & B	2.5" CAL.	9
QUE BIC	QUERCUS BICOLOR / SWAMP WHITE OAK	B & B	3" CAL.	5
TAX MIC	TAXODIUM DISTICHUM 'MICKELSON' TM / MICKELSON BALD CYPRESS	B & B	2.5" CAL.	3
TIL AMO	TILIA AMERICANA 'REDMOND' / REDMOND AMERICAN LINDEN	B & B	2.5" CAL.	6
EVERGREEN TREES				
PIC ABI	PICEA ABIES / NORWAY SPRUCE	B & B	6' HT.	11
PIC GEN	PICEA GLAUCA 'DENSATA' / BLACK HILLS SPRUCE	B & B	6' HT.	6
PIN STR	PINUS STROBUS / WHITE PINE	B & B	6' HT.	18
THU TEC	THUJA OCCIDENTALIS 'TECHNY' / TECHNY ARBORVITAE	B & B	6' HT.	18
UNDERSTORY TREES				
AME CAN	AMELANCHIER CANADENSIS / CANADIAN SERVICEBERRY	B & B	6' CLUMP	3
BET NIG	BETULA NIGRA / RIVER BIRCH	B & B	6' CLUMP	9
CER CAN	CERCIS CANADENSIS / EASTERN REDBUD	B & B	6' CLUMP	7
SYR RET	SYRINGA RETICULATA / JAPANESE TREE LILAC	B & B	3" CAL.	18
CODE	**BOTANICAL / COMMON NAME**	**COND**	**SIZE**	**QTY**
DECIDUOUS SHRUBS				
ARO MEM	ARONIA MELANOCARPA 'MORTON' TM / IROQUOIS BEAUTY BLACK CHOKEBERRY	B & B	36" HT.	48
COR AME	CORYLUS AMERICANA / AMERICAN HAZELNUT	B & B	36" HT.	38
COT ACU	COTONEASTER ACUTIFOLIUS / PEKING COTONEASTER	B & B	36" HT.	28
DIE KOD	DIERVILLA X 'SONDIERVA' / KODIAK® ORANGE DIERVILLA	CONT.	36" HT.	11
FOT AIR	FOTHERGILLA GARDENII 'MT. AIRY' / MOUNT AIRY FOTHERGILLA	CONT.	36" HT.	11
HYD ANN	HYDRANGEA ARBORESCENS 'ANNABELLE' / ANNABELLE SMOOTH HYDRANGEA	B & B	36" HT.	21
KER ODE	KERRIA JAPONICA 'GOLDEN GUINEA' / GOLDEN JAPANESE KERRIA	B & B	24" HT.	41
PHY MIN	PHYSOCARPUS 'SNOLESTOUS' / NINEBARK®	B & B	36" HT.	19
RHU GRO	RHUS AROMATICA 'GRO-LOW' / GRO-LOW FRAGRANT SUMAC	CONT.	24" HT.	13
RHU GRO	RHUS AROMATICA 'GRO-LOW' / GRO-LOW FRAGRANT SUMAC	CONT.	24" HT.	13
RIB GRE	RIBES ALPINUM 'GREEN MOUND' / GREEN MOUND ALPINE CURRANT	B & B	24" HT.	48
ROS FLO	ROSA X 'FLOWER CARPET CORAL' / ROSE	CONT.	24" SPREAD	47
SPI JAP	SPIRAEA JAPONICA 'LITTLE PRINCESS' / LITTLE PRINCESS JAPANESE SPIREA	CONT.	24" HT.	88
SYR MEY	SYRINGA MEYERI 'PALIBIN' / DWARF KOREAN LILAC	B & B	24" HT.	23
SYR WLD	SYRINGA X 'BLOOMERANG' / LILAC	B & B	36" HT.	28
VIB MEC	VIBURNUM DENTATUM 'BLUE MISTY' / SOUTHERN ARROWWOOD	B & B	36" HT.	17
VIB SLA	VIBURNUM PRUNIFOLIUM / BLACKHAW VIBURNUM	B & B	36" HT.	19
EVERGREEN SHRUBS				
JUN DEI	JUNIPERUS CHINENSIS 'KALLAY'S COMPACT' / KALLAY COMPACT PFITZER JUNIPER	B & B	24" SPREAD	45
JUN FOR	JUNIPERUS CHINENSIS 'SEA GREEN' / SEA GREEN JUNIPER	B & B	24" SPREAD	23
TAX DEN	TAXUS X MEDIA 'DENSIFORMIS' / DENSE YEW	B & B	36" HT.	62
THU WOO	THUJA OCCIDENTALIS 'WOODWARDII' / WOODWARD ARBORVITAE	B & B	36" HT.	15
GRASSES				
CAL KOE	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER' / FEATHER REED GRASS	CONT.	#1	87
PAN NOR	PANICUM VIRGATUM 'NORTH WIND' / NORTHWIND SWITCH GRASS	CONT.	#1	61
SPO HET	SPOROBOLUS HETEROLEPIS / PRAIRIE DROPSEED	CONT.	#1	39
CODE	**BOTANICAL / COMMON NAME**	**COND**	**SIZE**	**QTY**
PERENNIALS				
ALL SAN	ALLIUM TANGUTICUM 'SUMMER BEAUTY' / SUMMER BEAUTY GLOBE LILY	CONT.	#1	24
ECH PUR	ECHINACEA X 'PIXIE FALLS' / PIXIE FALLS RED SWORD / ARIZONA RED BLANKETFLOWER	CONT.	#1	64
HEM HAO	HEMEROCALLIS 'STELLA DE ORO DAYLIL' / STELLA DE ORO DAYLIL	CONT.	#1	67
HOS LIB	HOSTA X 'LIBERTY' / PLANTAIN LILY	CONT.	#1	21
LEU OVZ	LEUCANTHEMUM X SUPERBUM 'ALASKA' / ALASKA DAISY	CONT.	#1	14
NEP WAL	NEPETA X FAASSENII 'WALKER'S LOW' / WALKERS LOW CATMINT	CONT.	#1	136
RUD GLO	RUDBECKIA FULGIDA 'GLOSSTRUM' / BLACK-EYED SUSAN	CONT.	#1	27
SYM POE	SYMPHYOTRICHUM NOVAE-ANGLIAE 'PURPLE DOME' / NEW ENGLAND ASTER	CONT.	#1	37
TURF GRASS				
TUR SOD	TURF SOD / DROUGHT TOLERANT FESCUE BLEND	SOD	S.Y.	78,515 SF

SITE MATERIALS SCHEDULE

WET MESIC PLANTINGS	14,463 SF
LOW-PROFILE PRAIRIE	41,335 SF
EXISTING WETLAND	48,879 SF
ASPHALT	36,481 SF

ERIKSSON ENGINEERING ASSOCIATES, LTD.
1301 COMMERCE DRIVE, SUITE A
GRAYSLAKE, ILLINOIS 60030
PHONE (847) 223-4804
FAX (847) 223-4864
EMAIL INFO@EEALTD.COM
PROFESSIONAL DESIGN FIRM
LICENSE NO.: 184.003220
EXPIRES: 04/30/2023

670 OLD RAND ROAD RESIDENTIAL DEVELOPMENT

670 OLD RAND ROAD
LAKE ZURICH, ILLINOIS

Reserved for Seal:

No.	Date	Description
	05/17/2024	ISSUE FOR PZC
	06/20/2024	RE-ISSUE FOR VILLAGE BOARD

Design By: SSG | Approved By: XXX | Date: 02/28/2024

Sheet Title: LANDSCAPE PLAN

Sheet No: L100

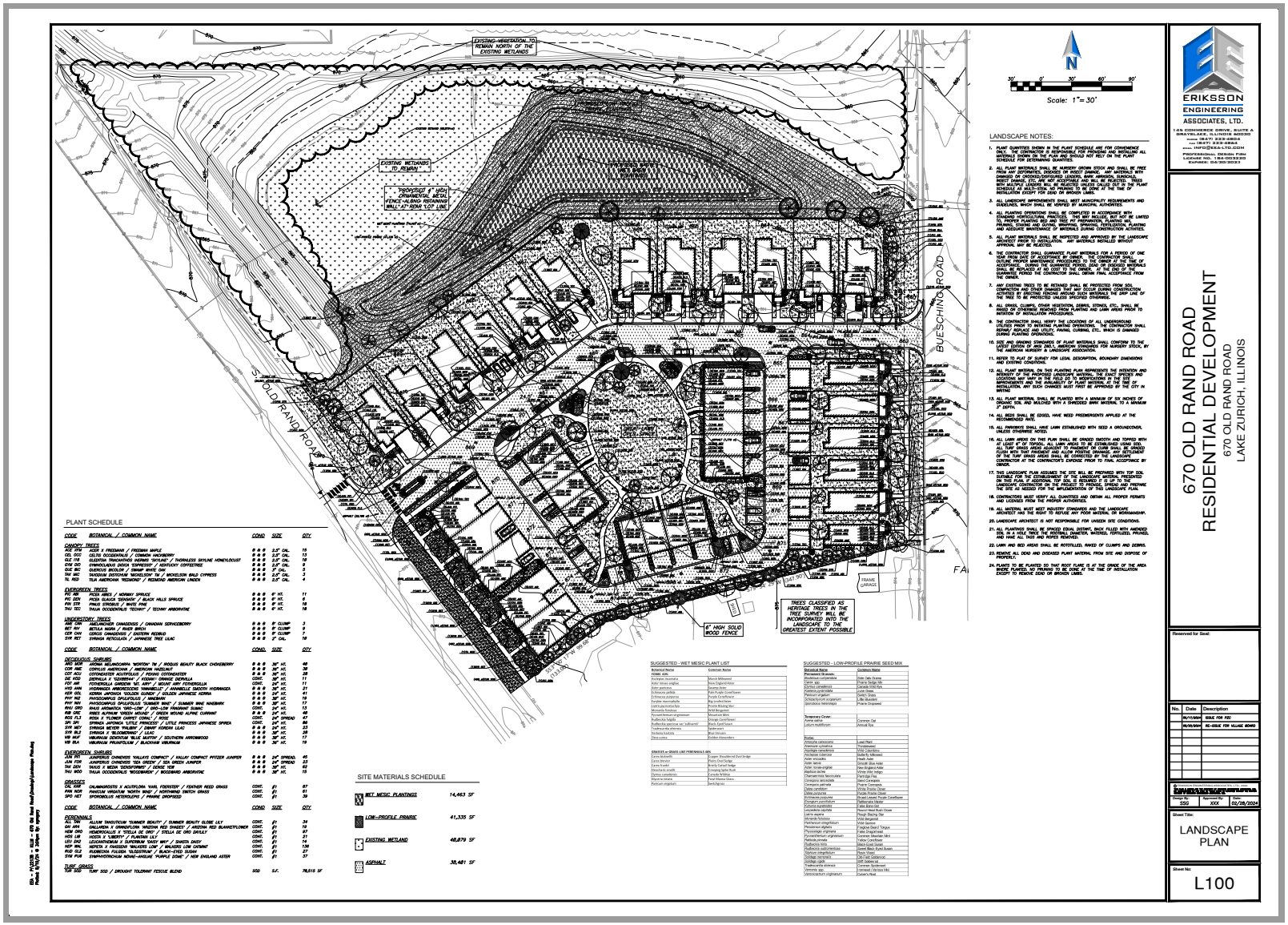
670 Old Rand Road – Single Family Residential P.U.D. Landscape Narrative

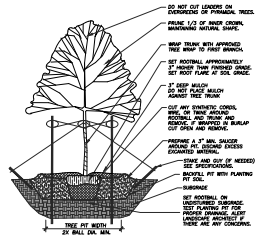
The subject site is an approximately 9 acre parcel of land bordered on the west by Old Rand Road, to the south by single family homes, on the east by Buesching Road, and commercial uses to the north.

The proposed landscape for this parcel started with an analysis of the existing vegetation on the parcel. The site is heavily wooded with predominately low-quality volunteer trees and understory brush that has largely been left in an unkept state. Additionally, there is a wetland area and creek that run generally in an east west direction across the north end of the site. The plan is to leave all the wetland and vegetation associated with the wetland and the portions north of the wetland unchanged.

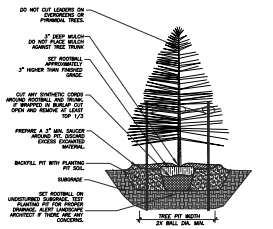
As proposed the area south of the wetland and north of the new home sites will be developed into a stormwater management area for the proposed project. This area will be landscaped with some native woody plants and low-profile prairie plantings, around the basin with native wet mesic vegetation in the bottom of the basin. This will create a nice transition from the wooded natural wetland area to the north to the proposed neighborhood to the south.

Given the condition, species of plants, and the grading that will be needed to realize this plan, the balance of the existing vegetation is proposed to be removed. This site will then be improved with a mix of high-quality landscape materials that will be predominantly native species. The landscape will utilize a mix of trees, shrubs, and groundcovers to enhance the proposed home sites and fit them into a familiar residential neighborhood that will blend into the surrounding community.


EXISTING WETLANDS TO REMAIN
"PROPOSED 6' HIGH ORNAMENTAL METAL FENCE ALONG RETAINING WALL AT ROW/ LOT LINE"
EXISTING WETLANDS TO REMAIN
EXISTING WETLANDS TO REMAIN
OLD RAND ROAD
BUESCHING ROAD
6' HIGH SOLID WOOD FENCE
TREES CLASSIFIED AS HERITAGE TREES IN THE TREE SURVEY WILL BE INCORPORATED INTO THE LANDSCAPE TO THE GREATEST EXTENT POSSIBLE
TRANS. GARAGE
N
Scale: 1"= 30'
LANDSCAPE NOTES:
1. PLANT QUANTITIES SHOWN IN THE PLANT SCHEDULE ARE FOR CONVENIENCE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND INSTALLING ALL MATERIALS SHOWN ON THE PLAN AND SHOULD NOT RELY ON THE PLANT SCHEDULE FOR DETERMINING QUANTITIES.
2. ALL PLANT MATERIALS SHALL BE NURSERY GROWN STOCK AND SHALL BE FREE FROM ANY DEFORMITIES, DISEASES OR INSECT DAMAGE. ANY MATERIALS WITH MULTIPLE LEADERS WILL BE REJECTED, UNLESS CALLED OUT IN THE PLANT SCHEDULE AS MULTI-STEM AND SHALL BE BUSHY AT THE TIME OF INSTALLATION. ANY NOT ACCEPTABLE AND WILL BE REJECTED. TREES WITH MULTIPLE LEADERS WILL BE REJECTED, UNLESS CALLED OUT IN THE PLANT SCHEDULE AS MULTI-STEM AND SHALL BE BUSHY AT THE TIME OF INSTALLATION. ANY NOT ACCEPTABLE AND WILL BE REJECTED.
3. ALL LANDSCAPE IMPROVEMENTS SHALL MEET MUNICIPALITY REQUIREMENTS AND GUIDELINES. PLANTING SHALL NOT BE KEPING BY MUNICIPAL AUTHORITIES.
4. ALL PLANTING OPERATIONS SHALL BE CONDUCTED IN ACCORDANCE WITH STANDARDS PLANTING PRACTICES. THIS SPECIFICATION INCLUDE, BUT NOT BE LIMITED TO, PLANTING SEASONS, PLANTING METHODS, MULCHING, STAKING AND GUYING, PRUNING, SPRAYING, FERTILIZATION, PLANTING AND ACCURATE MAINTENANCE OF MATERIALS DURING CONSTRUCTION ACTIVITIES.
5. ALL PLANT MATERIALS SHALL BE INSPECTED AND APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION. ANY MATERIALS INSTALLED WITHOUT APPROVAL MAY BE REJECTED.
6. THE CONTRACTOR SHALL GUARANTEE PLANT MATERIALS FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE BY OWNER. THE CONTRACTOR SHALL NOTIFY THE OWNER IN WRITING WHEN PLANTING IS COMPLETE AND READY FOR FUTURE PROPER MAINTENANCE PROCEDURES TO THE OWNER AT THE TIME OF ACCEPTANCE. ANY PLANTS FOUND DEAD OR IN UNHEALTHY CONDITION SHALL BE REPLACED AT NO COST TO THE OWNER. AT THE END OF THE GUARANTEE PERIOD THE CONTRACTOR SHALL OBTAIN FINAL ACCEPTANCE FROM THE OWNER.
7. ANY EXISTING TREES TO BE RETAINED SHALL BE PROTECTED FROM SOIL COMPACTION, CHEMICAL CONTAMINATION AND MECHANICAL DAMAGE. CONSTRUCTION FENCING SHALL BE INSTALLED AT THE DRIP LINE OF THE TREE TO BE PROTECTED UNLESS SPECIFIED OTHERWISE.
8. ALL PLANTING, SEEDING, SODDING, MULCHING, DEMOLITION, CTC., SHALL BE CARRIED OUT OTHERWISE SPECIFIED IN PLANTING AND LAWN AREAS PRIOR TO INITIATION OF INSTALLATION PROCEDURES.
9. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UNDERGROUND UTILITIES PRIOR TO INITIATING PLANTING OPERATIONS. THE CONTRACTOR SHALL REPAIR, REPLACE AND UTILITY, PAVING, CURBING, ETC., WHICH IS DAMAGED DURING PLANTING OPERATIONS.
10. SIZE AND GRADING STANDARDS OF PLANT MATERIALS SHALL CONFORM TO THE LATEST EDITION OF ANSI Z60.1, AMERICAN STANDARDS FOR NURSERY STOCK, BY THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION.
11. REFER TO PLAT OF SURVEY FOR LEGAL DESCRIPTION, BOUNDARY DIMENSIONS AND EXISTING CONDITIONS.
12. ALL PLANT MYSTERY, ON THIS PLANTING PLAN REPRESENTS THE INTENTION AND DENSITY OF THE PROPOSED LANDSCAPE MATERIAL. THE EXACT SPECIES AND QUANTITIES MAY VARY DUE TO SEASONAL AVAILABILITY, FIELD CONDITIONS, IMPROVEMENTS AND THE AVAILABILITY OF PLANT MATERIALS AT THE TIME OF INSTALLATION. ANY SUCH CHANGES MUST FIRST BE APPROVED BY THE CITY IN WRITING
13. ALL PLANT MATERIAL SHALL BE PLANTED WITH A MINIMUM OF SIX INCHES OF ORGANIC SOIL AND MULCHED WITH 3 SHREDDED BARK MATERIAL TO A MINIMUM 3" DEPTH.
14. ALL BEDS SHALL BE EDGED, HAVE NEED PREEMERGENTS APPLIED AT THE RECOMMENDED RATE.
15. ALL PARKWAYS SHALL HAVE LAWN ESTABLISHED WITH SEED A GROUNDCOVER, UNLESS OTHERWISE NOTED.
16. ALL LAWN AREAS ON THIS PLAN SHALL BE GRADED SMOOTH AND TOPPED WITH AT LEAST 6" OF TOPSOIL. ALL LAWN AREAS TO BE ESTABLISHED USING SOD. ALL TURF EDGES ARE TO BE NEATLY TRIMMED. NO CURB SHALL BE GRADED FLUSH WITH THAT PAVEMENT SHALL ALLOW POSITIVE DRAINAGE. ANY SETTLEMENT OR EROSION OF SOIL MATERIALS SHALL BE REPAIRED BY THE LANDSCAPE CONTRACTOR AT THE CONTRACTOR'S EXPOSURE PRIOR TO FINAL ACCEPTANCE BY OWNER.
17. THIS LANDSCAPE PLAN ASSUMES THE SITE WILL BE PREPARED WITH TOP SOIL SUITABLY FOR THE ESTABLISHMENT OF THE LANDSCAPE MATERIAL PRESENTED ON THIS PLAN. IF ADDITIONAL TOP SOIL IS REQUIRED, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE IT. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PREPARE THE SITE AS NEEDED FOR THE IMPLEMENTATION OF THIS LANDSCAPE PLAN.
18. CONTRACTORS MUST VERIFY ALL QUANTITIES AND OBTAIN ALL PROPER PERMITS AND LICENSES FROM THE PROPER AUTHORITIES.
19. ALL MATERIAL MUST MEET INDUSTRY STANDARDS AND THE LANDSCAPE ARCHITECT HAS THE RIGHT TO REFUSE ANY POOR MATERIAL OR WORKMANSHIP.
20. LANDSCAPE ARCHITECT IS NOT RESPONSIBLE FOR UNSEEN SITE CONDITIONS.
21. ALL PLANTING SHALL BE SPACED EQUAL DISTANCE, BACK FILLED WITH AMENDED SOIL IN A WAY THAT THE INDIVIDUAL CHARACTER, MATERIAL FERTILIZED, PRUNED, AND TAKE ALL TAGS AND RUPES REMOVED.
22. LAWN AND BED AREAS SHALL BE ROTOTILLED, RAKED OF CLUMPS AND DEBRIS.
23. REMOVE ALL DEAD AND DISEASED PLANT MATERIAL FROM SITE AND DISPOSE OF PROPERLY.
24. PLANTS TO BE PLANTED SO THAT ROOT FLARE IS AT THE GRADE OF THE AREA PLANTED OR SLIGHTLY ABOVE GRADE AT THE TIME OF INSTALLATION EXCEPT TO REMOVE SOD OR BROKEN CABE.
PLANT SCHEDULE
CODE BOTANICAL / COMMON NAME COND SIZE QTY
CANOPY TREES
ACE SYM ACER X FREEMANII / FREEMAN MAPLE B & B 2.5" CAL. 15
CEL OCC CELTIS OCCIDENTALIS / COMMON HACKBERRY B & B 2.5" CAL. 13
GLE TRI GLEDITSIA TRIACANTHOS INERMIS 'SKYLINE' / THORNLESS SKYLINE HONEYLOCUST B & B 2.5" CAL. 19
GYM DIO GYMNOCLADUS DIOICA 'ESPRESSO' / KENTUCKY COFFEETREE B & B 2.5" CAL. 9
QUE BIC QUERCUS BICOLOR / SWAMP WHITE OAK B & B 2" CAL. 5
TAX MIC TAXODIUM DISTICHUM 'MICKELSON' TM / MICKELSON BALD CYPRESS B & B 2.5" CAL. 4
TIL MOD TILIA AMERICANA 'REDMOND' / REDMOND AMERICAN LINDEN B & B 2.5" CAL. 4
EVERGREEN TREES
PIC ABI PICEA ABIES / NORWAY SPRUCE B & B 6' HT. 11
PIC DEN PICEA GLAUCA 'DENSATA' / BLACK HILLS SPRUCE B & B 6' HT. 9
PIN STR PINUS STROBUS / WHITE PINE B & B 6' HT. 18
THU SEC THUJA OCCIDENTALIS 'TECHNY' / TECHNY ARBORVITAE B & B 6' HT. 18
UNDERSTORY TREES
AME CAN AMELANCHIER CANADENSIS / CANADIAN SERVICEBERRY B & B 8' CLUMP 3
BET NIG BETULA NIGRA / RIVER BIRCH B & B 8' CLUMP 3
CER CAN CERCIS CANADENSIS / EASTERN REDBUD B & B 8' CLUMP 7
SYR RET SYRINGA RETICULATA / JAPANESE TREE LILAC B & B 8' CLUMP 18
CODE BOTANICAL / COMMON NAME COND SIZE QTY
DECIDUOUS SHRUBS
CAR SCP HYDRO 'INCINOLIGHT' / HYDRANGEA 'INCINOLIGHT' B & B 36" HT. 48
COR AME CORYLUS AMERICANA / AMERICAN HAZELNUT B & B 36" HT. 36
COT ACU COTONEASTER ACUTIFOLIUS / PEKING COTONEASTER B & B 36" HT. 36
DIE FOO DIERVILLA X 'KODIERMAI' / KODIAK ORANGE DIERVILLA CONT. 36" HT. 11
FOT AME FOTHERGILLA GARDENII 'MT. AIRY' / MOUNT AIRY FOTHERGILLA B & B 24" HT. 11
HYD ANN HYDRANGEA ARBORESCENS 'ANNABELLE' / ANNABELLE SMOOTH HYDRANGEA B & B 24" HT. 21
HYP HOL HYPERICUM KALMIANUM 'GOLDEN GUNDY' / GOLDEN JAPANESE KERRIA B & B 24" HT. 41
PHY OPU PHYSOCARPUS OPULIFOLIUS / NINEBARK B & B 36" HT. 31
RHU GRO RHUS AROMATICA 'GRO-LOW' / GRO-LOW FRAGRANT SUMAC B & B 24" HT. 13
RHU GRO RHUS AROMATICA 'GRO-LOW' / GRO-LOW FRAGRANT SUMAC B & B 24" HT. 13
RIB GRE RIBES ALPINUM 'GREEN MOUND' / GREEN MOUND ALPINE CURRANT B & B 24" HT. 48
ROS CL3 ROSA X 'FLOWER CARPET CORAL' / ROSE CONT. 24" SPREAD 17
SPI SPU SPIRAEA JAPONICA 'LITTLE PRINCESS' / LITTLE PRINCESS JAPANESE SPIREA CONT. 24" HT. 58
SYR MEY SYRINGA MEYERI 'PALIBIN' / DWARF KOREAN LILAC B & B 24" HT. 23
SYR BLS SYRINGA X 'BLOOMERANG' / LILAC B & B 24" HT. 28
VIB BLU VIBURNUM DENTATUM 'BLUE SUGAR' / SOUTHERN ARROWWOOD B & B 36" HT. 17
VIB BLA VIBURNUM TRILOBUM / BLACKHAW VIBURNUM B & B 36" HT. 19
EVERGREEN SHRUBS
JUN SKY JUNIPERUS CHINENSIS 'KALLAY COMPACT' / KALLAY COMPACT PFITZER JUNIPER B & B 24" SPREAD 45
JUN VIR JUNIPERUS CHINENSIS 'SEA GREEN' / SEA GREEN JUNIPER B & B 24" SPREAD 23
TAX DEN TAXUS X MEDIA 'DENSIFORMIS' / DENSE YEW B & B 36" HT. 52
THU WOO THUJA OCCIDENTALIS 'WOODWARDII' / BODDARD ARBORVITAE B & B 36" HT. 15
GRASSES
CAL KOE CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER' / FEATHER REED GRASS CONT. #1 67
PAN NOR PANICUM VIRGATUM 'NORTH WIND' / NORTHWIND SWITCH GRASS CONT. #1 61
SPO HET SPOROBOLUS HETEROLEPIS / PRAIRIE DROPSEED CONT. #1 59
CODE BOTANICAL / COMMON NAME COND SIZE QTY
PERENNIALS
ALL SUM ALLIUM 'SMIDTZOOM 'SUMMER BEAUTY' / SUMMER BEAUTY GLOBE LILY CONT. #1 24
ASC INC ASCLEPIAS INCARNATA 'SOLO PINK' / SOLO PINK SWAMP MILKWEED CONT. #1 24
HEM FRO HEMEROCALLIS X 'STELLA DE ORO' / STELLA DE ORO DAYLILY CONT. #1 57
HOS LIB HOSTA X 'LIBERTY' / PLANTAIN LILY CONT. #1 31
LIG SHU LIGUSTRUM X 'SUREHOW 'VICKI' MVI' / SWEETS DAISY CONT. #1 14
NEP WAL NEPETA X FAASSENII 'WALKERS LOW' / WALKERS LOW CATMINT CONT. #1 136
RUD CL2 RUDBECKIA FULGIDA 'VILSEITRUM' / BLACK-EYED SUSAN CONT. #1 27
SYM POR SYMPHYOTRICHUM NOVAE-ANGLIAE 'PURPLE DOME' / NEW ENGLAND ASTER CONT. #1 37
TURF GRASS
TUR SOD TURF SOD / DROUGHT TOLERANT FESCUE BLEND SOD S.Y. 78,515 SF
SITE MATERIALS SCHEDULE
WET. MESIC PLANTINGS 14,463 SF
LOW-PROFILE PRAIRIE 41,335 SF
EXISTING WETLAND 48,879 SF
ASPHALT 36,481 SF
SUGGESTED - WET MESIC PLANT LIST
Botanical Name Common Name
TREES (50%)
Asclepias incarnata Marsh Milkweed
Aster novae-angliae New England Aster
Aster puniceus Swamp Aster
Eupatorium maculatum Spotted Joe-Pye-Weed
Filipendula palmata Pacific Coast Meadowsweet
Iris versicolor Harlequin blueflag
Liatris pycnostachya Prairie Blazing Star
Monarda fistulosa Wild Bergamot
Penstemon digitalis Foxglove Beardtongue
Rudbeckia fulgida Orange Coneflower
Rudbeckia laciniata var. 'autumnal' Black-Eyed Susan
Tradescantia ohiensis Spiderwort
Verbena hastata Blue Vervain
Zizia aurea Golden Alexanders
GRASSES or GRASS-LIKE PERENNIALS (50%)
Carex blanda Eastern Woodland Sedge
Carex lacustris Prairie Sedge
Carex frankii Bristly-Carpet Sedge
Carex stipata Awl-Fruited Sedge
Elymus canadensis Canada Wildrye
Glyceria striata Fowl Manna Grass
Panicum virgatum Switchgrass
SUGGESTED - LOW-PROFILE PRAIRIE SEED MIX
Botanical Name Common Name
Perennial Grasses:
Bouteloua curtipendula Side Oats Grama
Carex spp. Prairie Sedge Mix
Elymus canadensis Canada Wild Rye
Koeleria macrantha June Grass
Panicum virgatum Switch Grass
Schizachyrium scoparium Little Bluestem
Sporobolus heterolepis Prairie Dropseed
Temporary Cover:
Avena sativa Common Oat
Lolium multiflorum Annual Rye
Forbs:
Amorpha canescens Lead Plant
Anemone cylindrica Thimbleweed
Asclepias tuberosa Wild Columbine
Asclepias viridiflora Butterfly Milkweed
Aster azureus Sky Blue Aster
Aster laevis Smooth Blue Aster
Aster novae-angliae New England Aster
Baptisia alba White Wild Indigo
Baptisia australis var. minor Dwarf Blue Wild Indigo
Campanula rotundifolia Harebell Bellflower
Campanula patula Prairie Campanula
Dalea candidum White Prairie Clover
Dalea purpureum Purple Prairie Clover
Echinacea purpurea Broad-Leaved Purple Coneflower
Eryngium yuccifolium Rattlesnake Master
Euthamia graminifolia Lake Boneset
Lespedeza capitata Round-Head Bush Clover
Liatris aspera Rough Blazing Star
Monarda fistulosa Wild Bergamot
Parthenium integrifolium Wild Quinine
Petalostemum purpureum Purple Prairie Clover
Physostegia virginiana False Dragonhead
Pycnanthemum virginianum Common Mountain Mint
Ratibida pinnata Yellow Coneflower
Rudbeckia hirta Black-Eyed Susan
Silphium integrifolium Rosin Weed
Solidago nemoralis Old Field Goldenrod
Solidago rigida Stiff Goldenrod
Tradescantia ohiensis Common Spiderwort
Verbena spp. Verbena/ Vervain Mix
Veronicastrum virginicum Culver's Root
ERIKSSON ENGINEERING ASSOCIATES, LTD.
145 COMMERCE DRIVE, SUITE A
GRAYSLAKE, ILLINOIS 60030
PHONE (847) 223-4804
FAX (847) 223-4864
WWW.EEA-LTD.COM
PROFESSIONAL DESIGN FIRM
LICENSE NO.: 184.005230
EXPIRES: 04/30/2025
670 OLD RAND ROAD
RESIDENTIAL DEVELOPMENT
670 OLD RAND ROAD
LAKE ZURICH, ILLINOIS
Reserved for Seal:
No. Date Description
01/17/2024 ISSUE FOR PZC
05/20/2024 RE-ISSUE FOR VILLAGE BOARD
Drawn By: SSG
Submitted By: XXX
Date: 01/26/2024
Sheet Title:
LANDSCAPE PLAN
Sheet No:
L100

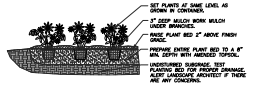


1 TREE PLANTING DETAIL
Not To Scale 329343-B1

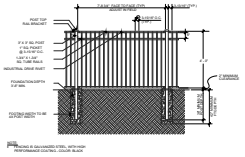


2 EVERGREEN TREE PLANTING DETAIL
NOT TO SCALE 329343-B2

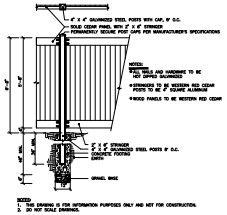
3 SHRUB PLANTING DETAIL
Not To Scale 329333-B1



4 ANNUAL, PERENNIAL, & GROUNDCOVER DETAIL
Not To Scale 329301-B3



5 4' ORNAMENTAL METAL FENCE
Not To Scale 323119-B3



6 6' SOLID WOOD PANEL FENCE WITH STEEL POSTS
NOT TO SCALE 323129.23-33

ERIKSSON ENGINEERING ASSOCIATES, LTD.
145 COMMERCE DRIVE, SUITE A
GRAYSLAKE, ILLINOIS 60030
PHONE (847) 223-4804
FAX (847) 223-4864
WWW.INFO@EEA-LTD.COM
PROFESSIONAL DESIGN FIRM
LICENSE NO.: 184.005233
EXPIRES: 04/30/2023

670 OLD RAND ROAD
RESIDENTIAL DEVELOPMENT
670 OLD RAND ROAD
LAKE ZURICH, ILLINOIS

Reserved for Seal:

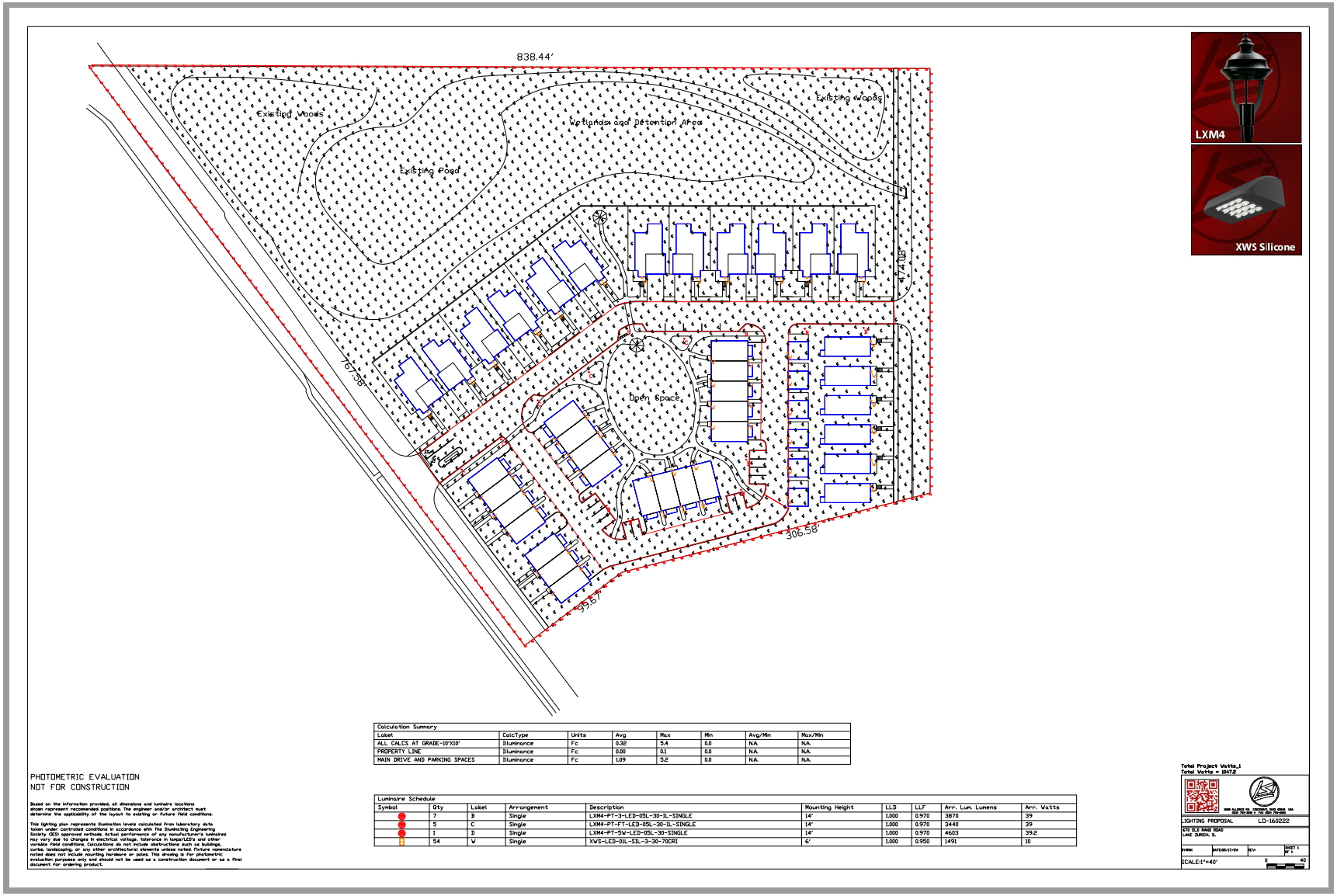
No.	Date	Description
	05/17/2024	ISSUE FOR RZC
	06/20/2024	RE-ISSUE FOR VILLAGE BOARD

Project No.: 22-SSG | Approved By: XXX | Date: 01/28/2024

Sheet Title: LANDSCAPE PLAN

Sheet No.: L100

ES - FY2023 - ALM - 670 Old Rand Road\Drawings\Landscape Plans\
Plotted: 6/19/24 @ 3:52pm by: gregory

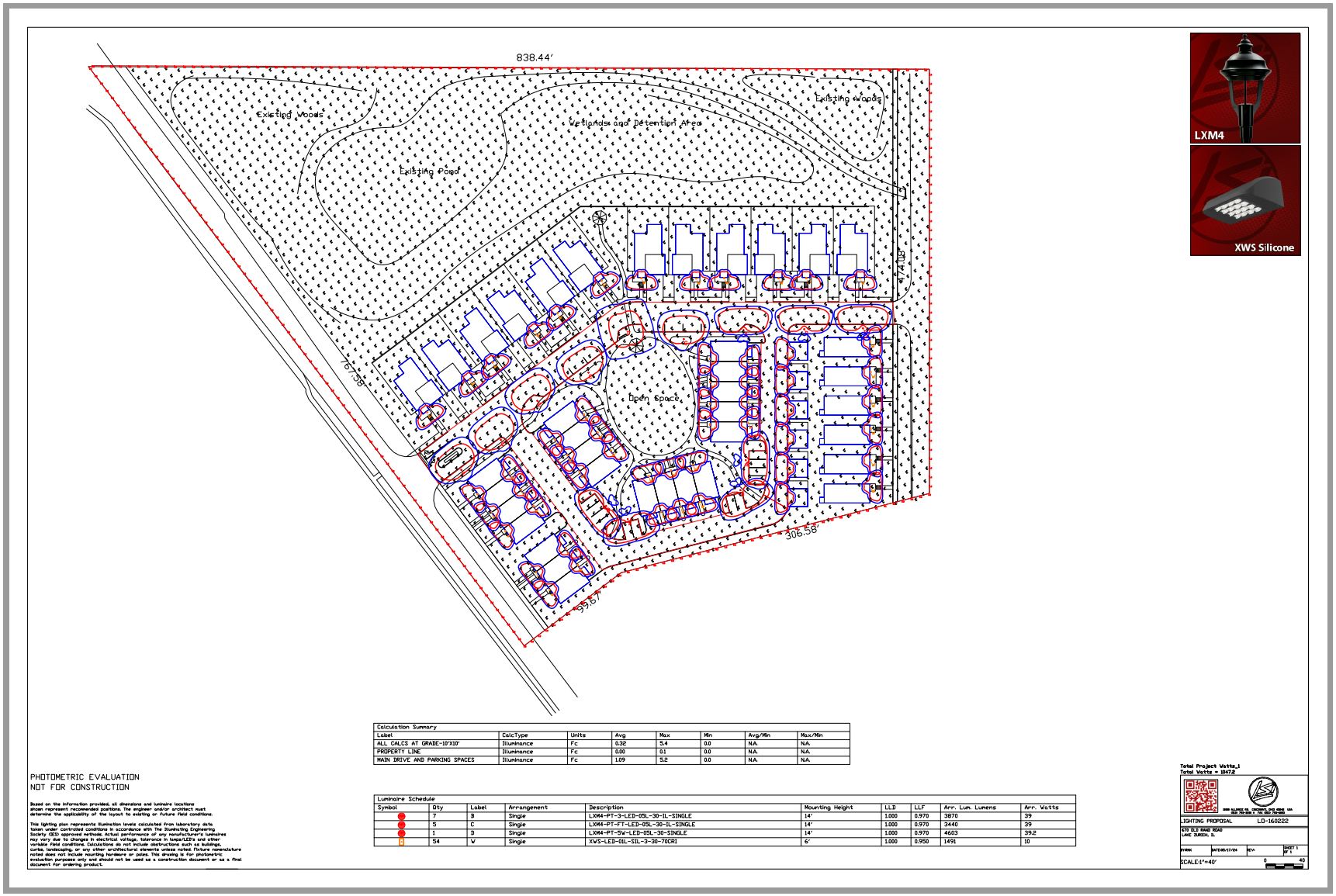


Calculation Summary

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
ALL CALCS AT GRADE-10'X10'	Illuminance	Fc	0.32	5.4	0.0	N.A.	N.A.
PROPERTY LINE	Illuminance	Fc	0.00	0.1	0.0	N.A.	N.A.
MAIN DRIVE AND PARKING SPACES	Illuminance	Fc	1.09	5.2	0.0	N.A.	N.A.

Luminaire Schedule

Symbol	Qty	Label	Arrangement	Description	Mounting Height	LLD	LLF	Arr. Lum. Lumens	Arr. Watts
	7	B	Single	LXM4-PT-3-LED-05L-30-IL-SINGLE	14'	1.000	0.970	3870	39
	5	C	Single	LXM4-PT-FT-LED-05L-30-IL-SINGLE	14'	1.000	0.970	3440	39
	1	D	Single	LXM4-PT-5W-LED-05L-30-SINGLE	14'	1.000	0.970	4603	39.2
	54	W	Single	XWS-LED-01L-SIL-3-30-70CRI	6'	1.000	0.950	1491	10



Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
ALL CALCS AT GRADE-10'X10'	Illuminance	Fc	0.32	5.4	0.0	N.A.	N.A.
PROPERTY LINE	Illuminance	Fc	0.00	0.1	0.0	N.A.	N.A.
MAIN DRIVE AND PARKING SPACES	Illuminance	Fc	1.09	5.2	0.0	N.A.	N.A.

Luminaire Schedule									
Symbol	Qty	Label	Arrangement	Description	Mounting Height	LLD	LLF	Arr. Lum. Lumens	Arr. Watts
	7	B	Single	LXM4-PT-3-LED-05L-30-IL-SINGLE	14'	1.000	0.970	3870	39
	5	C	Single	LXM4-PT-FT-LED-05L-30-IL-SINGLE	14'	1.000	0.970	3440	39
	1	D	Single	LXM4-PT-5W-LED-05L-30-SINGLE	14'	1.000	0.970	4603	39.2
	54	W	Single	XWS-LED-01L-SIL-3-30-70CRI	6'	1.000	0.950	1491	10

Catalog # : _____ Project : _____ Type : _____

Prepared By : _____ Date : _____

Lexington (LXM4)

LED Decorative Post Top & Area Light

OVERVIEW	
Lumen Package (lm)	4,000 - 27,000
Wattage Range (W)	39 - 228
Efficacy Range (LPW)	100 - 140
Weight lbs (kg)	64 (29)

QUICK LINKS

FEATURES & SPECIFICATIONS

Construction

- Rugged die-cast aluminum housing.
- Cast aluminum wiring access door located in lower hub/fitter.
- Rigid die-cast aluminum arms for consistency and strength.
- Precision die cast aluminum heatsink and optical frame.
- Removable spun aluminum cap/driver enclosure is retained by captive stainless steel fasteners and safety cables. Housing and top cap interface is sealed with a one-piece extruded silicone gasket. Tool-less entry option is available.
- All exposed fasteners are black oxide coated stainless steel. Internal fasteners are stainless steel or zinc electroplated steel.
- IP65 rated luminaire protects integral components from harsh environments.
- 1.5G rated for ANSI C136.31 high vibration applications
- Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling. Other standard LSI finishes available. Consult factory.

Optical System

- State-of-the-Art one piece silicone optic sheet delivers industry leading optical control with an integrated gasket to provide IP66 rated sealed optical chamber in 1 component.
- Proprietary silicone refractor optics provide exceptional coverage and uniformity in IES Types 2, 3, 5W and FT.
- Silicone optical material does not yellow or crack with age and provides a minimum light transmittance of 93%.
- Optical distributions are field rotatable (in 90° increments).
- Available in 5000K, 4000K, and 3000K (+/- 275K) color temperatures.
- Minimum CRI of 70. Consult Factory for Higher CRI requirements.
- Integral Louver (IL) option available for improved back-light control without sacrificing street side performance.

Electrical

- High-performance driver features over-voltage, under-voltage, short-circuit and over temperature protection.
- 0-10V dimming (10% - 100%) standard.
- Standard Universal Voltage (120-277 Vac) Input 50/60 Hz or optional High Voltage (347-480 Vac).
- L70 Calculated Life: >100k Hours (See Lumen Maintenance on Page 2)
- Total harmonic distortion: <20%
- Operating temperature: - -40°C to +50°C (-40°F to +122°F)
- Power factor: >.90
- Input power stays constant over life.
- Field replaceable surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).
- High-efficacy LEDs mounted to metal-core circuit board to maximize heat dissipation
- Terminal block provided accepts up to 10ga wire, however the luminaire is supplied with a 32' 3 conductor wire harness.
- Components are fully encased in potting material for moisture resistance. Driver complies with FCC standards. Driver and key electronic components can easily be accessed.

Controls

- Optional integral passive infrared Bluetooth™ motion and photocell sensor. Fixtures operate independently and can be commissioned via iOS or Android configuration app (See controls page for more detail).

Installation

- Mounts to 4" O.D. pole or tenon.
- Secures to pole with 6 stainless steel set screws.
- 32' wire leads are provided bundled in the slip fitter hub for ease of wiring.

Warranty

- LSI luminaires carry a 5-year limited warranty. Refer to https://www.lsicorp.com/resources/terms-conditions-warranty/ for more information.

Listings

- Listed to UL 1598 and UL 8750
- State of California Title 24
- IDA compliant; with 3000K color temperature selection.
- Meets Buy American Act requirements
- Suitable For wet Locations
- IP65 rated Luminaire. IP66 rated optical chamber.
- 1.5G rated for ANSI C136.31 high vibration applications

©LSI Industries Inc. All Rights Reserved. Specifications and dimensions subject to industry standard tolerances. Specifications subject to change without notice.

Lexington (LXM4)

Type : _____

Have questions? Call us at (800) 436-7800

ORDERING GUIDE

TYPICAL ORDER EXAMPLE: LXM4 PT LED 3 18L 50 UNV BLK IMSBT1L

Prefix	Mounting	Distribution	Light Source	Lumen Package	Color Temperature	Voltage	Finish	Option Controls	Options
LXM4 - Lexington	**PT** - Post Top	**2** - Type II **3** - Type III **5W** - Type 5 Wide **FT** - Forward Throw (Type IV)	**LED**	**5L** - 5,000 Lumens **10L** - 10,000 Lumens **18L** - 18,000 Lumens **25L** - 25,000 Lumens	**30** - 3000K **40** - 4000K **50** - 5000K	**UNV** - Universal Voltage (120-277V) **HV** - High Voltage (347-480V)	**BRZ** - Bronze **BLK** - Black **GPT** - Graphite **MSV** - Metallic Silver **WHT** - White **PLP** - Platinum Plus **SVG** - Satin Verde Green	**Stand-Alone Control** (Blank) - None **IMSBT1L** - Integral Bluetooth™ Motion and Photocell Sensor (8 - 24' mounting height)[3] **IMSBT2L** - Integral Bluetooth™ Motion and Photocell Sensor (25 - 40' mounting height)[3] **ALBCS1** - AirLink Blue Wireless Motion & Photo Sensor Controller (8-24' MH) **ALBCS2** - AirLink Blue Wireless Motion & Photo Sensor Controller (25-40' MH)	**IL** - Integral Louver Shield[4]

Need more information?
Click here for our glossary

Have additional questions?
Call us at (800) 436-7800

ACCESSORY ORDERING INFORMATION

Part Number	Description
490025CLR[2]	BK MPT B04 - Bolt on Bracket (for PT 180) For 4" O.D. Round Poles
490035CLR[2]	BK MPT B05 - Bolt on Bracket (for PT 180) For 5" O.D. Round Poles
654939	IL - Integral Louver Shield (Black only)
356044	WM - Post top wall mount bracket (bronze) C/F for additional finish options

Part Number	Description
FK120[1]	FK120 Single Fusing (120V)
FK277[1]	FK277 Single Fusing (277V)
DFK208, 240[1]	DFK208,240 Double Fusing (208V, 240V)
DFK480[1]	DFK480 Double Fusing (480V)
FK347[1]	FK347 Single Fusing (347V)
661409	ALSC UNV TL5 - AirLink 5 Pin Twist Lock Controller
661410	ALSC UNV TL7 - AirLink 7 Pin Twist Lock Controller

1. Fusing must be located in hand hole of pole.
2. Order poles with 3" reduced drilling pattern. For PT mounting configurations other than D180,consult factory. Order one bracket per fixture
3. Consists of a daylight & motion dual sensor. Field configurable via the LSI app that can be downloaded from your smartphone's native app store.
4. Not available with type 5W distribution.

©LSI Industries Inc. All Rights Reserved. Specifications and dimensions subject to industry standard tolerances. Specifications subject to change without notice.

Lexington (LXM4)

Type : _____

Have questions? Call us at (800) 436-7800

PERFORMANCE

Delivered Lumens*

Lumen Package	Distribution	3000K CCT			4000K CCT			5000K CCT			Wattage
		Delivered Lumens	Efficacy	BUG Rating	Delivered Lumens	Efficacy	BUG Rating	Delivered Lumens	Efficacy	BUG Rating	
5L	2	4568	117	B2-U1-G1	5047	129	B2-U1-G1	5297	136	B2-U1-G1	39
	3	4697	120	B1-U1-G2	5189	132	B1-U1-G2	5447	140	B1-U1-G2	
	FT	4575	117	B1-U1-G2	5054	129	B1-U1-G2	5305	136	B1-U1-G2	
	5W	4602	118	B3-U1-G1	5084	130	B3-U1-G1	5336	137	B3-U1-G1	
10L	2	9100	117	B2-U2-G2	10054	130	B2-U2-G2	10553	135	B2-U2-G2	78
	3	9360	120	B2-U2-G2	10341	134	B2-U2-G2	10854	139	B2-U2-G2	
	FT	9107	117	B2-U2-G2	10061	130	B2-U2-G2	10560	135	B2-U2-G2	
	5W	9152	120	B4-U2-G2	10020	130	B4-U2-G2	10517	135	B4-U2-G2	
18L	2	16650	112	B3-U2-G3	18113	122	B3-U2-G3	19012	128	B3-U2-G3	149
	3	17108	115	B3-U2-G3	18756	126	B3-U2-G3	19687	132	B3-U2-G3	
	FT	16725	112	B3-U2-G3	18336	123	B3-U2-G3	19246	129	B3-U2-G3	
	5W	16810	113	B4-U2-G2	18429	124	B4-U2-G2	19344	130	B4-U2-G2	
25L	2	22952	102	B4-U2-G3	25057	110	B4-U2-G3	26301	115	B4-U2-G3	228
	3	23544	103	B3-U2-G3	25921	114	B3-U2-G3	27208	119	B3-U2-G3	
	FT	22902	100	B3-U2-G4	25215	111	B3-U2-G4	26466	116	B3-U2-G4	
	5W	23612	104	B5-U2-G3	25996	114	B5-U2-G3	27286	120	B5-U2-G3	

*LEDs are frequently updated therefore values are nominal.

Electrical Data (Amps)*

Lumen Package	Wattage	120V	208V	240V	277V	347V	480V
5L	39	0.33	0.19	0.16	0.14	0.11	0.08
10L	78	0.65	0.38	0.33	0.28	0.22	0.16
18L	149	1.24	0.72	0.62	0.54	0.43	0.31
25L	228	1.90	1.10	0.95	0.82	0.66	0.48

*Electrical data at 25C (77F). Actual wattage may differ by +/-10%.

Recommended Lumen Maintenance[1]

Ambient Temp C	Initial [2]	25k hr [2]	50k hr [2]	75k hr [3]	100k hr [3]
0 C	99%	97%	96%	95%	94%
10 C	99%	97%	96%	95%	93%
20 C	99%	97%	95%	94%	92%
25 C	98%	97%	95%	93%	92%
30 C	98%	97%	95%	93%	92%
40 C	98%	97%	95%	93%	91%

1 Lumen maintenance values at 40C are calculated per TM-21 based on LM-80 data and in-situ testing.
2 In accordance with IESNA TM-21-11, Projected Values represent interpolated value based on time durations that are within six times the IESNA LM-80-08 total test duration for the device under testing.
3 In accordance with IESNA TM-21-11, Calculated Values represent time durations that exceed six times the IESNA LM-80-08 total test duration for the device under testing

1 Lumen maintenance values at 40C are calculated per TM-21 based on LM-80 data and in-situ testing.
2 In accordance with IESNA TM-21-11, Projected Values represent interpolated value based on time durations that are within six times the IESNA LM-80-08 total test duration for the device under testing.
3 In accordance with IESNA TM-21-11, Calculated Values represent time durations that exceed six times the IESNA LM-80-08 total test duration for the device under testing.

©LSI Industries Inc. All Rights Reserved. Specifications and dimensions subject to industry standard tolerances. Specifications subject to change without notice.

Lexington (LXM4)

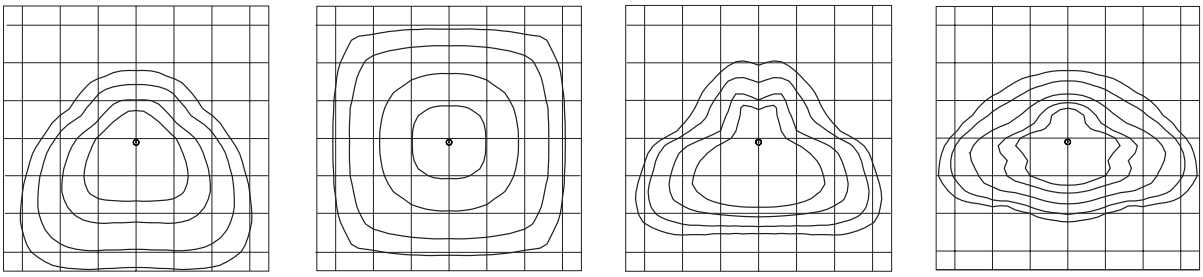
Type : _____

Have questions? Call us at (800) 436-7800

PHOTOMETRICS

Luminaire photometry has been conducted by a NVLAP accredited testing laboratory in accordance with IESNA LM-79-08. As specified by IESNA LM-79-08 the entire luminaire is tested as the source resulting in a luminaire efficiency of 100%.

See the individual product page on https://www.lsicorp.com/ for detailed photometric data.



FT | 5W | Type 3 | Type 2

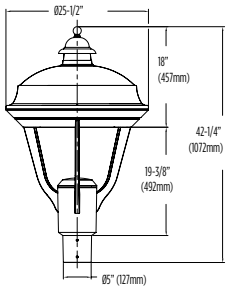
©LSI Industries Inc. All Rights Reserved. Specifications and dimensions subject to industry standard tolerances. Specifications subject to change without notice.

Lexington (LXM4)

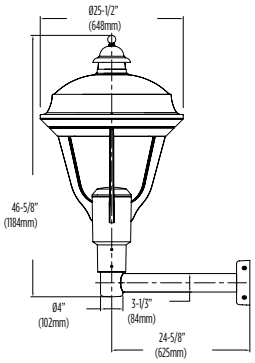
Type : _____

Have questions? Call us at (800) 436-7800

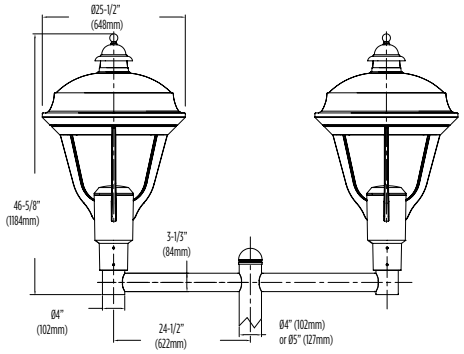
PRODUCT DIMENSIONS



Post Top Single
Slipfits 4" Dia. Tenon (4N) or Pole



Post Top with WM Accessory



Luminaire EPA Chart

	Mounting Style	
PT Single	PT	1.4
PT D180° with BK MPT BO (2)	PT	2.7

Shipping Weights

Catalog Number	Est. Weight (kg/lbs.)
LXM4 (PT)	29/64

POLES & BRACKETS

LSI offers a full line of poles and mounting accessories to complete your lighting assembly. Aluminum and steel in both square and round shafts. In addition, LSI offers round tapered, fluted and hinge based poles. Designed and engineered for durability and protected with our oven baked DuraGrip Protection System. Also available with our DuraGrip+ Protection system for unmatched corrosion resistance and an extended warranty. American made in our Ohio facility with industry leading lead times.

Click here to learn more details about poles & brackets

BKA UMB CLR

The 3G rated UMB allows for seamless integration of LSI luminaires onto existing/ retrofit or new construction poles. The UMB was designed for square or round (tapered or straight) poles with two mounting hole spacings between 3.5" – 5".

BKA ASF CLR

The adjustable Slip Fitter is a 3G rated rugged die cast aluminum adapter to mount LSI luminaires onto a onto a 2" iron pipe , 2 3/8 OD tenon. The Adjustable Slip Fitter can be rotated 180° allowing for tilting LSI luminaires up to 45° and 90° when using a vertical tenon.

BKS PQM15 CLR

The Pole Quick Mount Bracket allows for preset 15° uptilt of LSI luminaires for greater throw of light and increased vertical illumination as well as fast installation onto poles with LSI's 3" or 5" bolt pattern.

BKS PQMH CLR

The Pole Quick Mount Bracket allows for lightning fast installation of LSI luminaires onto existing and new construction poles with LSI's B3 or B5 standard pole bolt patterns.

Square Pole
14'-39'

Round Pole
10'-30'

Tapered Pole
20'-39'

©LSI Industries Inc. All Rights Reserved. Specifications and dimensions subject to industry standard tolerances. Specifications subject to change without notice.

Lexington (LXM4)

Type : _____

Have questions? Call us at (800) 436-7800

CONTROLS

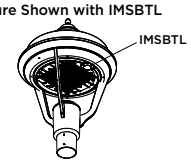
Integral Bluetooth™ Motion and Photocell Sensor (IMSBTxL)

Slim low profile sensor provides multi-level control based on motion and/or daylight. Sensor controls 0-10 VDC LED drivers and is IP66 rated for cold and wet locations (-40°F to 167°F). Two unique PIR lenses are available and used based on fixture mounting height. All control parameters are adjustable via an iOS or Android App capable of storing and transmitting sensor profiles.

Click here to learn more details about IMSBT

LEVITON App Apple Android

Fixture Shown with IMSBTL



AirLink Blue (ALBCSx)

Wireless Bluetooth Mesh Outdoor Lighting Control System that provides energy savings, code compliance and enhanced safety/security for parking lots and parking garages. Three key components; Bluetooth wireless radio/sensor controller, Time Keeper and an iOS App. Capable of grouping multiple fixtures and sensors as well as scheduling time-based events by zone. Radio/Sensor Controller is factory integrated into Area/Site, Wall Mounted, Parking Garage and Canopy luminaires.

Click here to learn more details about AirLink Blue

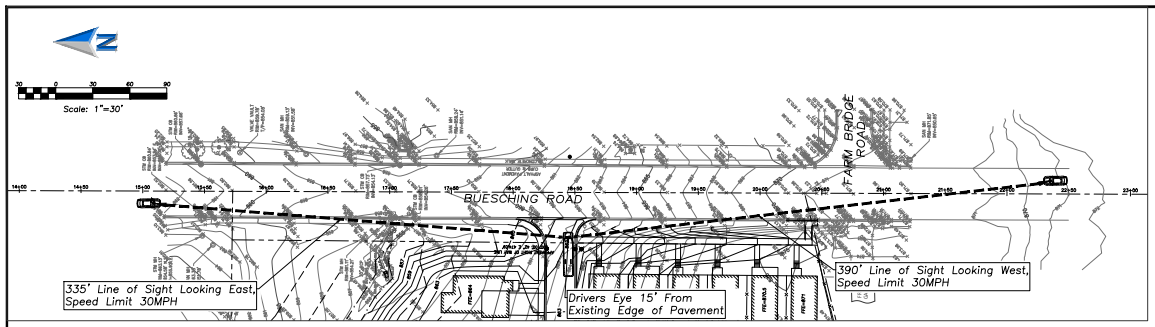
AirLink Blue App Apple

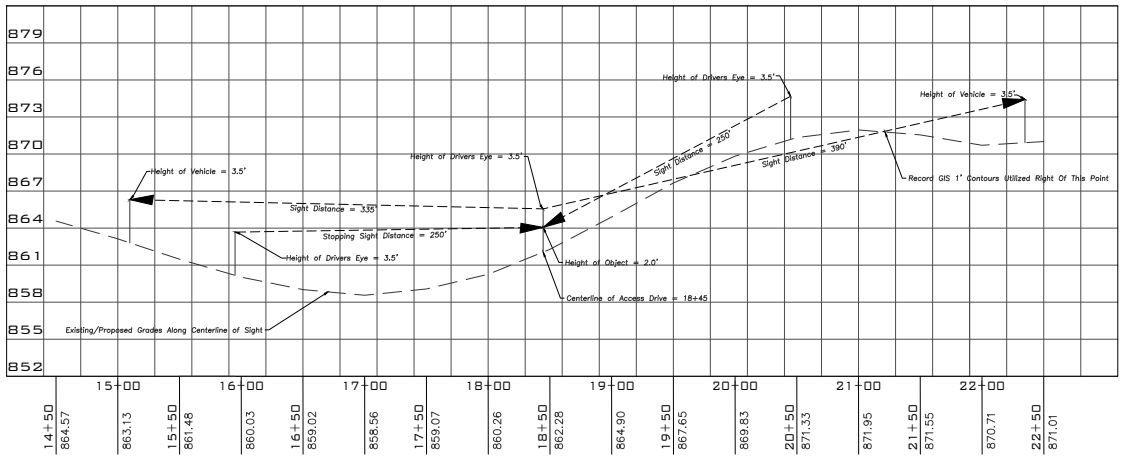
Sensor Sequence of Operations

Standard Programming	On Event	Off Event	On Light Level	Dim Light Level	Daylight Harvesting	Delay To Off	Sensitivity
OMSBTxL/IMSBTxL	Motion	No Motion	100%	N/A	On; Auto Calibration	20 minutes	High
OMS	Motion	No Motion	N/A	N/A	N/A	30 seconds	Auto

Operation	Description
On Event	Trigger that activates lights to turn on; either automatic via motion detected or manually activated via push of button.
Off Event	Trigger that activates lights to turn off; either automatic via no motion detected or manually activated via push of button.
On Light Level	The light level that the fixtures will turn on to when ON EVENT occurs.
Dim Light Level	The light level that the fixtures will dim down to when no motion is detected.
Delay to Dim	The amount of time after which no motion is detected that the fixtures will be triggered to dim down. This sequence is optional, and sensor can be programmed to only trigger the fixture to turn off by entering 100% in this field.
Delay to Off	The amount of time after which no motion is detected that the fixtures will be triggered to turn off. If delay to dim is part of the programmed functionality, this is the amount of time after which no motion is detected after the fixture have already dimmed down.
Sensitivity	The sensitivity can be set to high, medium, low, or auto where applicable. High will detect smaller, simple motions. Low will only detect larger more complex motions. Auto temperature calibration adjusts the PIR sensitivity as ambient temperature rises to increase detection of heat movement through the field of view.

©LSI Industries Inc. All Rights Reserved. Specifications and dimensions subject to industry standard tolerances. Specifications subject to change without notice.





SCALE
VERTICAL: 1"= 3'
HORIZONTAL: 1"= 30'

Buesching Road:
Jurisdiction: Village of Lake Zurich
Speed Limt: 30 MPH
Design Speed: 35 MPH

Stopping Sight Distance:
Northbound – 35 MPH – 250'
Southbound – 35 MPH – 250'

Intersection Sight Distance:
Looking North – 35 MPH – 335'
Looking South – 35 MPH – 390'

ERIKSSON ENGINEERING ASSOCIATES, LTD.
135 COMMERCE DRIVE, SUITE A
BRUCE, ILLINOIS 60103
PHONE: (847) 223-8804
FAX: (847) 223-4864
EMAIL: INFO@EEA-LTD.COM
PROFESSIONAL DESIGN FIRM
LICENSE NO.: 184.005830
EXPIRES: 04/30/2025

RESIDENTIAL DEVELOPMENT
670 S. OLD RAND ROAD
LAKE ZURICH, ILLINOIS

Reserved for Seal:

LICENSED PROFESSIONAL ENGINEER
MELANIE RAE CARGILL
062-070914
OF ILLINOIS

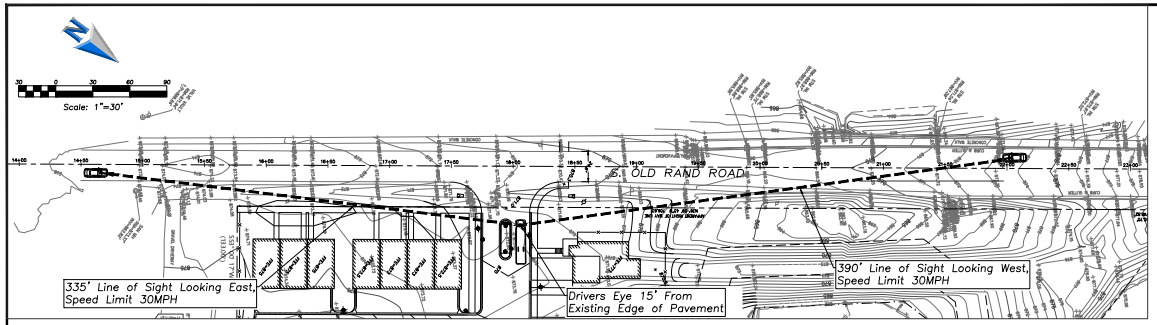
No.	Date	Description
	07/09/24	ISSUE FOR REVIEW

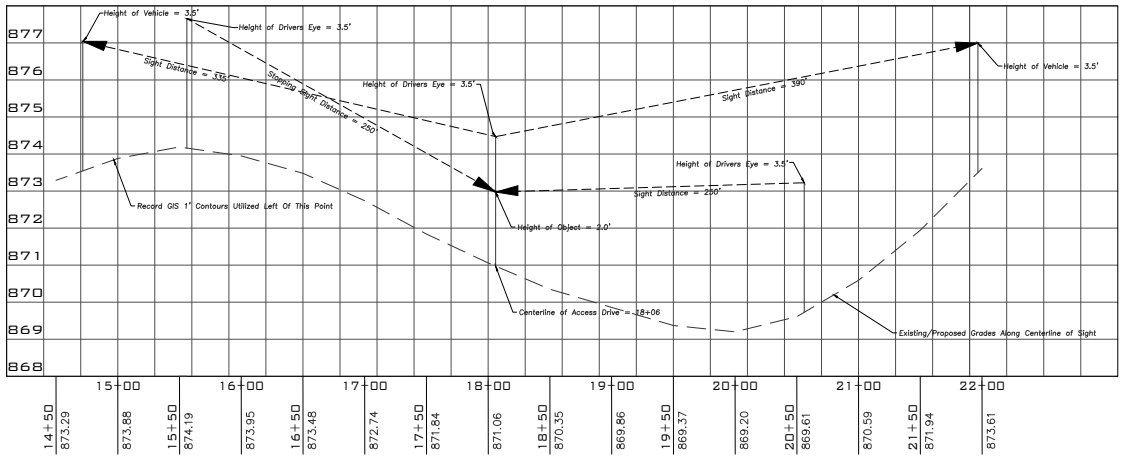
Designed By: EG | Drawn By: MC | Date: 07/01/24

Sheet Title:
SIGHT DISTANCE STUDY- BUESCHING

Sheet No:
CX1.0

EEA — P:\23138 — KLM — 670 Old Rand Road\Drawings\670 Old Rand Rd_Site Plan — Sight Distance Study.dwg
Plotted: 7/03/24 @ 11:31am By: egrabowski





SCALE
VERTICAL: 1"= 1'
HORIZONTAL: 1"= 30'

S. Old Rand Road:
Jurisdiction: Village of Lake Zurich
Speed Limit: 30 MPH
Design Speed: 35 MPH

Stopping Sight Distance:
Eastbound – 35 MPH – 250'
Westbound – 35 MPH – 250'

Intersection Sight Distance:
Looking East – 35 MPH – 335'
Looking West – 35 MPH – 390'

ERIKSSON ENGINEERING ASSOCIATES, LTD.
135 COMMERCE DRIVE, SUITE A
BRAUNFELS, TEXAS 78130
PHONE (847) 223-4804
FAX (847) 223-4864
EMAIL INFO@EEA-LTD.COM
PROFESSIONAL DESIGN FIRM
LICENSE NO.: 184.005830
EXPIRES: 04/30/2025

RESIDENTIAL DEVELOPMENT
670 S. OLD RAND ROAD
LAKE ZURICH, ILLINOIS

Reserved for Seal:

LICENSED PROFESSIONAL ENGINEER
MELANIE RAE CARGILL
062-070914
OF ILLINOIS

No.	Date	Description
	07/09/24	ISSUE FOR REC

Designed By	Drawn By	Date
EG	MC	07/01/24

Sheet Title:
SIGHT DISTANCE STUDY- OLD RAND

Sheet No:
CX2.0

EEA – P:\23138 – KLM – 670 Old Rand Road\Drawings\670 Old Rand Rd_Site Plan – Sight Distance Study.dwg
Plotted: 7/03/24 @ 11:31am By: egrabowski

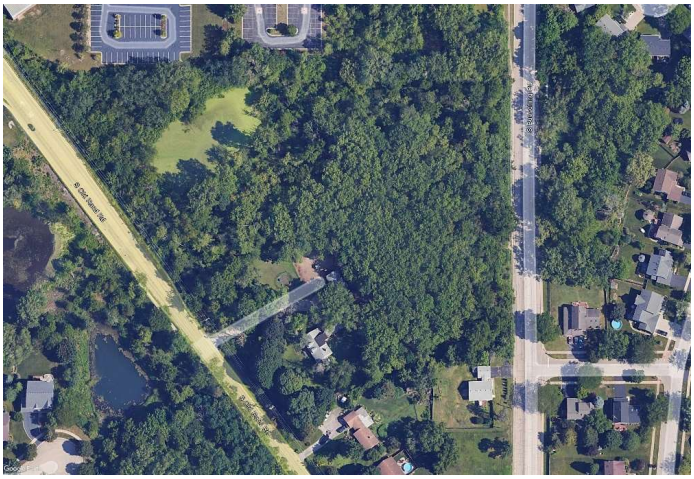
Stormwater Management Report

Residential Development

PZC Submittal

Prepared By: Melanie Carollo & Laura Rosenbauer

670 S Old Rand Road
Lake Zurich, IL



May 17, 2024

REV

Prepared by:

Melanie Carollo

Eriksson Engineering Associates, Ltd.

145 Commerce Drive, Ste A, Grayslake, IL 60030

847.223.4804

ERIKSSON ENGINEERING ASSOCIATES, LTD.

www.eea-ltd.com

Table of Contents

INTRODUCTION 2
EXISTING CONDITIONS 2
FLOOD PROTECTION AREAS 2
PROPOSED CONDITIONS 2
HYDROLOGY AND HYDRAULICS STUDY 3
CONCLUSIONS 3

Table of Appendices

APPENDIX I – EXISTING CONDITIONS INFORMATION

APPENDIX II – HYDROLOGIC & HYDRAULIC CALCULATIONS

APPENDIX III – EXHIBITS

INTRODUCTION

The subject property consists of **7.80 acres** in Lake Zurich, in Lake County, Illinois. It is bounded on the east by Buesching Road and S Old Rand Rd on the west. There are commercial parking lots to the north and single family residential properties to the south.

There is a large wetland located in the northwest corner of the site, which drains east to a creek, then off-site via a culvert under Buesching Road. The remainder of the site is densely populated with trees, most of which are in poor/scrub condition. The FEMA Flood Insurance Rate Map (FIRM) does not identify any special flood hazard areas on site.

The purpose of this study is to determine that the creek has the capacity to accommodate incoming tributary flows for the 100-year storm event. Also, to demonstrate that stormwater detention requirements have been met.

EXISTING CONDITIONS

The existing site includes an existing home and a heavily vegetated landscape. The site contains a large number of trees that make the creek located on the north end of the site difficult to maintain with the debris. The wetland located on the north end of the site per a preliminary jurisdictional determination is under USACOE jurisdiction. See Appendix I for the wetland maps showing the location of the wetland and the PJD. The 25’ and 50’ buffers are shown on the civil plans.

Wetland/Creek

The wetland covers an area of approximately **0.92 acres**. The creek is picked up by a culvert that crosses under Buesching Road. From there, flow continues to water bodies downstream. The wetland is bounded on the west by an 11-ft tall berm. A 12” pipe runs west to east under this berm and into the wetland. A preliminary wetland jurisdictional determination performed by Gary Weber Associates indicates the wetland is very likely under the U.S. Army Corps of Engineers’ jurisdiction.

FLOOD PROTECTION AREAS

FEMA FIRM map, panel number 17097C0229K, effective 9/18/2013, has been included in Appendix I to identify any potential flood zones located within the project vicinity. The FIRM Map does not identify any flood zones within the boundaries of the hydrologic disturbance.

PROPOSED CONDITIONS

Proposed site improvements consist of single family homes and townhomes along a proposed access road that connects at S Old Rand Road and Buesching Road. The development is located to the south of the existing wetland area and has been chosen with consideration to control the type of work occurring within the wetland buffer and mitigate impacts. No impervious structures are proposed within the 25’ buffer. All work within the 25’ wetland buffer is for the proposed detention basin. Within the 50’ buffer there are minimal structures encroaching. On the northeast corner, there is approximately 224 SF of building area encroaching on the 50’ buffer. Buffer averaging will be used to increase the buffer in a separate location to accommodate for the encroachment of the building and the minimal encroachment from the retaining wall as well.

STORMWATER RUNOFF

In accordance with Lake County Watershed Development Ordinance, stormwater detention will be provided in a surface detention basin located on the north end of the development. The basin will be planted with native plantings to keep the area within the wetland buffer naturalized and provide an ecological benefit. The basin was sized utilizing the release rate requirements for the 2-year and 100-year events of 0.04 cfs/acre and 0.15 cfs/acre. The restrictors were sized for the release rate requirements multiplied by the disturbance area. Refer to Appendix IV for exhibit showing disturbance area. The basin volumes and releases are shown in a stage storage table that were input into a hydrologic model to determine the 2-year and 100-year high water level elevations. Bulletin 75 rainfall data was utilized. Refer to Appendix III for the model and calculations.

HYDROLOGY AND HYDRAULICS STUDY

Hydrologic Study

The WinTR-20 hydrologic computer model was used to determine the peak runoff rates for the upstream tributary area for the 100-year storm event. Rainfall data was obtained from Bulletin 75, published by the Illinois State Water Survey. Soil types were obtained from the NRCS Soils Survey and used to calculate the Runoff Curve Number for the drainage area. The time of concentration was calculated using the TR-55 method.

A critical duration analysis of the 100-year storm event yielded a peak flow rate of **22.94 cfs**. Comprehensive results from the WinTR-20 model can be found in Appendix II.

Culvert Analysis

HY-8 was used to analyze the culvert running under the berm west of the wetland. In lieu of calculating the actual tributary upstream of the culvert, the model assumed a range of incoming flows up to 50 cfs to determine peak discharge from the culvert in a worst-case scenario. The results show that discharge from the culvert plateaus at **5.83 cfs**.

Hydraulic Study

HEC-RAS Version 6.4.1 was used to perform the hydraulic modeling for the project. A topographic survey of the subject property was used in conjunction with LIDAR topographic data to develop cross-sections along the length of the wetland and creek. N-values for the channel and overbank areas were determined using the National Land Cover Database.

A steady flow analysis was performed assuming a subcritical flow regime. The results of the model show an average water surface elevation of approximately **8”** above the creek bed. The culvert pipes appear to be flowing about ¼ full. Detailed model inputs and results are included in Appendix II.

CONCLUSIONS

Based on the HEC-RAS model results, the creek should be able to accommodate the incoming tributary flows without issue. However, local Village officials and residents have observed flooding issues on site, as well as upstream and downstream of the studied area.

In an effort to better realize the creek's modeled capacity, the project team has agreed to implement shoreline stabilization measures and clear the creek bed of accumulated debris.

APPENDIX I – EXISTING CONDITIONS INFORMATION

NRCS SOILS REPORT

FEMA FIRM

HYDROLOGIC ATLAS

LAKE COUNTY FLOOD OF RECORD MAP

COUNTY FLOOD MAP

USFW WETLANDS MAP

LAKE COUNTY WETLAND MAP

PRELIMINARY WETLAND JURISDICTIONAL DETERMINATION

Hydrologic Soil Group—Lake County, Illinois
88° 5' 11" W
88° 4' 53" W
42° 11' 26" N
42° 11' 17" N
410320
410360
410400
410440
410480
410520
410560
410600
410640
410680
4671490
4671450
4671410
4671370
4671330
4671290
4671250
Cedar St
530D3
1103A
531C2
330A
Soil Map may not be valid at this scale.
Map Scale: 1:1,880 if printed on A landscape (11" x 8.5") sheet.
N
Meters
0 25 50 100 150
Feet
0 50 100 200 300
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84
USDA
Natural Resources
Conservation Service
Web Soil Survey
National Cooperative Soil Survey
5/8/2024
Page 1 of 4

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features
- Streams and Canals

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

Background
- Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: Lake County, Illinois
Survey Area Data: Version 18, Aug 28, 2023

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

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

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

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
330A	Peotone silty clay loam, 0 to 2 percent slopes	C/D	0.0	0.1%
530D3	Ozaukee silty clay loam, 6 to 12 percent slopes, severely eroded	C	0.6	6.8%
531C2	Markham silt loam, 4 to 6 percent slopes, eroded	C	7.5	80.8%
1103A	Houghton muck, undrained, 0 to 2 percent slopes	A/D	1.1	12.3%
Totals for Area of Interest			**9.3**	**100.0%**

Description

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

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

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

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

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

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

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

Rating Options

Aggregation Method: Dominant Condition

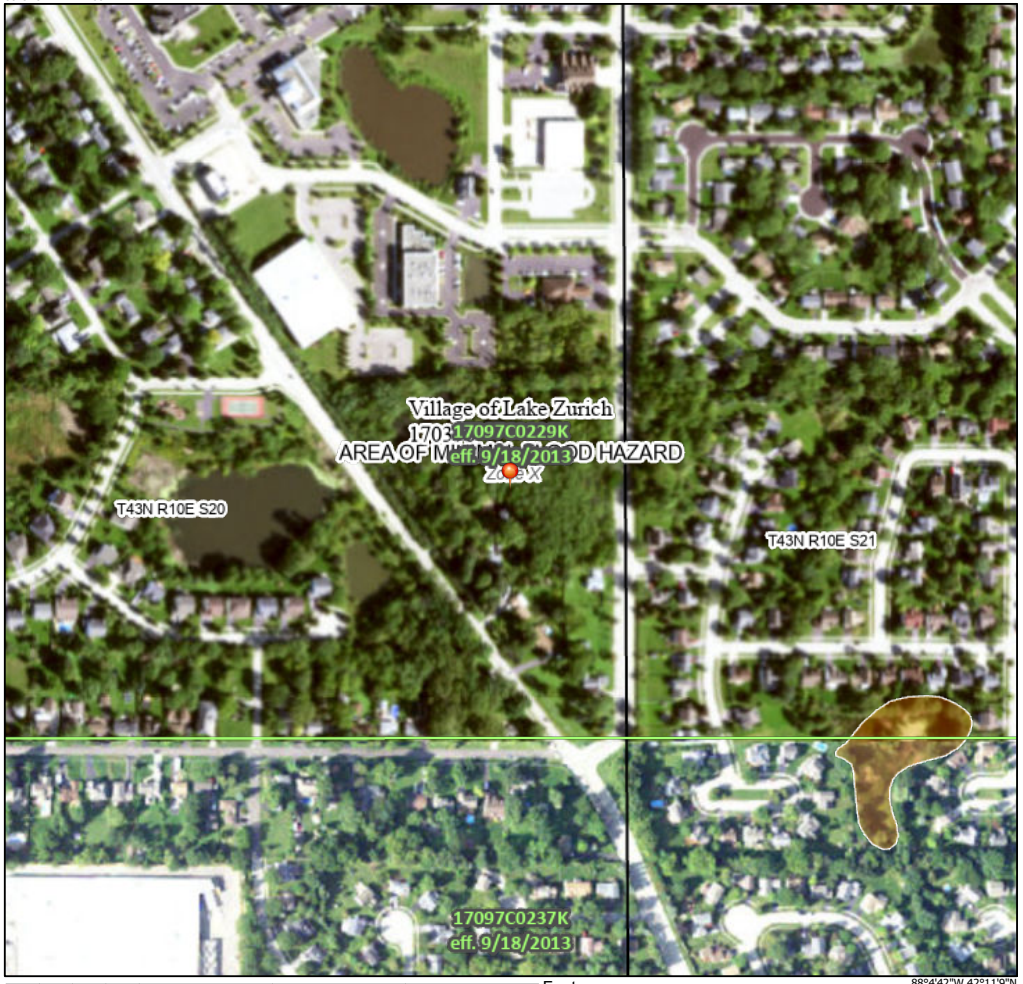
Component Percent Cutoff: None Specified

Tie-break Rule: Higher

National Flood Hazard Layer FIRMette

FEMA

88°5'19"W 42°11'35"N



88°4'42"W 42°11'9"N

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

1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

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

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

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

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

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

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

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

N

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

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

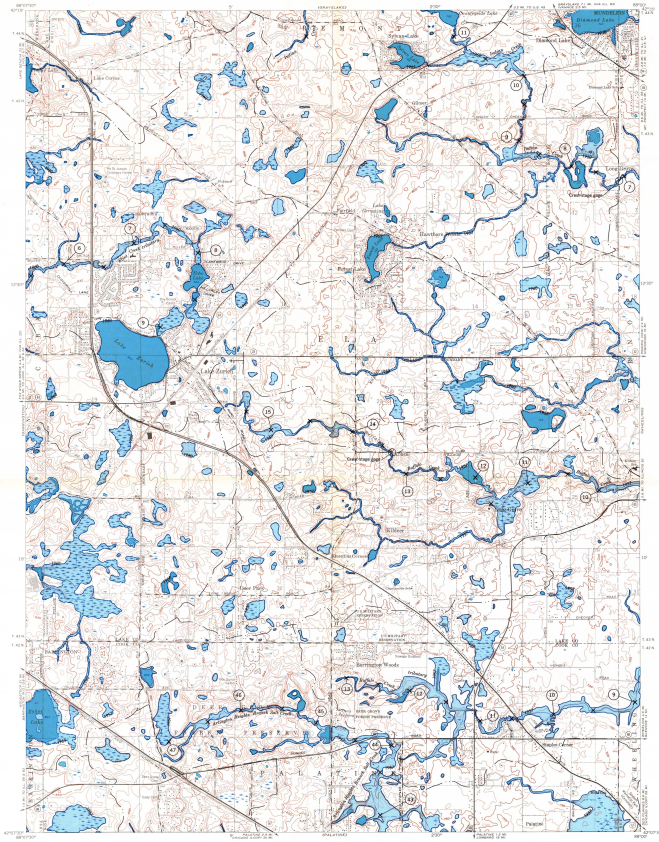
The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 5/8/2024 at 5:48 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

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

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

PREPARED IN COOPERATION WITH
THE NORTHEASTERN ILLINOIS METROPOLITAN
AREA PLANNING COMMISSION

HYDROLOGIC INVESTIGATIONS
ATLAS HA-208



FLOODS IN LAKE ZURICH QUADRANGLE NORTHEASTERN ILLINOIS

This report presents hydrologic data concerning the extent, depth, and frequency of flooding that are useful in planning for economic development of flood plains in the Lake Zurich quadrangle, northeastern Illinois. It will be a valuable tool for counties, municipalities, and other agencies responsible for solving existing flood problems, and in formulating regulations for land use and development that will reduce future flood damages.

The approximate areas inundated by floods along streams and lakes in the Lake Zurich 7 1/2-minute quadrangle are delineated on a topographic map. The quadrangle location is shown in figure 1. Inundated areas are shown along Buffalo Creek, Buffalo Creek tributary, and Arlington Heights Branch Salt Creek for the flood of July 1957; along Indian Creek, Flint Creek tributary, and Lake Zurich for the flood of March-April 1960; along Sylvan Lake, Forest Lake, and Baker Lake for the flood of April 1965; and along Diamond Lake for the flood of July 1938.

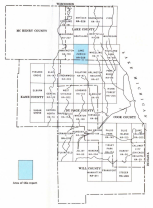


FIGURE 1.—*Index map of northeastern Illinois showing location of quadrangles in flood-hazard mapping program.*

The stage of the 1957 flood at the gaging station on Buffalo Creek at Buffalo Grove Road was the maximum for the period of record, 1953–64, and corresponds to the estimated 10-year flood at that site. A flood in the spring of 1951 was reported to be the highest in recent years along Indian Creek. Although sufficient data were not available to define its profile, the 1951 flood stage in Countryside Lake was about a quarter of a foot higher than the stage of the 1960 flood. The stage of the 1938 flood on Diamond Lake, 743.68 feet, exceeded the observed stage in April 1965 by about 3 feet and was reported to have been the highest in at least 32 years.

Greater floods than those shown on the map are possible. The flood boundaries shown provide a record of historic fact that reflect channel conditions existing when the floods occurred. Changes in channel conditions, waterway openings at highway and railroads, or changes in runoff characteristics of the streams caused by increased urbanization that may have take place subsequent to the floods shown on the map could affect the flood height reached by future floods of comparable discharges. Protective works built after the floods shown may reduce the frequency of flooding in the area but will not necessarily eliminate all future flooding. The inundation pattern of future floods may be affected by new highways and bridges, relocation and improvement of stream channels, and other cultural changes.

The general procedure used in defining flood boundaries was to construct flood profiles from elevations of floodmarks identified in the field and existing data available from other agencies. The extent of flooding delineated on the topographic map was derived from the profiles by interpolation between contours (lines of equal ground elevations) and by plotting overflow limits identified during field investigations and surveys. The portrayal of flood boundaries in contrast with the scale of the map (1 inch = 2,000 feet; contour interval, 5 feet and 10 feet).

There are numerous depressions or lowland areas in the Lake Zurich quadrangle where surface water accumulates because of inadequate drainage into the streams. Frequency and depth of flooding in these areas are unrelated to the water-surface elevation along the streams. Some areas are flooded only briefly after periods of heavy rainfall or snowmelt, whereas others remain inundated continuously, depending largely upon the rates of evaporation and seepage into the ground. Flood boundaries are shown for all such areas that were detected in this investigation.

Cooperation and acknowledgment.— The preparation of this report is a part of an extensive flood-mapping program financed through a cooperative agreement between the Northeastern Illinois Metropolitan Area Planning Commission and the U. S. Geological Survey. Under the agreement, flood maps will be prepared for the 71/2-minute quadrangles shown in figure 1. The program includes parts of Cook, Kane, McHenry, and Will Counties, and all of Du Page and Lake Counties. The six counties cooperate in the program financially through separate agreements with the Planning Commission. Financial support for the preparation of this report was provided by Lake and Cook Counties, the Metropolitan Sanitary District of Greater Chicago, and the Forest Preserve District of Cook County.

The cooperative program is administered on behalf of the Planning Commission by Matthew L. Rockwell, Executive Director, and is directly coordinated by John R. Sheaffer, Chief Planner.

The report was prepared by the U. S. Geological Survey under the administrative direction of William D. Mitchell, district engineer, and under the immediate supervision of Davis W. Ellis, engineer-in-charge of the project.

Acknowledgment is made to the Department of Highways, Cook County, for supplying some of the data on which this report is based.

Additional data were obtained from officials of municipalities located in the area and from field investigations.

Flood heights.— The height of a flood at a gaging station usually is stated in terms of gage height or of stage, which is the elevation of the water surface above a selected datum plane. Elevations shown on the map are in feet above mean sea level. Gage heights for crest-stage gages in the Lake Zurich quadrangle can be converted to elevations above mean sea level by adding the gage height to the appropriate datum of gage listed in the following table. The drainage area for each station also is shown in the table. The subbasin divides from which the areas were determined are shown on the flood map.

Crest-stage gage	Station of gage above mean sea level (feet)	Drainage area (square miles)
Indian Creek at Diamond Lake (Diamond Lake Road)	756.97	10.6
Buffalo Creek near Lake Zurich (Cuba Road)	760.91	1.91

Gage height and year of occurrence of each annual flood (highest peak stage in each calendar year) above 663-foot elevation at the gaging station, Buffalo Creek near Wheeling, Ill. (Buffalo Grove Road), during the period 1953–64 are shown in figure 2. The gaging station is 2 1/4 miles east of the Lake Zurich quadrangle and at mile 4.36.

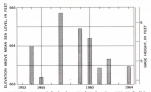


FIGURE 2.—*Annual floods above 663-foot elevation (NGVD) at Buffalo Creek near Wheeling, Illinois (Buffalo Grove Road).*

Flood discharge.—The rate of discharge of a stream is the volume of flow that passes a particular location in a given period of time. Discharge rates usually are expressed in cubic feet per second (cfs). Peak discharge, the maximum discharge attained by a flood, generally occurs at the time of the maximum height (stage) of the flood, but if a stream is affected by variable backwater, the time of the peak may not coincide with that of the maximum stage. For example, backwater from an ice jam may cause a high stage during a period of relatively low discharge.

Flood frequency.— Frequency of floods at the Geological Survey gaging station on Buffalo Creek near Wheeling was derived from streamflow records for this station combined with records for other nearby stations and with the regional flood-frequency relation for streams in northern Illinois (Mitchell, 1954). The general relation between frequency and discharge is shown in figure 3, and the general relation between frequency and stage is shown in figure 4. The relation between stage and frequency is dependent on the relation of stage to discharge which is affected by changes in physical conditions of channels and constrictions. The frequency curve shown in figure 4 is based on channel conditions existing in 1965. Longer records and future changes in channel conditions may define somewhat different flood-frequency curves. Extrapolation of the curves beyond the limits shown is not recommended.

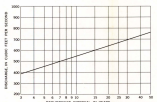


FIGURE 3.—*Frequency of flood discharges at Buffalo Creek near Wheeling, Illinois (Buffalo Grove Road).*

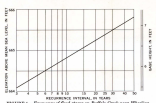


FIGURE 4.—*Frequency of flood stages at Buffalo Creek near Wheeling, Illinois (Buffalo Grove Road).*

Recurrence intervals.— As applied to flood events, recurrence interval is the average interval of time within which a given flood will be equaled or exceeded once. Frequencies of floods can be stated in terms of their probabilities of occurrence (virtually, reciprocals of their recurrence intervals for floods with recurrence intervals greater than 10 years). For example, a flood with a 25-year recurrence interval would have a 4-percent chance of being equaled or exceeded in any given year, or a flood with a 50-year recurrence interval would have a 2-percent chance of being equaled or exceeded in any given year.

The general relation between recurrence interval and flood height at the gaging station on Buffalo Creek near Wheeling (fig. 4) is tabulated below:

Recurrence interval (in years)	Elevation above mean sea level (feet)
50	665.0
25	665.5
10	666.2
5	666.8
2	668.4
1	669.1

It is emphasized that recurrence intervals are average figures—the average number of years between occurrences of floods that equal or exceed a given magnitude. The fact that a major flood is experienced in one year does not reduce the probability of that flood being exceeded in the next year or even in the next week.

Flood profiles.— Profiles of the water surface, based primarily on elevations of marks left by floods of July 1957, March–April 1960, and April 1965, are shown in figures 5–9. Where floodmarks could not be obtained the profiles were constructed on the basis of flood crests determined from reports of local residents, and on elevations of streambeds and lower flood stages. River miles used for the profiles correspond to those marked along the streams on the flood map.

Flood depths.—Depth of flooding at any point can be estimated by subtracting the ground elevation from the water surface elevation at the same point, indicated by the profiles in figures 5–9. The approximate ground elevation can be determined from contours on the map, although more nearly accurate elevations can be obtained by leveling from nearby bench marks.

Additional data.—Other information pertaining to floods in the Lake Zurich quadrangle can be obtained at the office of the U. S. Geological Survey, Oak Park, Ill., and from the following published reports:

Daniels, W. S., and Hale, M. D., 1958, Floods of October 1954 in the Chicago Area, Illinois and Indiana: U. S. Geol. Survey Water-Supply Paper 1370-B, p. 107–230.

Mitchell, W. D., 1954, Floods in Illinois, magnitude and frequency: Illinois Dept. of Public Works and Bldgs., Div. of Waterways, 386 p.

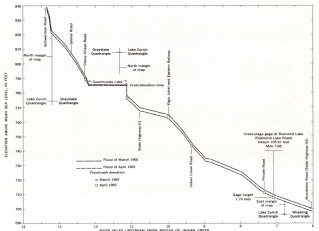


FIGURE 5.—*Profile of flood in Buffalo Creek.*

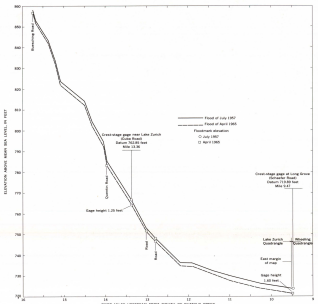


FIGURE 6.—*Profile of flood on Buffalo Creek.*

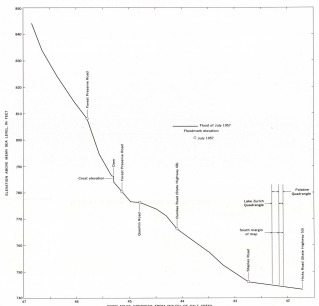


FIGURE 7.—*Profile of flood on Arlington Heights Branch Salt Creek.*

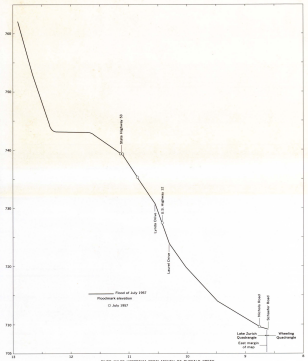


FIGURE 8.—*Profile of flood in Buffalo Creek tributary.*

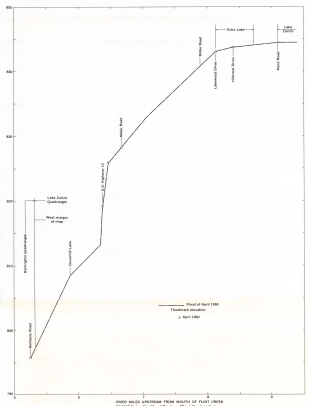


FIGURE 9.—*Profile of flood on Flint Creek tributary.*

FLOODS IN LAKE ZURICH QUADRANGLE, NORTHEASTERN ILLINOIS

By
Allen W. Noehre and Roman T. Mycyk

1966

UNITED STATES GEOLOGICAL SURVEY, WASHINGTON, D. C.—1966—260113

For sale by U.S. Geological Survey, price 75 cents

Lake County, Illinois

Lake County, Illinois

LakeCounty

Map Printed on 5/9/2024

N

Flood Hazard Zones

- USGS Flood of Record
- 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

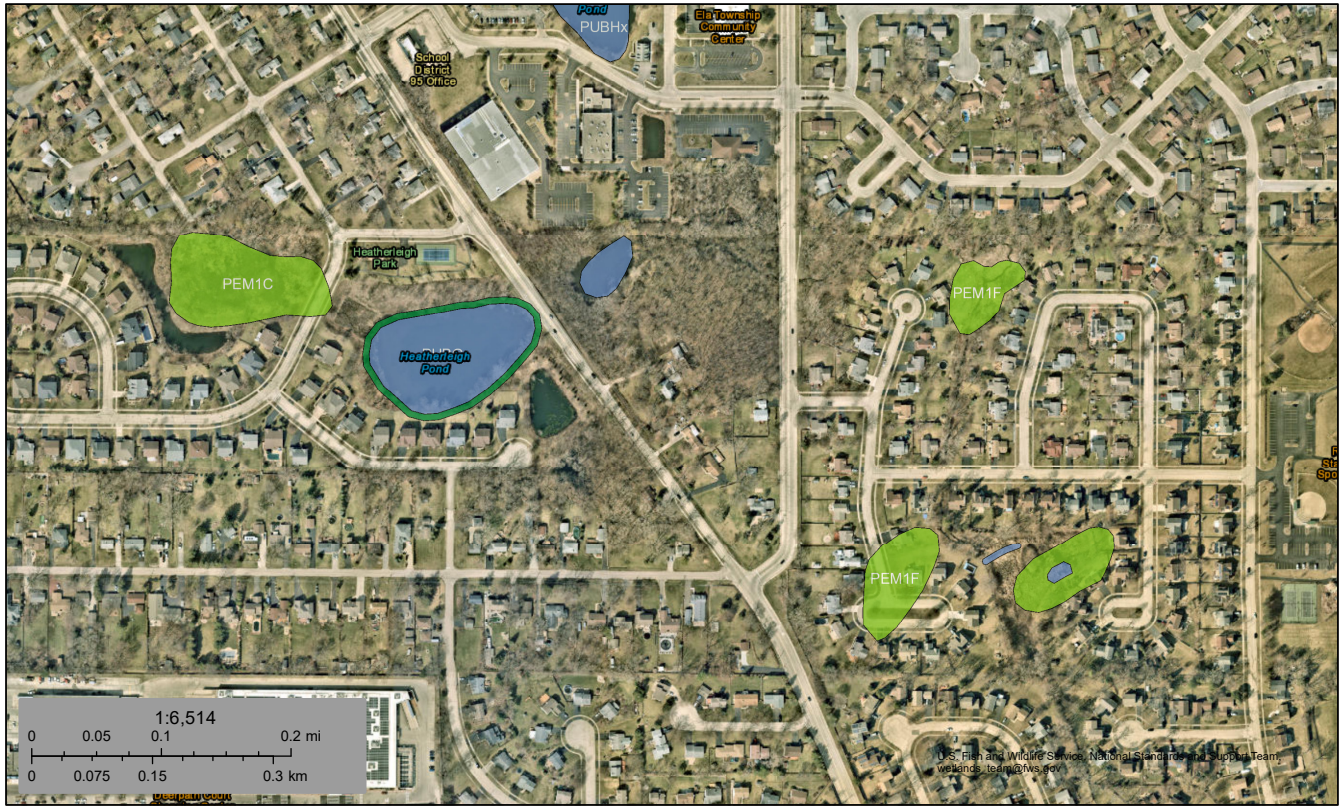
- Flood Structure
- Flood Structure
- Bridge
- Flood Structure
- Dam, Weir, Jetty
- Other Structures
- Other Structures
- Other Structures
- Dam, Weir, Jetty
- Levees
- Political Jurisdictions
- Base Flood Elevations
- Cross-Sections
- LOMAs
- Effective

Tax Parcel Information

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.

U.S. Fish and Wildlife Service
National Wetlands Inventory

Wetland Map



May 9, 2024

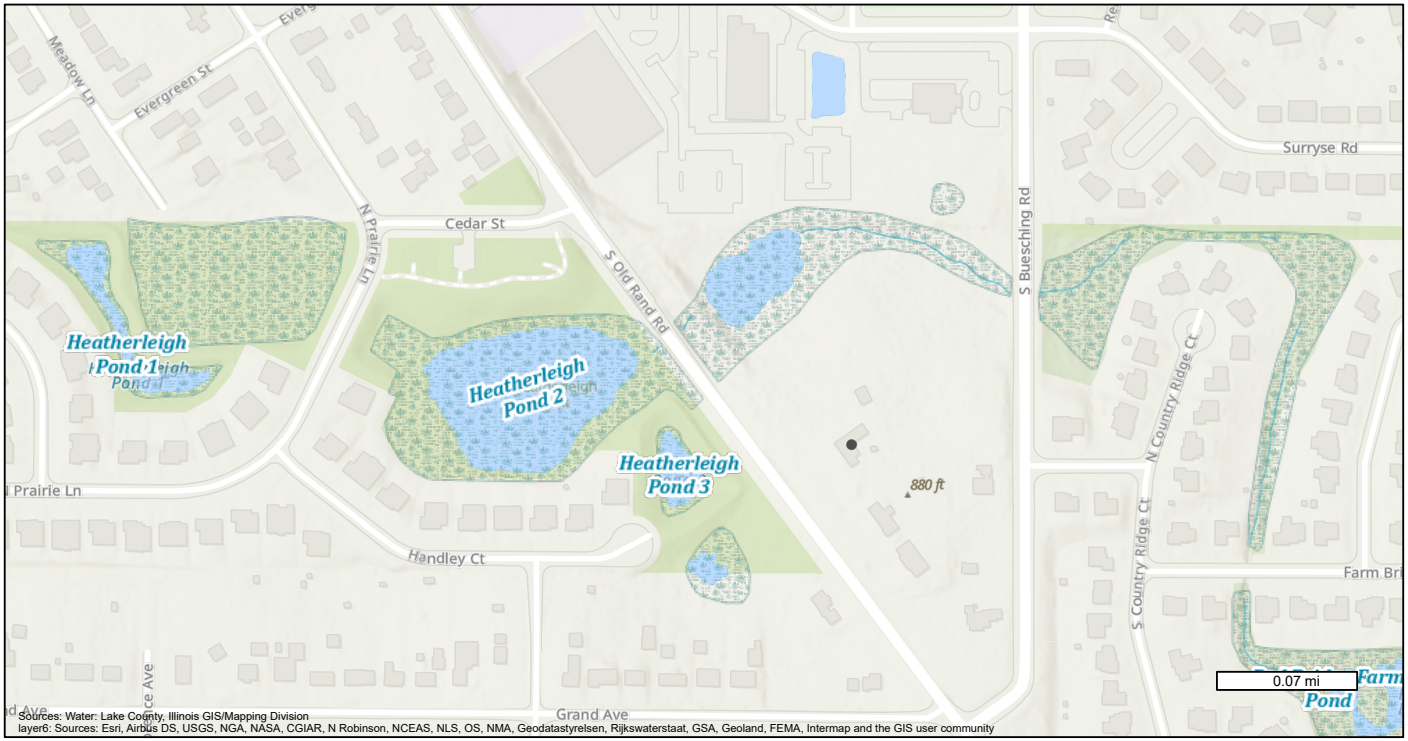
Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

Lake County, Illinois



LakeCounty

Map Printed on 5/9/2024

N

Tax Parcel Information

2022 Hydro Areas

TYPE

Lake

Pond

River/Stream/ Creek

Lake County Wetland Inventory

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.

STORMWATER MANAGEMENT COMMISSION

September 16, 2022

Mr. Henry Joern
670 S. Old Rand Road
Lake Zurich, IL 60047

Subject: **SMC File #:** IWLC-22-593
USACE Ref. #: LRC-2022-547
670 S. Old Rand Road Property, Lake Zurich, Lake County, IL
PRELIMINARY WETLAND JURISDICTIONAL DETERMINATION

Dear Mr. Joern:

This letter responds to the request for a preliminary wetland jurisdictional determination (PJD) and isolated wetland boundary verification (BV) for the above-referenced property, submitted on your behalf by Ms. Ellen Raimondi with Gary R. Weber Associates, Inc. (GRWA) and received by the Lake County Stormwater Management Commission (SMC) on August 8, 2022, with supplemental information received September 15, 2022. SMC reviewed available reference materials and performed a site reconnaissance in the company of Mr. Michael Machalek the U.S. Army Corps of Engineers (USACE) on August 25, 2022. Wetlands/waters referenced in this letter are shown on the enclosed *Exhibit A: Water Resources Summary,* by GRWA, not dated (digital copy received by SMC on September 15, 2022).

- Based on our findings, **"Tributary 1" and "Wetland 1" appear to be *Waters of the United States* (WOTUS)** subject to regulation by the USACE under Section 404 of the federal Clean Water Act. These feature have a clearly discernible hydrologic connection to the traditionally navigable Des Plaines River (via the Buffalo Creek subwatershed). "Tributary 1" is a relatively permanent waters, and Wetland 1 abuts that feature. The USACE did not verify WOTUIS boundaries during this determination (see enclosed PJD field report). If a WOTUS boundary verification is desired, please coordinate directly with the Corps to schedule a field visit once flagging has been refreshed.

This PJD has been approved by SMC's Chief Engineer and the findings are valid for a period of three (3) years from the date of this letter unless new information warrants a revision before the expiration date. If you disagree with the findings of this PJD, you may request an approved JD (AJD) from the USACE.

For your information, SMC performed this PJD in accordance with the *Interagency Coordination Agreement (ICA) Between the U.S. Army Corps of Engineers, Chicago District, Lake County Stormwater Management Commission, and Lake County Department of Planning, Building and Development*, dated June 4, 2002. We determined the jurisdiction of WOTUS on the subject project area based on the current definition in 33 U.S.C. 1344. Section 328.3(a); guidance provided in the EPA/USACE Memorandum entitled "Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. United States & Carabell v. United States" dated June 5, 2007 (revised 12-02-08); and the USACE's *Jurisdictional Determination Form Instructional Guidebook* dated May 30, 2007. For areas not considered WOTUS, we determined jurisdiction using the definition of IWLC in Appendix A of the Lake County Watershed Development Ordinance (WDO, 10-13-2020).

Permitting Considerations

1. This letter satisfies the requirement for a written jurisdictional determination under WDO §1001 for the indicated wetlands/waters.

2. The surveyed boundaries of all existing wetlands/waters on the development site, including features constructed in dry land (e.g., stormwater management basins), need to be included on the engineering plans for permitting purposes.

3. **If proposed development will impact WOTUS, a wetland permit from the USACE will be required.** Please refer to the USACE-Chicago District's web site for the permit application submittal requirements: http://www.lrc.usace.army.mil/Missions/Regulatory/Illinois/AppChecklist.aspx. The USACE may require SMC's technical review/approval of the proposed soil erosion and sediment control plan (SE/SC) for the development as a condition of the USACE permit. We will advise you if our SE/SC review/approval is required.

4. **A Watershed Development Permit (WDP) will be required from the Village of Lake Zurich for site development in accordance with the applicable provisions of the WDO.** Please contact Ms. Jodi McCarthy with Manhard Consulting, Ltd., the Village's WDO Enforcement Officer (EO, 847-634-5500 or jmccarthy@manhard.com), for the appropriate permit application form and procedures.

We would like to be of assistance. If you have any questions, or would like to set up a meeting, please contact Juli Crane at jcrane@lakecountyil.gov.

Sincerely,
LAKE COUNTY STORMWATER MANAGEMENT COMMISSION

Brian Frank, P.E., CFM
Chief Engineer

Juli E. Crane, PWS, CWS, CFM
Principal Wetland Specialist

Enclosures: *Exhibit A: Water Resources Summary* (GRWA, not dated)
PJD Field Report

xc: Kathy Chernich/Mike Machalek – U.S. Army Corps of Engineers
Jodi McCarthy, Manhard, EO for Village of Lake Zurich
Michael Brown, Village of Lake Zurich Public Works
Ellen Raimondi, CWS, GRWA

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.

LEGEND

Study Area

Flagged Wetland Boundaries

Off-site Wetland Boundaries (not flagged)

Estimated Non-wetland Waters (Tributary)

Sample Points A-E

0 80' 160'

SCALE: 1"=160' **NORTH**

Provided by: Google Earth 2018 Aerial

GARY R. WEBER ASSOCIATES, INC.

670 S. Old Rand Road

Lake Zurich, Lake County, Illinois 60047

AC2289

Advantage Consulting Engineers

WATER RESOURCES SUMMARY

EXHIBIT A

L:\Projects\AC2289\Eco-Con\Full Wetland Report\Maps\Old Rand Rd_WL Exhibits.dwg

STORMWATER MANAGEMENT COMMISSION

Preliminary Jurisdictional Determination Field Report

LakeCounty

Site Name: *670 S. Old Rand Rd Property*

Date: *August 25, 2022 4:00 PM*

SMC/PBD #: *IWLC-22-593*

USACOE #: *LRC-2022-593*

Attendees:

USACOE Representative(s): *Mike Machalek*
List Other Corp Representative(s): *N/A*
SMC/PBD Representative(s): *Juli Crane*
Other SMC/PBD Representative(s): *N/A*
Other attendee(s):

PJD Requestor:

Name/Contact Info: *Henry Joern, 670 S. Old Rand Rd, Lake Zurich, 847-417-8732, henryjoern@gmail.com*

Site Info:

Address/PIN#: *670 S. Old Rand Rd; PINs: 14-20-400-002 and 14-20-400-003*
Lat/Long: *42.189476 / -88.083492*
Description: *Single-family residence and out-buildings on wooded lot with creek bisecting the northern part of site from east to west.*
References: *No wetland report provided; Wetland Delineation Map (Exhibit A, Preliminary Water Resources Summary), FEMA Floodplain Map (2016), Aerial Photos (1939-2020, Lake County Online GIS Maps), Topographic Map - 1' contours (Lake County Online GIS Maps, 2007 & 2017), Lake County Soil Surveys (SCS 1970 & NRCS 2005), USGS Quadrangle Maps (1960, 1972, 1993), USGS Flood of Record Map, Lake County Storm Sewer Network Maps (SMC GIS, 2022); Lake County Wetland Restoration & Preservation Plan - Online Decision Support Tool (SMC, 2020)*

Disposition of Waters of the US:

Site appears to contain Waters of the U.S.: *Yes, site DOES appear to contain Waters of the U.S.*
List wetland/water IDs from delineation map and basis: *Tributary 1 is a relatively permanent water (RPW) and Wetland 1 = wetland abutting an RPW (i.e., Tributary 1)*
WOUS Exclusions: *N/a*
Corps representative concurs with staked/flagged WOUS boundaries: *No*
If Corp representative DOES NOT concur, please explain: *Flagging not present at time of PJD visit.*

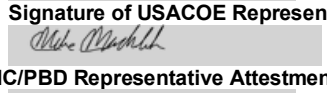
Disposition of Isolated Waters of Lake County:

Site appears to contain Isolated Waters of Lake County: *No, site DOES NOT appear to contain Isolated Waters of Lake County.*
List wetland/water IDs from delineation map: *N/A*
Potential IWLC Exclusions: *N/a*
SMC/PBD representative concurs with staked/flagged IWLC boundaries:
If SMC/PBD representative DOES NOT concur, please explain:

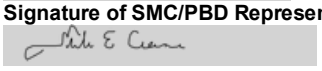
Comments: *The WOTUS boundary will be verified upon reflagging and consultant contacting the Army Corps to reschedule a field visit.*

Attests:

USACOE Representative Attestment: *Corp representative has reviewed the information herein and CONCURS with determination.*
Signature of USACOE Representative:



SMC/PBD Representative Attestment: *SMC/PBD representative has reviewed the information herein and CONCURS with determination.*
Signature of SMC/PBD Representative:



U:\Regulatory Program\Permits\22 Permits\IWLC\IWLC-22-593 670 S. Old Rand Rd PJD&BV, LZ\PERMITS\PJD_Field_Report_Form.docx

670 S Old Rand Rd
Residential Development
May 17, 2024

APPENDIX II – HYDROLOGIC & HYDRAULIC CALCULATIONS

TR-20 REPORT

HEC-RAS REPORT

HY-8 REPORT

```
WinTR-20 Printed Page File      Beginning of Input Data List
P:\22138 - KLLM - 670 Old Rand Road\Calculations\WinTR20\670.inp

WinTR-20: version 3.30                  0         0         0.01      0         Illinois,Lake
Tributary area east of Old Rand Rd berm

SUB-AREA:
          SubArea1  Reach1              .0006     90.       .25       YY  Y
          SubArea2  Reach1              .0039     90.       .25
          SubArea3  Reach1              .0046     90.       .25
          SubArea4  Reach1              .0037     90.       .25


STREAM REACH:
          Reach1    Outlet              Basin1                         YY  Y


STORM ANALYSIS:
          100YR-1HR           0.        4.03      Huff 1    2         3.34
          100YR-2HR           0.        4.97      Huff 1    2         3.34
          100YR-6HR           0.        6.43      Huff 1    2         3.34
          100YR-12HR          0.        7.46      Huff 2    2         3.34
          100YR-24HR          0.        8.57      Huff 3    2         3.34


STRUCTURE RATING:
          Basin1    100.
                    100.      0.        0.
                    101.      1.        2.
                    102.      2.        4.
                    103.      3.        6.



RAINFALL DISTRIBUTION:
          Huff 3              1.
                    0.        .0205     .0431     .0667     .0912
                    .1171     .1436     .1691     .1964     .2278
                    .2633     .3093     .3635     .4392     .5211
                    .6102     .6989     .7819     .8492     .8974
                    .9311     .9534     .9706     .9856     1.
          Huff 2              0.5
                    0.        .0229     .0482     .0778     .1133
                    .1579     .2139     .2841     .3644     .4529
                    .5435     .6238     .6976     .7548     .8038
                    .8470     .8781     .9022     .9217     .9381
                    .9529     .9657     .9774     .9884     1.
          Huff 1              .2
                    0.        .0836     .1773     .2811     .3833
                    .4745     .5550     .6225     .6722     .7082
                    .7417     .7697     .7981     .8255     .8518
                    .8740     .8947     .9117     .9270     .9403
                    .9536     .9656     .9774     .9885     1.



GLOBAL OUTPUT:
          2         .01       .25       YY  Y     YY  Y



WinTR-20 Printed Page File      End of Input Data List

                    Tributary area east of Old Rand Rd berm
```

Name of printed page file:
P:\22138 - KLLM - 670 Old Rand Road\Calculations\WinTR20\670.out

STORM 100YR-1HR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
SubArea1	0.600E-03		2.945		0.95	0.59	975.86

Line Start Time (hr)	Flow Values @ time increment of 0.250 hr (cfs)						
0.0	0.0	0.01	0.28	0.52	0.58	0.55	0.46
1.750	0.32	0.25	0.21	0.20	0.20	0.17	0.15
3.500	0.13	0.11	0.10	0.09	0.09	0.08	0.03
5.250	0.0						

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
SubArea2	0.004		2.947		0.95	3.81	975.86

Line Start Time (hr)	Flow Values @ time increment of 0.250 hr (cfs)						
0.0	0.0	0.09	1.82	3.39	3.80	3.57	2.99
1.750	2.11	1.63	1.37	1.33	1.28	1.13	1.00
3.500	0.82	0.70	0.64	0.59	0.56	0.54	0.22
5.250	0.02	0.0					

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
SubArea3	0.005		2.947		0.95	4.49	975.86

Line Start Time (hr)	Flow Values @ time increment of 0.250 hr (cfs)						
0.0	0.0	0.11	2.15	4.00	4.48	4.21	3.52
1.750	2.49	1.92	1.62	1.56	1.51	1.34	1.18
3.500	0.97	0.83	0.76	0.70	0.66	0.64	0.26
5.250	0.02	0.0					

Tributary area east of Old Rand Rd berm

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
SubArea4	0.004		2.947		0.95	3.61	975.86

Line Start Time (hr)	Flow Values @ time increment of 0.250 hr (cfs)						
0.0	0.0	0.09	1.73	3.22	3.61	3.38	2.83
1.750	2.00	1.55	1.30	1.26	1.21	1.07	0.95
3.500	0.78	0.67	0.61	0.56	0.53	0.52	0.21
5.250	0.02	0.0					

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
Reach1	0.013	Upstream	2.947		0.95	12.49	975.86

Line Start Time (hr)	Flow Values @ time increment of 0.250 hr (cfs)						
0.0	0.0	0.31	5.97	11.14	12.48	11.71	9.80
1.750	6.92	5.35	4.50	4.35	4.19	3.71	3.29
3.500	2.70	2.31	2.11	1.94	1.85	1.78	0.73
5.250	0.05	0.0					

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
Reach1	0.013	Downstream	2.918	100.88	4.98	0.88	69.05

Line Start Time (hr)	Flow Values @ time increment of 0.250 hr (cfs)						
0.250	0.0	0.03	0.12	0.24	0.37	0.47	0.55
2.000	0.61	0.65	0.69	0.73	0.76	0.79	0.81
3.750	0.83	0.85	0.86	0.87	0.88	0.88	0.88
5.500	0.87	0.86	0.85	0.84	0.83	0.82	0.82
7.250	0.81	0.80	0.79	0.78	0.78	0.77	0.76
9.000	0.75	0.74	0.74	0.73	0.72	0.71	0.71
10.750	0.70	0.69	0.68	0.68	0.67	0.66	0.66
12.500	0.65	0.64	0.64	0.63	0.62	0.62	0.61
14.250	0.60	0.60	0.59	0.59	0.58	0.57	0.57
16.000	0.56	0.56	0.55	0.55	0.54	0.53	0.53
17.750	0.52	0.52	0.51	0.51	0.50	0.50	0.49
19.500	0.49	0.48	0.48	0.47	0.47	0.46	0.46
21.250	0.45	0.45	0.44	0.44	0.43	0.43	0.43

Tributary area east of Old Rand Rd berm

Line Start Time (hr)	Flow Values @ time increment of 0.250 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
23.000	0.42	0.42	0.41	0.41	0.40	0.40	0.40
24.750	0.39	0.39	0.38	0.38	0.38	0.37	0.37
26.500	0.36	0.36	0.36	0.35	0.35	0.35	0.34
28.250	0.34	0.34	0.33	0.33	0.33	0.32	0.32
30.000	0.32	0.31	0.31	0.31	0.30	0.30	0.30
31.750	0.29	0.29	0.29	0.28	0.28	0.28	0.28
33.500	0.27	0.27	0.27	0.26	0.26	0.26	0.26
35.250	0.25	0.25	0.25	0.25	0.24	0.24	0.24
37.000	0.24	0.23	0.23	0.23	0.23	0.22	0.22
38.750	0.22	0.22	0.22	0.21	0.21	0.21	0.21
40.500	0.20	0.20	0.20	0.20	0.20	0.19	0.19
42.250	0.19	0.19	0.19	0.18	0.18	0.18	0.18
44.000	0.18	0.18	0.17	0.17	0.17	0.17	0.17
45.750	0.16	0.16	0.16	0.16	0.16	0.16	0.15
47.500	0.15	0.15	0.15	0.15	0.15	0.15	0.14
49.250	0.14	0.14	0.14	0.14	0.14	0.14	0.13
51.000	0.13	0.13	0.13	0.13	0.13	0.13	0.12
52.750	0.12	0.12	0.12	0.12	0.12	0.12	0.12
54.500	0.11	0.11	0.11	0.11	0.11	0.11	0.11
56.250	0.11	0.11	0.10	0.10	0.10	0.10	0.10
58.000	0.10	0.10	0.10	0.10	0.10	0.09	0.09
59.750	0.09	0.09	0.09	0.09	0.09	0.09	0.09
61.500	0.09	0.08	0.08	0.08	0.08	0.08	0.08
63.250	0.08	0.08	0.08	0.08	0.08	0.08	0.08
65.000	0.07	0.07	0.07	0.07	0.07	0.07	0.07
66.750	0.07	0.07	0.07	0.07	0.07	0.07	0.06
68.500	0.06	0.06	0.06	0.06	0.06	0.06	0.06
70.250	0.06	0.06	0.06	0.06	0.06	0.06	0.06
72.000	0.06	0.06	0.05	0.05	0.05	0.05	0.05
73.750	0.05	0.05	0.05	0.05	0.05	0.05	0.05
75.500	0.05	0.05	0.05	0.05	0.05	0.05	0.05
77.250	0.04	0.04	0.04	0.04	0.04	0.04	0.04
79.000	0.04	0.04	0.04	0.04	0.04	0.04	0.04
80.750	0.04	0.04	0.04	0.04	0.04	0.04	0.04
82.500	0.04	0.04	0.04	0.03	0.03	0.03	0.03
84.250	0.03	0.03	0.03	0.03	0.03	0.03	0.03
86.000	0.03	0.03	0.03	0.03	0.03	0.03	0.03
87.750	0.03	0.03	0.03	0.03	0.03	0.03	0.03
89.500	0.03	0.03	0.03	0.03	0.03	0.03	0.03
91.250	0.03	0.02	0.02	0.02	0.02	0.02	0.02
93.000	0.02	0.02	0.02	0.02	0.02	0.02	0.02
94.750	0.02	0.02	0.02	0.02	0.02	0.02	0.02
96.500	0.02	0.02	0.02	0.02	0.02	0.02	0.02
98.250	0.02	0.02	0.02	0.02	0.02	0.02	0.02
100.000	0.02	0.02	0.02	0.02	0.02	0.02	0.02
101.750	0.02	0.02	0.02	0.02	0.02	0.02	0.02
103.500	0.02	0.01	0.01	0.01	0.01	0.01	0.01
105.250	0.01	0.01	0.01	0.01	0.01	0.01	0.01
107.000	0.01	0.01	0.01	0.01	0.01	0.01	0.01
108.750	0.01	0.01	0.01	0.01	0.01	0.01	0.01
110.500	0.01	0.01	0.01	0.01	0.01	0.01	0.01
112.250	0.01	0.01	0.01	0.01	0.01	0.01	0.0

Tributary area east of Old Rand Rd berm

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
OUTLET	0.013		2.918		4.98	0.88	69.05

Line Start Time (hr)	Flow Values @ time increment of 0.250 hr (cfs)						
0.250	0.0	0.03	0.12	0.24	0.37	0.47	0.55
2.000	0.61	0.65	0.69	0.73	0.76	0.79	0.81
3.750	0.83	0.85	0.86	0.87	0.88	0.88	0.88
5.500	0.87	0.86	0.85	0.84	0.83	0.82	0.82
7.250	0.81	0.80	0.79	0.78	0.78	0.77	0.76
9.000	0.75	0.74	0.74	0.73	0.72	0.71	0.71
10.750	0.70	0.69	0.68	0.68	0.67	0.66	0.66
12.500	0.65	0.64	0.64	0.63	0.62	0.62	0.61
14.250	0.60	0.60	0.59	0.59	0.58	0.57	0.57
16.000	0.56	0.56	0.55	0.55	0.54	0.53	0.53
17.750	0.52	0.52	0.51	0.51	0.50	0.50	0.49
19.500	0.49	0.48	0.48	0.47	0.47	0.46	0.46
21.250	0.45	0.45	0.44	0.44	0.43	0.43	0.43
23.000	0.42	0.42	0.41	0.41	0.40	0.40	0.40
24.750	0.39	0.39	0.38	0.38	0.38	0.37	0.37
26.500	0.36	0.36	0.36	0.35	0.35	0.35	0.34
28.250	0.34	0.34	0.33	0.33	0.33	0.32	0.32
30.000	0.32	0.31	0.31	0.31	0.30	0.30	0.30
31.750	0.29	0.29	0.29	0.28	0.28	0.28	0.28
33.500	0.27	0.27	0.27	0.26	0.26	0.26	0.26
35.250	0.25	0.25	0.25	0.25	0.24	0.24	0.24
37.000	0.24	0.23	0.23	0.23	0.23	0.22	0.22
38.750	0.22	0.22	0.22	0.21	0.21	0.21	0.21
40.500	0.20	0.20	0.20	0.20	0.20	0.19	0.19
42.250	0.19	0.19	0.19	0.18	0.18	0.18	0.18
44.000	0.18	0.18	0.17	0.17	0.17	0.17	0.17
45.750	0.16	0.16	0.16	0.16	0.16	0.16	0.15
47.500	0.15	0.15	0.15	0.15	0.15	0.15	0.14
49.250	0.14	0.14	0.14	0.14	0.14	0.14	0.13
51.000	0.13	0.13	0.13	0.13	0.13	0.13	0.12
52.750	0.12	0.12	0.12	0.12	0.12	0.12	0.12
54.500	0.11	0.11	0.11	0.11	0.11	0.11	0.11
56.250	0.11	0.11	0.10	0.10	0.10	0.10	0.10
58.000	0.10	0.10	0.10	0.10	0.10	0.09	0.09
59.750	0.09	0.09	0.09	0.09	0.09	0.09	0.09
61.500	0.09	0.08	0.08	0.08	0.08	0.08	0.08
63.250	0.08	0.08	0.08	0.08	0.08	0.08	0.08
65.000	0.07	0.07	0.07	0.07	0.07	0.07	0.07
66.750	0.07	0.07	0.07	0.07	0.07	0.07	0.06
68.500	0.06	0.06	0.06	0.06	0.06	0.06	0.06
70.250	0.06	0.06	0.06	0.06	0.06	0.06	0.06
72.000	0.06	0.06	0.05	0.05	0.05	0.05	0.05
73.750	0.05	0.05	0.05	0.05	0.05	0.05	0.05
75.500	0.05	0.05	0.05	0.05	0.05	0.05	0.05
77.250	0.04	0.04	0.04	0.04	0.04	0.04	0.04

Tributary area east of Old Rand Rd berm

Line Start Time (hr)	Flow Values @ time increment of 0.250 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
79.000	0.04	0.04	0.04	0.04	0.04	0.04	0.04
80.750	0.04	0.04	0.04	0.04	0.04	0.04	0.04
82.500	0.04	0.04	0.04	0.03	0.03	0.03	0.03
84.250	0.03	0.03	0.03	0.03	0.03	0.03	0.03
86.000	0.03	0.03	0.03	0.03	0.03	0.03	0.03
87.750	0.03	0.03	0.03	0.03	0.03	0.03	0.03
89.500	0.03	0.03	0.03	0.03	0.03	0.03	0.03
91.250	0.03	0.02	0.02	0.02	0.02	0.02	0.02
93.000	0.02	0.02	0.02	0.02	0.02	0.02	0.02
94.750	0.02	0.02	0.02	0.02	0.02	0.02	0.02
96.500	0.02	0.02	0.02	0.02	0.02	0.02	0.02
98.250	0.02	0.02	0.02	0.02	0.02	0.02	0.02
100.000	0.02	0.02	0.02	0.02	0.02	0.02	0.02
101.750	0.02	0.02	0.02	0.02	0.02	0.02	0.02
103.500	0.02	0.01	0.01	0.01	0.01	0.01	0.01
105.250	0.01	0.01	0.01	0.01	0.01	0.01	0.01
107.000	0.01	0.01	0.01	0.01	0.01	0.01	0.01
108.750	0.01	0.01	0.01	0.01	0.01	0.01	0.01
110.500	0.01	0.01	0.01	0.01	0.01	0.01	0.01
112.250	0.01	0.01	0.01	0.01	0.01	0.01	0.0

STORM 100YR-2HR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Time (hr)	Rate (cfs)	Rate (csm)
SubArea1	0.600E-03		3.845		0.91	0.78	1292.88

Line Start Time (hr)	Flow Values @ time increment of 0.250 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
0.0	0.0	0.04	0.42	0.71	0.77	0.71	0.59
1.750	0.41	0.32	0.27	0.26	0.25	0.22	0.19
3.500	0.16	0.14	0.12	0.11	0.11	0.10	0.04
5.250	0.0						

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Time (hr)	Rate (cfs)	Rate (csm)
SubArea2	0.004		3.847		0.91	5.04	1292.88

Line Start Time (hr)	Flow Values @ time increment of 0.250 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
0.0	0.0	0.25	2.75	4.63	4.99	4.60	3.82
1.750	2.68	2.06	1.73	1.67	1.61	1.42	1.26

Tributary area east of Old Rand Rd berm

Line Start Time (hr)	Flow Values @ time increment of 0.250 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
3.500	1.04	0.88	0.81	0.74	0.71	0.68	0.28
5.250	0.02	0.0					

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Time (hr)	Rate (cfs)	Rate (csm)
SubArea3	0.005		3.847		0.91	5.95	1292.88

Line Start Time (hr)	Flow Values @ time increment of 0.250 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
0.0	0.0	0.30	3.24	5.46	5.89	5.43	4.50
1.750	3.16	2.44	2.04	1.97	1.90	1.68	1.48
3.500	1.22	1.04	0.95	0.87	0.83	0.80	0.33
5.250	0.02	0.0					

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Time (hr)	Rate (cfs)	Rate (csm)
SubArea4	0.004		3.847		0.91	4.78	1292.88

Line Start Time (hr)	Flow Values @ time increment of 0.250 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
0.0	0.0	0.24	2.61	4.39	4.74	4.37	3.62
1.750	2.54	1.96	1.64	1.59	1.53	1.35	1.19
3.500	0.98	0.84	0.76	0.70	0.67	0.65	0.26
5.250	0.02	0.0					

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Time (hr)	Rate (cfs)	Rate (csm)
Reach1	0.013	Upstream	3.847		0.91	16.55	1292.88

Line Start Time (hr)	Flow Values @ time increment of 0.250 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
0.0	0.0	0.83	9.03	15.20	16.39	15.11	12.53
1.750	8.79	6.78	5.69	5.49	5.28	4.68	4.13
3.500	3.40	2.90	2.64	2.43	2.32	2.24	0.91
5.250	0.06	0.0					

Tributary area east of Old Rand Rd berm

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
Reach1	0.013	Downstream	3.818	101.15	4.97	1.15	89.98

Line Start Time (hr)	Flow Values @ time increment of 0.250 hr (cfs)						
0.250	0.0	0.05	0.18	0.34	0.50	0.64	0.74
2.000	0.81	0.87	0.92	0.96	1.00	1.04	1.07
3.750	1.09	1.10	1.12	1.13	1.14	1.15	1.14
5.500	1.13	1.12	1.11	1.10	1.09	1.07	1.06
7.250	1.05	1.04	1.03	1.02	1.01	1.00	0.99
9.000	0.98	0.97	0.96	0.95	0.94	0.93	0.92
10.750	0.91	0.90	0.89	0.88	0.87	0.86	0.86
12.500	0.85	0.84	0.83	0.82	0.81	0.80	0.80
14.250	0.79	0.78	0.77	0.76	0.76	0.75	0.74
16.000	0.73	0.73	0.72	0.71	0.70	0.70	0.69
17.750	0.68	0.68	0.67	0.66	0.65	0.65	0.64
19.500	0.63	0.63	0.62	0.62	0.61	0.60	0.60
21.250	0.59	0.58	0.58	0.57	0.57	0.56	0.55
23.000	0.55	0.54	0.54	0.53	0.53	0.52	0.52
24.750	0.51	0.51	0.50	0.50	0.49	0.49	0.48
26.500	0.48	0.47	0.47	0.46	0.46	0.45	0.45
28.250	0.44	0.44	0.43	0.43	0.42	0.42	0.42
30.000	0.41	0.41	0.40	0.40	0.39	0.39	0.39
31.750	0.38	0.38	0.37	0.37	0.37	0.36	0.36
33.500	0.36	0.35	0.35	0.34	0.34	0.34	0.33
35.250	0.33	0.33	0.32	0.32	0.32	0.31	0.31
37.000	0.31	0.30	0.30	0.30	0.30	0.29	0.29
38.750	0.29	0.28	0.28	0.28	0.27	0.27	0.27
40.500	0.27	0.26	0.26	0.26	0.26	0.25	0.25
42.250	0.25	0.25	0.24	0.24	0.24	0.24	0.23
44.000	0.23	0.23	0.23	0.22	0.22	0.22	0.22
45.750	0.21	0.21	0.21	0.21	0.21	0.20	0.20
47.500	0.20	0.20	0.20	0.19	0.19	0.19	0.19
49.250	0.19	0.18	0.18	0.18	0.18	0.18	0.17
51.000	0.17	0.17	0.17	0.17	0.17	0.16	0.16
52.750	0.16	0.16	0.16	0.16	0.15	0.15	0.15
54.500	0.15	0.15	0.15	0.14	0.14	0.14	0.14
56.250	0.14	0.14	0.14	0.13	0.13	0.13	0.13
58.000	0.13	0.13	0.13	0.13	0.12	0.12	0.12
59.750	0.12	0.12	0.12	0.12	0.12	0.11	0.11
61.500	0.11	0.11	0.11	0.11	0.11	0.11	0.11
63.250	0.10	0.10	0.10	0.10	0.10	0.10	0.10
65.000	0.10	0.10	0.09	0.09	0.09	0.09	0.09
66.750	0.09	0.09	0.09	0.09	0.09	0.09	0.08
68.500	0.08	0.08	0.08	0.08	0.08	0.08	0.08
70.250	0.08	0.08	0.08	0.08	0.07	0.07	0.07
72.000	0.07	0.07	0.07	0.07	0.07	0.07	0.07
73.750	0.07	0.07	0.07	0.07	0.06	0.06	0.06
75.500	0.06	0.06	0.06	0.06	0.06	0.06	0.06
77.250	0.06	0.06	0.06	0.06	0.06	0.06	0.05

Tributary area east of Old Rand Rd berm

Line Start Time (hr)	Flow Values @ time increment of 0.250 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
79.000	0.05	0.05	0.05	0.05	0.05	0.05	0.05
80.750	0.05	0.05	0.05	0.05	0.05	0.05	0.05
82.500	0.05	0.05	0.05	0.05	0.05	0.04	0.04
84.250	0.04	0.04	0.04	0.04	0.04	0.04	0.04
86.000	0.04	0.04	0.04	0.04	0.04	0.04	0.04
87.750	0.04	0.04	0.04	0.04	0.04	0.04	0.04
89.500	0.04	0.03	0.03	0.03	0.03	0.03	0.03
91.250	0.03	0.03	0.03	0.03	0.03	0.03	0.03
93.000	0.03	0.03	0.03	0.03	0.03	0.03	0.03
94.750	0.03	0.03	0.03	0.03	0.03	0.03	0.03
96.500	0.03	0.03	0.03	0.03	0.03	0.03	0.02
98.250	0.02	0.02	0.02	0.02	0.02	0.02	0.02
100.000	0.02	0.02	0.02	0.02	0.02	0.02	0.02
101.750	0.02	0.02	0.02	0.02	0.02	0.02	0.02
103.500	0.02	0.02	0.02	0.02	0.02	0.02	0.02
105.250	0.02	0.02	0.02	0.02	0.02	0.02	0.02
107.000	0.02	0.02	0.02	0.02	0.02	0.02	0.02
108.750	0.02	0.02	0.02	0.02	0.02	0.02	0.01
110.500	0.01	0.01	0.01	0.01	0.01	0.01	0.01
112.250	0.01	0.01	0.01	0.01	0.01	0.01	0.01
114.000	0.01	0.01	0.01	0.01	0.01	0.01	0.01
115.750	0.01	0.01	0.01	0.01	0.01	0.01	0.01
117.500	0.01	0.01	0.01	0.01	0.01	0.01	0.01
119.250	0.01	0.01	0.01	0.0			

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Time (hr)	Rate (cfs)	Rate (csm)
OUTLET	0.013		3.818		4.97	1.15	89.98

Line Start Time (hr)	Flow Values @ time increment of 0.250 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
0.250	0.0	0.05	0.18	0.34	0.50	0.64	0.74
2.000	0.81	0.87	0.92	0.96	1.00	1.04	1.07
3.750	1.09	1.10	1.12	1.13	1.14	1.15	1.14
5.500	1.13	1.12	1.11	1.10	1.09	1.07	1.06
7.250	1.05	1.04	1.03	1.02	1.01	1.00	0.99
9.000	0.98	0.97	0.96	0.95	0.94	0.93	0.92
10.750	0.91	0.90	0.89	0.88	0.87	0.86	0.86
12.500	0.85	0.84	0.83	0.82	0.81	0.80	0.80
14.250	0.79	0.78	0.77	0.76	0.76	0.75	0.74
16.000	0.73	0.73	0.72	0.71	0.70	0.70	0.69
17.750	0.68	0.68	0.67	0.66	0.65	0.65	0.64
19.500	0.63	0.63	0.62	0.62	0.61	0.60	0.60
21.250	0.59	0.58	0.58	0.57	0.57	0.56	0.55
23.000	0.55	0.54	0.54	0.53	0.53	0.52	0.52
24.750	0.51	0.51	0.50	0.50	0.49	0.49	0.48
26.500	0.48	0.47	0.47	0.46	0.46	0.45	0.45

Tributary area east of Old Rand Rd berm

Line Start Time (hr)	Flow Values @ time increment of 0.250 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
28.250	0.44	0.44	0.43	0.43	0.42	0.42	0.42
30.000	0.41	0.41	0.40	0.40	0.39	0.39	0.39
31.750	0.38	0.38	0.37	0.37	0.37	0.36	0.36
33.500	0.36	0.35	0.35	0.34	0.34	0.34	0.33
35.250	0.33	0.33	0.32	0.32	0.32	0.31	0.31
37.000	0.31	0.30	0.30	0.30	0.30	0.29	0.29
38.750	0.29	0.28	0.28	0.28	0.27	0.27	0.27
40.500	0.27	0.26	0.26	0.26	0.26	0.25	0.25
42.250	0.25	0.25	0.24	0.24	0.24	0.24	0.23
44.000	0.23	0.23	0.23	0.22	0.22	0.22	0.22
45.750	0.21	0.21	0.21	0.21	0.21	0.20	0.20
47.500	0.20	0.20	0.20	0.19	0.19	0.19	0.19
49.250	0.19	0.18	0.18	0.18	0.18	0.18	0.17
51.000	0.17	0.17	0.17	0.17	0.17	0.16	0.16
52.750	0.16	0.16	0.16	0.16	0.15	0.15	0.15
54.500	0.15	0.15	0.15	0.14	0.14	0.14	0.14
56.250	0.14	0.14	0.14	0.13	0.13	0.13	0.13
58.000	0.13	0.13	0.13	0.13	0.12	0.12	0.12
59.750	0.12	0.12	0.12	0.12	0.12	0.11	0.11
61.500	0.11	0.11	0.11	0.11	0.11	0.11	0.11
63.250	0.10	0.10	0.10	0.10	0.10	0.10	0.10
65.000	0.10	0.10	0.09	0.09	0.09	0.09	0.09
66.750	0.09	0.09	0.09	0.09	0.09	0.09	0.08
68.500	0.08	0.08	0.08	0.08	0.08	0.08	0.08
70.250	0.08	0.08	0.08	0.08	0.07	0.07	0.07
72.000	0.07	0.07	0.07	0.07	0.07	0.07	0.07
73.750	0.07	0.07	0.07	0.07	0.06	0.06	0.06
75.500	0.06	0.06	0.06	0.06	0.06	0.06	0.06
77.250	0.06	0.06	0.06	0.06	0.06	0.06	0.05
79.000	0.05	0.05	0.05	0.05	0.05	0.05	0.05
80.750	0.05	0.05	0.05	0.05	0.05	0.05	0.05
82.500	0.05	0.05	0.05	0.05	0.05	0.04	0.04
84.250	0.04	0.04	0.04	0.04	0.04	0.04	0.04
86.000	0.04	0.04	0.04	0.04	0.04	0.04	0.04
87.750	0.04	0.04	0.04	0.04	0.04	0.04	0.04
89.500	0.04	0.03	0.03	0.03	0.03	0.03	0.03
91.250	0.03	0.03	0.03	0.03	0.03	0.03	0.03
93.000	0.03	0.03	0.03	0.03	0.03	0.03	0.03
94.750	0.03	0.03	0.03	0.03	0.03	0.03	0.03
96.500	0.03	0.03	0.03	0.03	0.03	0.03	0.02
98.250	0.02	0.02	0.02	0.02	0.02	0.02	0.02
100.000	0.02	0.02	0.02	0.02	0.02	0.02	0.02
101.750	0.02	0.02	0.02	0.02	0.02	0.02	0.02
103.500	0.02	0.02	0.02	0.02	0.02	0.02	0.02
105.250	0.02	0.02	0.02	0.02	0.02	0.02	0.02
107.000	0.02	0.02	0.02	0.02	0.02	0.02	0.02
108.750	0.02	0.02	0.02	0.02	0.02	0.02	0.01
110.500	0.01	0.01	0.01	0.01	0.01	0.01	0.01
112.250	0.01	0.01	0.01	0.01	0.01	0.01	0.01
114.000	0.01	0.01	0.01	0.01	0.01	0.01	0.01
115.750	0.01	0.01	0.01	0.01	0.01	0.01	0.01
117.500	0.01	0.01	0.01	0.01	0.01	0.01	0.01

Tributary area east of Old Rand Rd berm

Line Start Time (hr)	Flow Values @ time increment of 0.250 hr (cfs)						
119.250	0.01	0.01	0.01	0.0			

STORM 100YR-6HR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Time (hr)	Rate (cfs)	Rate (csm)
SubArea1	0.600E-03		5.263		0.89	1.08	1791.89

Line Start Time (hr)	Flow Values @ time increment of 0.250 hr (cfs)						
0.0	0.0	0.10	0.66	1.01	1.05	0.95	0.78
1.750	0.55	0.42	0.35	0.34	0.33	0.29	0.25
3.500	0.21	0.18	0.16	0.15	0.14	0.14	0.06
5.250	0.0						

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Time (hr)	Rate (cfs)	Rate (csm)
SubArea2	0.004		5.265		0.89	6.99	1791.89

Line Start Time (hr)	Flow Values @ time increment of 0.250 hr (cfs)						
0.0	0.0	0.64	4.31	6.59	6.85	6.20	5.09
1.750	3.56	2.73	2.29	2.21	2.12	1.88	1.66
3.500	1.36	1.16	1.06	0.97	0.93	0.89	0.36
5.250	0.03	0.0					

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Time (hr)	Rate (cfs)	Rate (csm)
SubArea3	0.005		5.265		0.89	8.24	1791.89

Line Start Time (hr)	Flow Values @ time increment of 0.250 hr (cfs)						
0.0	0.0	0.76	5.09	7.77	8.07	7.31	6.01
1.750	4.20	3.22	2.70	2.60	2.50	2.21	1.95
3.500	1.60	1.37	1.25	1.15	1.09	1.05	0.43
5.250	0.03	0.0					

Tributary area east of Old Rand Rd berm

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
SubArea4	0.004		5.265		0.89	6.63	1791.89

Line Start Time (hr) — Flow Values @ time increment of 0.250 hr

Start Time (hr)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
0.0	0.0	0.61	4.09	6.25	6.50	5.88	4.83
1.750	3.38	2.59	2.17	2.10	2.01	1.78	1.57
3.500	1.29	1.10	1.00	0.92	0.88	0.85	0.35
5.250	0.02	0.0					

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
Reach1	0.013	Upstream	5.265		0.89	22.94	1791.89

Line Start Time (hr) — Flow Values @ time increment of 0.250 hr

Start Time (hr)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
0.0	0.0	2.11	14.16	21.63	22.47	20.34	16.71
1.750	11.68	8.97	7.52	7.25	6.95	6.15	5.43
3.500	4.47	3.81	3.47	3.19	3.04	2.93	1.19
5.250	0.08	0.0					

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
Reach1	0.013	Downstream	5.236	101.57	4.98	1.57	122.94

Line Start Time (hr) — Flow Values @ time increment of 0.250 hr

Start Time (hr)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
0.250	0.0	0.09	0.28	0.51	0.72	0.91	1.04
2.000	1.13	1.21	1.27	1.33	1.39	1.43	1.47
3.750	1.49	1.51	1.53	1.55	1.56	1.57	1.56
5.500	1.55	1.53	1.51	1.50	1.48	1.47	1.45
7.250	1.44	1.42	1.41	1.39	1.38	1.37	1.35
9.000	1.34	1.32	1.31	1.30	1.28	1.27	1.26
10.750	1.24	1.23	1.22	1.21	1.19	1.18	1.17
12.500	1.16	1.15	1.13	1.12	1.11	1.10	1.09
14.250	1.08	1.07	1.05	1.04	1.03	1.02	1.01
16.000	1.00	0.99	0.98	0.97	0.96	0.95	0.94
17.750	0.93	0.92	0.91	0.90	0.89	0.88	0.88
19.500	0.87	0.86	0.85	0.84	0.83	0.82	0.81
21.250	0.81	0.80	0.79	0.78	0.77	0.77	0.76

Tributary area east of Old Rand Rd berm

Line Start Time (hr)	Flow Values @ time increment of 0.250 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
23.000	0.75	0.74	0.73	0.73	0.72	0.71	0.70
24.750	0.70	0.69	0.68	0.68	0.67	0.66	0.66
26.500	0.65	0.64	0.64	0.63	0.62	0.62	0.61
28.250	0.60	0.60	0.59	0.59	0.58	0.57	0.57
30.000	0.56	0.56	0.55	0.54	0.54	0.53	0.53
31.750	0.52	0.52	0.51	0.51	0.50	0.50	0.49
33.500	0.49	0.48	0.48	0.47	0.47	0.46	0.46
35.250	0.45	0.45	0.44	0.44	0.43	0.43	0.42
37.000	0.42	0.42	0.41	0.41	0.40	0.40	0.40
38.750	0.39	0.39	0.38	0.38	0.38	0.37	0.37
40.500	0.36	0.36	0.36	0.35	0.35	0.35	0.34
42.250	0.34	0.34	0.33	0.33	0.32	0.32	0.32
44.000	0.31	0.31	0.31	0.31	0.30	0.30	0.30
45.750	0.29	0.29	0.29	0.28	0.28	0.28	0.28
47.500	0.27	0.27	0.27	0.26	0.26	0.26	0.26
49.250	0.25	0.25	0.25	0.25	0.24	0.24	0.24
51.000	0.24	0.23	0.23	0.23	0.23	0.22	0.22
52.750	0.22	0.22	0.21	0.21	0.21	0.21	0.21
54.500	0.20	0.20	0.20	0.20	0.20	0.19	0.19
56.250	0.19	0.19	0.19	0.18	0.18	0.18	0.18
58.000	0.18	0.17	0.17	0.17	0.17	0.17	0.17
59.750	0.16	0.16	0.16	0.16	0.16	0.16	0.15
61.500	0.15	0.15	0.15	0.15	0.15	0.15	0.14
63.250	0.14	0.14	0.14	0.14	0.14	0.13	0.13
65.000	0.13	0.13	0.13	0.13	0.13	0.13	0.12
66.750	0.12	0.12	0.12	0.12	0.12	0.12	0.12
68.500	0.11	0.11	0.11	0.11	0.11	0.11	0.11
70.250	0.11	0.11	0.10	0.10	0.10	0.10	0.10
72.000	0.10	0.10	0.10	0.10	0.10	0.09	0.09
73.750	0.09	0.09	0.09	0.09	0.09	0.09	0.09
75.500	0.09	0.08	0.08	0.08	0.08	0.08	0.08
77.250	0.08	0.08	0.08	0.08	0.08	0.08	0.07
79.000	0.07	0.07	0.07	0.07	0.07	0.07	0.07
80.750	0.07	0.07	0.07	0.07	0.07	0.07	0.06
82.500	0.06	0.06	0.06	0.06	0.06	0.06	0.06
84.250	0.06	0.06	0.06	0.06	0.06	0.06	0.06
86.000	0.06	0.05	0.05	0.05	0.05	0.05	0.05
87.750	0.05	0.05	0.05	0.05	0.05	0.05	0.05
89.500	0.05	0.05	0.05	0.05	0.05	0.05	0.05
91.250	0.04	0.04	0.04	0.04	0.04	0.04	0.04
93.000	0.04	0.04	0.04	0.04	0.04	0.04	0.04
94.750	0.04	0.04	0.04	0.04	0.04	0.04	0.04
96.500	0.04	0.04	0.04	0.03	0.03	0.03	0.03
98.250	0.03	0.03	0.03	0.03	0.03	0.03	0.03
100.000	0.03	0.03	0.03	0.03	0.03	0.03	0.03
101.750	0.03	0.03	0.03	0.03	0.03	0.03	0.03
103.500	0.03	0.03	0.03	0.03	0.03	0.03	0.03
105.250	0.03	0.02	0.02	0.02	0.02	0.02	0.02
107.000	0.02	0.02	0.02	0.02	0.02	0.02	0.02
108.750	0.02	0.02	0.02	0.02	0.02	0.02	0.02
110.500	0.02	0.02	0.02	0.02	0.02	0.02	0.02
112.250	0.02	0.02	0.02	0.02	0.02	0.02	0.02

Tributary area east of Old Rand Rd berm

Line Start Time (hr)	Flow Values @ time increment of 0.250 hr (cfs)						
114.000	0.02	0.02	0.02	0.02	0.02	0.02	0.02
115.750	0.02	0.02	0.02	0.02	0.02	0.02	0.02
117.500	0.02	0.01	0.01	0.01	0.01	0.01	0.01
119.250	0.01	0.01	0.01	0.01	0.01	0.01	0.01
121.000	0.01	0.01	0.01	0.01	0.01	0.01	0.01
122.750	0.01	0.01	0.01	0.01	0.01	0.01	0.01
124.500	0.01	0.01	0.01	0.01	0.01	0.01	0.01
126.250	0.01	0.01	0.01	0.01	0.01	0.0	

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Time (hr)	Rate (cfs)	Rate (csm)
OUTLET	0.013		5.236		4.98	1.57	122.94

Line Start Time (hr)	Flow Values @ time increment of 0.250 hr (cfs)						
0.250	0.0	0.09	0.28	0.51	0.72	0.91	1.04
2.000	1.13	1.21	1.27	1.33	1.39	1.43	1.47
3.750	1.49	1.51	1.53	1.55	1.56	1.57	1.56
5.500	1.55	1.53	1.51	1.50	1.48	1.47	1.45
7.250	1.44	1.42	1.41	1.39	1.38	1.37	1.35
9.000	1.34	1.32	1.31	1.30	1.28	1.27	1.26
10.750	1.24	1.23	1.22	1.21	1.19	1.18	1.17
12.500	1.16	1.15	1.13	1.12	1.11	1.10	1.09
14.250	1.08	1.07	1.05	1.04	1.03	1.02	1.01
16.000	1.00	0.99	0.98	0.97	0.96	0.95	0.94
17.750	0.93	0.92	0.91	0.90	0.89	0.88	0.88
19.500	0.87	0.86	0.85	0.84	0.83	0.82	0.81
21.250	0.81	0.80	0.79	0.78	0.77	0.77	0.76
23.000	0.75	0.74	0.73	0.73	0.72	0.71	0.70
24.750	0.70	0.69	0.68	0.68	0.67	0.66	0.66
26.500	0.65	0.64	0.64	0.63	0.62	0.62	0.61
28.250	0.60	0.60	0.59	0.59	0.58	0.57	0.57
30.000	0.56	0.56	0.55	0.54	0.54	0.53	0.53
31.750	0.52	0.52	0.51	0.51	0.50	0.50	0.49
33.500	0.49	0.48	0.48	0.47	0.47	0.46	0.46
35.250	0.45	0.45	0.44	0.44	0.43	0.43	0.42
37.000	0.42	0.42	0.41	0.41	0.40	0.40	0.40
38.750	0.39	0.39	0.38	0.38	0.38	0.37	0.37
40.500	0.36	0.36	0.36	0.35	0.35	0.35	0.34
42.250	0.34	0.34	0.33	0.33	0.32	0.32	0.32
44.000	0.31	0.31	0.31	0.31	0.30	0.30	0.30
45.750	0.29	0.29	0.29	0.28	0.28	0.28	0.28
47.500	0.27	0.27	0.27	0.26	0.26	0.26	0.26
49.250	0.25	0.25	0.25	0.25	0.24	0.24	0.24
51.000	0.24	0.23	0.23	0.23	0.23	0.22	0.22
52.750	0.22	0.22	0.21	0.21	0.21	0.21	0.21
54.500	0.20	0.20	0.20	0.20	0.20	0.19	0.19

Tributary area east of Old Rand Rd berm

Line Start Time (hr)	Flow Values @ time increment of 0.250 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
56.250	0.19	0.19	0.19	0.18	0.18	0.18	0.18
58.000	0.18	0.17	0.17	0.17	0.17	0.17	0.17
59.750	0.16	0.16	0.16	0.16	0.16	0.16	0.15
61.500	0.15	0.15	0.15	0.15	0.15	0.15	0.14
63.250	0.14	0.14	0.14	0.14	0.14	0.13	0.13
65.000	0.13	0.13	0.13	0.13	0.13	0.13	0.12
66.750	0.12	0.12	0.12	0.12	0.12	0.12	0.12
68.500	0.11	0.11	0.11	0.11	0.11	0.11	0.11
70.250	0.11	0.11	0.10	0.10	0.10	0.10	0.10
72.000	0.10	0.10	0.10	0.10	0.10	0.09	0.09
73.750	0.09	0.09	0.09	0.09	0.09	0.09	0.09
75.500	0.09	0.08	0.08	0.08	0.08	0.08	0.08
77.250	0.08	0.08	0.08	0.08	0.08	0.08	0.07
79.000	0.07	0.07	0.07	0.07	0.07	0.07	0.07
80.750	0.07	0.07	0.07	0.07	0.07	0.07	0.06
82.500	0.06	0.06	0.06	0.06	0.06	0.06	0.06
84.250	0.06	0.06	0.06	0.06	0.06	0.06	0.06
86.000	0.06	0.05	0.05	0.05	0.05	0.05	0.05
87.750	0.05	0.05	0.05	0.05	0.05	0.05	0.05
89.500	0.05	0.05	0.05	0.05	0.05	0.05	0.05
91.250	0.04	0.04	0.04	0.04	0.04	0.04	0.04
93.000	0.04	0.04	0.04	0.04	0.04	0.04	0.04
94.750	0.04	0.04	0.04	0.04	0.04	0.04	0.04
96.500	0.04	0.04	0.04	0.03	0.03	0.03	0.03
98.250	0.03	0.03	0.03	0.03	0.03	0.03	0.03
100.000	0.03	0.03	0.03	0.03	0.03	0.03	0.03
101.750	0.03	0.03	0.03	0.03	0.03	0.03	0.03
103.500	0.03	0.03	0.03	0.03	0.03	0.03	0.03
105.250	0.03	0.02	0.02	0.02	0.02	0.02	0.02
107.000	0.02	0.02	0.02	0.02	0.02	0.02	0.02
108.750	0.02	0.02	0.02	0.02	0.02	0.02	0.02
110.500	0.02	0.02	0.02	0.02	0.02	0.02	0.02
112.250	0.02	0.02	0.02	0.02	0.02	0.02	0.02
114.000	0.02	0.02	0.02	0.02	0.02	0.02	0.02
115.750	0.02	0.02	0.02	0.02	0.02	0.02	0.02
117.500	0.02	0.01	0.01	0.01	0.01	0.01	0.01
119.250	0.01	0.01	0.01	0.01	0.01	0.01	0.01
121.000	0.01	0.01	0.01	0.01	0.01	0.01	0.01
122.750	0.01	0.01	0.01	0.01	0.01	0.01	0.01
124.500	0.01	0.01	0.01	0.01	0.01	0.01	0.01
126.250	0.01	0.01	0.01	0.01	0.01	0.0	

STORM 100YR-12HR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Time (hr)	Rate (cfs)	Rate (csm)
SubArea1	0.600E-03		6.270		5.01	0.49	822.85

Tributary area east of Old Rand Rd berm

Line Start Time (hr)	Flow Values @ time increment of 0.250 hr (cfs)						
0.750	0.0	0.02	0.04	0.06	0.09	0.11	0.15
2.500	0.17	0.22	0.25	0.31	0.34	0.39	0.41
4.250	0.45	0.47	0.49	0.49	0.45	0.44	0.42
6.000	0.41	0.34	0.32	0.29	0.28	0.25	0.24
7.750	0.19	0.18	0.15	0.14	0.12	0.11	0.10
9.500	0.09	0.09	0.08	0.08	0.07	0.07	0.07
11.250	0.06	0.06	0.07	0.07	0.02	0.0	

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Time (hr)	Rate (cfs)	Rate (csm)
SubArea2	0.004		6.274		5.01	3.21	822.85

Line Start Time (hr)	Flow Values @ time increment of 0.250 hr (cfs)						
0.750	0.0	0.10	0.26	0.39	0.58	0.71	0.97
2.500	1.12	1.45	1.61	2.03	2.21	2.54	2.68
4.250	2.95	3.06	3.16	3.21	2.95	2.89	2.72
6.000	2.68	2.22	2.09	1.86	1.79	1.63	1.59
7.750	1.25	1.15	0.95	0.89	0.76	0.72	0.63
9.500	0.61	0.56	0.55	0.49	0.47	0.44	0.43
11.250	0.41	0.41	0.42	0.43	0.10	0.0	

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Time (hr)	Rate (cfs)	Rate (csm)
SubArea3	0.005		6.274		5.01	3.79	822.85

Line Start Time (hr)	Flow Values @ time increment of 0.250 hr (cfs)						
0.750	0.0	0.12	0.30	0.46	0.68	0.84	1.14
2.500	1.32	1.71	1.90	2.40	2.61	3.00	3.16
4.250	3.48	3.61	3.73	3.78	3.48	3.41	3.20
6.000	3.16	2.62	2.47	2.19	2.12	1.92	1.87
7.750	1.47	1.35	1.12	1.05	0.89	0.85	0.74
9.500	0.71	0.66	0.64	0.58	0.56	0.52	0.51
11.250	0.49	0.48	0.50	0.50	0.12	0.0	

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Time (hr)	Rate (cfs)	Rate (csm)
SubArea4	0.004		6.274		5.01	3.04	822.85

Tributary area east of Old Rand Rd berm

Line Start Time (hr)	Flow Values @ time increment of 0.250 hr (cfs)						
0.750	0.0	0.10	0.24	0.37	0.55	0.67	0.92
2.500	1.06	1.38	1.53	1.93	2.10	2.41	2.54
4.250	2.80	2.91	3.00	3.04	2.80	2.74	2.58
6.000	2.54	2.11	1.98	1.76	1.70	1.55	1.50
7.750	1.18	1.09	0.90	0.84	0.72	0.68	0.60
9.500	0.57	0.53	0.52	0.46	0.45	0.42	0.41
11.250	0.39	0.39	0.40	0.41	0.10	0.0	

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Time (hr)	Rate (cfs)	Rate (csm)
Reach1	0.013	Upstream	6.274		5.01	10.53	822.85

Line Start Time (hr)	Flow Values @ time increment of 0.250 hr (cfs)						
0.750	0.0	0.33	0.84	1.28	1.90	2.33	3.18
2.500	3.67	4.76	5.30	6.67	7.26	8.35	8.80
4.250	9.70	10.05	10.37	10.53	9.69	9.48	8.92
6.000	8.78	7.29	6.87	6.10	5.89	5.35	5.20
7.750	4.09	3.77	3.10	2.92	2.48	2.36	2.07
9.500	1.99	1.83	1.79	1.60	1.55	1.45	1.42
11.250	1.35	1.33	1.39	1.40	0.33	0.0	

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Time (hr)	Rate (cfs)	Rate (csm)
Reach1	0.013	Downstream	6.244	101.66	10.19	1.66	129.91

Line Start Time (hr)	Flow Values @ time increment of 0.250 hr (cfs)						
1.250	0.0	0.02	0.03	0.06	0.08	0.12	0.16
3.000	0.21	0.27	0.34	0.41	0.50	0.59	0.68
4.750	0.78	0.88	0.98	1.06	1.15	1.23	1.30
6.500	1.36	1.41	1.46	1.50	1.54	1.57	1.60
8.250	1.61	1.63	1.64	1.65	1.65	1.66	1.66
10.000	1.66	1.66	1.66	1.66	1.66	1.66	1.65
11.750	1.65	1.65	1.64	1.62	1.61	1.59	1.57
13.500	1.56	1.54	1.53	1.51	1.49	1.48	1.46
15.250	1.45	1.43	1.42	1.40	1.39	1.38	1.36
17.000	1.35	1.33	1.32	1.31	1.29	1.28	1.27
18.750	1.25	1.24	1.23	1.22	1.20	1.19	1.18
20.500	1.17	1.15	1.14	1.13	1.12	1.11	1.10
22.250	1.09	1.07	1.06	1.05	1.04	1.03	1.02
24.000	1.01	1.00	0.99	0.98	0.97	0.96	0.95

Tributary area east of Old Rand Rd berm

Line Start Time (hr)	Flow Values @ time increment of 0.250 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
25.750	0.94	0.93	0.92	0.91	0.90	0.89	0.88
27.500	0.87	0.86	0.86	0.85	0.84	0.83	0.82
29.250	0.81	0.80	0.80	0.79	0.78	0.77	0.76
31.000	0.76	0.75	0.74	0.73	0.73	0.72	0.71
32.750	0.70	0.70	0.69	0.68	0.67	0.67	0.66
34.500	0.65	0.65	0.64	0.63	0.63	0.62	0.61
36.250	0.61	0.60	0.60	0.59	0.58	0.58	0.57
38.000	0.57	0.56	0.55	0.55	0.54	0.54	0.53
39.750	0.53	0.52	0.52	0.51	0.51	0.50	0.49
41.500	0.49	0.48	0.48	0.47	0.47	0.47	0.46
43.250	0.46	0.45	0.45	0.44	0.44	0.43	0.43
45.000	0.42	0.42	0.42	0.41	0.41	0.40	0.40
46.750	0.39	0.39	0.39	0.38	0.38	0.37	0.37
48.500	0.37	0.36	0.36	0.36	0.35	0.35	0.34
50.250	0.34	0.34	0.33	0.33	0.33	0.32	0.32
52.000	0.32	0.31	0.31	0.31	0.30	0.30	0.30
53.750	0.30	0.29	0.29	0.29	0.28	0.28	0.28
55.500	0.27	0.27	0.27	0.27	0.26	0.26	0.26
57.250	0.26	0.25	0.25	0.25	0.25	0.24	0.24
59.000	0.24	0.24	0.23	0.23	0.23	0.23	0.22
60.750	0.22	0.22	0.22	0.21	0.21	0.21	0.21
62.500	0.21	0.20	0.20	0.20	0.20	0.20	0.19
64.250	0.19	0.19	0.19	0.19	0.18	0.18	0.18
66.000	0.18	0.18	0.17	0.17	0.17	0.17	0.17
67.750	0.17	0.16	0.16	0.16	0.16	0.16	0.16
69.500	0.15	0.15	0.15	0.15	0.15	0.15	0.14
71.250	0.14	0.14	0.14	0.14	0.14	0.14	0.13
73.000	0.13	0.13	0.13	0.13	0.13	0.13	0.13
74.750	0.12	0.12	0.12	0.12	0.12	0.12	0.12
76.500	0.12	0.11	0.11	0.11	0.11	0.11	0.11
78.250	0.11	0.11	0.11	0.10	0.10	0.10	0.10
80.000	0.10	0.10	0.10	0.10	0.10	0.09	0.09
81.750	0.09	0.09	0.09	0.09	0.09	0.09	0.09
83.500	0.09	0.09	0.08	0.08	0.08	0.08	0.08
85.250	0.08	0.08	0.08	0.08	0.08	0.08	0.08
87.000	0.07	0.07	0.07	0.07	0.07	0.07	0.07
88.750	0.07	0.07	0.07	0.07	0.07	0.07	0.07
90.500	0.06	0.06	0.06	0.06	0.06	0.06	0.06
92.250	0.06	0.06	0.06	0.06	0.06	0.06	0.06
94.000	0.06	0.06	0.05	0.05	0.05	0.05	0.05
95.750	0.05	0.05	0.05	0.05	0.05	0.05	0.05
97.500	0.05	0.05	0.05	0.05	0.05	0.05	0.05
99.250	0.05	0.04	0.04	0.04	0.04	0.04	0.04
101.000	0.04	0.04	0.04	0.04	0.04	0.04	0.04
102.750	0.04	0.04	0.04	0.04	0.04	0.04	0.04
104.500	0.04	0.04	0.04	0.04	0.03	0.03	0.03
106.250	0.03	0.03	0.03	0.03	0.03	0.03	0.03
108.000	0.03	0.03	0.03	0.03	0.03	0.03	0.03
109.750	0.03	0.03	0.03	0.03	0.03	0.03	0.03
111.500	0.03	0.03	0.03	0.03	0.03	0.03	0.03
113.250	0.03	0.02	0.02	0.02	0.02	0.02	0.02
115.000	0.02	0.02	0.02	0.02	0.02	0.02	0.02

Tributary area east of Old Rand Rd berm

Line Start Time (hr)	Flow Values @ time increment of 0.250 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
116.750	0.02	0.02	0.02	0.02	0.02	0.02	0.02
118.500	0.02	0.02	0.02	0.02	0.02	0.02	0.02
120.250	0.02	0.02	0.02	0.02	0.02	0.02	0.02
122.000	0.02	0.02	0.02	0.02	0.02	0.02	0.02
123.750	0.02	0.02	0.02	0.02	0.02	0.02	0.02
125.500	0.02	0.02	0.01	0.01	0.01	0.01	0.01
127.250	0.01	0.01	0.01	0.01	0.01	0.01	0.01
129.000	0.01	0.01	0.01	0.01	0.01	0.01	0.01
130.750	0.01	0.01	0.01	0.01	0.01	0.01	0.01
132.500	0.01	0.01	0.01	0.01	0.01	0.01	0.01
134.250	0.01	0.01	0.01	0.01	0.01	0.01	0.0

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Time (hr)	Rate (cfs)	Rate (csm)
OUTLET	0.013		6.244		10.19	1.66	129.91

Line Start Time (hr)	Flow Values @ time increment of 0.250 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
1.250	0.0	0.02	0.03	0.06	0.08	0.12	0.16
3.000	0.21	0.27	0.34	0.41	0.50	0.59	0.68
4.750	0.78	0.88	0.98	1.06	1.15	1.23	1.30
6.500	1.36	1.41	1.46	1.50	1.54	1.57	1.60
8.250	1.61	1.63	1.64	1.65	1.65	1.66	1.66
10.000	1.66	1.66	1.66	1.66	1.66	1.66	1.65
11.750	1.65	1.65	1.64	1.62	1.61	1.59	1.57
13.500	1.56	1.54	1.53	1.51	1.49	1.48	1.46
15.250	1.45	1.43	1.42	1.40	1.39	1.38	1.36
17.000	1.35	1.33	1.32	1.31	1.29	1.28	1.27
18.750	1.25	1.24	1.23	1.22	1.20	1.19	1.18
20.500	1.17	1.15	1.14	1.13	1.12	1.11	1.10
22.250	1.09	1.07	1.06	1.05	1.04	1.03	1.02
24.000	1.01	1.00	0.99	0.98	0.97	0.96	0.95
25.750	0.94	0.93	0.92	0.91	0.90	0.89	0.88
27.500	0.87	0.86	0.86	0.85	0.84	0.83	0.82
29.250	0.81	0.80	0.80	0.79	0.78	0.77	0.76
31.000	0.76	0.75	0.74	0.73	0.73	0.72	0.71
32.750	0.70	0.70	0.69	0.68	0.67	0.67	0.66
34.500	0.65	0.65	0.64	0.63	0.63	0.62	0.61
36.250	0.61	0.60	0.60	0.59	0.58	0.58	0.57
38.000	0.57	0.56	0.55	0.55	0.54	0.54	0.53
39.750	0.53	0.52	0.52	0.51	0.51	0.50	0.49
41.500	0.49	0.48	0.48	0.47	0.47	0.47	0.46
43.250	0.46	0.45	0.45	0.44	0.44	0.43	0.43
45.000	0.42	0.42	0.42	0.41	0.41	0.40	0.40
46.750	0.39	0.39	0.39	0.38	0.38	0.37	0.37
48.500	0.37	0.36	0.36	0.36	0.35	0.35	0.34
50.250	0.34	0.34	0.33	0.33	0.33	0.32	0.32

Tributary area east of Old Rand Rd berm

Line Start Time (hr)	Flow Values @ time increment of 0.250 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
52.000	0.32	0.31	0.31	0.31	0.30	0.30	0.30
53.750	0.30	0.29	0.29	0.29	0.28	0.28	0.28
55.500	0.27	0.27	0.27	0.27	0.26	0.26	0.26
57.250	0.26	0.25	0.25	0.25	0.25	0.24	0.24
59.000	0.24	0.24	0.23	0.23	0.23	0.23	0.22
60.750	0.22	0.22	0.22	0.21	0.21	0.21	0.21
62.500	0.21	0.20	0.20	0.20	0.20	0.20	0.19
64.250	0.19	0.19	0.19	0.19	0.18	0.18	0.18
66.000	0.18	0.18	0.17	0.17	0.17	0.17	0.17
67.750	0.17	0.16	0.16	0.16	0.16	0.16	0.16
69.500	0.15	0.15	0.15	0.15	0.15	0.15	0.14
71.250	0.14	0.14	0.14	0.14	0.14	0.14	0.13
73.000	0.13	0.13	0.13	0.13	0.13	0.13	0.13
74.750	0.12	0.12	0.12	0.12	0.12	0.12	0.12
76.500	0.12	0.11	0.11	0.11	0.11	0.11	0.11
78.250	0.11	0.11	0.11	0.10	0.10	0.10	0.10
80.000	0.10	0.10	0.10	0.10	0.10	0.09	0.09
81.750	0.09	0.09	0.09	0.09	0.09	0.09	0.09
83.500	0.09	0.09	0.08	0.08	0.08	0.08	0.08
85.250	0.08	0.08	0.08	0.08	0.08	0.08	0.08
87.000	0.07	0.07	0.07	0.07	0.07	0.07	0.07
88.750	0.07	0.07	0.07	0.07	0.07	0.07	0.07
90.500	0.06	0.06	0.06	0.06	0.06	0.06	0.06
92.250	0.06	0.06	0.06	0.06	0.06	0.06	0.06
94.000	0.06	0.06	0.05	0.05	0.05	0.05	0.05
95.750	0.05	0.05	0.05	0.05	0.05	0.05	0.05
97.500	0.05	0.05	0.05	0.05	0.05	0.05	0.05
99.250	0.05	0.04	0.04	0.04	0.04	0.04	0.04
101.000	0.04	0.04	0.04	0.04	0.04	0.04	0.04
102.750	0.04	0.04	0.04	0.04	0.04	0.04	0.04
104.500	0.04	0.04	0.04	0.04	0.03	0.03	0.03
106.250	0.03	0.03	0.03	0.03	0.03	0.03	0.03
108.000	0.03	0.03	0.03	0.03	0.03	0.03	0.03
109.750	0.03	0.03	0.03	0.03	0.03	0.03	0.03
111.500	0.03	0.03	0.03	0.03	0.03	0.03	0.03
113.250	0.03	0.02	0.02	0.02	0.02	0.02	0.02
115.000	0.02	0.02	0.02	0.02	0.02	0.02	0.02
116.750	0.02	0.02	0.02	0.02	0.02	0.02	0.02
118.500	0.02	0.02	0.02	0.02	0.02	0.02	0.02
120.250	0.02	0.02	0.02	0.02	0.02	0.02	0.02
122.000	0.02	0.02	0.02	0.02	0.02	0.02	0.02
123.750	0.02	0.02	0.02	0.02	0.02	0.02	0.02
125.500	0.02	0.02	0.01	0.01	0.01	0.01	0.01
127.250	0.01	0.01	0.01	0.01	0.01	0.01	0.01
129.000	0.01	0.01	0.01	0.01	0.01	0.01	0.01
130.750	0.01	0.01	0.01	0.01	0.01	0.01	0.01
132.500	0.01	0.01	0.01	0.01	0.01	0.01	0.01
134.250	0.01	0.01	0.01	0.01	0.01	0.01	0.0

STORM 100YR-24HR

Tributary area east of Old Rand Rd berm

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
SubArea1	0.600E-03		7.359		16.00	0.29	477.16

Line Start Time (hr)	Flow Values @ time increment of 0.250 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
1.750	0.0	0.01	0.02	0.02	0.03	0.03	0.03
3.500	0.04	0.04	0.04	0.05	0.05	0.05	0.05
5.250	0.06	0.06	0.06	0.06	0.06	0.06	0.06
7.000	0.06	0.07	0.07	0.07	0.07	0.08	0.09
8.750	0.09	0.09	0.10	0.10	0.10	0.10	0.13
10.500	0.13	0.14	0.14	0.16	0.16	0.16	0.17
12.250	0.22	0.23	0.23	0.24	0.25	0.26	0.26
14.000	0.26	0.28	0.28	0.28	0.29	0.29	0.29
15.750	0.29	0.29	0.27	0.27	0.27	0.27	0.23
17.500	0.22	0.22	0.22	0.17	0.16	0.16	0.16
19.250	0.12	0.11	0.11	0.11	0.08	0.07	0.07
21.000	0.07	0.06	0.06	0.06	0.06	0.05	0.05
22.750	0.05	0.05	0.05	0.05	0.05	0.05	0.01
24.500	0.0						

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
SubArea2	0.004		7.367		16.00	1.86	477.16

Line Start Time (hr)	Flow Values @ time increment of 0.250 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
1.250	0.0	0.01	0.05	0.08	0.12	0.15	0.17
3.000	0.20	0.23	0.25	0.27	0.28	0.31	0.33
4.750	0.34	0.36	0.38	0.39	0.40	0.41	0.40
6.500	0.41	0.41	0.42	0.45	0.46	0.47	0.47
8.250	0.54	0.56	0.56	0.57	0.63	0.65	0.66
10.000	0.67	0.82	0.87	0.88	0.89	1.02	1.06
11.750	1.07	1.07	1.41	1.51	1.53	1.53	1.64
13.500	1.67	1.68	1.69	1.81	1.84	1.85	1.86
15.250	1.85	1.85	1.86	1.86	1.77	1.75	1.75
17.000	1.75	1.50	1.43	1.42	1.42	1.12	1.03
18.750	1.02	1.02	0.79	0.72	0.72	0.72	0.53
20.500	0.48	0.47	0.47	0.39	0.37	0.37	0.37
22.250	0.33	0.32	0.32	0.32	0.31	0.31	0.31
24.000	0.31	0.07	0.0				

Tributary area east of Old Rand Rd berm

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
SubArea3	0.005		7.367		16.00	2.19	477.16

Line Start Time (hr)	Flow Values @ time increment of 0.250 hr (cfs)						
1.250	0.0	0.02	0.06	0.10	0.14	0.17	0.21
3.000	0.23	0.27	0.29	0.31	0.33	0.37	0.39
4.750	0.41	0.42	0.44	0.46	0.47	0.48	0.48
6.500	0.48	0.49	0.50	0.53	0.55	0.55	0.56
8.250	0.63	0.66	0.67	0.67	0.75	0.77	0.78
10.000	0.79	0.97	1.03	1.04	1.05	1.20	1.25
11.750	1.26	1.27	1.66	1.78	1.80	1.81	1.93
13.500	1.97	1.98	1.99	2.13	2.17	2.18	2.19
15.250	2.19	2.19	2.19	2.19	2.09	2.06	2.06
17.000	2.06	1.77	1.68	1.68	1.68	1.32	1.21
18.750	1.20	1.21	0.93	0.85	0.84	0.84	0.63
20.500	0.56	0.56	0.56	0.46	0.43	0.43	0.43
22.250	0.39	0.38	0.38	0.38	0.36	0.36	0.36
24.000	0.36	0.09	0.0				

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
SubArea4	0.004		7.367		16.00	1.77	477.16

Line Start Time (hr)	Flow Values @ time increment of 0.250 hr (cfs)						
1.250	0.0	0.01	0.05	0.08	0.11	0.14	0.17
3.000	0.19	0.21	0.23	0.25	0.27	0.30	0.31
4.750	0.33	0.34	0.36	0.37	0.38	0.39	0.38
6.500	0.39	0.39	0.40	0.43	0.44	0.45	0.45
8.250	0.51	0.53	0.54	0.54	0.60	0.62	0.63
10.000	0.63	0.78	0.83	0.84	0.84	0.97	1.01
11.750	1.01	1.02	1.34	1.43	1.45	1.46	1.55
13.500	1.59	1.59	1.60	1.71	1.75	1.76	1.76
15.250	1.76	1.76	1.76	1.77	1.68	1.66	1.66
17.000	1.66	1.42	1.35	1.35	1.35	1.06	0.98
18.750	0.97	0.97	0.75	0.68	0.68	0.68	0.50
20.500	0.45	0.45	0.45	0.37	0.35	0.35	0.35
22.250	0.31	0.30	0.30	0.30	0.29	0.29	0.29
24.000	0.29	0.07	0.0				

Tributary area east of Old Rand Rd berm

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
Reach1	0.013	Upstream	7.366		16.00	6.11	477.16

Line Start Time (hr)	Flow Values @ time increment of 0.250 hr (cfs)						
1.250	0.0	0.04	0.15	0.27	0.39	0.49	0.57
3.000	0.65	0.74	0.81	0.87	0.93	1.02	1.08
4.750	1.13	1.17	1.23	1.27	1.31	1.34	1.33
6.500	1.34	1.36	1.38	1.48	1.52	1.54	1.56
8.250	1.76	1.83	1.85	1.87	2.08	2.15	2.17
10.000	2.19	2.70	2.87	2.90	2.92	3.34	3.48
11.750	3.51	3.53	4.62	4.96	5.01	5.04	5.37
13.500	5.49	5.52	5.53	5.92	6.05	6.07	6.09
15.250	6.08	6.09	6.10	6.11	5.82	5.74	5.74
17.000	5.74	4.92	4.68	4.67	4.67	3.66	3.37
18.750	3.35	3.35	2.59	2.36	2.35	2.35	1.74
20.500	1.57	1.55	1.55	1.28	1.21	1.20	1.20
22.250	1.08	1.05	1.05	1.05	1.01	1.01	1.01
24.000	1.00	0.24	0.0				

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
Reach1	0.013	Downstream	7.337	101.78	20.24	1.78	139.18

Line Start Time (hr)	Flow Values @ time increment of 0.250 hr (cfs)						
2.250	0.0	0.01	0.02	0.02	0.03	0.04	0.05
4.000	0.05	0.06	0.07	0.08	0.10	0.11	0.12
5.750	0.13	0.14	0.15	0.17	0.18	0.19	0.20
7.500	0.22	0.23	0.24	0.26	0.27	0.29	0.31
9.250	0.32	0.34	0.36	0.38	0.40	0.43	0.45
11.000	0.48	0.50	0.53	0.56	0.59	0.63	0.67
12.750	0.72	0.76	0.81	0.85	0.90	0.95	1.00
14.500	1.05	1.10	1.15	1.20	1.25	1.30	1.35
16.250	1.40	1.44	1.49	1.53	1.57	1.60	1.64
18.000	1.67	1.69	1.71	1.73	1.75	1.76	1.77
19.750	1.77	1.78	1.78	1.78	1.78	1.78	1.77
21.500	1.77	1.76	1.75	1.75	1.74	1.73	1.73
23.250	1.72	1.71	1.71	1.70	1.69	1.67	1.65
25.000	1.64	1.62	1.60	1.59	1.57	1.55	1.54
26.750	1.52	1.51	1.49	1.48	1.46	1.45	1.43
28.500	1.42	1.40	1.39	1.37	1.36	1.35	1.33
30.250	1.32	1.30	1.29	1.28	1.26	1.25	1.24
32.000	1.23	1.21	1.20	1.19	1.18	1.16	1.15
33.750	1.14	1.13	1.12	1.11	1.09	1.08	1.07

Tributary area east of Old Rand Rd berm

Line Start Time (hr)	Flow Values @ time increment of 0.250 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
35.500	1.06	1.05	1.04	1.03	1.02	1.01	1.00
37.250	0.99	0.98	0.97	0.96	0.95	0.94	0.93
39.000	0.92	0.91	0.90	0.89	0.88	0.87	0.86
40.750	0.85	0.85	0.84	0.83	0.82	0.81	0.80
42.500	0.79	0.79	0.78	0.77	0.76	0.75	0.75
44.250	0.74	0.73	0.72	0.72	0.71	0.70	0.69
46.000	0.69	0.68	0.67	0.67	0.66	0.65	0.65
47.750	0.64	0.63	0.63	0.62	0.61	0.61	0.60
49.500	0.59	0.59	0.58	0.58	0.57	0.56	0.56
51.250	0.55	0.55	0.54	0.54	0.53	0.53	0.52
53.000	0.51	0.51	0.50	0.50	0.49	0.49	0.48
54.750	0.48	0.47	0.47	0.46	0.46	0.45	0.45
56.500	0.45	0.44	0.44	0.43	0.43	0.42	0.42
58.250	0.41	0.41	0.41	0.40	0.40	0.39	0.39
60.000	0.39	0.38	0.38	0.37	0.37	0.37	0.36
61.750	0.36	0.35	0.35	0.35	0.34	0.34	0.34
63.500	0.33	0.33	0.33	0.32	0.32	0.32	0.31
65.250	0.31	0.31	0.30	0.30	0.30	0.29	0.29
67.000	0.29	0.29	0.28	0.28	0.28	0.27	0.27
68.750	0.27	0.27	0.26	0.26	0.26	0.26	0.25
70.500	0.25	0.25	0.24	0.24	0.24	0.24	0.23
72.250	0.23	0.23	0.23	0.23	0.22	0.22	0.22
74.000	0.22	0.21	0.21	0.21	0.21	0.21	0.20
75.750	0.20	0.20	0.20	0.19	0.19	0.19	0.19
77.500	0.19	0.19	0.18	0.18	0.18	0.18	0.18
79.250	0.17	0.17	0.17	0.17	0.17	0.17	0.16
81.000	0.16	0.16	0.16	0.16	0.16	0.15	0.15
82.750	0.15	0.15	0.15	0.15	0.14	0.14	0.14
84.500	0.14	0.14	0.14	0.14	0.13	0.13	0.13
86.250	0.13	0.13	0.13	0.13	0.13	0.12	0.12
88.000	0.12	0.12	0.12	0.12	0.12	0.12	0.11
89.750	0.11	0.11	0.11	0.11	0.11	0.11	0.11
91.500	0.10	0.10	0.10	0.10	0.10	0.10	0.10
93.250	0.10	0.10	0.10	0.09	0.09	0.09	0.09
95.000	0.09	0.09	0.09	0.09	0.09	0.09	0.09
96.750	0.08	0.08	0.08	0.08	0.08	0.08	0.08
98.500	0.08	0.08	0.08	0.08	0.08	0.07	0.07
100.250	0.07	0.07	0.07	0.07	0.07	0.07	0.07
102.000	0.07	0.07	0.07	0.07	0.07	0.06	0.06
103.750	0.06	0.06	0.06	0.06	0.06	0.06	0.06
105.500	0.06	0.06	0.06	0.06	0.06	0.06	0.06
107.250	0.05	0.05	0.05	0.05	0.05	0.05	0.05
109.000	0.05	0.05	0.05	0.05	0.05	0.05	0.05
110.750	0.05	0.05	0.05	0.05	0.05	0.04	0.04
112.500	0.04	0.04	0.04	0.04	0.04	0.04	0.04
114.250	0.04	0.04	0.04	0.04	0.04	0.04	0.04
116.000	0.04	0.04	0.04	0.04	0.04	0.04	0.04
117.750	0.04	0.04	0.03	0.03	0.03	0.03	0.03
119.500	0.03	0.03	0.03	0.03	0.03	0.03	0.03
121.250	0.03	0.03	0.03	0.03	0.03	0.03	0.03
123.000	0.03	0.03	0.03	0.03	0.03	0.03	0.03
124.750	0.03	0.03	0.03	0.03	0.03	0.03	0.02

Tributary area east of Old Rand Rd berm

Line Start Time (hr)	Flow Values @ time increment of 0.250 hr (cfs)						
126.500	0.02	0.02	0.02	0.02	0.02	0.02	0.02
128.250	0.02	0.02	0.02	0.02	0.02	0.02	0.02
130.000	0.02	0.02	0.02	0.02	0.02	0.02	0.02
131.750	0.02	0.02	0.02	0.02	0.02	0.02	0.02
133.500	0.02	0.02	0.02	0.02	0.02	0.02	0.02
135.250	0.02	0.02	0.02	0.02	0.02	0.02	0.02
137.000	0.02	0.02	0.02	0.02	0.02	0.02	0.02
138.750	0.01	0.01	0.01	0.01	0.01	0.01	0.01
140.500	0.01	0.01	0.01	0.01	0.01	0.01	0.01
142.250	0.01	0.01	0.01	0.01	0.01	0.01	0.01
144.000	0.01	0.01	0.01	0.01	0.01	0.01	0.01
145.750	0.01	0.01	0.01	0.01	0.01	0.01	0.01
147.500	0.01	0.01	0.01	0.01	0.0		

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Time (hr)	Rate (cfs)	Rate (csm)
OUTLET	0.013		7.337		20.24	1.78	139.18

Line Start Time (hr)	Flow Values @ time increment of 0.250 hr (cfs)						
2.250	0.0	0.01	0.02	0.02	0.03	0.04	0.05
4.000	0.05	0.06	0.07	0.08	0.10	0.11	0.12
5.750	0.13	0.14	0.15	0.17	0.18	0.19	0.20
7.500	0.22	0.23	0.24	0.26	0.27	0.29	0.31
9.250	0.32	0.34	0.36	0.38	0.40	0.43	0.45
11.000	0.48	0.50	0.53	0.56	0.59	0.63	0.67
12.750	0.72	0.76	0.81	0.85	0.90	0.95	1.00
14.500	1.05	1.10	1.15	1.20	1.25	1.30	1.35
16.250	1.40	1.44	1.49	1.53	1.57	1.60	1.64
18.000	1.67	1.69	1.71	1.73	1.75	1.76	1.77
19.750	1.77	1.78	1.78	1.78	1.78	1.78	1.77
21.500	1.77	1.76	1.75	1.75	1.74	1.73	1.73
23.250	1.72	1.71	1.71	1.70	1.69	1.67	1.65
25.000	1.64	1.62	1.60	1.59	1.57	1.55	1.54
26.750	1.52	1.51	1.49	1.48	1.46	1.45	1.43
28.500	1.42	1.40	1.39	1.37	1.36	1.35	1.33
30.250	1.32	1.30	1.29	1.28	1.26	1.25	1.24
32.000	1.23	1.21	1.20	1.19	1.18	1.16	1.15
33.750	1.14	1.13	1.12	1.11	1.09	1.08	1.07
35.500	1.06	1.05	1.04	1.03	1.02	1.01	1.00
37.250	0.99	0.98	0.97	0.96	0.95	0.94	0.93
39.000	0.92	0.91	0.90	0.89	0.88	0.87	0.86
40.750	0.85	0.85	0.84	0.83	0.82	0.81	0.80
42.500	0.79	0.79	0.78	0.77	0.76	0.75	0.75
44.250	0.74	0.73	0.72	0.72	0.71	0.70	0.69
46.000	0.69	0.68	0.67	0.67	0.66	0.65	0.65
47.750	0.64	0.63	0.63	0.62	0.61	0.61	0.60

Tributary area east of Old Rand Rd berm

Line Start Time (hr)	Flow Values @ time increment of 0.250 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
49.500	0.59	0.59	0.58	0.58	0.57	0.56	0.56
51.250	0.55	0.55	0.54	0.54	0.53	0.53	0.52
53.000	0.51	0.51	0.50	0.50	0.49	0.49	0.48
54.750	0.48	0.47	0.47	0.46	0.46	0.45	0.45
56.500	0.45	0.44	0.44	0.43	0.43	0.42	0.42
58.250	0.41	0.41	0.41	0.40	0.40	0.39	0.39
60.000	0.39	0.38	0.38	0.37	0.37	0.37	0.36
61.750	0.36	0.35	0.35	0.35	0.34	0.34	0.34
63.500	0.33	0.33	0.33	0.32	0.32	0.32	0.31
65.250	0.31	0.31	0.30	0.30	0.30	0.29	0.29
67.000	0.29	0.29	0.28	0.28	0.28	0.27	0.27
68.750	0.27	0.27	0.26	0.26	0.26	0.26	0.25
70.500	0.25	0.25	0.24	0.24	0.24	0.24	0.23
72.250	0.23	0.23	0.23	0.23	0.22	0.22	0.22
74.000	0.22	0.21	0.21	0.21	0.21	0.21	0.20
75.750	0.20	0.20	0.20	0.19	0.19	0.19	0.19
77.500	0.19	0.19	0.18	0.18	0.18	0.18	0.18
79.250	0.17	0.17	0.17	0.17	0.17	0.17	0.16
81.000	0.16	0.16	0.16	0.16	0.16	0.15	0.15
82.750	0.15	0.15	0.15	0.15	0.14	0.14	0.14
84.500	0.14	0.14	0.14	0.14	0.13	0.13	0.13
86.250	0.13	0.13	0.13	0.13	0.13	0.12	0.12
88.000	0.12	0.12	0.12	0.12	0.12	0.12	0.11
89.750	0.11	0.11	0.11	0.11	0.11	0.11	0.11
91.500	0.10	0.10	0.10	0.10	0.10	0.10	0.10
93.250	0.10	0.10	0.10	0.09	0.09	0.09	0.09
95.000	0.09	0.09	0.09	0.09	0.09	0.09	0.09
96.750	0.08	0.08	0.08	0.08	0.08	0.08	0.08
98.500	0.08	0.08	0.08	0.08	0.08	0.07	0.07
100.250	0.07	0.07	0.07	0.07	0.07	0.07	0.07
102.000	0.07	0.07	0.07	0.07	0.07	0.06	0.06
103.750	0.06	0.06	0.06	0.06	0.06	0.06	0.06
105.500	0.06	0.06	0.06	0.06	0.06	0.06	0.06
107.250	0.05	0.05	0.05	0.05	0.05	0.05	0.05
109.000	0.05	0.05	0.05	0.05	0.05	0.05	0.05
110.750	0.05	0.05	0.05	0.05	0.05	0.04	0.04
112.500	0.04	0.04	0.04	0.04	0.04	0.04	0.04
114.250	0.04	0.04	0.04	0.04	0.04	0.04	0.04
116.000	0.04	0.04	0.04	0.04	0.04	0.04	0.04
117.750	0.04	0.04	0.03	0.03	0.03	0.03	0.03
119.500	0.03	0.03	0.03	0.03	0.03	0.03	0.03
121.250	0.03	0.03	0.03	0.03	0.03	0.03	0.03
123.000	0.03	0.03	0.03	0.03	0.03	0.03	0.03
124.750	0.03	0.03	0.03	0.03	0.03	0.03	0.02
126.500	0.02	0.02	0.02	0.02	0.02	0.02	0.02
128.250	0.02	0.02	0.02	0.02	0.02	0.02	0.02
130.000	0.02	0.02	0.02	0.02	0.02	0.02	0.02
131.750	0.02	0.02	0.02	0.02	0.02	0.02	0.02
133.500	0.02	0.02	0.02	0.02	0.02	0.02	0.02
135.250	0.02	0.02	0.02	0.02	0.02	0.02	0.02
137.000	0.02	0.02	0.02	0.02	0.02	0.02	0.02
138.750	0.01	0.01	0.01	0.01	0.01	0.01	0.01

Tributary area east of Old Rand Rd berm

Line Start Time (hr)	Flow Values @ time increment of 0.250 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
140.500	0.01	0.01	0.01	0.01	0.01	0.01	0.01
142.250	0.01	0.01	0.01	0.01	0.01	0.01	0.01
144.000	0.01	0.01	0.01	0.01	0.01	0.01	0.01
145.750	0.01	0.01	0.01	0.01	0.01	0.01	0.01
147.500	0.01	0.01	0.01	0.01	0.0		

Tributary area east of Old Rand Rd berm

Area or Reach Identifier	Drainage Area (sq mi)	Peak Flow by Storm (cfs) 100YR-1HR	100YR-2HR	100YR-6HR	100YR-12HR	100YR-24HR
SubArea1	0.600E-03	0.59	0.78	1.08	0.49	0.29
SubArea2	0.004	3.81	5.04	6.99	3.21	1.86
SubArea3	0.005	4.49	5.95	8.24	3.79	2.19
SubArea4	0.004	3.61	4.78	6.63	3.04	1.77
Reach1	0.013	12.49	16.55	22.94	10.53	6.11
DOWNSTREAM		0.88	1.15	1.57	1.66	1.78
OUTLET	0.013	0.88	1.15	1.57	1.66	1.78

```
                HEC-RAS HEC-RAS 6.4.1 June 2023
                  U.S. Army Corps of Engineers
                 Hydrologic Engineering Center
                       609 Second Street
                       Davis, California


          X     X  XXXXXX    XXXX        XXXX       XX      XXXX
          X     X  X        X    X       X   X     X  X    X
          X     X  X        X            X   X     X    X   X
          XXXXXXX  XXXX     X       XXX  XXXX     XXXXXX    XXXX
          X     X  X        X            X  X      X    X        X
          X     X  X        X    X       X   X     X    X        X
          X     X  XXXXXX    XXXX        X    X    X    X   XXXXX


PROJECT DATA
Project Title: 670 S Old Rand
Project File : 670SOldRand.prj
Run Date and Time: 4/26/2024 12:59:40 PM

Project in English units


PLAN DATA

Plan Title: Plan 01
Plan File : p:\22138 - KLLM - 670 Old Rand Road\Calculations\HEC-RAS\670SOldRand.p01

          Geometry Title: Geometry Data
          Geometry File : p:\22138 - KLLM - 670 Old Rand Road\Calculations\HEC-RAS\670SOldRand.g01

          Flow Title    : Flow Data
          Flow File     : p:\22138 - KLLM - 670 Old Rand Road\Calculations\HEC-RAS\670SOldRand.f01

Plan Summary Information:
```

```
Number of:  Cross Sections =    9    Multiple Openings  =    0
            Culverts       =    1    Inline Structures  =    0
            Bridges        =    0    Lateral Structures =    0

Computational Information
    Water surface calculation tolerance  =  0.01
    Critical depth calculation tolerance =  0.01
    Maximum number of iterations         =  20
    Maximum difference tolerance         =  0.3
    Flow tolerance factor                =  0.001

Computation Options
    Critical depth computed only where necessary
    Conveyance Calculation Method: At breaks in n values only
    Friction Slope Method:         Average Conveyance
    Computational Flow Regime:     Subcritical Flow



FLOW DATA

Flow Title: Flow Data
Flow File : p:\22138 - KLLM - 670 Old Rand Road\Calculations\HEC-RAS\670SOldRand.f01

Flow Data (cfs)

  River           Reach           RS                  PF 1
  Creek           Stream Alignment850.07              6.88
  Creek           Stream Alignment600                 8.07
  Creek           Stream Alignment200                16.31
  Creek           Stream Alignment0                  22.94


Boundary Conditions

  River           Reach           Profile                     Upstream               Downstream

  Creek           Stream AlignmentPF 1                     Normal S = 0.25         Normal S = 0.02
```

GEOMETRY DATA

Geometry Title: Geometry Data
Geometry File : p:\22138 - KLLM - 670 Old Rand Road\Calculations\HEC-RAS\670SOldRand.g01

CROSS SECTION

RIVER: Creek
REACH: Stream Alignment RS: 850.07

INPUT
Description:
Station Elevation Data num= 157

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	874.41	2.53	874.69	2.89	874.68	4.1	874.7	5.47	874.76
6.93	874.9	8.12	874.99	10.86	875.18	14.34	875.25	16.08	875.4
20.46	875.36	26.7	875.14	33.35	874.55	38.81	874.02	39.12	874
44.89	873.32	47.37	873	48.12	872.9	55.37	872	57.23	871.76
58.02	871.63	62.43	871	70.51	869.52	71.67	869.32	73.69	869
78.99	868.09	79.72	868	86.8	867.22	88.89	867	88.99	867
92.29	866.71	100	866.057	100.67	866	100.85	866	102.4	865.99
108.57	865.98	109.76	865.98	113.05	865.82	113.33	865.78	114.48	865.74
121.98	865.59	124.36	865.3	130.03	864.95	135.07	864.22	136.31	864.17
140.52	864.26	142.51	864	145.53	863.8	146.27	863.81	147.06	863.78
148.07	863.75	151.63	863.92	151.76	863.92	152	863.95	156.44	863.82
158.09	863.85	158.53	863.87	159.85	864	164.12	864.54	168.51	864.96
171.47	865.16	172.73	865.26	173.8	865.29	175.38	865.25	180.2	865.54
181	865.58	181.76	865.57	183.21	865.48	188.74	865.01	188.96	864.99
191.68	864.79	191.77	864.78	194.2	864.55	196.75	864.42	200	864.2
203	864	203.02	864	213.65	864.14	214.4	864.25	217.22	864.03
217.3	864.03	218	864	224.06	863.86	225.65	863.79	226.44	863.8
227.43	863.77	228.31	863.8	236.65	863.96	236.81	863.96	237.21	863.99
237.25	863.99	237.61	863.97	238.23	864	242.28	864.22	242.89	864.19
242.91	864.19	244.8	864	247.15	863.76	248.92	863.7	252.82	863.66
258.21	863.63	259.45	863.71	260.01	863.79	260.7	863.81	261.86	863.8
265.22	864	266.81	864.14	266.84	864.14	269.07	864.49	270.23	864.63

```
  271.23   864.7  275.19  864.71  277.23  864.83  278.88  864.78  279.66  864.81
  281.85   865.1  292.11  865.55  292.84  865.64  293.51  865.75  294.21  865.82
  294.45  865.84  294.66  865.84  297.15  865.83     300 865.865  303.72  865.91
  303.93  865.92  307.59  865.97  308.36  865.99  309.69     866  311.25  866.11
  311.37  866.11  313.12     866  314.37  865.99  315.12  865.99  317.19     866
   319.3     866  320.63  866.18   321.5  866.16     322   866.2  324.83  866.54
  327.75  866.78  328.42  866.86   330.5  866.95  330.75  866.97  331.93     867
   332.7  867.13     333  867.13  333.47  867.16  338.86  867.74  340.77  867.93
  341.39     868   341.5  868.01  344.58  868.28  346.67  868.41  347.87  868.43
   349.3  868.49     350  868.55

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .04  181.76    .035  265.22     .04

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        181.76  265.22             50.07   50.07   50.07             .1       .3

  Profile #PF 1

              Pos         Left Sta    Right Sta       Flow       Area       W.P.    Percent       Hydr
Velocity      Shear      Power
                          (ft)        (ft)           (cfs)    (sq ft)       (ft)       Conv  Depth(ft)
(ft/s)  (lb/sq ft)  (lb/ft s)
  1           LOB         130.80      174.40          0.57       0.56      10.35       8.24       0.05
1.01       0.11       0.11
  2           LOB         174.40      218.00
0.00       0.00
  3           Chan        218.00      227.44          0.25       0.24       4.05       3.58       0.06
1.03       0.12       0.12
  4           Chan        227.44      236.89          0.20       0.23       4.80       2.90       0.05
0.88       0.09       0.08
  5           Chan        236.89      246.33          0.00       0.00       0.31       0.03       0.02
0.43       0.03       0.01
  6           Chan        246.33      255.78          3.81       1.74       9.45      55.40       0.18
2.19       0.37       0.80
  7           Chan        255.78      265.22          2.05       1.09       7.36      29.86       0.15
1.89       0.29       0.55
```

```
Warning: The energy equation could not be balanced within the specified number of iterations.  The program
used critical
         depth for the water surface and continued on with the calculations.
Warning: Divided flow computed for this cross-section.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or
greater than
         1.4.  This may indicate the need for additional cross sections.
Warning: During the standard step iterations, when the assumed water surface was set equal to critical
depth, the calculated
         water surface came back below critical depth.  This indicates that there is not a valid
subcritical answer.  The
         program defaulted to critical depth.

CROSS SECTION


RIVER: Creek
REACH: Stream Alignment   RS: 800

INPUT
Description:
Station Elevation Data    num=      57
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  870.921.899994  870.942.890015  870.9411.35001  870.9913.95999  870.99
14.70999     87116.57001  871.3519.60999  871.7919.92999  871.84   20.87     872
23.04001  872.2728.89999     87330.57999  873.0333.35999  873.05   34.47  873.07
35.39001  873.0736.89001  873.05   38.62  873.02   40.06     873   47.22     872
47.23999     87252.79999     871   60.91  869.79   65.97     869   72.47  868.14
   73.44     868   80.47  867.27   80.88  867.24   82.97     86792.51999     866
92.57999     86692.70001  865.99  118.82  864.01  119.39     864  123.71  863.63
  131.12     863  137.77  862.37  142.45     862   264.9     862  276.42  862.51
  278.73  862.61  280.26  862.68  288.74     863  289.34  863.01  289.78  863.03
   294.8  863.22  296.75   863.3  301.02  863.48  303.84   863.6   311.7  863.94
  312.85     864   312.9     864  337.96  865.95   338.6     866  338.69     866
  348.28  866.38     350  866.44

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .04  123.71    .035   294.8     .04
```

```
Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       123.71   294.8              200     200     200            .1       .3

  Profile #PF 1

              Pos         Left Sta    Right Sta       Flow       Area       W.P.    Percent       Hydr
Velocity      Shear      Power
                          (ft)        (ft)           (cfs)    (sq ft)       (ft)       Conv  Depth(ft)
(ft/s)  (lb/sq ft)  (lb/ft s)
  1           Chan        123.71      157.93          0.97      27.55      29.44      14.14       0.94
0.04       0.00       0.00
  2           Chan        157.93      192.15          1.76      41.72      34.22      25.54       1.22
0.04       0.00       0.00
  3           Chan        192.15      226.36          1.76      41.72      34.22      25.54       1.22
0.04       0.00       0.00
  4           Chan        226.36      260.58          1.76      41.72      34.22      25.54       1.22
0.04       0.00       0.00
  5           Chan        260.58      294.80          0.64      22.68      34.23       9.25       0.66
0.03       0.00       0.00


Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or
greater than
         1.4.  This may indicate the need for additional cross sections.

CROSS SECTION


RIVER: Creek
REACH: Stream Alignment   RS: 600

INPUT
Description:
Station Elevation Data    num=      47
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0     86942.39999     86945.75999  868.55   46.48  868.47   50.72     868
   51.23  867.93   52.23  867.76   55.39     86757.46001  866.48   59.41     866
   62.52  865.43   64.22  865.16   69.45     864   71.98  863.6776.64999  863.54
   81.64  863.7185.50999     864  119.97     864  120.23  863.99  137.01   863.1
  141.88     863  143.99  862.99  150.27  862.95  155.35  862.98  158.36     863
```

```
  158.58     863  159.15  863.01  162.13  863.04  170.57  863.35  173.03  863.43
   181.5  863.75  187.36     864  188.89     864  192.18  864.22  194.65  864.38
  220.02  865.99  220.37     866   234.2  866.59  236.89   866.7  238.43  866.77
  241.56  866.88  242.69  866.92  244.83     867  245.15     867  249.64  867.16
  249.74  867.16     250  867.17

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .048 5.50999    .035  170.57     .04

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      85.50999  170.57              200     200     200             .1       .3

  Profile #PF 1

              Pos         Left Sta    Right Sta       Flow       Area       W.P.    Percent       Hydr
Velocity      Shear      Power
                           (ft)        (ft)          (cfs)    (sq ft)       (ft)       Conv  Depth(ft)
(ft/s)  (lb/sq ft)  (lb/ft s)
  1           Chan        130.30      140.37          0.34       0.27       4.16       4.27       0.07
1.25       0.15       0.19
  2           Chan        140.37      150.43          3.66       1.62      10.07      45.40       0.16
2.27       0.37       0.83
  3           Chan        150.43      160.50          3.63       1.61      10.07      44.97       0.16
2.26       0.36       0.82
  4           Chan        160.50      170.57          0.43       0.32       4.42       5.36       0.07
1.34       0.17       0.22


Warning: The energy equation could not be balanced within the specified number of iterations.  The program
used critical
         depth for the water surface and continued on with the calculations.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or
greater than
         1.4.  This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section.
This may indicate
         the need for additional cross sections.
Warning: During the standard step iterations, when the assumed water surface was set equal to critical
depth, the calculated
```

```
        water surface came back below critical depth.  This indicates that there is not a valid
subcritical answer.  The
        program defaulted to critical depth.

CROSS SECTION


RIVER: Creek
REACH: Stream Alignment   RS: 400

INPUT
Description:
Station Elevation Data    num=      61
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0     869   46.16     869   52.75   868.355.25999     868   59.09  867.31
   60.67     86761.82001  866.71   64.67     866   68.73  864.83   71.69     864
   73.37   863.5   75.07     863   77.67  862.23   78.44     862   80.29  861.51
   82.01     861    83.7  860.78   85.37  860.52   92.63  859.47   96.03     859
   96.57     859   97.11  858.99   98.27  858.98   98.58  858.98   99.79  858.99
     100     859  100.28     859  105.55  859.87  107.04  860.09  113.38     861
  113.64     861   116.6  861.02  119.69  861.03  127.78  861.03  129.27  861.04
  131.61  861.04   133.7  861.06  136.39  861.07  137.74  861.07  138.82  861.08
   141.6  861.09  142.42   861.1  143.17  861.09  146.21   861.1  148.89  861.09
  150.39   861.1  153.49   861.1  161.22  861.05  164.18  861.15  164.45  861.16
  165.41  861.19  166.53  861.25  173.45  861.52  177.78  861.67  183.15  861.97
  184.81     862  187.24     862  190.51  862.01  190.58  862.01  193.53  862.02
     200  862.02

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .04   85.37    .035  113.38     .04

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         85.37  113.38              200     200     200             .1       .3

  Profile #PF 1

              Pos         Left Sta    Right Sta       Flow       Area       W.P.    Percent       Hydr
Velocity      Shear      Power
```

		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	Chan	89.41	93.44	0.18	0.28	2.00	2.21	0.14	0.63	0.03	0.02
2	Chan	93.44	97.48	3.21	2.13	4.06	39.80	0.53	1.51	0.12	0.18
3	Chan	97.48	101.51	4.20	2.49	4.05	52.03	0.62	1.68	0.14	0.24
4	Chan	101.51	105.55	0.48	0.58	2.68	5.95	0.22	0.84	0.05	0.04

Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than
1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.

CROSS SECTION

RIVER: Creek
REACH: Stream Alignment RS: 200

INPUT
Description:
Station Elevation Data num= 18

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	858.849.649994	858.07	10.38	858	11.88	857.98	12.77	857.97	
17.31	857.94	31.27	857.3	34.9	857.17	39.12	857.01	39.43	857.01
40.25	857	77.66	857	84.9	857.49	90.32	858	103.06	858.7
110.48	859	135.7	860.22	150	860.99				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.04	17.31	.035	90.32	.04

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
17.31	90.32	52.97	52.97	52.97	.1	.3

Profile #PF 1

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	Chan	31.91	46.51	3.31	1.62	11.69	20.29	0.14	2.05	0.28	0.58
2	Chan	46.51	61.12	5.97	2.52	14.60	36.63	0.17	2.37	0.36	0.84
3	Chan	61.12	75.72	5.97	2.52	14.60	36.63	0.17	2.37	0.36	0.84
4	Chan	75.72	90.32	1.05	0.56	4.50	6.45	0.12	1.90	0.25	0.48

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical
depth for the water surface and continued on with the calculations.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than
1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated
water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The
program defaulted to critical depth.

CROSS SECTION

RIVER: Creek
REACH: Stream Alignment RS: 147.03

INPUT
Description:

Station Elevation Data num= 16

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	859.15	14	859	52	858.35	60	858	66	857
70	856	72	855	75	854.5	78	853.9	91	853.9
94	854.5	99	855.5	105	856.5	115	857.8	135	858.73
165.94	859.04								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.04	66	.035	105	.04

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
66	105	60.72	60.72	.1	.3

Profile #PF 1

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	Chan	66.00	73.80	0.60	3.08	4.07	3.66	0.81	0.19	0.00	0.00
2	Chan	73.80	81.60	5.18	14.66	7.88	31.78	1.88	0.35	0.00	0.00
3	Chan	81.60	89.40	6.29	16.40	7.80	38.56	2.10	0.38	0.00	0.00
4	Chan	89.40	97.20	3.99	12.55	7.92	24.45	1.61	0.32	0.00	0.00
5	Chan	97.20	105.00	0.25	1.98	4.89	1.56	0.41	0.13	0.00	0.00

CULVERT

RIVER: Creek
REACH: Stream Alignment RS: 145

INPUT
Description:

```
Distance from Upstream XS =       5
Deck/Roadway Width        =      45
Weir Coefficient          =     2.6
Upstream  Deck/Roadway Coordinates
    num=       2
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
      60     858             115   857.8

Upstream Bridge Cross Section Data
Station Elevation Data    num=      16
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  859.15      14     859      52  858.35      60     858      66     857
      70     856      72     855      75   854.5      78   853.9      91   853.9
      94   854.5      99   855.5     105   856.5     115   857.8     135  858.73
  165.94  859.04

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .04      66    .035     105     .04

Bank Sta: Left   Right    Coeff Contr.   Expan.
            66     105             .1       .3

Downstream  Deck/Roadway Coordinates
    num=       2
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
      71     857             114     857

Downstream Bridge Cross Section Data
Station Elevation Data    num=      13
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0   859.2      42     858      71     857      79     856      84     855
      85     854      87   852.9      95   852.9    96.5     854      98     855
     110     856     114     857  165.94   858.2

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .04      79    .035     110     .04

Bank Sta: Left   Right    Coeff Contr.   Expan.
```

```
            79     110            .1       .3

Upstream Embankment side slope             =       2 horiz. to 1.0 vertical
Downstream Embankment side slope           =       2 horiz. to 1.0 vertical
Maximum allowable submergence for weir flow =     .98
Elevation at which weir flow begins        =
Energy head used in spillway design        =
Spillway height used in design             =
Weir crest shape                           = Broad Crested

Number of Culverts =  1

Culvert Name     Shape      Rise    Span
Culvert #1      Circular     2.5     2.5
FHWA Chart # 1 - Concrete Pipe Culvert
FHWA Scale # 3 - Groove end entrance; pipe projecting from fill
Solution Criteria = Highest U.S. EG
Culvert Upstrm Dist  Length    Top n  Bottom n  Depth Blocked  Entrance Loss Coef   Exit Loss Coef
                 5      50     .011     .011        0                  .4               1
Number of Barrels =  2
Upstream   Elevation =  854.56
Centerline Stations
    Sta.    Sta.
      82      88
Downstream Elevation =  853.97
Centerline Stations
    Sta.    Sta.
      88      94

CROSS SECTION


RIVER: Creek
REACH: Stream Alignment   RS: 86.31

INPUT
Description:
Station Elevation Data    num=      13
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0   859.2      42     858      71     857      79     856      84     855
```

```
     85     854      87   852.9      95   852.9    96.5     854      98     855
    110     856     114     857  165.94   858.2

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .04      79    .035     110     .04

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
           79     110             50.2    50.2    50.2             .1       .3

  Profile #PF 1

              Pos         Left Sta    Right Sta       Flow       Area       W.P.    Percent       Hydr
Velocity      Shear      Power
                           (ft)        (ft)           (cfs)    (sq ft)       (ft)       Conv  Depth(ft)
(ft/s)  (lb/sq ft)  (lb/ft s)
  1           Chan        84.00       86.80           1.31       2.44       3.07       8.02       0.97
0.54       0.01       0.01
  2           Chan        86.80       89.60           4.69       5.08       2.83      28.73       1.81
0.92       0.03       0.03
  3           Chan        89.60       92.40           4.73       5.09       2.80      29.02       1.82
0.93       0.03       0.03
  4           Chan        92.40       95.20           4.66       5.08       2.85      28.56       1.81
0.92       0.03       0.03
  5           Chan        95.20       98.00           0.92       1.94       2.91       5.67       0.82
0.48       0.01       0.01


Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or
greater than
        1.4.  This may indicate the need for additional cross sections.

CROSS SECTION


RIVER: Creek
REACH: Stream Alignment   RS: 36.11

INPUT
Description:
```

```
Station Elevation Data    num=      93
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  860.079.909973  859.05   10.19  859.0210.42999     859   10.59  858.97
18.35999     85819.72998  857.79   25.78     85727.07999  856.87   28.25  856.73
33.64999  856.0233.85999     85635.64999  855.9638.89999  855.9340.22998  855.92
49.41998  855.7550.28998  855.7350.51999  855.7350.98999   855.763.42999  855.22
66.14999  855.2269.79999   855.273.77998  855.1575.78999  855.0677.01999  855.02
83.24998  854.9388.70999   854.989.41998  854.91   90.12  854.9292.87999  854.92
95.67999  854.93   108.3  855.04  119.52  855.05  124.51  854.95  130.83   854.8
  131.06  854.79   131.3  854.78  135.23  854.75  138.91  854.73  140.87   854.7
  144.47  854.67  144.67  854.67  149.81  854.65  154.81  854.66  158.55   854.7
  160.65   854.7  177.08  854.71  195.73  854.71  198.14  854.72  200.69  854.75
  205.74  854.61  206.65  854.63  208.27  854.64  209.52  854.65  212.84  854.63
   216.3  854.59     219   854.6  225.79  854.44   234.9  854.22  235.42  854.22
  235.93  854.21  236.91  854.23  237.27  854.24  237.67  854.25  238.08  854.26
  240.14   854.3  246.04  854.33  246.85  854.34   247.9  854.37  249.22  854.42
  250.15  854.44  251.44  854.49  252.33  854.51  253.36  854.54  254.75   854.6
  261.63  854.87  265.44  855.07  271.88  855.48  272.96  855.53  278.55   855.9
  278.85  855.92  279.09  855.93  279.93     856  285.74  856.34  290.35  856.42
   291.6  856.46   303.8  856.92  305.78     857  312.85  857.62  316.16  857.86
  318.03     858  319.91   858.2   321.3  858.36

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .04  124.51    .035  265.44     .04

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        124.51  265.44            36.11   36.11   36.11             .1       .3

  Profile #PF 1

              Pos         Left Sta    Right Sta       Flow       Area       W.P.    Percent       Hydr
Velocity      Shear      Power
                          (ft)        (ft)           (cfs)    (sq ft)       (ft)       Conv  Depth(ft)
(ft/s)  (lb/sq ft)  (lb/ft s)
  1           Chan        59.67       71.86           0.71       0.74       6.35       4.35       0.12
0.96       0.10       0.10
  2           Chan        71.86       84.05           7.39       3.91      12.19      45.32       0.32
1.89       0.28       0.53
```

```
  3          Chan        84.05       96.23          7.55       3.96      12.19      46.28       0.32
1.91       0.28       0.54
  4          Chan        96.23      108.42          0.65       0.91      12.19       3.99       0.07
0.72       0.07       0.05
  5          Chan       108.42      120.61          0.01       0.05       5.53       0.07       0.01
0.20       0.01       0.00


Warning: Divided flow computed for this cross-section.

CROSS SECTION


RIVER: Creek
REACH: Stream Alignment   RS: 0

INPUT
Description:
Station Elevation Data    num=      64
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  858.883.190002  858.416.029999     8589.040009  857.4912.17001     857
15.10001  856.4217.32001     85622.32001  855.24   23.94  855.0829.42001  854.32
   33.22  854.1535.82999  854.0136.54999     85437.07001     854   37.84  853.99
44.14001  853.9750.76001  853.96   55.59  853.9661.26001  853.94   67.03  853.97
   72.92  853.99   74.38     854    75.8  854.01   81.47  854.0284.92999  854.03
94.32001  854.03   95.23  854.0299.21001  854.02  101.63  854.01  103.27  854.01
  109.02  854.02  114.84     854  203.28     854  204.69  853.99  205.55  853.98
  205.94  853.98  207.12     854  220.05     854  222.73  853.95  225.35  853.88
  238.68  853.62  255.14  853.78  256.93  853.78  266.05  853.91  267.96  853.96
  269.16  853.97  271.99  853.99  273.06     854  274.37  854.12  275.14  854.19
  282.72  855.05  287.03  855.29  293.54  855.93  295.01  855.93  296.33     856
  297.78  856.11  298.32  856.13  300.06   856.3  300.48  856.33  302.84  856.55
  309.06     857  316.12  857.35  317.13   857.4     320  857.62

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .04   33.22    .035  274.37     .04

Bank Sta: Left   Right    Coeff Contr.   Expan.
         33.22  274.37             .1       .3
```

Profile #PF 1

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	Chan	45.63	93.86	18.90	11.96	47.33	82.39	0.25	1.58	0.32	0.50
2	Chan	93.86	142.09	1.13	2.23	48.23	4.95	0.05	0.51	0.06	0.03
3	Chan	142.09	190.32	0.79	1.80	48.23	3.46	0.04	0.44	0.05	0.02
4	Chan	190.32	238.55	0.37	1.13	48.23	1.59	0.02	0.32	0.03	0.01
5	Chan	238.55	286.78	1.75	2.84	46.13	7.61	0.06	0.62	0.08	0.05

SUMMARY OF MANNING'S N VALUES

River:Creek

Reach	River Sta.	n1	n2	n3
Stream Alignment	850.07	.04	.035	.04
Stream Alignment	800	.04	.035	.04
Stream Alignment	600	.04	.035	.04
Stream Alignment	400	.04	.035	.04
Stream Alignment	200	.04	.035	.04
Stream Alignment	147.03	.04	.035	.04
Stream Alignment	145	Culvert		
Stream Alignment	86.31	.04	.035	.04
Stream Alignment	36.11	.04	.035	.04
Stream Alignment	0	.04	.035	.04

SUMMARY OF REACH LENGTHS

River: Creek

Reach	River Sta.	Left	Channel	Right
Stream Alignment	850.07	50.07	50.07	50.07
Stream Alignment	800	200	200	200
Stream Alignment	600	200	200	200
Stream Alignment	400	200	200	200
Stream Alignment	200	52.97	52.97	52.97
Stream Alignment	147.03	60.72	60.72	60.72
Stream Alignment	145	Culvert		
Stream Alignment	86.31	50.2	50.2	50.2
Stream Alignment	36.11	36.11	36.11	36.11
Stream Alignment	0			

SUMMARY OF CONTRACTION AND EXPANSION COEFFICIENTS
River: Creek

Reach	River Sta.	Contr.	Expan.
Stream Alignment	850.07	.1	.3
Stream Alignment	800	.1	.3
Stream Alignment	600	.1	.3
Stream Alignment	400	.1	.3
Stream Alignment	200	.1	.3
Stream Alignment	147.03	.1	.3
Stream Alignment	145	Culvert	
Stream Alignment	86.31	.1	.3
Stream Alignment	36.11	.1	.3
Stream Alignment	0	.1	.3

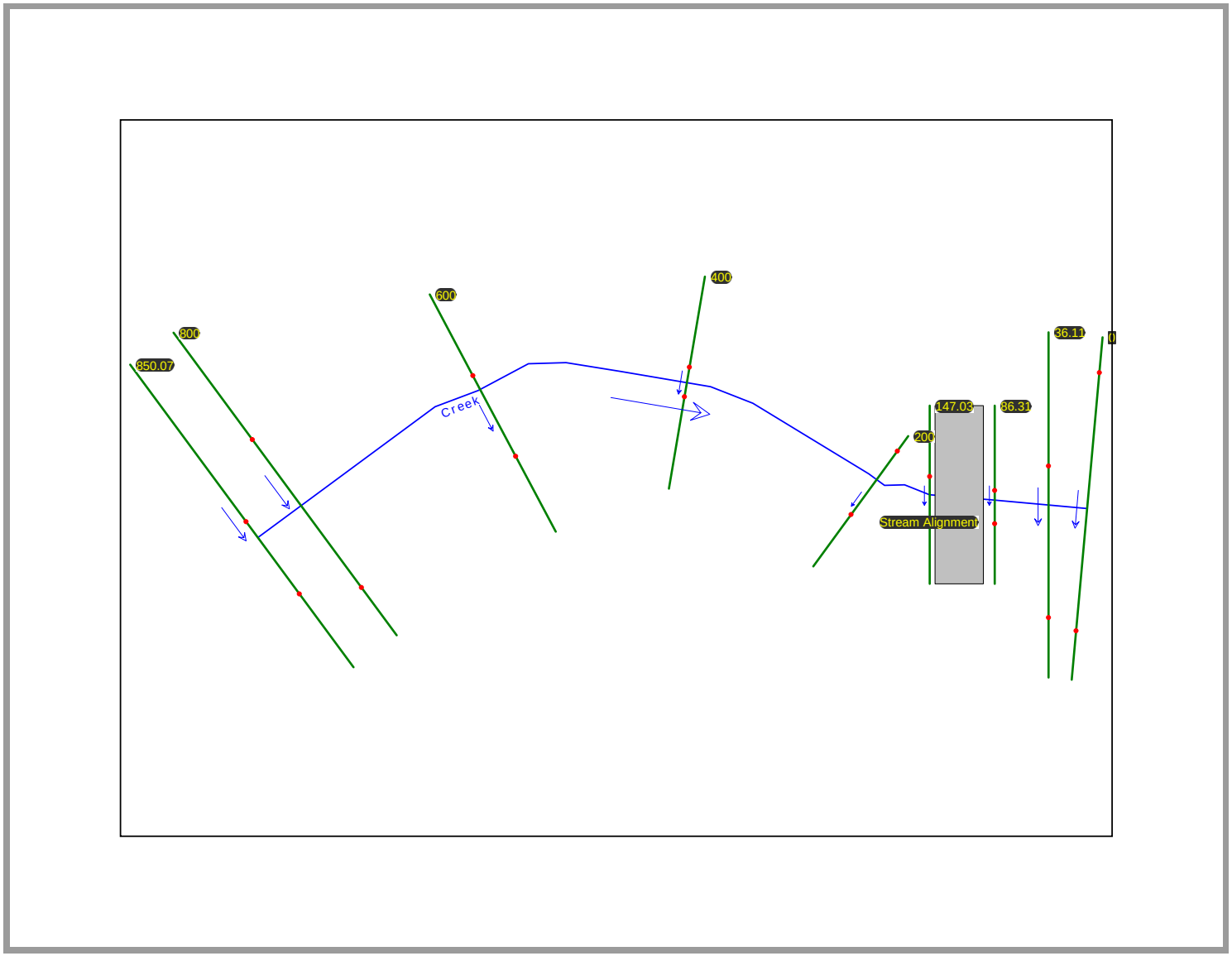
Profile Output Table - Standard Table 2

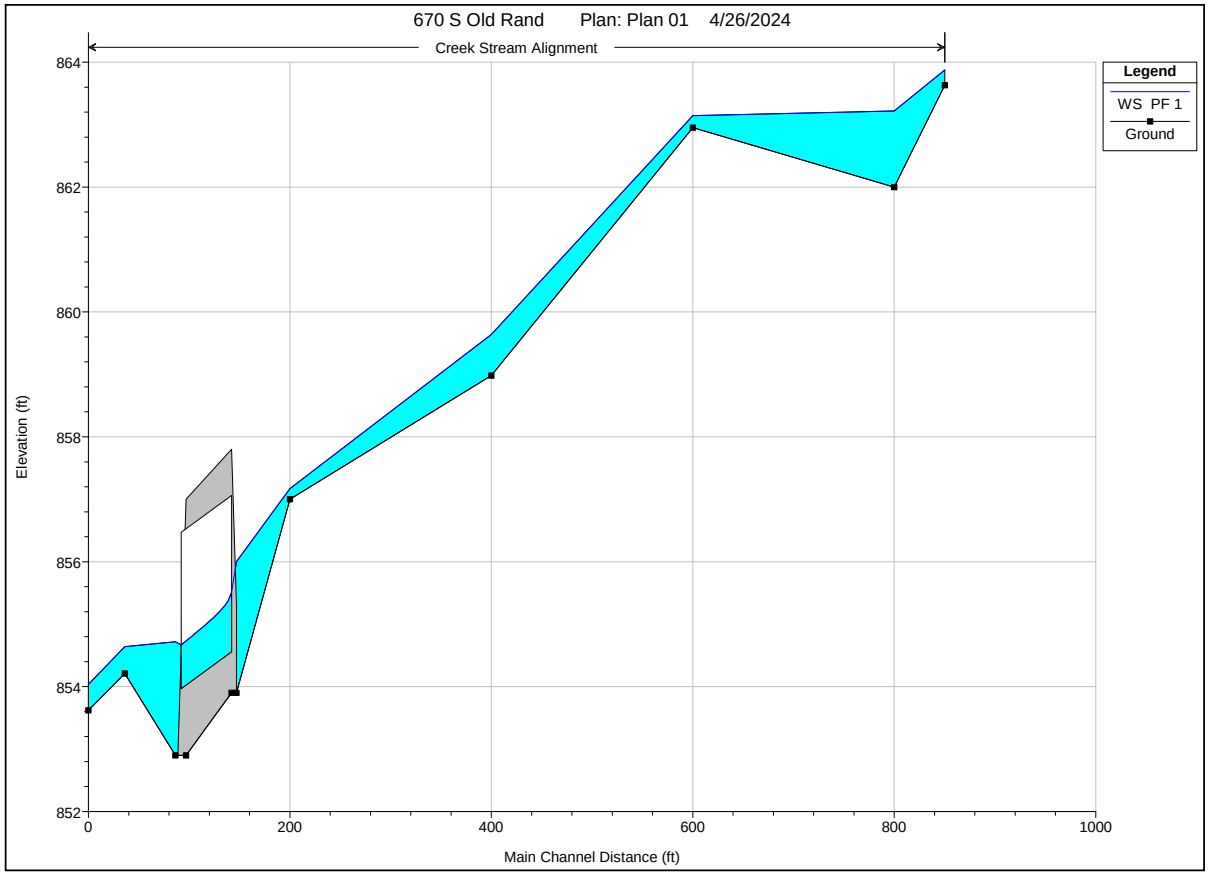
Reach	River Sta	Profile	E.G. Elev	W.S. Elev	Vel Head	Frctn Loss	C & E Loss	Q Left	Q Channel	Q Right	Top Width
			(ft)	(ft)	(ft)	(ft)	(ft)	(cfs)	(cfs)	(cfs)	(ft)
Stream Alignment	850.07	PF 1	863.93	863.88	0.05	0.00	0.02	0.57	6.31		36.29
Stream Alignment	800	PF 1	863.22	863.22	0.00	0.00	0.01	6.88		166.24	
Stream Alignment	600	PF 1	863.21	863.14	0.07	1.71	0.01	8.07		28.71	
Stream Alignment	400	PF 1	859.67	859.64	0.03	2.41	0.00	8.07		12.70	
Stream Alignment	200	PF 1	857.25	857.17	0.08	0.01	0.02	16.31		45.38	
Stream Alignment	147.03	PF 1	856.00	856.00	0.00			16.31		32.02	
Stream Alignment	145		Culvert								
Stream Alignment	86.31	PF 1	854.73	854.72	0.01	0.04	0.00	16.31		13.30	
Stream Alignment	36.11	PF 1	854.69	854.64	0.05	0.62	0.01	16.31		48.44	
Stream Alignment	0	PF 1	854.06	854.04	0.02			22.94		238.15	

Profile Output Table - Standard Table 1

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Stream Alignment	850.07	PF 1	6.88	863.63	863.88	863.88	863.93	0.031851	1.91	3.86	36.29	0.95
Stream Alignment	800	PF 1	6.88	862.00	863.22		863.22	0.000001	0.04	175.41	166.24	0.01
Stream Alignment	600	PF 1	8.07	862.95	863.14	863.14	863.21	0.036418	2.11	3.82	28.71	1.02

Stream Alignment	400		PF 1	8.07	858.98	859.64	859.38	859.67	
0.003733	1.47	5.48	12.70		0.40				
Stream Alignment	200		PF 1	16.31	857.00	857.17	857.17	857.25	
0.032946	2.26	7.21	45.38		1.00				
Stream Alignment	147.03		PF 1	16.31	853.90	856.00	854.25	856.00	
0.000036	0.34	48.67	32.02		0.05				
Stream Alignment	145			Culvert					
Stream Alignment	86.31		PF 1	16.31	852.90	854.72		854.73	
0.000255	0.83	19.63	13.30		0.12				
Stream Alignment	36.11		PF 1	16.31	854.21	854.64		854.69	
0.014023	1.70	9.57	48.44		0.68				
Stream Alignment	0		PF 1	22.94	853.62	854.04	854.02	854.06	
0.019996	1.15	19.96	238.15		0.70				


800
850.07
600
Creek
400
200
147.03
36.31
36.11
Stream Alignment


670 S Old Rand Plan: Plan 01 4/26/2024
Creek Stream Alignment
Legend
WS PF 1
Ground
Elevation (ft)
Main Channel Distance (ft)
852
854
856
858
860
862
864
0
200
400
600
800
1000

Culvert Summary Table - Berm Culvert

Total Discharge (cfs)	Culvert Discharge (cfs)	Headwater Elevation (ft)	Inlet Control Depth(ft)	Outlet Control Depth(ft)	Normal Depth (ft)	Critical Depth (ft)	Outlet Depth (ft)	Tailwater Depth (ft)	Outlet Velocity (ft/s)	Tailwater Velocity (ft/s)
0.62	0.62	862.46	0.44~	0.44	0.27	0.23	0.23	0.04	2.72	0.16
5	5	868.63	6.61	5.5	0.67	0.67	0.67	0.14	9.03	0.36
10	5.8	873.84	11.82	7.24	0.67	0.67	0.67	0.21	10.48	0.47
15	5.81	873.88	11.86	7.25	0.67	0.67	0.67	0.27	10.49	0.55
20	5.81	873.91	11.89	7.26	0.67	0.67	0.67	0.32	10.5	0.61
25	5.82	873.94	11.92	7.27	0.67	0.67	0.67	0.36	10.5	0.67
30	5.82	873.97	11.94	7.28	0.67	0.67	0.67	0.4	10.51	0.71
35	5.82	873.99	11.97	7.28	0.67	0.67	0.67	0.44	10.51	0.76
40	5.82	874.02	11.99	7.29	0.67	0.67	0.67	0.48	10.52	0.8
45	5.83	874.04	12.02	7.29	0.67	0.67	0.67	0.51	10.52	0.83
50	5.83	874.06	12.04	7.3	0.67	0.67	0.67	0.55	10.53	0.87

670 S Old Rand Rd
Residential Development
May 17, 2024

APPENDIX III – STORMWATER CALCULATIONS

DRAINAGE SUMMARY

RESTRICTOR SIZING CALCULATIONS

STAGE/STORAGE RELEASE CALCULATIONS

TR-20 MODEL

DRAINAGE SUMMARY

670 S Old Rand Rd 05.17.2024
MC rev

Property Area =	7.80	acres	0.01219	sq mi		
Total Disturbed Area =	5.64	acres	0.00881	sq mi		
Proposed (Disturbed)						
Impervious Area =	2.26	acres	$CN_{impervious}$ =	98	$C_{impervious}$ =	0.90
Gravel Area =	0.00	acres	CN_{gravel} =	89	C_{gravel} =	0.75
Pervious Area =	3.38	acres	$CN_{pervious}$ =	74	$C_{pervious}$ =	0.30
			CN =	83.61	c =	0.54
			% Imp =	40%		

Allowable Release Rate =	0.15	cfs/acre	100-yr
	0.846	cfs	
	0.04	cfs/acre	2-yr
	0.226	cfs	

Restrictor Sizing Calculations

670 S Old Rand Rd 05.17.2024

MC rev

ERIKSSON ENGINEERING ASSOCIATES, LTD.

2-Year Restrictor

2-year high water elevation =	857.81	
C_D =	0.61	(constant)
G =	32.20	ft/sec^2
Inv. restrictor =	855.75	
Drainage Area =	5.64	acre
$Q_{allowable}$ =	0.04	cfs/acre
$Q_{allowable}$ =	0.23	cfs

$\triangle h$ = hwe - Inv. - 1/2 Dia.

= 1.96 ft.

$Q = C_D A(2gh)^{1/2}$

$A_{restrictor} = (Q_{allowable}) / (C_D(2gh)^{1/2})$

$A_{restrictor}$ =	4.75	in^2
$D_{restrictor}$ =	2.5	in
=> Restrictor diameter =	**2.500**	**inches**

100-Year Restrictor

100-year high water elevation =	860.97	
C_D =	0.61	(constant)
G =	32.20	ft/sec^2
Inv. restrictor =	857.85	
$Q_{allowable}$ =	0.15	cfs/acre
$Q_{allowable}$ =	0.85	cfs

Note: 100-year restrictor sizing calculations take into account the fact that some release will be provided through the 2-year restrictor. Q_{2year} is a calculation of the flow through the 2-year restrictor with a 100-year head acting on it.

Q_{2year} =	0.36	cfs
Therefore: $Q_{remaining}$ =	0.48	cfs

$\triangle h$ = hwe - Inv. - 1/2 Dia.

= 2.99 ft.

$Q = C_D A(2gh)^{1/2}$

$A_{restrictor} = (Q_{allowable}) / (C_D(2gh)^{1/2})$

$A_{restrictor}$ =	8.18	in^2
$D_{restrictor}$ =	3.2	in
=> Restrictor diameter =	**3.125**	**inches**

Stage/Storage Release Calculations

670 S Old Rand Rd 05.17.2024

MC rev

ERIKSSON ENGINEERING ASSOCIATES, LTD.

2 Year Restrictor

Dia= 2.500 in
C_d = 0.61
Inv. rest. = 855.75
g = 32.2 ft/sec^2
A_{rest}= 4.91 in^2

100 Year Restrictor

Dia= 3.125 in
C_d = 0.61
Inv. rest. = 857.85
g = 32.2 ft/sec^2
A_{rest}= 7.67 in^2

(see Restrictor Sizing Calculations for detailed information)

	Elev	Area (sq. ft.)	Increm. Volume (cu ft.)	Increm. Volume (ac-ft)	Total Volume (ac-ft)		Q(2yr) (cfs)		Q(100yr) (cfs)		Q(Total) (cfs)
NWL	856	11722					0.06		0.00		**0.06**
	857	14733	13198.85	0.303	**0.30**		0.18		0.00		**0.18**
	858	18219	16445.18	0.378	**0.68**		0.24		0.04		**0.28**
	859	21975	20067.69	0.461	**1.14**		0.30		0.26		**0.56**
	860	25863	23892.62	0.548	**1.69**		0.34		0.37		**0.71**
	861	29911	27862.48	0.640	**2.33**		0.38		0.45		**0.83**
	862	34193	32028.14	0.735	**3.06**		0.41		0.52		**0.94**

857.80	**2-Year Storage Volume =**	**0.60 acre-ft.**
860.98	**100-Year Storage Volume =**	**2.32 acre-ft**
861.1	**Storage Provided Before Spill =**	2.40

```
WinTR-20 Printed Page File      Beginning of Input Data List
C:\Users\mcarollo\AppData\Roaming\USDA\TR20\Rand Rd Detention.inp

WinTR-20: version 3.30                  0         0         0.001     0         ,
670 S Old Rand Road
Proposed Detention

SUB-AREA:
          Proposed  Basin               0.00881   83.61     0.2       YY  Y


STREAM REACH:
          Basin     Outlet              Rest                          YY  Y


STORM ANALYSIS:
          100Yr24Hr                     8.57      H3Q24Hr   2
          2Yr24Hr                       3.34      H3Q24Hr   2



STRUCTURE RATING:
          Rest      855.75
                    855.75    0.00      0.00
                    856.00    0.06      0.001
                    857.00    0.18      0.30
                    857.85    0.24      0.62
                    858.00    0.28      0.68
                    859.00    0.56      1.14
                    860.00    0.71      1.69
                    861.00    0.83      2.33
                    862.00    0.94      3.06



RAINFALL DISTRIBUTION:
          H3Q24Hr             1.0
                    0.        0.0205    0.0431    0.0667    0.0912
                    0.1171    0.1436    0.1691    0.1964    0.2278
                    0.2633    0.3093    0.3635    0.4392    0.5211
                    0.6102    0.6989    0.7819    0.8492    0.8974
                    0.9311    0.9534    0.9706    0.9856    1.00




GLOBAL OUTPUT:
          2         0.005     0.1       YY  Y     YY  Y




WinTR-20 Printed Page File      End of Input Data List

                              670 S Old Rand Road
                              Proposed Detention

                         Name of printed page file:
```

C:\Users\mcarollo\AppData\Roaming\USDA\TR20\Rand Rd Detention.out

STORM 100Yr24Hr

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
Proposed	0.009		6.597		16.01	4.02	456.48

Line Start Time (hr)	Flow Values @ time increment of 0.100 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
2.200	0.112E-02	0.01	0.03	0.05	0.07	0.10	0.12
2.900	0.14	0.16	0.18	0.20	0.22	0.24	0.26
3.600	0.27	0.29	0.31	0.32	0.34	0.36	0.39
4.300	0.41	0.42	0.44	0.45	0.47	0.48	0.50
5.000	0.51	0.52	0.54	0.56	0.57	0.58	0.60
5.700	0.61	0.62	0.63	0.64	0.65	0.64	0.65
6.400	0.66	0.66	0.67	0.68	0.69	0.70	0.71
7.100	0.73	0.76	0.78	0.79	0.80	0.81	0.81
7.800	0.82	0.83	0.84	0.88	0.95	0.98	0.99
8.500	1.00	1.01	1.02	1.03	1.04	1.04	1.09
9.200	1.17	1.20	1.21	1.22	1.23	1.24	1.25
9.900	1.26	1.26	1.37	1.57	1.65	1.67	1.69
10.600	1.70	1.71	1.72	1.73	1.74	1.83	2.00
11.300	2.07	2.09	2.11	2.12	2.13	2.14	2.15
12.000	2.16	2.40	2.85	3.01	3.07	3.10	3.11
12.700	3.13	3.14	3.16	3.17	3.25	3.40	3.45
13.400	3.48	3.50	3.51	3.52	3.53	3.54	3.55
14.100	3.64	3.81	3.88	3.90	3.92	3.93	3.94
14.800	3.95	3.96	3.97	3.97	3.97	3.97	3.98
15.500	3.99	4.00	4.00	4.01	4.02	4.02	3.96
16.200	3.84	3.80	3.79	3.79	3.79	3.80	3.80
16.900	3.81	3.81	3.63	3.27	3.15	3.11	3.11
17.600	3.11	3.11	3.11	3.11	3.11	2.89	2.44
18.300	2.29	2.25	2.24	2.24	2.24	2.24	2.24
19.000	2.24	2.07	1.73	1.61	1.58	1.57	1.57
19.700	1.57	1.57	1.57	1.57	1.44	1.17	1.08
20.400	1.05	1.04	1.04	1.04	1.04	1.04	1.04
21.100	0.98	0.86	0.82	0.81	0.81	0.80	0.80
21.800	0.80	0.80	0.80	0.78	0.73	0.71	0.70
22.500	0.70	0.70	0.70	0.70	0.70	0.70	0.70
23.200	0.68	0.68	0.68	0.68	0.68	0.68	0.68
23.900	0.68	0.68	0.50	0.16	0.04	0.01	0.0

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
Basin	0.009	Upstream	6.597		16.01	4.02	456.48

670 S Old Rand Road
Proposed Detention

Line Start Time (hr)	Flow Values @ time increment of 0.100 hr (cfs)						
2.200	0.112E-02	0.01	0.03	0.05	0.07	0.10	0.12
2.900	0.14	0.16	0.18	0.20	0.22	0.24	0.26
3.600	0.27	0.29	0.31	0.32	0.34	0.36	0.39
4.300	0.41	0.42	0.44	0.45	0.47	0.48	0.50
5.000	0.51	0.52	0.54	0.56	0.57	0.58	0.60
5.700	0.61	0.62	0.63	0.64	0.65	0.64	0.65
6.400	0.66	0.66	0.67	0.68	0.69	0.70	0.71
7.100	0.73	0.76	0.78	0.79	0.80	0.81	0.81
7.800	0.82	0.83	0.84	0.88	0.95	0.98	0.99
8.500	1.00	1.01	1.02	1.03	1.04	1.04	1.09
9.200	1.17	1.20	1.21	1.22	1.23	1.24	1.25
9.900	1.26	1.26	1.37	1.57	1.65	1.67	1.69
10.600	1.70	1.71	1.72	1.73	1.74	1.83	2.00
11.300	2.07	2.09	2.11	2.12	2.13	2.14	2.15
12.000	2.16	2.40	2.85	3.01	3.07	3.10	3.11
12.700	3.13	3.14	3.16	3.17	3.25	3.40	3.45
13.400	3.48	3.50	3.51	3.52	3.53	3.54	3.55
14.100	3.64	3.81	3.88	3.90	3.92	3.93	3.94
14.800	3.95	3.96	3.97	3.97	3.97	3.97	3.98
15.500	3.99	4.00	4.00	4.01	4.02	4.02	3.96
16.200	3.84	3.80	3.79	3.79	3.79	3.80	3.80
16.900	3.81	3.81	3.63	3.27	3.15	3.11	3.11
17.600	3.11	3.11	3.11	3.11	3.11	2.89	2.44
18.300	2.29	2.25	2.24	2.24	2.24	2.24	2.24
19.000	2.24	2.07	1.73	1.61	1.58	1.57	1.57
19.700	1.57	1.57	1.57	1.57	1.44	1.17	1.08
20.400	1.05	1.04	1.04	1.04	1.04	1.04	1.04
21.100	0.98	0.86	0.82	0.81	0.81	0.80	0.80
21.800	0.80	0.80	0.80	0.78	0.73	0.71	0.70
22.500	0.70	0.70	0.70	0.70	0.70	0.70	0.70
23.200	0.68	0.68	0.68	0.68	0.68	0.68	0.68
23.900	0.68	0.68	0.50	0.16	0.04	0.01	0.0

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
Basin	0.009	Downstream	6.597	860.98	21.26	0.83	93.95

Line Start Time (hr)	Flow Values @ time increment of 0.100 hr (cfs)						
2.300	0.240E-02	0.01	0.02	0.04	0.06	0.06	0.06
3.000	0.06	0.06	0.06	0.06	0.06	0.06	0.06
3.700	0.06	0.07	0.07	0.07	0.07	0.07	0.07
4.400	0.07	0.07	0.07	0.07	0.08	0.08	0.08
5.100	0.08	0.08	0.08	0.08	0.09	0.09	0.09
5.800	0.09	0.09	0.10	0.10	0.10	0.10	0.10
6.500	0.10	0.11	0.11	0.11	0.11	0.11	0.12

670 S Old Rand Road
Proposed Detention

Line Start Time (hr)	Flow Values @ time increment of 0.100 hr (cfs)						
	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
7.200	0.12	0.12	0.12	0.12	0.13	0.13	0.13
7.900	0.13	0.14	0.14	0.14	0.14	0.15	0.15
8.600	0.15	0.15	0.16	0.16	0.16	0.17	0.17
9.300	0.17	0.18	0.18	0.18	0.18	0.18	0.19
10.000	0.19	0.19	0.19	0.19	0.20	0.20	0.20
10.700	0.20	0.21	0.21	0.21	0.21	0.22	0.22
11.400	0.22	0.22	0.23	0.23	0.23	0.24	0.24
12.100	0.25	0.26	0.27	0.29	0.30	0.32	0.33
12.800	0.35	0.36	0.37	0.39	0.40	0.42	0.43
13.500	0.45	0.46	0.48	0.49	0.51	0.52	0.54
14.200	0.56	0.57	0.57	0.58	0.59	0.60	0.60
14.900	0.61	0.62	0.63	0.63	0.64	0.65	0.66
15.600	0.66	0.67	0.68	0.69	0.69	0.70	0.71
16.300	0.71	0.72	0.72	0.73	0.73	0.74	0.74
17.000	0.75	0.75	0.76	0.76	0.76	0.77	0.77
17.700	0.77	0.78	0.78	0.78	0.79	0.79	0.79
18.400	0.80	0.80	0.80	0.80	0.80	0.81	0.81
19.100	0.81	0.81	0.81	0.82	0.82	0.82	0.82
19.800	0.82	0.82	0.82	0.82	0.82	0.82	0.83
20.500	0.83	0.83	0.83	0.83	0.83	0.83	0.83
21.200	0.83	0.83	0.83	0.83	0.83	0.83	0.83
21.900	0.83	0.83	0.83	0.83	0.83	0.83	0.83
22.600	0.83	0.83	0.83	0.83	0.83	0.83	0.83
23.300	0.83	0.82	0.82	0.82	0.82	0.82	0.82
24.000	0.82	0.82	0.82	0.82	0.82	0.82	0.82
24.700	0.82	0.81	0.81	0.81	0.81	0.81	0.81
25.400	0.81	0.81	0.80	0.80	0.80	0.80	0.80
26.100	0.80	0.80	0.80	0.80	0.79	0.79	0.79
26.800	0.79	0.79	0.79	0.79	0.79	0.78	0.78
27.500	0.78	0.78	0.78	0.78	0.78	0.78	0.77
28.200	0.77	0.77	0.77	0.77	0.77	0.77	0.77
28.900	0.76	0.76	0.76	0.76	0.76	0.76	0.76
29.600	0.76	0.76	0.75	0.75	0.75	0.75	0.75
30.300	0.75	0.75	0.75	0.74	0.74	0.74	0.74
31.000	0.74	0.74	0.74	0.74	0.74	0.73	0.73
31.700	0.73	0.73	0.73	0.73	0.73	0.73	0.73
32.400	0.72	0.72	0.72	0.72	0.72	0.72	0.72
33.100	0.72	0.72	0.71	0.71	0.71	0.71	0.71
33.800	0.71	0.71	0.71	0.70	0.70	0.70	0.70
34.500	0.70	0.70	0.69	0.69	0.69	0.69	0.69
35.200	0.69	0.68	0.68	0.68	0.68	0.68	0.68
35.900	0.68	0.67	0.67	0.67	0.67	0.67	0.67
36.600	0.67	0.66	0.66	0.66	0.66	0.66	0.66
37.300	0.65	0.65	0.65	0.65	0.65	0.65	0.65
38.000	0.64	0.64	0.64	0.64	0.64	0.64	0.64
38.700	0.63	0.63	0.63	0.63	0.63	0.63	0.63
39.400	0.62	0.62	0.62	0.62	0.62	0.62	0.62
40.100	0.61	0.61	0.61	0.61	0.61	0.61	0.61
40.800	0.60	0.60	0.60	0.60	0.60	0.60	0.60
41.500	0.60	0.59	0.59	0.59	0.59	0.59	0.59
42.200	0.59	0.58	0.58	0.58	0.58	0.58	0.58

670 S Old Rand Road
Proposed Detention

Line Start Time (hr)	Flow Values @ time increment of 0.100 hr (cfs)						
42.900	0.58	0.58	0.57	0.57	0.57	0.57	0.57
43.600	0.57	0.57	0.57	0.56	0.56	0.56	0.56
44.300	0.56	0.56	0.55	0.55	0.55	0.54	0.54
45.000	0.54	0.54	0.53	0.53	0.53	0.53	0.52
45.700	0.52	0.52	0.51	0.51	0.51	0.51	0.50
46.400	0.50	0.50	0.50	0.49	0.49	0.49	0.49
47.100	0.48	0.48	0.48	0.48	0.48	0.47	0.47
47.800	0.47	0.47	0.46	0.46	0.46	0.46	0.45
48.500	0.45	0.45	0.45	0.44	0.44	0.44	0.44
49.200	0.44	0.43	0.43	0.43	0.43	0.43	0.42
49.900	0.42	0.42	0.42	0.41	0.41	0.41	0.41
50.600	0.41	0.40	0.40	0.40	0.40	0.40	0.39
51.300	0.39	0.39	0.39	0.39	0.38	0.38	0.38
52.000	0.38	0.38	0.37	0.37	0.37	0.37	0.37
52.700	0.37	0.36	0.36	0.36	0.36	0.36	0.35
53.400	0.35	0.35	0.35	0.35	0.35	0.34	0.34
54.100	0.34	0.34	0.34	0.34	0.33	0.33	0.33
54.800	0.33	0.33	0.33	0.32	0.32	0.32	0.32
55.500	0.32	0.32	0.31	0.31	0.31	0.31	0.31
56.200	0.31	0.31	0.30	0.30	0.30	0.30	0.30
56.900	0.30	0.29	0.29	0.29	0.29	0.29	0.29
57.600	0.29	0.28	0.28	0.28	0.28	0.28	0.28
58.300	0.28	0.27	0.27	0.27	0.27	0.27	0.27
59.000	0.27	0.26	0.26	0.26	0.26	0.26	0.26
59.700	0.26	0.25	0.25	0.25	0.25	0.25	0.25
60.400	0.25	0.24	0.24	0.24	0.24	0.24	0.24
61.100	0.24	0.24	0.24	0.24	0.24	0.24	0.24
61.800	0.24	0.24	0.24	0.24	0.23	0.23	0.23
62.500	0.23	0.23	0.23	0.23	0.23	0.23	0.23
63.200	0.23	0.23	0.23	0.23	0.23	0.23	0.23
63.900	0.23	0.23	0.23	0.23	0.23	0.23	0.23
64.600	0.23	0.23	0.23	0.23	0.22	0.22	0.22
65.300	0.22	0.22	0.22	0.22	0.22	0.22	0.22
66.000	0.22	0.22	0.22	0.22	0.22	0.22	0.22
66.700	0.22	0.22	0.22	0.22	0.22	0.22	0.22
67.400	0.22	0.22	0.22	0.22	0.22	0.22	0.21
68.100	0.21	0.21	0.21	0.21	0.21	0.21	0.21
68.800	0.21	0.21	0.21	0.21	0.21	0.21	0.21
69.500	0.21	0.21	0.21	0.21	0.21	0.21	0.21
70.200	0.21	0.21	0.21	0.21	0.21	0.21	0.21
70.900	0.21	0.20	0.20	0.20	0.20	0.20	0.20
71.600	0.20	0.20	0.20	0.20	0.20	0.20	0.20
72.300	0.20	0.20	0.20	0.20	0.20	0.20	0.20
73.000	0.20	0.20	0.20	0.20	0.20	0.20	0.20
73.700	0.20	0.20	0.20	0.20	0.20	0.20	0.19
74.400	0.19	0.19	0.19	0.19	0.19	0.19	0.19
75.100	0.19	0.19	0.19	0.19	0.19	0.19	0.19
75.800	0.19	0.19	0.19	0.19	0.19	0.19	0.19
76.500	0.19	0.19	0.19	0.19	0.19	0.19	0.19
77.200	0.19	0.19	0.19	0.19	0.19	0.18	0.18
77.900	0.18	0.18	0.18	0.18	0.18	0.18	0.18

670 S Old Rand Road
Proposed Detention

Line Start Time (hr)	Flow Values @ time increment of 0.100 hr (cfs)						
78.600	0.18	0.18	0.18	0.18	0.18	0.18	0.18
79.300	0.18	0.18	0.18	0.18	0.18	0.18	0.18
80.000	0.18	0.18	0.18	0.17	0.17	0.17	0.17
80.700	0.17	0.17	0.17	0.17	0.17	0.17	0.17
81.400	0.17	0.17	0.17	0.17	0.17	0.17	0.16
82.100	0.16	0.16	0.16	0.16	0.16	0.16	0.16
82.800	0.16	0.16	0.16	0.16	0.16	0.16	0.16
83.500	0.16	0.16	0.16	0.16	0.15	0.15	0.15
84.200	0.15	0.15	0.15	0.15	0.15	0.15	0.15
84.900	0.15	0.15	0.15	0.15	0.15	0.15	0.15
85.600	0.15	0.15	0.15	0.14	0.14	0.14	0.14
86.300	0.14	0.14	0.14	0.14	0.14	0.14	0.14
87.000	0.14	0.14	0.14	0.14	0.14	0.14	0.14
87.700	0.14	0.14	0.14	0.14	0.13	0.13	0.13
88.400	0.13	0.13	0.13	0.13	0.13	0.13	0.13
89.100	0.13	0.13	0.13	0.13	0.13	0.13	0.13
89.800	0.13	0.13	0.13	0.13	0.13	0.13	0.12
90.500	0.12	0.12	0.12	0.12	0.12	0.12	0.12
91.200	0.12	0.12	0.12	0.12	0.12	0.12	0.12
91.900	0.12	0.12	0.12	0.12	0.12	0.12	0.12
92.600	0.12	0.12	0.12	0.11	0.11	0.11	0.11
93.300	0.11	0.11	0.11	0.11	0.11	0.11	0.11
94.000	0.11	0.11	0.11	0.11	0.11	0.11	0.11
94.700	0.11	0.11	0.11	0.11	0.11	0.11	0.11
95.400	0.11	0.11	0.11	0.10	0.10	0.10	0.10
96.100	0.10	0.10	0.10	0.10	0.10	0.10	0.10
96.800	0.10	0.10	0.10	0.10	0.10	0.10	0.10
97.500	0.10	0.10	0.10	0.10	0.10	0.10	0.10
98.200	0.10	0.10	0.10	0.10	0.10	0.09	0.09
98.900	0.09	0.09	0.09	0.09	0.09	0.09	0.09
99.600	0.09	0.09	0.09	0.09	0.09	0.09	0.09
100.300	0.09	0.09	0.09	0.09	0.09	0.09	0.09
101.000	0.09	0.09	0.09	0.09	0.09	0.09	0.09
101.700	0.09	0.09	0.09	0.08	0.08	0.08	0.08
102.400	0.08	0.08	0.08	0.08	0.08	0.08	0.08
103.100	0.08	0.08	0.08	0.08	0.08	0.08	0.08
103.800	0.08	0.08	0.08	0.08	0.08	0.08	0.08
104.500	0.08	0.08	0.08	0.08	0.08	0.08	0.08
105.200	0.08	0.08	0.08	0.08	0.08	0.08	0.07
105.900	0.07	0.07	0.07	0.07	0.07	0.07	0.07
106.600	0.07	0.07	0.07	0.07	0.07	0.07	0.07
107.300	0.07	0.07	0.07	0.07	0.07	0.07	0.07
108.000	0.07	0.07	0.07	0.07	0.07	0.07	0.07
108.700	0.07	0.07	0.07	0.07	0.07	0.07	0.07
109.400	0.07	0.07	0.07	0.07	0.07	0.07	0.07
110.100	0.06	0.06	0.06	0.06	0.06	0.06	0.06
110.800	0.06	0.06	0.06	0.06	0.06	0.06	0.06
111.500	0.06	0.06	0.06	0.06	0.06	0.06	0.06
112.200	0.06	0.06	0.06	0.06	0.04	0.02	0.01
112.900	0.795E-02	0.0					

670 S Old Rand Road
Proposed Detention

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
OUTLET	0.009		6.597		21.26	0.83	93.95

Line Start Time (hr)	Flow Values @ time increment of 0.100 hr (cfs)						
2.300	0.240E-02	0.01	0.02	0.04	0.06	0.06	0.06
3.000	0.06	0.06	0.06	0.06	0.06	0.06	0.06
3.700	0.06	0.07	0.07	0.07	0.07	0.07	0.07
4.400	0.07	0.07	0.07	0.07	0.08	0.08	0.08
5.100	0.08	0.08	0.08	0.08	0.09	0.09	0.09
5.800	0.09	0.09	0.10	0.10	0.10	0.10	0.10
6.500	0.10	0.11	0.11	0.11	0.11	0.11	0.12
7.200	0.12	0.12	0.12	0.12	0.13	0.13	0.13
7.900	0.13	0.14	0.14	0.14	0.14	0.15	0.15
8.600	0.15	0.15	0.16	0.16	0.16	0.17	0.17
9.300	0.17	0.18	0.18	0.18	0.18	0.18	0.19
10.000	0.19	0.19	0.19	0.19	0.20	0.20	0.20
10.700	0.20	0.21	0.21	0.21	0.21	0.22	0.22
11.400	0.22	0.22	0.23	0.23	0.23	0.24	0.24
12.100	0.25	0.26	0.27	0.29	0.30	0.32	0.33
12.800	0.35	0.36	0.37	0.39	0.40	0.42	0.43
13.500	0.45	0.46	0.48	0.49	0.51	0.52	0.54
14.200	0.56	0.57	0.57	0.58	0.59	0.60	0.60
14.900	0.61	0.62	0.63	0.63	0.64	0.65	0.66
15.600	0.66	0.67	0.68	0.69	0.69	0.70	0.71
16.300	0.71	0.72	0.72	0.73	0.73	0.74	0.74
17.000	0.75	0.75	0.76	0.76	0.76	0.77	0.77
17.700	0.77	0.78	0.78	0.78	0.79	0.79	0.79
18.400	0.80	0.80	0.80	0.80	0.80	0.81	0.81
19.100	0.81	0.81	0.81	0.82	0.82	0.82	0.82
19.800	0.82	0.82	0.82	0.82	0.82	0.82	0.83
20.500	0.83	0.83	0.83	0.83	0.83	0.83	0.83
21.200	0.83	0.83	0.83	0.83	0.83	0.83	0.83
21.900	0.83	0.83	0.83	0.83	0.83	0.83	0.83
22.600	0.83	0.83	0.83	0.83	0.83	0.83	0.83
23.300	0.83	0.82	0.82	0.82	0.82	0.82	0.82
24.000	0.82	0.82	0.82	0.82	0.82	0.82	0.82
24.700	0.82	0.81	0.81	0.81	0.81	0.81	0.81
25.400	0.81	0.81	0.80	0.80	0.80	0.80	0.80
26.100	0.80	0.80	0.80	0.80	0.79	0.79	0.79
26.800	0.79	0.79	0.79	0.79	0.79	0.78	0.78
27.500	0.78	0.78	0.78	0.78	0.78	0.78	0.77
28.200	0.77	0.77	0.77	0.77	0.77	0.77	0.77
28.900	0.76	0.76	0.76	0.76	0.76	0.76	0.76
29.600	0.76	0.76	0.75	0.75	0.75	0.75	0.75
30.300	0.75	0.75	0.75	0.74	0.74	0.74	0.74
31.000	0.74	0.74	0.74	0.74	0.74	0.73	0.73
31.700	0.73	0.73	0.73	0.73	0.73	0.73	0.73
32.400	0.72	0.72	0.72	0.72	0.72	0.72	0.72

670 S Old Rand Road
Proposed Detention

Line Start Time (hr)	Flow Values @ time increment of 0.100 hr (cfs)						
33.100	0.72	0.72	0.71	0.71	0.71	0.71	0.71
33.800	0.71	0.71	0.71	0.70	0.70	0.70	0.70
34.500	0.70	0.70	0.69	0.69	0.69	0.69	0.69
35.200	0.69	0.68	0.68	0.68	0.68	0.68	0.68
35.900	0.68	0.67	0.67	0.67	0.67	0.67	0.67
36.600	0.67	0.66	0.66	0.66	0.66	0.66	0.66
37.300	0.65	0.65	0.65	0.65	0.65	0.65	0.65
38.000	0.64	0.64	0.64	0.64	0.64	0.64	0.64
38.700	0.63	0.63	0.63	0.63	0.63	0.63	0.63
39.400	0.62	0.62	0.62	0.62	0.62	0.62	0.62
40.100	0.61	0.61	0.61	0.61	0.61	0.61	0.61
40.800	0.60	0.60	0.60	0.60	0.60	0.60	0.60
41.500	0.60	0.59	0.59	0.59	0.59	0.59	0.59
42.200	0.59	0.58	0.58	0.58	0.58	0.58	0.58
42.900	0.58	0.58	0.57	0.57	0.57	0.57	0.57
43.600	0.57	0.57	0.57	0.56	0.56	0.56	0.56
44.300	0.56	0.56	0.55	0.55	0.55	0.54	0.54
45.000	0.54	0.54	0.53	0.53	0.53	0.53	0.52
45.700	0.52	0.52	0.51	0.51	0.51	0.51	0.50
46.400	0.50	0.50	0.50	0.49	0.49	0.49	0.49
47.100	0.48	0.48	0.48	0.48	0.48	0.47	0.47
47.800	0.47	0.47	0.46	0.46	0.46	0.46	0.45
48.500	0.45	0.45	0.45	0.44	0.44	0.44	0.44
49.200	0.44	0.43	0.43	0.43	0.43	0.43	0.42
49.900	0.42	0.42	0.42	0.41	0.41	0.41	0.41
50.600	0.41	0.40	0.40	0.40	0.40	0.40	0.39
51.300	0.39	0.39	0.39	0.39	0.38	0.38	0.38
52.000	0.38	0.38	0.37	0.37	0.37	0.37	0.37
52.700	0.37	0.36	0.36	0.36	0.36	0.36	0.35
53.400	0.35	0.35	0.35	0.35	0.35	0.34	0.34
54.100	0.34	0.34	0.34	0.34	0.33	0.33	0.33
54.800	0.33	0.33	0.33	0.32	0.32	0.32	0.32
55.500	0.32	0.32	0.31	0.31	0.31	0.31	0.31
56.200	0.31	0.31	0.30	0.30	0.30	0.30	0.30
56.900	0.30	0.29	0.29	0.29	0.29	0.29	0.29
57.600	0.29	0.28	0.28	0.28	0.28	0.28	0.28
58.300	0.28	0.27	0.27	0.27	0.27	0.27	0.27
59.000	0.27	0.26	0.26	0.26	0.26	0.26	0.26
59.700	0.26	0.25	0.25	0.25	0.25	0.25	0.25
60.400	0.25	0.24	0.24	0.24	0.24	0.24	0.24
61.100	0.24	0.24	0.24	0.24	0.24	0.24	0.24
61.800	0.24	0.24	0.24	0.24	0.23	0.23	0.23
62.500	0.23	0.23	0.23	0.23	0.23	0.23	0.23
63.200	0.23	0.23	0.23	0.23	0.23	0.23	0.23
63.900	0.23	0.23	0.23	0.23	0.23	0.23	0.23
64.600	0.23	0.23	0.23	0.23	0.22	0.22	0.22
65.300	0.22	0.22	0.22	0.22	0.22	0.22	0.22
66.000	0.22	0.22	0.22	0.22	0.22	0.22	0.22
66.700	0.22	0.22	0.22	0.22	0.22	0.22	0.22
67.400	0.22	0.22	0.22	0.22	0.22	0.22	0.21
68.100	0.21	0.21	0.21	0.21	0.21	0.21	0.21

670 S Old Rand Road
Proposed Detention

Line Start Time (hr)	Flow Values @ time increment of 0.100 hr (cfs)						
68.800	0.21	0.21	0.21	0.21	0.21	0.21	0.21
69.500	0.21	0.21	0.21	0.21	0.21	0.21	0.21
70.200	0.21	0.21	0.21	0.21	0.21	0.21	0.21
70.900	0.21	0.20	0.20	0.20	0.20	0.20	0.20
71.600	0.20	0.20	0.20	0.20	0.20	0.20	0.20
72.300	0.20	0.20	0.20	0.20	0.20	0.20	0.20
73.000	0.20	0.20	0.20	0.20	0.20	0.20	0.20
73.700	0.20	0.20	0.20	0.20	0.20	0.20	0.19
74.400	0.19	0.19	0.19	0.19	0.19	0.19	0.19
75.100	0.19	0.19	0.19	0.19	0.19	0.19	0.19
75.800	0.19	0.19	0.19	0.19	0.19	0.19	0.19
76.500	0.19	0.19	0.19	0.19	0.19	0.19	0.19
77.200	0.19	0.19	0.19	0.19	0.19	0.18	0.18
77.900	0.18	0.18	0.18	0.18	0.18	0.18	0.18
78.600	0.18	0.18	0.18	0.18	0.18	0.18	0.18
79.300	0.18	0.18	0.18	0.18	0.18	0.18	0.18
80.000	0.18	0.18	0.18	0.17	0.17	0.17	0.17
80.700	0.17	0.17	0.17	0.17	0.17	0.17	0.17
81.400	0.17	0.17	0.17	0.17	0.17	0.17	0.16
82.100	0.16	0.16	0.16	0.16	0.16	0.16	0.16
82.800	0.16	0.16	0.16	0.16	0.16	0.16	0.16
83.500	0.16	0.16	0.16	0.16	0.15	0.15	0.15
84.200	0.15	0.15	0.15	0.15	0.15	0.15	0.15
84.900	0.15	0.15	0.15	0.15	0.15	0.15	0.15
85.600	0.15	0.15	0.15	0.14	0.14	0.14	0.14
86.300	0.14	0.14	0.14	0.14	0.14	0.14	0.14
87.000	0.14	0.14	0.14	0.14	0.14	0.14	0.14
87.700	0.14	0.14	0.14	0.14	0.13	0.13	0.13
88.400	0.13	0.13	0.13	0.13	0.13	0.13	0.13
89.100	0.13	0.13	0.13	0.13	0.13	0.13	0.13
89.800	0.13	0.13	0.13	0.13	0.13	0.13	0.12
90.500	0.12	0.12	0.12	0.12	0.12	0.12	0.12
91.200	0.12	0.12	0.12	0.12	0.12	0.12	0.12
91.900	0.12	0.12	0.12	0.12	0.12	0.12	0.12
92.600	0.12	0.12	0.12	0.11	0.11	0.11	0.11
93.300	0.11	0.11	0.11	0.11	0.11	0.11	0.11
94.000	0.11	0.11	0.11	0.11	0.11	0.11	0.11
94.700	0.11	0.11	0.11	0.11	0.11	0.11	0.11
95.400	0.11	0.11	0.11	0.10	0.10	0.10	0.10
96.100	0.10	0.10	0.10	0.10	0.10	0.10	0.10
96.800	0.10	0.10	0.10	0.10	0.10	0.10	0.10
97.500	0.10	0.10	0.10	0.10	0.10	0.10	0.10
98.200	0.10	0.10	0.10	0.10	0.10	0.09	0.09
98.900	0.09	0.09	0.09	0.09	0.09	0.09	0.09
99.600	0.09	0.09	0.09	0.09	0.09	0.09	0.09
100.300	0.09	0.09	0.09	0.09	0.09	0.09	0.09
101.000	0.09	0.09	0.09	0.09	0.09	0.09	0.09
101.700	0.09	0.09	0.09	0.08	0.08	0.08	0.08
102.400	0.08	0.08	0.08	0.08	0.08	0.08	0.08
103.100	0.08	0.08	0.08	0.08	0.08	0.08	0.08
103.800	0.08	0.08	0.08	0.08	0.08	0.08	0.08

670 S Old Rand Road
Proposed Detention

Line Start Time (hr)	Flow Values @ time increment of 0.100 hr (cfs)						
104.500	0.08	0.08	0.08	0.08	0.08	0.08	0.08
105.200	0.08	0.08	0.08	0.08	0.08	0.08	0.07
105.900	0.07	0.07	0.07	0.07	0.07	0.07	0.07
106.600	0.07	0.07	0.07	0.07	0.07	0.07	0.07
107.300	0.07	0.07	0.07	0.07	0.07	0.07	0.07
108.000	0.07	0.07	0.07	0.07	0.07	0.07	0.07
108.700	0.07	0.07	0.07	0.07	0.07	0.07	0.07
109.400	0.07	0.07	0.07	0.07	0.07	0.07	0.07
110.100	0.06	0.06	0.06	0.06	0.06	0.06	0.06
110.800	0.06	0.06	0.06	0.06	0.06	0.06	0.06
111.500	0.06	0.06	0.06	0.06	0.06	0.06	0.06
112.200	0.06	0.06	0.06	0.06	0.04	0.02	0.01
112.900	0.795E-02	0.0					

STORM 2Yr24Hr

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
Proposed	0.009		1.771		16.03	1.25	141.87

Line Start Time (hr)	Flow Values @ time increment of 0.100 hr (cfs)						
5.200	0.240E-02	0.619E-02	0.01	0.01	0.02	0.02	0.03
5.900	0.03	0.04	0.04	0.04	0.05	0.05	0.05
6.600	0.06	0.06	0.06	0.07	0.07	0.07	0.08
7.300	0.09	0.09	0.09	0.10	0.10	0.10	0.11
8.000	0.11	0.12	0.13	0.14	0.14	0.15	0.15
8.700	0.16	0.16	0.16	0.17	0.18	0.19	0.20
9.400	0.21	0.21	0.22	0.22	0.23	0.23	0.24
10.100	0.26	0.30	0.32	0.33	0.34	0.34	0.35
10.800	0.36	0.36	0.37	0.39	0.43	0.45	0.46
11.500	0.47	0.48	0.49	0.49	0.50	0.51	0.57
12.200	0.68	0.73	0.75	0.77	0.78	0.79	0.80
12.900	0.81	0.82	0.85	0.90	0.92	0.93	0.94
13.600	0.96	0.97	0.98	0.99	0.99	1.03	1.08
14.300	1.11	1.12	1.13	1.14	1.15	1.16	1.17
15.000	1.18	1.19	1.19	1.20	1.21	1.21	1.22
15.700	1.23	1.24	1.24	1.25	1.23	1.20	1.19
16.400	1.19	1.20	1.20	1.21	1.21	1.22	1.22
17.100	1.17	1.05	1.02	1.01	1.01	1.01	1.01
17.800	1.02	1.02	1.02	0.95	0.80	0.75	0.74
18.500	0.74	0.74	0.74	0.74	0.74	0.74	0.69
19.200	0.58	0.54	0.53	0.52	0.52	0.53	0.53
19.900	0.53	0.53	0.48	0.39	0.36	0.35	0.35
20.600	0.35	0.35	0.35	0.35	0.35	0.33	0.29
21.300	0.28	0.27	0.27	0.27	0.27	0.27	0.27

670 S Old Rand Road
Proposed Detention

Line Start Time (hr)	Flow Values @ time increment of 0.100 hr (cfs)						
22.000	0.27	0.26	0.25	0.24	0.24	0.24	0.24
22.700	0.24	0.24	0.24	0.24	0.24	0.23	0.23
23.400	0.23	0.23	0.23	0.23	0.23	0.23	0.23
24.100	0.17	0.05	0.01	0.0			

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
Basin	0.009	Upstream	1.771		16.03	1.25	141.87

Line Start Time (hr)	Flow Values @ time increment of 0.100 hr (cfs)						
5.200	0.240E-02	0.619E-02	0.01	0.01	0.02	0.02	0.03
5.900	0.03	0.04	0.04	0.04	0.05	0.05	0.05
6.600	0.06	0.06	0.06	0.07	0.07	0.07	0.08
7.300	0.09	0.09	0.09	0.10	0.10	0.10	0.11
8.000	0.11	0.12	0.13	0.14	0.14	0.15	0.15
8.700	0.16	0.16	0.16	0.17	0.18	0.19	0.20
9.400	0.21	0.21	0.22	0.22	0.23	0.23	0.24
10.100	0.26	0.30	0.32	0.33	0.34	0.34	0.35
10.800	0.36	0.36	0.37	0.39	0.43	0.45	0.46
11.500	0.47	0.48	0.49	0.49	0.50	0.51	0.57
12.200	0.68	0.73	0.75	0.77	0.78	0.79	0.80
12.900	0.81	0.82	0.85	0.90	0.92	0.93	0.94
13.600	0.96	0.97	0.98	0.99	0.99	1.03	1.08
14.300	1.11	1.12	1.13	1.14	1.15	1.16	1.17
15.000	1.18	1.19	1.19	1.20	1.21	1.21	1.22
15.700	1.23	1.24	1.24	1.25	1.23	1.20	1.19
16.400	1.19	1.20	1.20	1.21	1.21	1.22	1.22
17.100	1.17	1.05	1.02	1.01	1.01	1.01	1.01
17.800	1.02	1.02	1.02	0.95	0.80	0.75	0.74
18.500	0.74	0.74	0.74	0.74	0.74	0.74	0.69
19.200	0.58	0.54	0.53	0.52	0.52	0.53	0.53
19.900	0.53	0.53	0.48	0.39	0.36	0.35	0.35
20.600	0.35	0.35	0.35	0.35	0.35	0.33	0.29
21.300	0.28	0.27	0.27	0.27	0.27	0.27	0.27
22.000	0.27	0.26	0.25	0.24	0.24	0.24	0.24
22.700	0.24	0.24	0.24	0.24	0.24	0.23	0.23
23.400	0.23	0.23	0.23	0.23	0.23	0.23	0.23
24.100	0.17	0.05	0.01	0.0			

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
Basin	0.009	Downstream	1.771	857.80	23.09	0.24	26.83

670 S Old Rand Road
Proposed Detention

Line Start Time (hr)	Flow Values @ time increment of 0.100 hr (cfs)						
5.400	0.449E-02	0.773E-02	0.01	0.02	0.02	0.02	0.03
6.100	0.03	0.04	0.04	0.04	0.05	0.05	0.05
6.800	0.06	0.06	0.06	0.06	0.06	0.06	0.06
7.500	0.06	0.06	0.06	0.06	0.06	0.06	0.06
8.200	0.06	0.06	0.06	0.06	0.06	0.06	0.06
8.900	0.06	0.06	0.06	0.06	0.07	0.07	0.07
9.600	0.07	0.07	0.07	0.07	0.07	0.07	0.07
10.300	0.07	0.07	0.07	0.07	0.07	0.08	0.08
11.000	0.08	0.08	0.08	0.08	0.08	0.08	0.08
11.700	0.09	0.09	0.09	0.09	0.09	0.09	0.09
12.400	0.10	0.10	0.10	0.10	0.11	0.11	0.11
13.100	0.11	0.12	0.12	0.12	0.12	0.13	0.13
13.800	0.13	0.13	0.14	0.14	0.14	0.15	0.15
14.500	0.15	0.16	0.16	0.16	0.17	0.17	0.17
15.200	0.18	0.18	0.18	0.18	0.18	0.19	0.19
15.900	0.19	0.19	0.19	0.19	0.20	0.20	0.20
16.600	0.20	0.20	0.20	0.21	0.21	0.21	0.21
17.300	0.21	0.21	0.21	0.21	0.22	0.22	0.22
18.000	0.22	0.22	0.22	0.22	0.22	0.22	0.23
18.700	0.23	0.23	0.23	0.23	0.23	0.23	0.23
19.400	0.23	0.23	0.23	0.23	0.23	0.23	0.23
20.100	0.23	0.23	0.23	0.23	0.23	0.23	0.23
20.800	0.24	0.24	0.24	0.24	0.24	0.24	0.24
21.500	0.24	0.24	0.24	0.24	0.24	0.24	0.24
22.200	0.24	0.24	0.24	0.24	0.24	0.24	0.24
22.900	0.24	0.24	0.24	0.24	0.24	0.24	0.24
23.600	0.24	0.24	0.24	0.24	0.24	0.24	0.24
24.300	0.24	0.24	0.24	0.23	0.23	0.23	0.23
25.000	0.23	0.23	0.23	0.23	0.23	0.23	0.23
25.700	0.23	0.23	0.23	0.23	0.23	0.23	0.23
26.400	0.23	0.23	0.23	0.23	0.23	0.23	0.23
27.100	0.23	0.23	0.23	0.22	0.22	0.22	0.22
27.800	0.22	0.22	0.22	0.22	0.22	0.22	0.22
28.500	0.22	0.22	0.22	0.22	0.22	0.22	0.22
29.200	0.22	0.22	0.22	0.22	0.22	0.22	0.22
29.900	0.22	0.22	0.22	0.22	0.21	0.21	0.21
30.600	0.21	0.21	0.21	0.21	0.21	0.21	0.21
31.300	0.21	0.21	0.21	0.21	0.21	0.21	0.21
32.000	0.21	0.21	0.21	0.21	0.21	0.21	0.21
32.700	0.21	0.21	0.21	0.21	0.21	0.21	0.21
33.400	0.20	0.20	0.20	0.20	0.20	0.20	0.20
34.100	0.20	0.20	0.20	0.20	0.20	0.20	0.20
34.800	0.20	0.20	0.20	0.20	0.20	0.20	0.20
35.500	0.20	0.20	0.20	0.20	0.20	0.20	0.20
36.200	0.20	0.20	0.20	0.20	0.19	0.19	0.19
36.900	0.19	0.19	0.19	0.19	0.19	0.19	0.19
37.600	0.19	0.19	0.19	0.19	0.19	0.19	0.19
38.300	0.19	0.19	0.19	0.19	0.19	0.19	0.19
39.000	0.19	0.19	0.19	0.19	0.19	0.19	0.19
39.700	0.19	0.19	0.19	0.19	0.18	0.18	0.18
40.400	0.18	0.18	0.18	0.18	0.18	0.18	0.18

670 S Old Rand Road
Proposed Detention

Line Start Time (hr)	Flow Values @ time increment of 0.100 hr (cfs)						
41.100	0.18	0.18	0.18	0.18	0.18	0.18	0.18
41.800	0.18	0.18	0.18	0.18	0.18	0.18	0.18
42.500	0.18	0.17	0.17	0.17	0.17	0.17	0.17
43.200	0.17	0.17	0.17	0.17	0.17	0.17	0.17
43.900	0.17	0.17	0.17	0.17	0.17	0.16	0.16
44.600	0.16	0.16	0.16	0.16	0.16	0.16	0.16
45.300	0.16	0.16	0.16	0.16	0.16	0.16	0.16
46.000	0.16	0.16	0.16	0.15	0.15	0.15	0.15
46.700	0.15	0.15	0.15	0.15	0.15	0.15	0.15
47.400	0.15	0.15	0.15	0.15	0.15	0.15	0.15
48.100	0.15	0.15	0.14	0.14	0.14	0.14	0.14
48.800	0.14	0.14	0.14	0.14	0.14	0.14	0.14
49.500	0.14	0.14	0.14	0.14	0.14	0.14	0.14
50.200	0.14	0.14	0.13	0.13	0.13	0.13	0.13
50.900	0.13	0.13	0.13	0.13	0.13	0.13	0.13
51.600	0.13	0.13	0.13	0.13	0.13	0.13	0.13
52.300	0.13	0.13	0.13	0.13	0.13	0.12	0.12
53.000	0.12	0.12	0.12	0.12	0.12	0.12	0.12
53.700	0.12	0.12	0.12	0.12	0.12	0.12	0.12
54.400	0.12	0.12	0.12	0.12	0.12	0.12	0.12
55.100	0.12	0.12	0.11	0.11	0.11	0.11	0.11
55.800	0.11	0.11	0.11	0.11	0.11	0.11	0.11
56.500	0.11	0.11	0.11	0.11	0.11	0.11	0.11
57.200	0.11	0.11	0.11	0.11	0.11	0.11	0.11
57.900	0.11	0.10	0.10	0.10	0.10	0.10	0.10
58.600	0.10	0.10	0.10	0.10	0.10	0.10	0.10
59.300	0.10	0.10	0.10	0.10	0.10	0.10	0.10
60.000	0.10	0.10	0.10	0.10	0.10	0.10	0.10
60.700	0.10	0.10	0.10	0.09	0.09	0.09	0.09
61.400	0.09	0.09	0.09	0.09	0.09	0.09	0.09
62.100	0.09	0.09	0.09	0.09	0.09	0.09	0.09
62.800	0.09	0.09	0.09	0.09	0.09	0.09	0.09
63.500	0.09	0.09	0.09	0.09	0.09	0.09	0.09
64.200	0.09	0.09	0.08	0.08	0.08	0.08	0.08
64.900	0.08	0.08	0.08	0.08	0.08	0.08	0.08
65.600	0.08	0.08	0.08	0.08	0.08	0.08	0.08
66.300	0.08	0.08	0.08	0.08	0.08	0.08	0.08
67.000	0.08	0.08	0.08	0.08	0.08	0.08	0.08
67.700	0.08	0.08	0.08	0.08	0.08	0.07	0.07
68.400	0.07	0.07	0.07	0.07	0.07	0.07	0.07
69.100	0.07	0.07	0.07	0.07	0.07	0.07	0.07
69.800	0.07	0.07	0.07	0.07	0.07	0.07	0.07
70.500	0.07	0.07	0.07	0.07	0.07	0.07	0.07
71.200	0.07	0.07	0.07	0.07	0.07	0.07	0.07
71.900	0.07	0.07	0.07	0.07	0.07	0.07	0.06
72.600	0.06	0.06	0.06	0.06	0.06	0.06	0.06
73.300	0.06	0.06	0.06	0.06	0.06	0.06	0.06
74.000	0.06	0.06	0.06	0.06	0.06	0.06	0.06
74.700	0.06	0.06	0.04	0.03	0.02	0.971E-02	0.591E-02
75.400	0.0						

670 S Old Rand Road
Proposed Detention

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
OUTLET	0.009		1.770		23.09	0.24	26.83

Line Start Time (hr)	Flow Values @ time increment of 0.100 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
5.400	0.449E-02	0.773E-02	0.01	0.02	0.02	0.02	0.03
6.100	0.03	0.04	0.04	0.04	0.05	0.05	0.05
6.800	0.06	0.06	0.06	0.06	0.06	0.06	0.06
7.500	0.06	0.06	0.06	0.06	0.06	0.06	0.06
8.200	0.06	0.06	0.06	0.06	0.06	0.06	0.06
8.900	0.06	0.06	0.06	0.06	0.07	0.07	0.07
9.600	0.07	0.07	0.07	0.07	0.07	0.07	0.07
10.300	0.07	0.07	0.07	0.07	0.07	0.08	0.08
11.000	0.08	0.08	0.08	0.08	0.08	0.08	0.08
11.700	0.09	0.09	0.09	0.09	0.09	0.09	0.09
12.400	0.10	0.10	0.10	0.10	0.11	0.11	0.11
13.100	0.11	0.12	0.12	0.12	0.12	0.13	0.13
13.800	0.13	0.13	0.14	0.14	0.14	0.15	0.15
14.500	0.15	0.16	0.16	0.16	0.17	0.17	0.17
15.200	0.18	0.18	0.18	0.18	0.18	0.19	0.19
15.900	0.19	0.19	0.19	0.19	0.20	0.20	0.20
16.600	0.20	0.20	0.20	0.21	0.21	0.21	0.21
17.300	0.21	0.21	0.21	0.21	0.22	0.22	0.22
18.000	0.22	0.22	0.22	0.22	0.22	0.22	0.23
18.700	0.23	0.23	0.23	0.23	0.23	0.23	0.23
19.400	0.23	0.23	0.23	0.23	0.23	0.23	0.23
20.100	0.23	0.23	0.23	0.23	0.23	0.23	0.23
20.800	0.24	0.24	0.24	0.24	0.24	0.24	0.24
21.500	0.24	0.24	0.24	0.24	0.24	0.24	0.24
22.200	0.24	0.24	0.24	0.24	0.24	0.24	0.24
22.900	0.24	0.24	0.24	0.24	0.24	0.24	0.24
23.600	0.24	0.24	0.24	0.24	0.24	0.24	0.24
24.300	0.24	0.24	0.24	0.23	0.23	0.23	0.23
25.000	0.23	0.23	0.23	0.23	0.23	0.23	0.23
25.700	0.23	0.23	0.23	0.23	0.23	0.23	0.23
26.400	0.23	0.23	0.23	0.23	0.23	0.23	0.23
27.100	0.23	0.23	0.23	0.22	0.22	0.22	0.22
27.800	0.22	0.22	0.22	0.22	0.22	0.22	0.22
28.500	0.22	0.22	0.22	0.22	0.22	0.22	0.22
29.200	0.22	0.22	0.22	0.22	0.22	0.22	0.22
29.900	0.22	0.22	0.22	0.22	0.21	0.21	0.21
30.600	0.21	0.21	0.21	0.21	0.21	0.21	0.21
31.300	0.21	0.21	0.21	0.21	0.21	0.21	0.21
32.000	0.21	0.21	0.21	0.21	0.21	0.21	0.21
32.700	0.21	0.21	0.21	0.21	0.21	0.21	0.21
33.400	0.20	0.20	0.20	0.20	0.20	0.20	0.20
34.100	0.20	0.20	0.20	0.20	0.20	0.20	0.20
34.800	0.20	0.20	0.20	0.20	0.20	0.20	0.20
35.500	0.20	0.20	0.20	0.20	0.20	0.20	0.20

670 S Old Rand Road
Proposed Detention

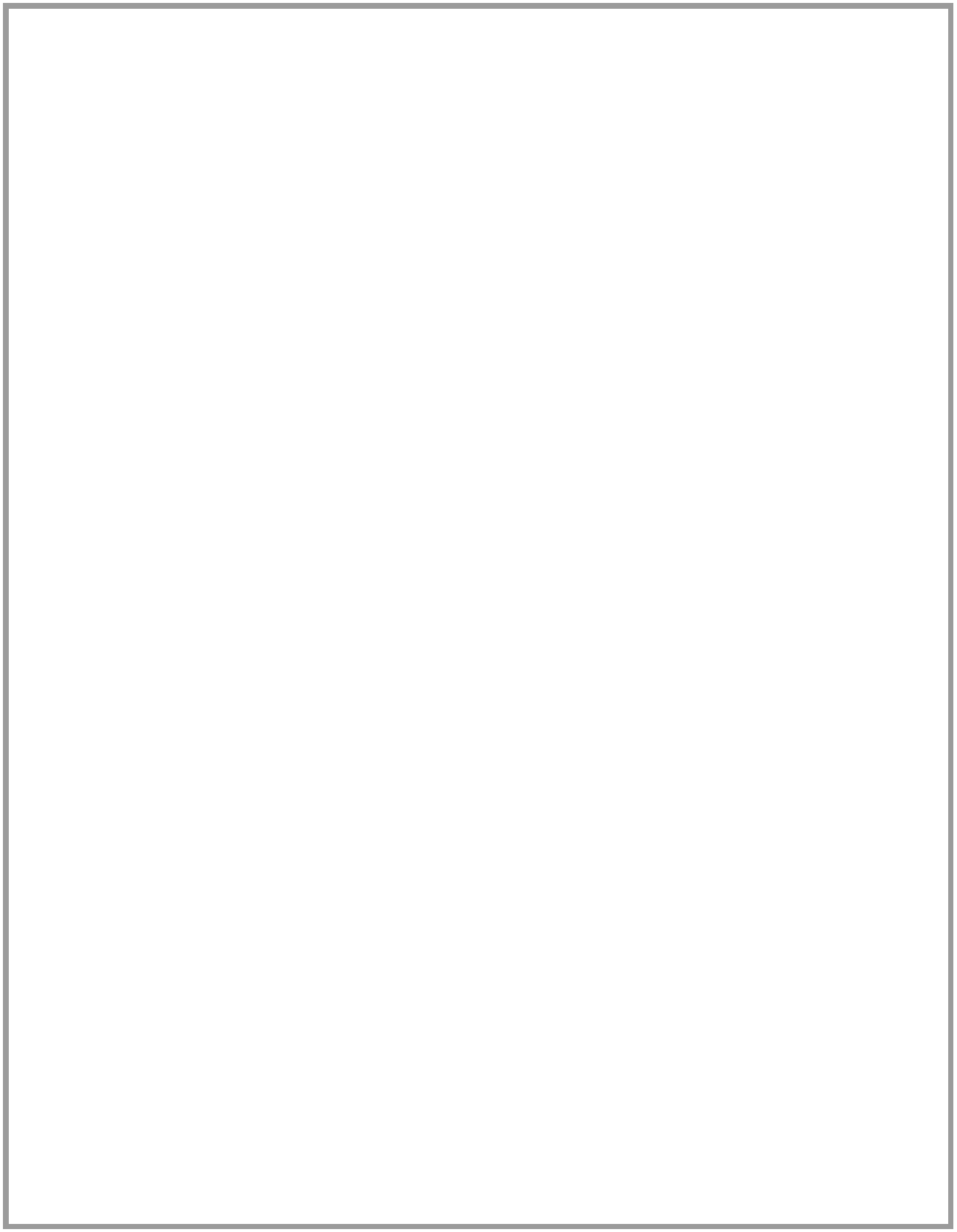
Line Start Time (hr)	Flow Values @ time increment of 0.100 hr (cfs)						
36.200	0.20	0.20	0.20	0.20	0.19	0.19	0.19
36.900	0.19	0.19	0.19	0.19	0.19	0.19	0.19
37.600	0.19	0.19	0.19	0.19	0.19	0.19	0.19
38.300	0.19	0.19	0.19	0.19	0.19	0.19	0.19
39.000	0.19	0.19	0.19	0.19	0.19	0.19	0.19
39.700	0.19	0.19	0.19	0.18	0.18	0.18	0.18
40.400	0.18	0.18	0.18	0.18	0.18	0.18	0.18
41.100	0.18	0.18	0.18	0.18	0.18	0.18	0.18
41.800	0.18	0.18	0.18	0.18	0.18	0.18	0.18
42.500	0.18	0.17	0.17	0.17	0.17	0.17	0.17
43.200	0.17	0.17	0.17	0.17	0.17	0.17	0.17
43.900	0.17	0.17	0.17	0.17	0.17	0.16	0.16
44.600	0.16	0.16	0.16	0.16	0.16	0.16	0.16
45.300	0.16	0.16	0.16	0.16	0.16	0.16	0.16
46.000	0.16	0.16	0.16	0.15	0.15	0.15	0.15
46.700	0.15	0.15	0.15	0.15	0.15	0.15	0.15
47.400	0.15	0.15	0.15	0.15	0.15	0.15	0.15
48.100	0.15	0.15	0.14	0.14	0.14	0.14	0.14
48.800	0.14	0.14	0.14	0.14	0.14	0.14	0.14
49.500	0.14	0.14	0.14	0.14	0.14	0.14	0.14
50.200	0.14	0.14	0.13	0.13	0.13	0.13	0.13
50.900	0.13	0.13	0.13	0.13	0.13	0.13	0.13
51.600	0.13	0.13	0.13	0.13	0.13	0.13	0.13
52.300	0.13	0.13	0.13	0.13	0.13	0.12	0.12
53.000	0.12	0.12	0.12	0.12	0.12	0.12	0.12
53.700	0.12	0.12	0.12	0.12	0.12	0.12	0.12
54.400	0.12	0.12	0.12	0.12	0.12	0.12	0.12
55.100	0.12	0.12	0.11	0.11	0.11	0.11	0.11
55.800	0.11	0.11	0.11	0.11	0.11	0.11	0.11
56.500	0.11	0.11	0.11	0.11	0.11	0.11	0.11
57.200	0.11	0.11	0.11	0.11	0.11	0.11	0.11
57.900	0.11	0.10	0.10	0.10	0.10	0.10	0.10
58.600	0.10	0.10	0.10	0.10	0.10	0.10	0.10
59.300	0.10	0.10	0.10	0.10	0.10	0.10	0.10
60.000	0.10	0.10	0.10	0.10	0.10	0.10	0.10
60.700	0.10	0.10	0.10	0.09	0.09	0.09	0.09
61.400	0.09	0.09	0.09	0.09	0.09	0.09	0.09
62.100	0.09	0.09	0.09	0.09	0.09	0.09	0.09
62.800	0.09	0.09	0.09	0.09	0.09	0.09	0.09
63.500	0.09	0.09	0.09	0.09	0.09	0.09	0.09
64.200	0.09	0.09	0.08	0.08	0.08	0.08	0.08
64.900	0.08	0.08	0.08	0.08	0.08	0.08	0.08
65.600	0.08	0.08	0.08	0.08	0.08	0.08	0.08
66.300	0.08	0.08	0.08	0.08	0.08	0.08	0.08
67.000	0.08	0.08	0.08	0.08	0.08	0.08	0.08
67.700	0.08	0.08	0.08	0.08	0.08	0.07	0.07
68.400	0.07	0.07	0.07	0.07	0.07	0.07	0.07
69.100	0.07	0.07	0.07	0.07	0.07	0.07	0.07
69.800	0.07	0.07	0.07	0.07	0.07	0.07	0.07
70.500	0.07	0.07	0.07	0.07	0.07	0.07	0.07
71.200	0.07	0.07	0.07	0.07	0.07	0.07	0.07

670 S Old Rand Road
Proposed Detention

Line Start Time (hr)	Flow Values @ time increment of 0.100 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
71.900	0.07	0.07	0.07	0.07	0.07	0.07	0.06
72.600	0.06	0.06	0.06	0.06	0.06	0.06	0.06
73.300	0.06	0.06	0.06	0.06	0.06	0.06	0.06
74.000	0.06	0.06	0.06	0.06	0.06	0.06	0.06
74.700	0.06	0.06	0.04	0.03	0.02	0.971E-02	0.591E-02
75.400	0.0						

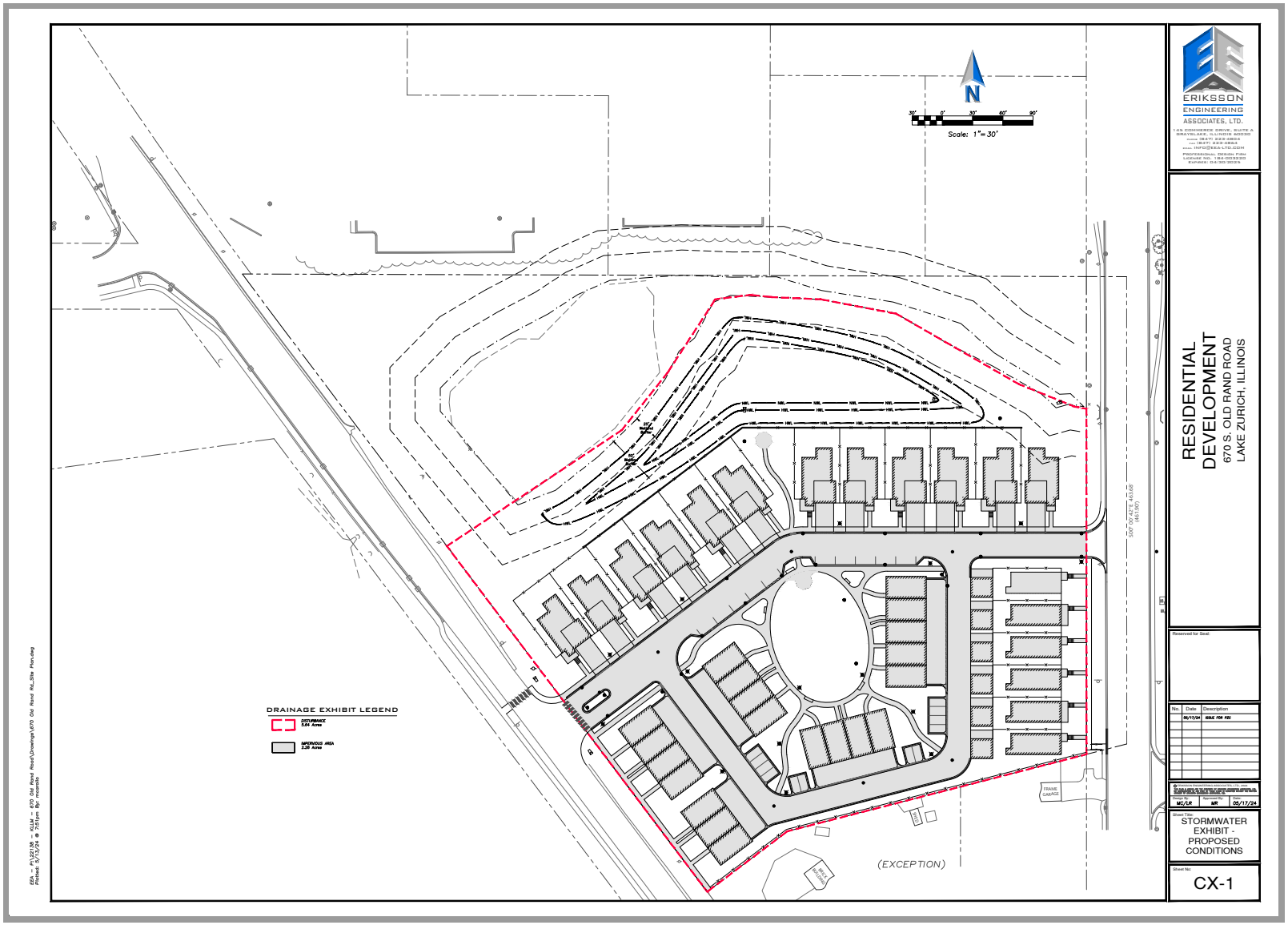
670 S Old Rand Road
Proposed Detention

Area or Reach Identifier	Drainage Area (sq mi)	Peak Flow by Storm 100Yr24Hr (cfs)	2Yr24Hr (cfs)	(cfs)	(cfs)	(cfs)
Proposed	0.009	4.02	1.25			
Basin	0.009	4.02	1.25			
DOWNSTREAM		0.83	0.24			
OUTLET	0.009	0.83	0.24			

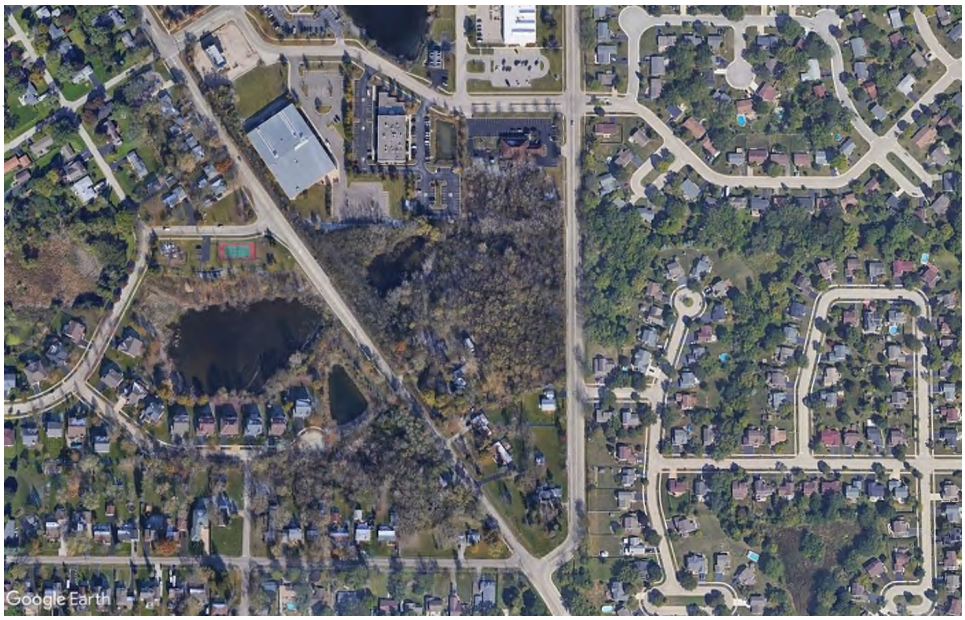


APPENDIX IV – EXHIBITS

CX-1 STORMWATER EXHIBIT – PROPOSED CONDITIONS


N
Scale: 1"=30'
DRAINAGE EXHIBIT LEGEND
DISTURBANCE
5.64 Acres
IMPERVIOUS AREA
3.28 Acres
(EXCEPTION)
ERIKSSON ENGINEERING ASSOCIATES, LTD.
RESIDENTIAL DEVELOPMENT
670 S. OLD RAND ROAD
LAKE ZURICH, ILLINOIS
Reserved for Seal:
No. Date Description
05/17/24 ISSUE FOR REVIEW
Design By: MC/LR
Drawn By: MR
Date: 05/17/24
Sheet Title: STORMWATER EXHIBIT - PROPOSED CONDITIONS
Sheet No: CX-1

Residential Development
Traffic and Parking Study
670 Old Rand Road
Lake Zurich, Illinois



Prepared For:

Pappageorge Haymes Partners

Prepared by:

Eriksson Engineering Associates, Ltd.

ERIKSSON ENGINEERING ASSOCIATES, LTD.

145 Commerce Drive, Ste A, Grayslake, IL 60030

847.223.8404

www.eea-ltd.com

1 – INTRODUCTION

This report summarizes the results of a traffic and parking study for a proposed residential project located at 670 Old Rand Road in Lake Zurich, Illinois. The site will have a combination of single-family detached and attached residences. Access to the site will be provided by driveways on Old Rand Road and Buesching Road. **Figure 1** illustrates the site location and the area roadways. Please note that all figures are located at the end of the report.

Methodology

The purpose of this study was to identify the transportation system serving the site, to determine its characteristics, and to evaluate the impact of the proposed development. An evaluation of the transportation access for a development includes the network serving pedestrians, public transportation, bicycle, vehicles, and service trucks around the site.

Data was collected on existing pedestrian, bicycle, and vehicular traffic volumes along with an inventory of traffic control devices, sidewalks, bike lanes, parking, and traffic lanes. Projections were made of future traffic volumes by the proposed development and combined with the existing traffic volumes. Analyses were conducted and recommendations developed for the transportation needs to accommodate the development.

Conclusions

With the additional traffic generated by the proposed development, the following conclusions and recommendations were developed:

1. The street network can accommodate the additional traffic from the proposed project.
2. Development of the site with 38 residential units will generate 26 to 31 peak-hour trips during the morning and evening commuter periods.
3. All intersections within the study area work at acceptable levels of service and delay. There is a slight increase in delays from the projected traffic growth.
4. One full access point is proposed on Old Rand Road with one inbound lane and one outbound lane under stop sign control.
5. A second full access point is proposed on Buesching Road with one inbound lane and one outbound lane under stop sign control.
6. A sidewalk will be provided across the Old Rand Road frontage with a crosswalk to the existing sidewalk on the west side of the road. Pedestrian crosswalk signing should be provided.
7. Along the Buesching Road frontage, a sidewalk with a parkway is proposed across the southern two thirds of the site frontage. North of the driveway, the existing carriage walk will be used.
8. Twelve of the single-family homes will have four parking spaces with a two-vehicle garage and two driveway spaces. Six single-family homes will have two-car garages. Ten on-street parallel parking spaces will be available for visitors.
9. The single-family attached homes will have a two-vehicle garage and two driveway spaces with twelve off-street visitor parking spaces.

2 – EXISTING TRANSPORTATION NETWORK

Site Location

The site is located between Old Rand Road and Buesching Road. Vehicular access to it is provided by a single residential driveway on Old Rand Road. Land-uses around the site consist of single-family homes to the east, south, and west. North of the site, there are three buildings containing a funeral home, office space, and an indoor soccer center.

Existing Roadway Characteristics

A description of the study area roadways providing access to the site is provided below:

Old Rand Road is a north-south collector extending north from Rand Road (US 12) thru downtown Lake Zurich, around Lake Zurich, back to Rand Road (US 12). Along the site frontage, it has one through lane in each direction. It is under the jurisdiction of the Village of Lake Zurich with a 30-mph speed limit and has a 5-ton weight limit.

Buesching Road is a two-lane north-south collector extending north of Old Rand Road across IL 22 to Rose Road. It is under the jurisdiction of the Village of Lake Zurich with a 30-mph speed limit. There is a 10-mph curve just north of Old Rand Road. It is a Class 2 truck route.

Grand Avenue is an east-west residential roadway with one lane in each direction. On-street parking is not permitted on the road overnight or after two inches of rain. It is under stop sign control at Old Rand Road. The speed limit is 20 mph and has a 5-ton weight limit. It is under the jurisdiction of the Village of Lake Zurich.

Figure 2 illustrates the existing roadway geometrics and traffic control.

Pedestrians

Grand Avenue does not have any sidewalks along its length. Buesching Road has five-foot wide carriage walk on both sides. Old Rand Road has a five-foot sidewalk with a small parkway on the west side of the road. A painted crosswalk is provided across Buesching Road at Old Rand Road.

Existing Vehicular, Pedestrian and Bicycle Volumes

Weekday morning (7:00 to 8:00 AM) and afternoon (4:00 to 6:00 PM) manual counts of pedestrians and vehicles were conducted at the study area intersection of Old Rand Road/Buesching Road/Grand Avenue. These counts showed the peak hours of traffic occurring from 7:30 to 8:30 AM and 4:15 to 5:15 PM on a weekday. **Figure 3** illustrates the existing vehicular volumes. Copies of the counts can be found in the **Appendix**.

3 - DEVELOPMENT CHARACTERISTICS

Site Trip Generation

A single-family detached and attached development is proposed with 18 detached and 20 attached units. Vehicular volumes generated by the residences were estimated from the Institute of Transportation Engineer's Trip Generation Manual, 11th Edition for similar projects. **Table 1** summarizes the estimated site generated traffic volumes.

Table 1
Site Trip Generation Estimates

Use	Size	ITE Land Use Code	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Single-family	18 units	210(1)	4	12	16	12	8	20
Townhomes	20 units	215(2)	2	8	10	7	4	11
Total Site Volumes			**6**	**20**	**26**	**19**	**12**	**31**

(1) Single Family Homes – Detached
(2) Single Family Homes - Attached

Directional Distribution

The trip distribution for the development is based on a combination of the existing traffic volumes, the existing road system, nearby attractions for residents, and the proposed site access. The trip distribution for the site is shown on **Table 2** and **Figure 4**.

Table 2
Directional Distribution

Direction	Percentage
North on Buesching Road	20%
North on Old Rand Road	40%
South on Old Rand Road	40%
Total	**100%**

Total Traffic Volumes

Based on trip generation and directional distribution estimates, the site generated traffic was assigned to the proposed access drives and area roadways. **Figure 5** illustrates the resulting site traffic assignments to the proposed access system. Total traffic volumes are a combination of the existing traffic volumes, projected non-site growth in those volumes, and the site traffic. Construction of the development is planned to be completed in the year 2025. The total traffic volumes were estimated for a period of five years after the projected opening which is the Year 2030. Data provided by the Chicago Metropolitan Agency for Planning (CMAP) shows a growth rate on Old Road and Buesching Roads of 0.2% per year. A copy of the CMAP letter is included in the **Appendix**. This growth rate was applied to the existing traffic volumes to obtain the base 2030 volumes (**Figure 6**) without the development. The base volumes were then combined with site traffic for the Year 2030 total traffic volumes are shown on **Figure 7**.

4 – ANALYSES

Intersection Capacity Analyses

To determine the operation of the study area intersections and the access drives, intersection capacity analyses were conducted for the existing and projected traffic volumes. An intersection's ability to accommodate traffic flow is based on the average control delay experienced by vehicles passing through the intersection. The intersection and individual traffic movements are assigned a level of service (LOS), ranging from A to F based on the control delay created by a traffic signal or stop sign. Control delay consists of the initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. LOS A has the best traffic flow and least delay. LOS E represents saturated or at capacity conditions. LOS F experiences oversaturated conditions and extensive delays. The Highway Capacity Manual definitions for levels of service and the corresponding control delay for both signalized and unsignalized intersections are shown in **Table 3**.

Table 3
Level of Service Criteria for Intersections

Level of Service	Description	Control Delay (seconds/vehicle)		
		Signals	Roundabouts	Stop Signs
A	Minimal delay and few stops	<10	<10	<10
B	Low delay with more stops	>10-20	>10-15	>10-15
C	Light congestion	>20-35	>15-25	>15-25
D	Congestion is more noticeable with longer delays	>35-55	>25-35	>25-35
E	High delays and number of stops	>55-80	>35-50	>35-50
F	Unacceptable delays and over capacity	>80	>50	>50

Source: Highway Capacity Manual

Capacity analyses were conducted for each intersection area using the SYNCHRO software to determine the existing and future operations of the transportation system. These analyses were performed for the weekday peak-hours. Copies of the capacity analysis summaries are included in the **Appendix**.

Table 4 shows the existing and future level of service and delay results for the study area traffic conditions. All the intersections within the study are currently operating at a satisfactory level of service. Overall, with the low volume of site generated traffic, there is a nominal impact on existing traffic conditions. The conclusion of the analyses is that the road system can accommodate the projected traffic volumes.

Old Rand Road Access

One full access point is proposed on Old rand Road with one inbound lane and one outbound lane under stop sign control. The projected vehicular delays are low. A sidewalk is proposed across the site frontage. Crosswalks are proposed across the site driveway and Old Rand Road to connect to the sidewalk on the west side of the road. Pedestrian warning signs should be posted for approaching Old Rand Road traffic.

Buesching Road Access

Another full access point is proposed on Buesching Road with one inbound lane and one outbound lane under stop sign control. The projected vehicular delays are low. A sidewalk with a parkway is proposed across the southern two thirds of the site frontage. North of the driveway, the existing carriage walk will be used.

Old Rand Road at Grand Avenue and Buesching Road

Under current and future traffic conditions, this intersection works well with minimal delays today and in the future. No additional roadway improvements are proposed.

Table 4
Intersection Level of Service and Total Delay (seconds)

Intersection	Movement	Morning Peak		Afternoon Peak	
		2024 Existing	2030 Total	2024 Existing	2030 Total
Old Rand Road at Buesching Road And Grand Avenue	Eb Rt/Th/Lt	B-12.7	B-12.9	B-13.9	B-14.1
	Wb Rt/Th/Lt	B-13.8	B-14.2	C-17.2	C-17.8
	Nb Lt	A-7.6	A-7.6	A-7.8	A-7.8
	Sb /Lt	A-8.0	A-8.0	A-8.2	A-8.3
Site Access on Old Rand Road	Sb Left		A-7.8		A-8.0
	Wb Lt/Rt		B-10.4		B-10.8
Site Access on Buesching Road	Nb Lt		A-7.4		A-7.5
	Eb Lt/Rt		A-9.4		A-9.5

Lake Zurich Zoning Requirements

The parking requirements were calculated for the development based on the Village of Lake Zurich Zoning Code (see **Table 5**). A total of 120 spaces are required and 162 spaces are provided. Each single-family home will have two spaces in a parking garage and twelve units will have two spaces in the driveway. Each townhome will have two spaces in a garage and two spaces in their driveway. A total of 22 visitor spaces are provided.

Table 5
Zoning Code Parking Requirements

Use	Size	Zoning Code Requirement	Required Parking	Parking Provided
Detached	18 units	3 spaces for each dwelling unit	**54 spaces**	**70**[(1)]
Attached	20 units	1 1/2 for each efficiency dwelling unit plus 2 for each 1- or 2-bedroom dwelling unit plus 3 for each 3 or more bedroom dwelling unit plus 1 for each 10 spaces required by this paragraph	**66 spaces**	**92**[(2)]
		Total	**120 spaces**	**162 spaces**

(1) 36 spaces in 2-vehicle garages, 24 driveways spaces, and 10 visitor spaces
(2) 40 spaces in 2-vehicle garages, 40 driveway spaces, and 12 visitor spaces

5 - RECOMMENDATIONS

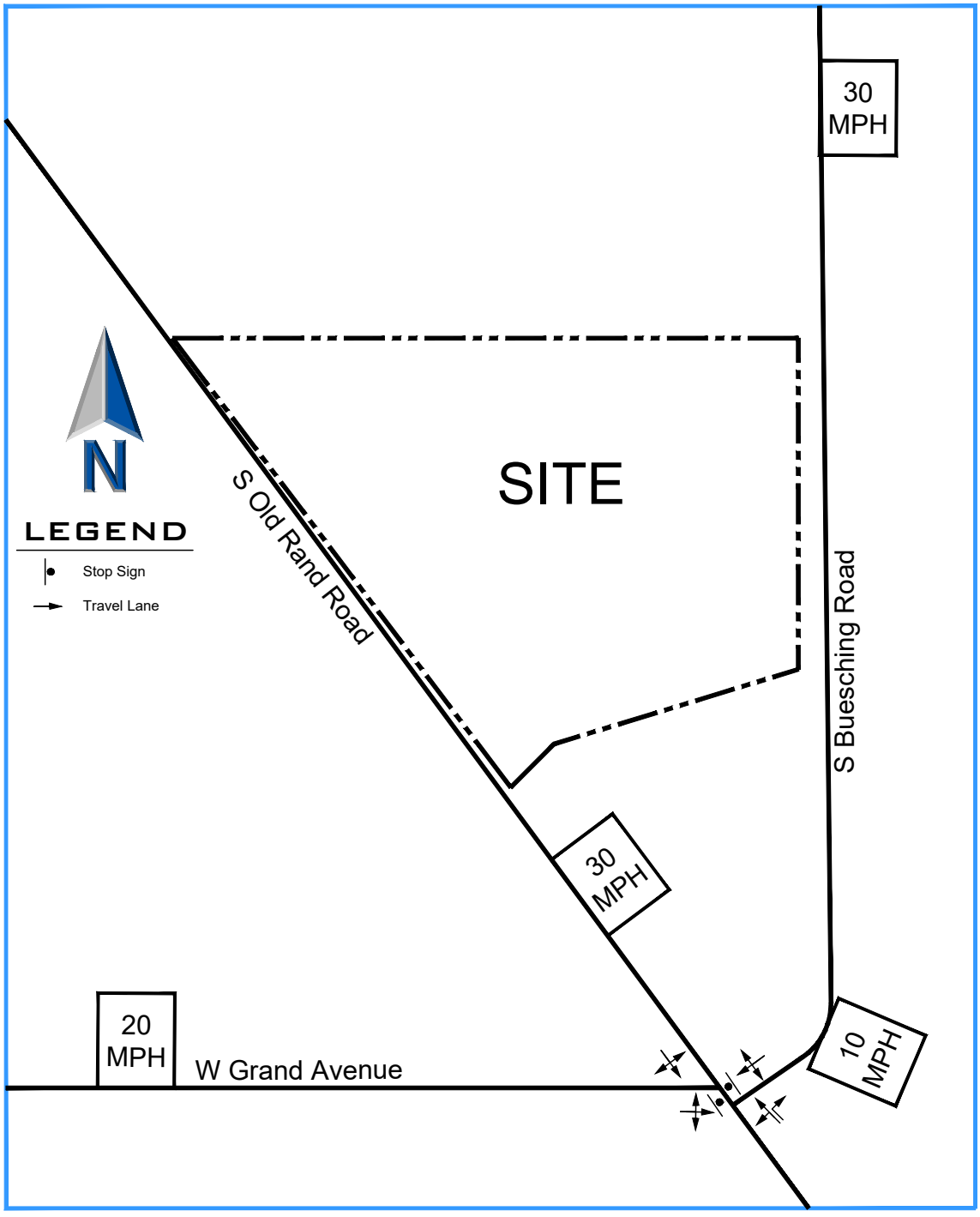
With the additional traffic generated by the proposed development, the following conclusions and recommendations were developed:

1. The street network can accommodate the additional traffic from the proposed project.
2. Development of the site with 38 residential units will generate 26 to 31 peak-hour trips during the morning and evening commuter periods.
3. All intersections within the study area work at acceptable levels of service and delay. There is a slight increase in delays from the projected traffic growth.
4. One full access point is proposed on Old Rand Road with one inbound lane and one outbound lane under stop sign control.
5. A second full access point is proposed on Buesching Road with one inbound lane and one outbound lane under stop sign control.
6. A sidewalk will be provided across the Old Rand Road frontage with a crosswalk to the existing sidewalk on the west side of the road. Pedestrian crosswalk signing should be provided.
7. Along the Buesching Road frontage, a sidewalk with a parkway is proposed across the southern two thirds of the site frontage. North of the driveway, the existing carriage walk will be used.
8. Twelve of the single-family homes will have four parking spaces with a two-vehicle garage and two driveway spaces. Six single-family homes will have two-car garages. Ten on-street parallel parking spaces will be available for visitors.
9. The single-family attached homes will have a two-vehicle garage and two driveway spaces with twelve off-street visitor parking spaces.

ERIKSSON ENGINEERING ASSOCIATES, LTD.

Site Location & Area Roadways

Figure 1



ERIKSSON ENGINEERING ASSOCIATES, LTD.

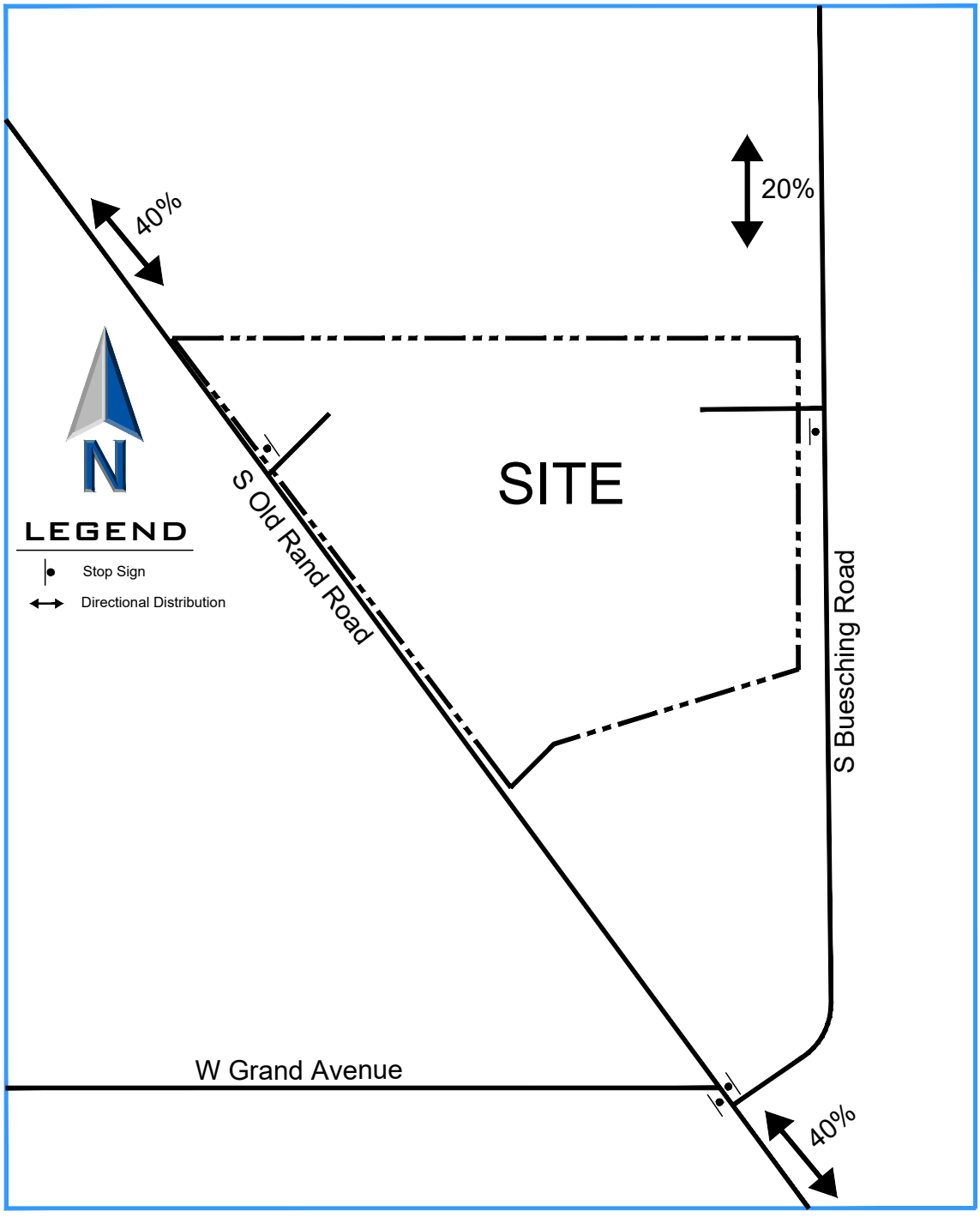
Existing Roadway Geometrics

Figure 2

ERIKSSON ENGINEERING ASSOCIATES, LTD.

2024 Existing Traffic Volumes

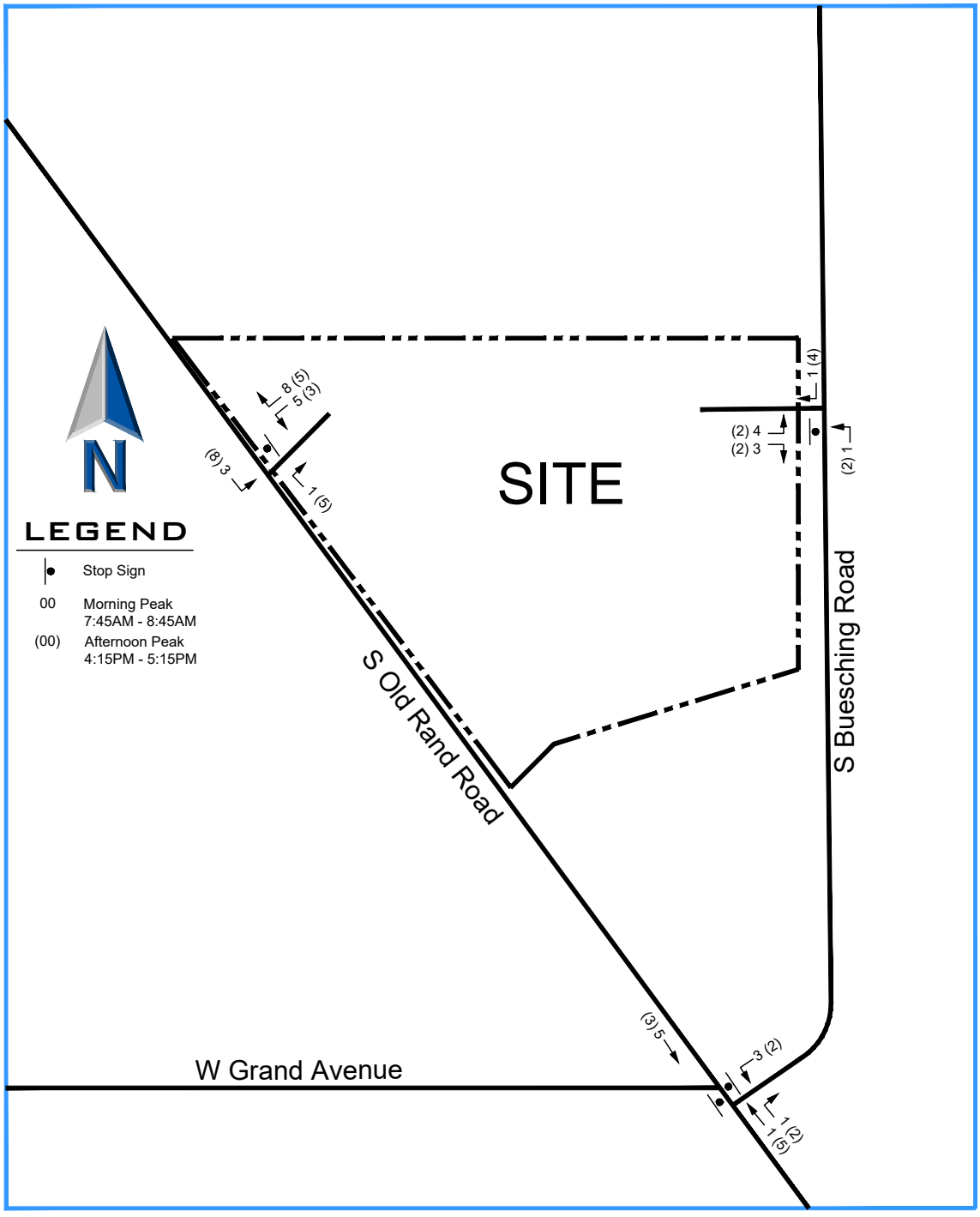
Figure 3



ERIKSSON ENGINEERING ASSOCIATES, LTD.

Directional Distribution

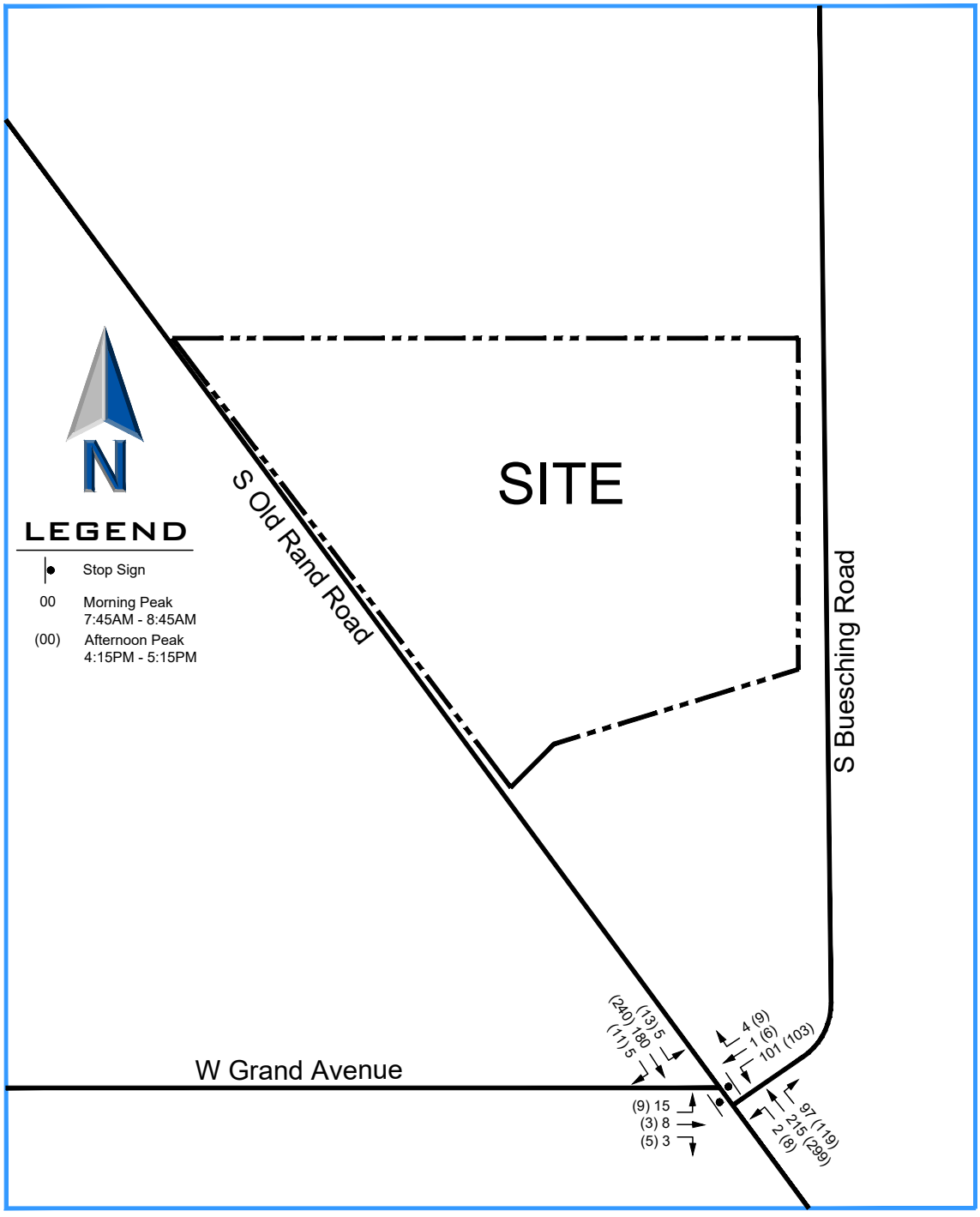
Figure 4



ERIKSSON ENGINEERING ASSOCIATES, LTD.

Site Traffic Assignment

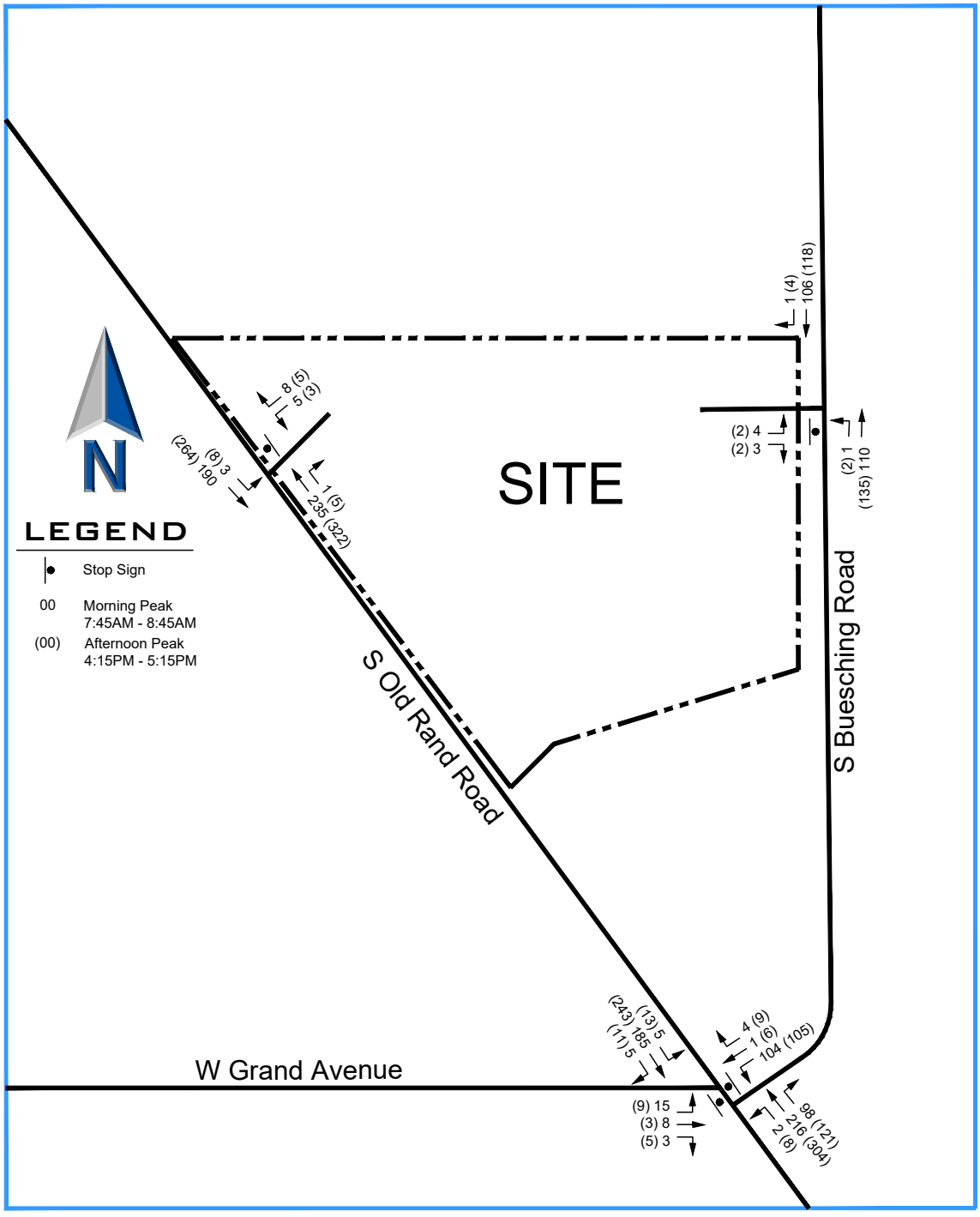
Figure 5



ERIKSSON ENGINEERING ASSOCIATES, LTD.

Year 2030 Volumes Without Site

Figure 6



ERIKSSON ENGINEERING ASSOCIATES, LTD.

Year 2030 Total Traffic Volumes

Figure 7

ERIKSSON ENGINEERING ASSOCIATES, LTD.

Appendix

- **Existing 2024 Traffic Counts**
- **CMAP Projection Letter**
- **ITE Trip Generation Calculations**
- **Intersection Capacity Analyses**
  - **2024 Existing Conditions**
  - **2030 Total Traffic Conditions**

Illinois | Wisconsin | Indiana www.eea-ltd.com

145 Commerce Drive, Suite A, Grayslake, IL 60030 | 847.223.4804

ERIKSSON ENGINEERING ASSOCIATES, LTD.

Old Rand Road at Grand Avenue/Buesching Road

Lake Zurich, Illinois															
	Old Rand Road Southbound			Buesching Road Westbound			Old Rand Road Northbound			Grand Avenue Eastbound			15 Minute Totals	60 Minute Totals	Peak Hour Factor
Begin Time	Right Turn	Through	Left Turn	Right Turn	Through	Left Turn	Right Turn	Through	Left Turn	Right Turn	Through	Left Turn			
	Tuesday April 16, 2024														
7:00 AM	1	35	0	0	0	28	25	33	0	1	2	1	126	552	0.86
7:15 AM	0	39	2	1	2	34	33	26	1	2	1	2	143	594	0.88
7:30 AM	2	29	0	0	0	30	14	40	0	3	1	4	123	619	0.92
7:45 AM	1	44	3	0	1	22	21	55	1	1	4	7	160	**627**	**0.93**
8:00 AM	2	43	1	0	0	25	22	67	0	2	2	4	168	581	0.86
8:15 AM	0	46	0	1	0	26	34	56	1	0	1	3	168		
8:30 AM	2	45	0	2	0	27	19	34	0	0	1	1	131		
8:45 AM	2	28	2	0	1	17	24	30	2	2	2	4	114		
Total	10	309	8	4	4	209	192	341	5	11	14	26			
7:45-8:45 AM	**5**	**178**	**4**	**3**	**1**	**100**	**96**	**212**	**2**	**3**	**8**	**15**	**627**		
	Tuesday April 16, 2024														
4:00 PM	6	55	3	0	1	34	33	46	3	2	2	3	188	792	0.97
4:15 PM	2	58	4	1	1	24	32	70	3	2	0	5	202	**815**	**0.97**
4:30 PM	1	65	4	2	2	27	21	76	2	2	0	2	204	802	0.95
4:45 PM	5	55	4	4	0	22	34	68	3	1	1	1	198	794	0.94
5:00 PM	3	59	0	1	3	29	31	82	0	0	2	1	211	793	0.94
5:15 PM	3	52	3	2	1	20	38	63	3	1	0	3	189		
5:30 PM	3	48	4	1	0	31	25	71	7	2	0	4	196		
5:45 PM	4	55	4	0	1	24	27	78	2	0	1	1	197		
Total	27	447	26	11	9	211	241	554	23	10	6	20			
4:15-5:15 PM	**11**	**237**	**12**	**8**	**6**	**102**	**118**	**296**	**8**	**5**	**3**	**9**	**815**		

Chicago Metropolitan Agency for Planning

433 West Van Buren Street, Suite 450
Chicago, IL 60607
cmap.illinois.gov | 312-454-0400

April 10, 2024

Stephen B. Corcoran, PE, PTOE
Director of Traffic Engineering
Eriksson Engineering Associates
145 Commerce Drive
Suite A
Grayslake, IL 60030

Subject: Old Rand Road - Grand Avenue / Buesching Road
IDOT

Dear Mr. Corcoran:

In response to a request made on your behalf and dated 4/10/2024, we have developed year 2050 average daily traffic (ADT) projections for the subject location.

ROAD SEGMENT	Current ADT (2019)	Year 2050 ADT
Old Rand Rd north of Buesching Road	8,900	9,450
Old Rand Rd south of Buesching Road	8,900	9,450
Buesching Road north of Old Rand Rd	2,550	2,700

Traffic projections are developed using existing ADT data provided in the request letter and the results from the December 2023 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)
s\2024_TrafficForecasts\LakeZurich\la-13-24\la-13-24.docx

TRAFFIC FORECAST RECORD

Record Number: la-13-24
Type of Report: Projection
Year Sought: 2050
Analyst: JAR
Organization Requestion Forecast: Eriksson Engineering Associates
Contact: Stephen B. Corcoran, PE, PTOE
Email or Phone: scorcoran@eea-ltd.com
Sponsor: IDOT
Date request was received: 4/10/2024
Date that response was emailed: 4/10/2024
Facility Location: Old Rand Road - Grand Avenue / Buesching Road
Municipality: Lake Zurich

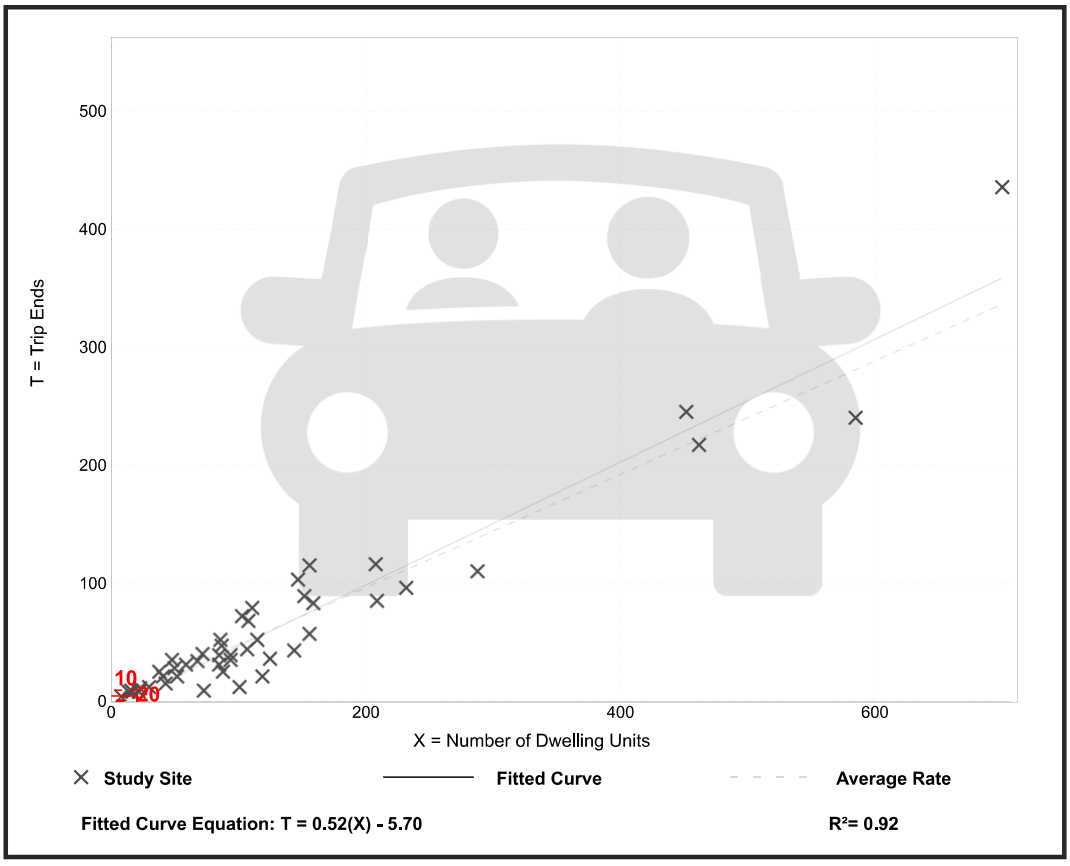
Single-Family Attached Housing
(215)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	46
Avg. Num. of Dwelling Units:	135
Directional Distribution:	25% entering, 75% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.48	0.12 - 0.74	0.14

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

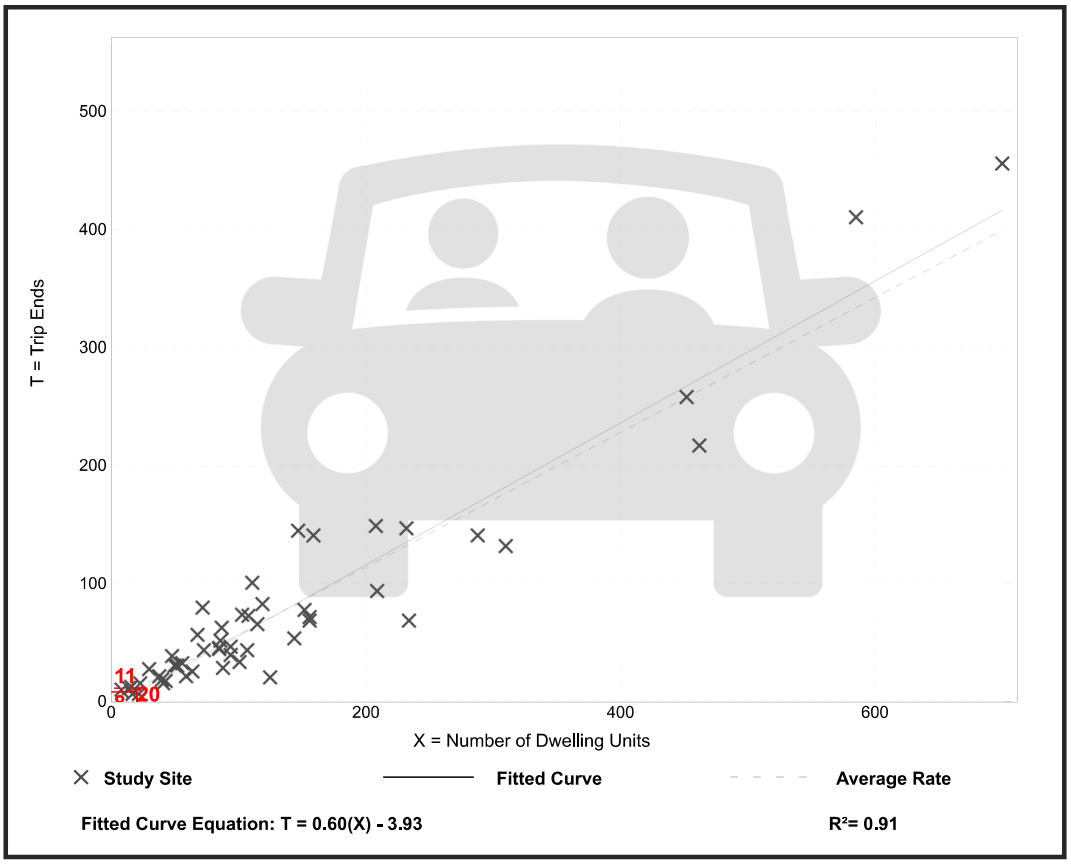
Single-Family Attached Housing
(215)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 51
Avg. Num. of Dwelling Units: 136
Directional Distribution: 59% entering, 41% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.57	0.17 - 1.25	0.18

Data Plot and Equation



Trip Gen Manual, 11th Edition • Institute of Transportation Engineers

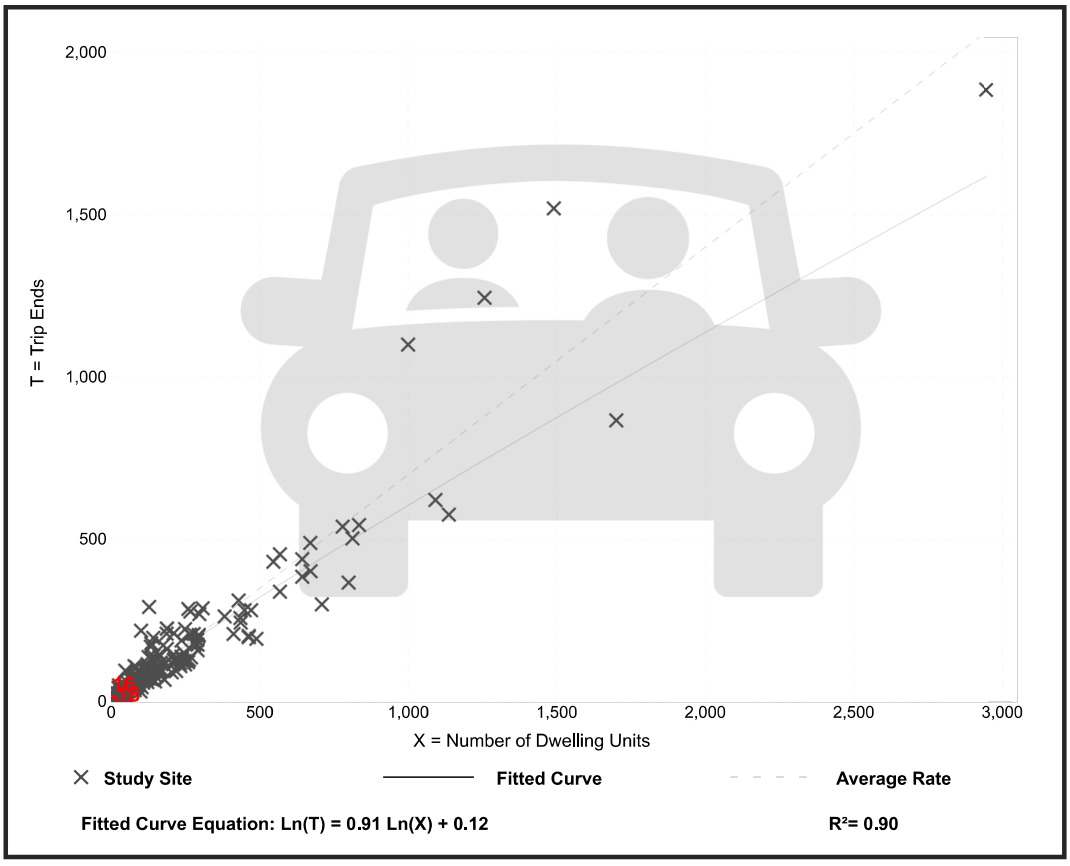
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 192
Avg. Num. of Dwelling Units: 226
Directional Distribution: 25% entering, 75% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.70	0.27 - 2.27	0.24

Data Plot and Equation



Trip Gen Manual, 11th Edition • Institute of Transportation Engineers

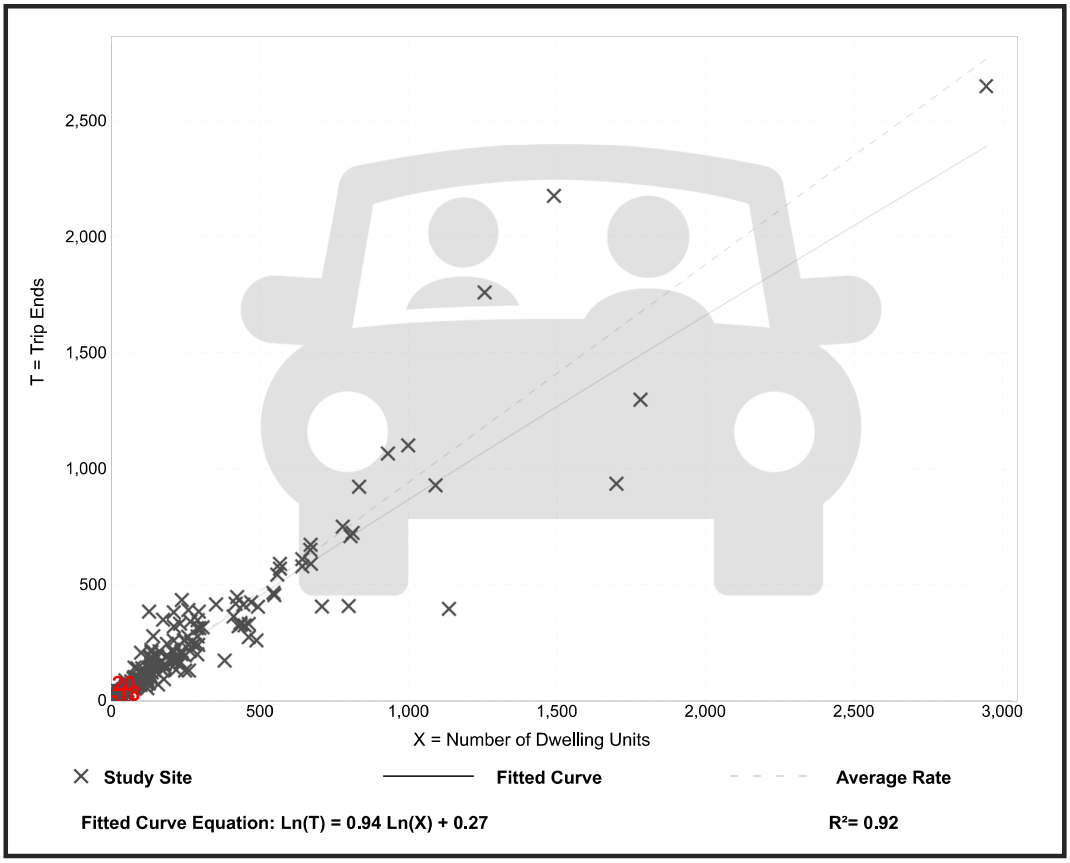
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 208
Avg. Num. of Dwelling Units: 248
Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.94	0.35 - 2.98	0.31

Data Plot and Equation



Trip Gen Manual, 11th Edition • Institute of Transportation Engineers

HCM 6th TWSC
1: Old Rand Road & Grand Avenue/Buesching Road 04/22/2024

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↰	↱		↕	
Traffic Vol, veh/h	15	8	3	100	1	3	2	212	96	4	178	5
Future Vol, veh/h	15	8	3	100	1	3	2	212	96	4	178	5
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	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	16	9	3	108	1	3	2	228	103	4	191	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	488	537	194	440	436	228	196	0	0	331	0	0
Stage 1	202	202	-	232	232	-	-	-	-	-	-	-
Stage 2	286	335	-	208	204	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	488	449	845	526	512	809	1371	-	-	1223	-	-
Stage 1	798	732	-	769	711	-	-	-	-	-	-	-
Stage 2	719	641	-	792	731	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	483	446	845	514	509	809	1371	-	-	1223	-	-
Mov Cap-2 Maneuver	483	446	-	514	509	-	-	-	-	-	-	-
Stage 1	796	729	-	767	710	-	-	-	-	-	-	-
Stage 2	714	640	-	777	728	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.7	13.8	0	0.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1371	-	-	495	519	1223	-	-
HCM Lane V/C Ratio	0.002	-	-	0.056	0.215	0.004	-	-
HCM Control Delay (s)	7.6	0	-	12.7	13.8	8	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.8	0	-	-

HCM 6th TWSC
1: Old Rand Road & Grand Avenue/Buesching Road 04/22/2024

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↰	↱		↕	
Traffic Vol, veh/h	9	3	5	102	6	8	8	296	118	12	237	11
Future Vol, veh/h	9	3	5	102	6	8	8	296	118	12	237	11
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	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	9	3	5	105	6	8	8	305	122	12	244	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	663	717	250	599	600	305	255	0	0	427	0	0
Stage 1	274	274	-	321	321	-	-	-	-	-	-	-
Stage 2	389	443	-	278	279	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	373	354	786	412	413	732	1304	-	-	1127	-	-
Stage 1	730	681	-	689	650	-	-	-	-	-	-	-
Stage 2	633	574	-	726	678	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	359	347	786	400	405	732	1304	-	-	1127	-	-
Mov Cap-2 Maneuver	359	347	-	400	405	-	-	-	-	-	-	-
Stage 1	724	673	-	683	645	-	-	-	-	-	-	-
Stage 2	615	569	-	709	670	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.9	17.2	0.1	0.4
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1304	-	-	424	413	1127	-	-
HCM Lane V/C Ratio	0.006	-	-	0.041	0.29	0.011	-	-
HCM Control Delay (s)	7.8	0	-	13.9	17.2	8.2	0	-
HCM Lane LOS	A	A	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	1.2	0	-	-

HCM 6th TWSC
1: Old Rand Road & Grand Avenue/Buesching Road 04/23/2024

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↰	↱		↕	
Traffic Vol, veh/h	15	8	3	104	1	4	2	216	98	5	185	5
Future Vol, veh/h	15	8	3	104	1	4	2	216	98	5	185	5
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	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	16	9	3	112	1	4	2	232	105	5	199	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	503	553	202	454	450	232	204	0	0	337	0	0
Stage 1	212	212	-	236	236	-	-	-	-	-	-	-
Stage 2	291	341	-	218	214	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	477	440	836	515	503	805	1362	-	-	1217	-	-
Stage 1	788	725	-	765	708	-	-	-	-	-	-	-
Stage 2	715	637	-	782	724	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	471	437	836	503	499	805	1362	-	-	1217	-	-
Mov Cap-2 Maneuver	471	437	-	503	499	-	-	-	-	-	-	-
Stage 1	786	721	-	763	707	-	-	-	-	-	-	-
Stage 2	709	636	-	766	720	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.9	14.2	0	0.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1362	-	-	484	510	1217	-	-
HCM Lane V/C Ratio	0.002	-	-	0.058	0.23	0.004	-	-
HCM Control Delay (s)	7.6	0	-	12.9	14.2	8	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.9	0	-	-

HCM 6th TWSC
6: Old Rand Road & Site Access 04/23/2024

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	8	234	1	3	190
Future Vol, veh/h	5	8	234	1	3	190
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	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	5	9	252	1	3	204

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	463	253	0	0	253	0
Stage 1	253	-	-	-	-	-
Stage 2	210	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	555	783	-	-	1306	-
Stage 1	787	-	-	-	-	-
Stage 2	823	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	553	783	-	-	1306	-
Mov Cap-2 Maneuver	553	-	-	-	-	-
Stage 1	787	-	-	-	-	-
Stage 2	821	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.4	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	675	1306	-
HCM Lane V/C Ratio	-	-	0.021	0.002	-
HCM Control Delay (s)	-	-	10.4	7.8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

HCM 6th TWSC
9: Buesching Rd & Site Access 04/23/2024

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	3	1	110	106	1
Future Vol, veh/h	4	3	1	110	106	1
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	-	-	-	-	-
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	4	3	1	120	115	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	238	116	116	0	-	0
Stage 1	116	-	-	-	-	-
Stage 2	122	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	750	936	1473	-	-	-
Stage 1	909	-	-	-	-	-
Stage 2	903	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	749	936	1473	-	-	-
Mov Cap-2 Maneuver	749	-	-	-	-	-
Stage 1	908	-	-	-	-	-
Stage 2	903	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.4	0.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1473	-	819	-	-
HCM Lane V/C Ratio	0.001	-	0.009	-	-
HCM Control Delay (s)	7.4	0	9.4	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

HCM 6th TWSC
1: Old Rand Road & Grand Avenue/Buesching Road 04/23/2024

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↰	↱		↕	
Traffic Vol, veh/h	9	3	5	105	6	9	8	304	121	13	243	11
Future Vol, veh/h	9	3	5	105	6	9	8	304	121	13	243	11
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	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	9	3	5	108	6	9	8	313	125	13	251	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	682	737	257	616	617	313	262	0	0	438	0	0
Stage 1	283	283	-	329	329	-	-	-	-	-	-	-
Stage 2	399	454	-	287	288	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	363	345	779	401	404	725	1296	-	-	1117	-	-
Stage 1	722	675	-	682	645	-	-	-	-	-	-	-
Stage 2	625	568	-	718	672	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	348	337	779	389	395	725	1296	-	-	1117	-	-
Mov Cap-2 Maneuver	348	337	-	389	395	-	-	-	-	-	-	-
Stage 1	716	666	-	677	640	-	-	-	-	-	-	-
Stage 2	606	563	-	700	663	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.1	17.8	0.1	0.4
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1296	-	-	413	403	1117	-	-
HCM Lane V/C Ratio	0.006	-	-	0.042	0.307	0.012	-	-
HCM Control Delay (s)	7.8	0	-	14.1	17.8	8.3	0	-
HCM Lane LOS	A	A	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	1.3	0	-	-

HCM 6th TWSC
6: Old Rand Road & Site Access 04/23/2024

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	5	317	5	8	264
Future Vol, veh/h	3	5	317	5	8	264
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	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	2	5	327	5	8	272

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	618	330	0	0	332	0
Stage 1	330	-	-	-	-	-
Stage 2	288	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	451	709	-	-	1222	-
Stage 1	726	-	-	-	-	-
Stage 2	759	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	447	709	-	-	1222	-
Mov Cap-2 Maneuver	447	-	-	-	-	-
Stage 1	726	-	-	-	-	-
Stage 2	753	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.8	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	625	1222	-
HCM Lane V/C Ratio	-	-	0.011	0.007	-
HCM Control Delay (s)	-	-	10.8	8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

HCM 6th TWSC
9: Buesching Rd & Site Access 04/23/2024

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	2	2	135	118	4
Future Vol, veh/h	2	2	2	135	118	4
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	2	2	2	139	122	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	267	124	126	0	-	0
Stage 1	124	-	-	-	-	-
Stage 2	143	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	720	924	1454	-	-	-
Stage 1	899	-	-	-	-	-
Stage 2	882	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	719	924	1454	-	-	-
Mov Cap-2 Maneuver	719	-	-	-	-	-
Stage 1	898	-	-	-	-	-
Stage 2	882	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.5	0.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1454	-	809	-	-
HCM Lane V/C Ratio	0.001	-	0.005	-	-
HCM Control Delay (s)	7.5	0	9.5	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Urban Forest Management, Inc.

June 24, 2022

Mr. Dennis Kulak, NCARB
KLLM, Inc.
2357 N. Damen Ave.
Chicago, IL 60647

RE: Tree Inventory and Report
670 Old Rand Road
Lake Zurich, IL

Dear Mr. Kulak,

The following is the tree inventory listing and report for the property located at 670 Old Rand Road in Lake Zurich, IL.

All trees measuring 4" d.b.h. (diameter at breast height) and larger were tagged and included in the inventory.

A total of eight hundred and seventy eight (878) trees were included within this inventory, using tag #'s 2001 – 2500 and 4001 - 4378. There were seven (7) trees considered Heritage trees by Lake Zurich ordinance, fifty three (53) trees considered Landmark trees, four hundred thirty nine, (439) trees considered Desireable species, three hundred twenty one (321) trees considered Undesireable species and fifty eight eight (58) trees that were not classified within the Lake Zurich ordinance. The Species Quality Rating is found in the far right column of the tree inventory listing.

The following inventory listing and report will describe each tree in detail by tag number and the site in general.

Sincerely,
URBAN FOREST MANAGEMENT, INC.

Todd R. Sinn
Senior Forester

960 Route 22, Suite 207 Fox River Grove, Illinois 60021 847-516-9708 FAX 847-516-9716

TREE INVENTORY & REPORT
670 OLD RAND ROAD
LAKE ZURICH, IL

June 24, 2022

Prepared by:

URBAN FOREST MANAGEMENT, INC.
960 Route 22, Suite 207
Fox River Grove, IL 60021
(847) 516-9708

CONTENTS

Item		Page No.
I.	Background and Methodology	1
II.	General Comments	2
III.	Tree Inventory	

I. Background and Methodology

A tree inventory was conducted on the property located at 670 Old Rand Road in Lake Zurich, IL. All trees measuring 4" d.b.h. (diameter at breast height—4.5' above the ground) and larger were tagged and included in this inventory. Buckthorn was not tagged or included in the inventory, nor were dead trees measuring less than 10" in diameter. Tags were nailed on the north face of the tree at eye level.

Trees were evaluated for species, size, condition, form and any observed problems were also noted. The following is a key for interpreting the condition and form data found on the tree inventory listing:

Condition Rating - The condition of the trees shall be based on a six (6) point scale with one (1) being the best and six (6) being the worst.

Rating	Description	General Criteria
1	Excellent	The tree is typical of the species, has less than 10% deadwood in the crown that is attributable to normal causes, has no other observed problems, and required no remedial action.
2	Good to Fair	The tree is typical of the species and/or has less than 20% deadwood in the crown, only one or two minor problems that are easily corrected with normal care.
3	Fair (average)	The tree is typical of the species and/or has less than 30% deadwood in the crown, one or two minor problems that are not eminently lethal to the tree, and no significant decay or structural problems, but the tree must have remedial care above normal care in order to minimize the impact of future stress and to insure continued health.
4	Fair to Poor	The tree is not typical of the species and/or has significant problems such as 30-50% deadwood in the crown, serious decay or structural defect, insects, disease or other problems that can be eminently lethal to the tree or create a hazardous tree if not corrected in a short period of time of if the tree is subjected to additional stress.
5	Poor	The tree is not typical of the species and/or has over 50% deadwood in the crown, major decay or structural problems, is hazardous or is severely involved with insects, disease, or other problems that even if aggressively corrected would not result in the long term survival of the tree.
6	Dead	Less than 10% of the tree shows signs of life.

Form Rating – Subjective evaluation comparing tree with specimen tree of the same species. Form classes are the same as those listed above under condition, with the exception of number 6, which translates to 'very poor form'. Typical form defects might include multiple leaders, no leader, lean, one sided crown, trunk crook, etc.

II. General Comments

A total of eight hundred and seventy eight (878) trees were inventoried using tree numbers 2001 – 2500 and 4001 - 4378.

Species inventoried included boxelder maple, Norway maple, silver maple, green ash, black walnut, crabapple, white mulberry, black cherry, black locust, American elm and other species in smaller quantities.

The most common species inventoried was silver maple with 44% of all species inventoried, followed by boxelder maple with 16% and black cherry with 11%. Buckthorn is the primary understory species with honeysuckle, ash, Virginia creeper, Chinese privet, viburnum, silver maple and black cherry found as additional understory species.

There are seven (7) trees (.7%) considered Heritage trees by Lake Zurich ordinance, fifty three (53) trees (6%) considered Landmark trees, four hundred thirty nine (439) trees (50%) considered Desirable, three hundred twenty one (321) trees (36%) are Undesirable trees and fifty eight (58) trees (6%) not included in the Lake Zurich categories.

The property is primarily wooded with lower quality species of trees throughout the site. There are some planted trees as well as some maintained turf adjacent to the residence. A single family residence, barn and livestock corrals are located in the southcentral part of the site. A pond and creek are located in the north quarter of the site. Piles of fallen trees and brush are located within the fenced livestock corrals.

Most of the inventoried trees have not been maintained in the past and they contain varying degrees of deadwood, decay or structural issues. Approximately 33% of the inventoried trees were in fair/poor or worse condition at the time of the inventory. Thirty one (31) of the trees were dead at the time of the inventory.

The boxelder maple, black locust, silver maple, and mulberry are fast growing, weak wooded and relatively short lived species.

Most of the ash trees on this site are dead as a result of emerald ash borer.

Many of the trees within the horse corrals have bark damage from the horses gnawing on the bark and the brush/trees being pushed into piles.

Tree Inventory Listing
670 Old Rand Road
Lake Zurich, Illinois
Prepared by Urban Forest Management, Inc. 6/24/2022

Tag No.	Location	Botanical Name	Common Name	Size	Cond.	Form	Problems	Insect/Disease	Comments	Co-Leaders at DBH	Species Quality Rating
2001	Southwest property corner	Juniperus virginiana	Eastern Red-cedar	10	4	5	damaged leader, one-sided, pruned for overhead wires		Overhead wires.		DESIRABLE
2002	Southwest property corner	Juniperus virginiana	Eastern Red-cedar	8	3	4	one-sided, damaged leader, pruned for overhead wires, multiple leaders		Overhead wires.		DESIRABLE
2003	Southwest property corner	Juniperus virginiana	Eastern Red-cedar	11	3	4	weak crotch, trunk scar, multiple leaders				DESIRABLE
2004	Southwest property corner	Cornus florida	Flowering Dogwood	3	3	4	sweep, minor deadwood, suckering, metal in trunk			Forked at base with 3", 3", 3", 2", 1", 1" co-leaders.	LANDMARK
2005	South property line	Acer negundo	Boxelder Maple	8	4	4	over-topped, slight sweep, excessive lean, minor deadwood				UNDESIRABLE
2006	South property line	Acer platanoides	Norway Maple	25	3	4	one-sided, multiple leaders, minor deadwood				DESIRABLE
2007	South property line	Acer platanoides	Norway Maple	21	4	5	one-sided, weak crotch, decay, broken limbs, over-topped		2 main co-leaders broken off at 13'.		DESIRABLE
2008	South property line	Acer platanoides	Norway Maple	11	3	4	minor deadwood, twist in trunk				DESIRABLE
2009	Southwest house corner	Picea glauca	White Spruce	16	6	5			Dead.		LANDMARK
2010	Southwest house corner	Juniperus virginiana	Eastern Red-cedar	11	3	4	damaged leader, twist in trunk, minor deadwood				DESIRABLE
2011	South property line	Morus alba	White Mulberry (Common Mulberry)	29	4	3	basal decay, weak crotch, multiple leaders, minor deadwood, suckering, hollow		Main crotch splitting		UNDESIRABLE
2012	Southeast of house	Malus spp.	Crabapple	10	5	4	top broken out, damaged leader, suckering, decay, hollow, basal decay				DESIRABLE
2013	Southeast of house	Picea abies	Norway Spruce	18	3	4	over-topped, one-sided				LANDMARK
2014	Southeast of house	Acer platanoides	Norway Maple	14	3	3	weak crotch, double leader, minor deadwood			Forked at 4' with a 13" co-leader.	DESIRABLE
2015	South property line	Acer saccharinum	Silver Maple	15	3	4	one-sided, double leader, damaged leader				DESIRABLE
2016	South property line	Morus alba	White Mulberry (Common Mulberry)	15	4	4	slight sweep, suckering, sweep, sparse foliage				UNDESIRABLE
2017	South property line	Acer negundo	Boxelder Maple	11	4	4	slight lean, one-sided, suckering, minor deadwood				UNDESIRABLE
2018	South property line	Acer negundo	Boxelder Maple	14	3	4	one-sided, multiple leaders, slight lean				UNDESIRABLE
2019	South property line	Ulmus americana	American Elm	8	3	4	basal scar, dead tree caught in crown, suckering, double leader		Uprooted 12" green ash caught in crown.		N/A
2020	South property line	Acer negundo	Boxelder Maple	4	4	4	minor deadwood, over-topped, suckering				UNDESIRABLE
2021	South property line	Acer negundo	Boxelder Maple	5	4	4	minor deadwood, suckering, over-topped				UNDESIRABLE
2022	South property line	Acer negundo	Boxelder Maple	8	3	4	slight lean, twist in trunk, thin crown, suckering				UNDESIRABLE
2023	South property line	Acer negundo	Boxelder Maple	8	3	4	over-topped, double leader, slight sweep, twist in trunk				UNDESIRABLE
2024	South property line	Acer negundo	Boxelder Maple	10	3	4	slight sweep, multiple leaders, suckering				UNDESIRABLE
2025	South property line	Acer negundo	Boxelder Maple	9	3	4	one-sided, suckering, minor deadwood, over-topped				UNDESIRABLE
2026	South property line	Acer negundo	Boxelder Maple	6	4	4	excessive lean, one-sided, suckering				UNDESIRABLE
2027	South property line	Acer negundo	Boxelder Maple	19	5	4	heavy deadwood, one-sided, multiple leaders, basal decay, basal scar				UNDESIRABLE
2028	South property line	Acer negundo	Boxelder Maple	14	5	5	slight sweep, damaged leader, suckering				UNDESIRABLE
2029	South property line	Acer negundo	Boxelder Maple	8	3	4	slight lean, suckering				UNDESIRABLE
2030	South property line	Acer negundo	Boxelder Maple	12	4	5	excessive lean, sweep, trunk scar, decay				UNDESIRABLE
2031	South property line	Ulmus americana	American Elm	11	3	4	minor deadwood				N/A
2032	South property line	Acer negundo	Boxelder Maple	7	4	5	damaged leader, slight sweep, suckering				UNDESIRABLE
2033	South property line	Acer negundo	Boxelder Maple	9	5	5	damaged leader, slight lean, sparse foliage, over-topped				UNDESIRABLE
2034	South property line	Juglans nigra	Black Walnut	16	2	3	twist in trunk				LANDMARK
2035	South property line	Juglans nigra	Black Walnut	17	2	3	slight lean, minor deadwood, multiple leaders, minor deadwood				LANDMARK
2036	South property line	Maclura pomifera	Osage-orange (Hedge-apple)	4	3	4	sweep, minor deadwood, weak crotch, suckering			Forked at base with a 2" co-leader.	UNDESIRABLE
2037	South property line	Juglans nigra	Black Walnut	7	3	4	basal scar, over-topped, suckering, double leader				LANDMARK
2038	South property line	Juglans nigra	Black Walnut	14	3	3	one-sided, double leader, vine infested				LANDMARK
2039	Southeast property corner	Acer saccharinum	Silver Maple	9	5	4	thin crown, minor deadwood, sparse foliage, suckering, overhead wires			Forked at base with 9"(dead), 9"(dead), 10"(dead), 4" co-leaders	DESIRABLE
2040	East property line	Malus spp.	Crabapple	4	4	3	minor deadwood, damaged leader, suckering, overhead wires				DESIRABLE

Tree Inventory Listing
670 Old Rand Road
Lake Zurich, Illinois
Prepared by Urban Forest Management, Inc. 6/24/2022

Tag No.	Location	Botanical Name	Common Name	Size	Cond.	Form	Problems	Insect/Disease	Comments	Co-Leaders at DBH	Species Quality Rating
2041	East property line	Malus spp.	Crabapple	4	3	3	over-topped, suckering, overhead wires				DESIRABLE
2042	East of homestead	Prunus serotina	Black Cherry	9	4	3	dieback, thin crown, double leader, minor deadwood				UNDESIRABLE
2043	East of homestead	Ulmus americana	American Elm	11	4	3	dieback, minor deadwood, multiple leaders				N/A
2044	East of homestead	Juglans nigra	Black Walnut	5	2	4	over-topped, twist in trunk, minor deadwood				LANDMARK
2045	East of homestead	Prunus serotina	Black Cherry	11	3	4	one-sided, thin crown, slight sweep, minor deadwood				UNDESIRABLE
2046	East of homestead	Catalpa speciosa	Northern Catalpa	7	3	4	twist in trunk, thin crown, minor deadwood				LANDMARK
2047	East of homestead	Malus spp.	Crabapple	5	4	4	over-topped, damaged leader			Forked at base with a 5" co-leader.	DESIRABLE
2048	East of homestead	Acer saccharinum	Silver Maple	9	5	4	one-sided, double leader, sparse foliage, dieback, minor deadwood			Forked at 2' with a 5" (dead) co-leader.	DESIRABLE
2049	East of homestead	Ulmus americana	American Elm	5	3	4	over-topped, minor deadwood, double leader				N/A
2050	East of homestead	Acer saccharinum	Silver Maple	15	4	3	weak crotch, multiple leaders, thin crown			Forked at 3' with an 11" co-leader.	DESIRABLE
2051	East of homestead	Acer saccharinum	Silver Maple	7	2	4	over-topped, one-sided, weak crotch, slight sweep			Forked at 1' with a 6" co-leader.	DESIRABLE
2052	East of homestead	Acer saccharinum	Silver Maple	6	3	4	over-topped, slight sweep, minor deadwood, basal scar				DESIRABLE
2053	East of homestead	Acer saccharinum	Silver Maple	9	2	4	over-topped, slight sweep, one-sided				DESIRABLE
2054	East of homestead	Acer saccharinum	Silver Maple	8	2	4	over-topped, slight sweep, double leader				DESIRABLE
2055	East of homestead	Acer saccharinum	Silver Maple	13	3	4	over-topped, slight sweep, one-sided				DESIRABLE
2056	East of homestead	Acer saccharinum	Silver Maple	5	3	4	over-topped, twist in trunk, trunk scar, suckering, minor deadwood				DESIRABLE
2057	Homestead	Acer saccharinum	Silver Maple	5	3	4	over-topped, twist in trunk, dead tree caught in crown		Dead 10" green ash caught in crown (snapped off at base)		DESIRABLE
2058	Homestead	Ulmus americana	American Elm	8	3	4	twist in trunk, one-sided				N/A
2059	Homestead	Acer saccharinum	Silver Maple	5	3	4	over-topped, multiple leaders, slight sweep				DESIRABLE
2060	Homestead	Acer saccharinum	Silver Maple	24	3	4	over-topped, weak crotch, sweep, multiple leaders		Forked at 5'.		DESIRABLE
2061	Homestead	Acer saccharinum	Silver Maple	16	3	4	slight sweep, one-sided, suckering				DESIRABLE
2062	Homestead	Acer saccharinum	Silver Maple	30	3	4	weak crotch, slight sweep, multiple leaders, metal in trunk		Forked at 5'.		DESIRABLE
2063	Homestead	Acer saccharinum	Silver Maple	32	4	3	trunk scar, decay, multiple leaders, minor deadwood, trunk swell				DESIRABLE
2064	Homestead	Acer saccharinum	Silver Maple	29	3	4	one-sided, multiple leaders, weak crotch, minor deadwood, metal in trunk, sparse foliage		Electric service wire embedded in trunk.		DESIRABLE
2065	Homestead	Acer saccharinum	Silver Maple	32	3	3	weak crotch, multiple leaders				DESIRABLE
2066	Homestead	Acer saccharinum	Silver Maple	23	3	4	over-topped, one-sided, multiple leaders, broken limbs, metal in trunk		Electric service wire embedded in trunk.		DESIRABLE
2067	Homestead	Quercus rubra	Northern Red Oak	28	6	4		hypoxylon canker	Dead.		HERITAGE
2068	Homestead	Picea pungens	Colorado Blue Spruce	13	4	4	lower branches shaded out, minor deadwood, sparse foliage				LANDMARK
2069	Homestead	Picea pungens	Colorado Blue Spruce	15	4	4	lower branches shaded out, minor deadwood, sparse foliage				LANDMARK
2070	Homestead	Picea pungens	Colorado Blue Spruce	11	6	4			Dead.		LANDMARK
2071	Homestead	Carya ovata	Shagbark Hickory	14	3	3	minor deadwood, weak crotch, multiple leaders				HERITAGE
2072	Homestead	Picea pungens	Colorado Blue Spruce	9	6	3			Dead.		LANDMARK
2073	Homestead	Picea pungens	Colorado Blue Spruce	15	6	4			Dead.		LANDMARK
2074	Homestead	Pseudotsuga menziesii	Douglas-fir	17	3	4	one-sided, lower branches shaded out, minor deadwood, vine infested				LANDMARK
2075	Homestead	Malus spp.	Crabapple	10	4	4	decay, minor deadwood, suckering, broken limbs				DESIRABLE
2076	Homestead	Acer platanoides	Norway Maple	34	3	3	weak crotch, multiple leaders, broken limbs, minor deadwood, trunk scar				DESIRABLE
2077	Homestead	Fraxinus pennsylvanica	Green Ash	13	6	5	vine infested		Dead. Overhead wires.		N/A
2078	Homestead	Acer platanoides	Norway Maple	39	3	3	weak crotch, multiple leaders, heavy deadwood, surface roots, lawnmower damage				DESIRABLE
2079	Homestead	Acer platanoides	Norway Maple	26	3	3	weak crotch, multiple leaders, minor deadwood				DESIRABLE

Tree Inventory Listing
670 Old Rand Road
Lake Zurich, Illinois
Prepared by Urban Forest Management, Inc. 6/24/2022

Tag No.	Location	Botanical Name	Common Name	Size	Cond.	Form	Problems	Insect/Disease	Comments	Co-Leaders at DBH	Species Quality Rating
2080	Homestead	Salix nigra	Black Willow	37	5	4	heavy deadwood, suckering, sparse foliage, minor deadwood, surface roots, lawnmower damage				DESIRABLE
2081	Homestead	Acer platanoides	Norway Maple	24	4	3	weak crotch, multiple leaders, trunk scar				DESIRABLE
2082	East of homestead	Acer saccharinum	Silver Maple	12	3	4	one-sided, thin crown, multiple leaders				DESIRABLE
2083	East of homestead	Acer saccharinum	Silver Maple	8	3	4	slight sweep, thin crown, over-topped				DESIRABLE
2084	East of homestead	Acer saccharinum	Silver Maple	16	3	4	double leader, slight sweep, thin crown				DESIRABLE
2085	East of homestead	Fraxinus pennsylvanica	Green Ash	11	6	5	top broken off		Snag.		N/A
2086	East of homestead	Acer saccharinum	Silver Maple	11	3	4	slight sweep, one-sided, thin crown				DESIRABLE
2087	East of homestead	Acer saccharinum	Silver Maple	15	3	4	slight sweep, one-sided				DESIRABLE
2088	East of homestead	Acer saccharinum	Silver Maple	18	3	4	one-sided, multiple leaders				DESIRABLE
2089	East of homestead	Ulmus americana	American Elm	8	3	4	over-topped, one-sided, suckering				N/A
2090	East of homestead	Acer saccharinum	Silver Maple	12	3	4	slight sweep, minor deadwood, basal swell				DESIRABLE
2091	East of homestead	Acer saccharinum	Silver Maple	14	3	4	over-topped, slight sweep, one-sided				DESIRABLE
2092	East of homestead	Acer saccharinum	Silver Maple	7	3	4	over-topped, twist in trunk, thin crown				DESIRABLE
2093	East of homestead	Acer saccharinum	Silver Maple	8	3	4	one-sided, thin crown				DESIRABLE
2094	East of homestead	Acer saccharinum	Silver Maple	8	3	4	over-topped, slight sweep, double leader, dead tree caught in crown				DESIRABLE
2095	East of homestead	Acer saccharinum	Silver Maple	6	3	4	over-topped, slight sweep, thin crown				DESIRABLE
2096	East of homestead	Acer saccharinum	Silver Maple	7	3	4	thin crown, one-sided, slight sweep, weak crotch			Forked at 2' with a 5" co-leader.	DESIRABLE
2097	East of homestead	Acer saccharinum	Silver Maple	8	4	4	minor deadwood, double leader, slight sweep				DESIRABLE
2098	East of homestead	Acer saccharinum	Silver Maple	6	3	4	one-sided, thin crown, minor deadwood			Forked at 1.5' with a 3" co-leader.	DESIRABLE
2099	East of homestead	Acer saccharinum	Silver Maple	8	3	4	over-topped, one-sided, multiple leaders, minor deadwood				DESIRABLE
2100	East of homestead	Juglans nigra	Black Walnut	11	2	3	multiple leaders, minor deadwood				LANDMARK
2101	East of homestead	Prunus serotina	Black Cherry	7	5	4	sparse foliage, minor deadwood, thin crown			Forked at 2.5' with a 5" co-leader.	UNDESIRABLE
2102	East of homestead	Juglans nigra	Black Walnut	8	2	4	over-topped, twist in trunk, one-sided				LANDMARK
2103	East of homestead	Prunus serotina	Black Cherry	9	4	4	trunk scar, decay, thin crown, sparse foliage, vine infested				UNDESIRABLE
2104	East property line	Juglans nigra	Black Walnut	6	3	4	damaged leader, multiple leaders, pruned for overhead wires		Overhead wires.		LANDMARK
2105	East property line	Malus spp.	Crabapple	4	3	4	over-topped, slight sweep, multiple leaders, pruned for overhead wires		Overhead wires.		DESIRABLE
2106	East property line	Malus spp.	Crabapple	5	3	4	over-topped, slight sweep, weak crotch, suckering		Overhead wires.	Forked at 1' with 4", 3", 3" co-leaders.	DESIRABLE
2107	East property line	Ulmus americana	American Elm	6	3	3					N/A
2108	East property line	Malus spp.	Crabapple	4	3	3	weak crotch, minor deadwood, decay			Forked at .5' with 4", 3", 3", 4" co-leaders.	DESIRABLE
2109	East property line	Ulmus pumila	Siberian Elm	4	3	4	over-topped, multiple leaders, weak crotch		Overhead wires.		UNDESIRABLE
2110	East of homestead	Malus spp.	Crabapple	4	4	4	over-topped, slight sweep, minor deadwood			Forked at .5' with a 3" co-leader.	DESIRABLE
2111	East of homestead	Acer saccharinum	Silver Maple	8	3	4	weak crotch, minor deadwood, one-sided, thin crown			Forked at base with 7", 7" co-leaders.	DESIRABLE
2112	East of homestead	Acer saccharinum	Silver Maple	7	3	4	slight sweep, one-sided, thin crown				DESIRABLE
2113	East of homestead	Acer saccharinum	Silver Maple	10	5	4	dieback, heavy deadwood, sparse foliage			Forked at 2' with a 9" co-leader.	DESIRABLE
2114	East of homestead	Acer saccharinum	Silver Maple	12	3	4	weak crotch, one-sided, slight sweep, multiple leaders			Forked at 4' with an 11" co-leader.	DESIRABLE
2115	East of homestead	Acer saccharinum	Silver Maple	9	3	4	slight sweep, one-sided, one-sided			Forked at 2.5' with an 8" co-leader.	DESIRABLE
2116	East of homestead	Prunus serotina	Black Cherry	4	4	4	slight sweep, suckering, minor deadwood, double leader				UNDESIRABLE
2117	East of homestead	Acer saccharinum	Silver Maple	5	3	4	slight sweep, thin crown, over-topped				DESIRABLE
2118	East of homestead	Acer saccharinum	Silver Maple	8	3	4	slight sweep, one-sided, thin crown				DESIRABLE

Tree Inventory Listing
670 Old Rand Road
Lake Zurich, Illinois
Prepared by Urban Forest Management, Inc. 6/24/2022

Tag No.	Location	Botanical Name	Common Name	Size	Cond.	Form	Problems	Insect/Disease	Comments	Co-Leaders at DBH	Species Quality Rating
2119	East of homestead	Acer saccharinum	Silver Maple	11	3	4	one-sided, thin crown, double leader				DESIRABLE
2120	East of homestead	Prunus serotina	Black Cherry	8	3	4	slight sweep, one-sided, thin crown, minor deadwood				UNDESIRABLE
2121	East of homestead	Acer saccharinum	Silver Maple	10	3	4	twist in trunk, thin crown, trunk scar				DESIRABLE
2122	East of homestead	Acer saccharinum	Silver Maple	12	3	4	slight lean, one-sided, multiple leaders				DESIRABLE
2123	East of homestead	Acer saccharinum	Silver Maple	9	3	4	slight lean, over-topped, one-sided, double leader, basal scar				DESIRABLE
2124	East of homestead	Acer saccharinum	Silver Maple	15	3	4	slight lean, double leader, over-topped, basal scar				DESIRABLE
2125	East of homestead	Acer saccharinum	Silver Maple	9	3	4	weak crotch, one-sided, suckering			Forked at 3.5' with an 8" co-leader.	DESIRABLE
2126	East of homestead	Acer saccharinum	Silver Maple	14	3	3	twist in trunk, thin crown				DESIRABLE
2127	East of homestead	Acer saccharinum	Silver Maple	9	3	5	over-topped, sweep, thin crown				DESIRABLE
2128	East of homestead	Acer saccharinum	Silver Maple	10	3	4	twist in trunk, one-sided, thin crown				DESIRABLE
2129	East of homestead	Acer saccharinum	Silver Maple	5	3	4	twist in trunk, one-sided, thin crown, trunk scar				DESIRABLE
2130	East of homestead	Acer saccharinum	Silver Maple	7	4	4	over-topped, slight sweep, trunk scar, dead tree caught in crown				DESIRABLE
2131	East of homestead	Acer saccharinum	Silver Maple	24	3	3	multiple leaders				DESIRABLE
2132	East of homestead	Acer saccharinum	Silver Maple	8	3	3	metal in trunk, one-sided, thin crown		Barbed wire attached to trunk.		DESIRABLE
2133	East of homestead	Acer saccharinum	Silver Maple	10	3	4	sweep, one-sided				DESIRABLE
2134	East of homestead	Acer saccharinum	Silver Maple	12	3	3	thin crown, one-sided, double leader				DESIRABLE
2135	East of homestead	Acer saccharinum	Silver Maple	8	4	4	basal decay, hollow, one-sided, thin crown				DESIRABLE
2136	East of homestead	Acer saccharinum	Silver Maple	10	3	4	slight sweep, thin crown, trunk scar, over-topped				DESIRABLE
2137	East of homestead	Acer saccharinum	Silver Maple	8	3	4	over-topped, slight sweep, thin crown, trunk scar, decay		Old co-leader rotted off at 3'.		DESIRABLE
2138	East of homestead	Acer saccharinum	Silver Maple	10	3	4	over-topped, slight sweep, multiple leaders				DESIRABLE
2139	East of homestead	Acer saccharinum	Silver Maple	8	3	4	over-topped, slight sweep, thin crown				DESIRABLE
2140	East of homestead	Acer saccharinum	Silver Maple	5	4	4	thin crown, minor deadwood, suckering, slight sweep				DESIRABLE
2141	East of homestead	Acer saccharinum	Silver Maple	9	3	4	one-sided, thin crown, slight sweep			Forked at 1.5' with a 6" co-leader.	DESIRABLE
2142	East of homestead	Acer saccharinum	Silver Maple	7	3	4	slight sweep, thin crown, multiple leaders				DESIRABLE
2143	East of homestead	Prunus serotina	Black Cherry	4	3	4	twist in trunk, minor deadwood, suckering, over-topped				UNDESIRABLE
2144	East of homestead	Acer saccharinum	Silver Maple	8	3	4	slight sweep, thin crown, decay		Old co-leader rotted off at 1'.		DESIRABLE
2145	East of homestead	Acer saccharinum	Silver Maple	8	3	4	one-sided, double leader, thin crown				DESIRABLE
2146	East of homestead	Acer saccharinum	Silver Maple	5	4	3	basal decay, thin crown, over-topped				DESIRABLE
2147	East of homestead	Acer saccharinum	Silver Maple	11	3	4	over-topped, slight sweep, multiple leaders, weak crotch, minor deadwood			Forked at 4' with a 6" co-leader.	DESIRABLE
2148	East of homestead	Acer saccharinum	Silver Maple	5	3	4	over-topped, slight lean, thin crown				DESIRABLE
2149	East of homestead	Acer saccharinum	Silver Maple	9	3	4	slight sweep, thin crown				DESIRABLE
2150	East of homestead	Acer saccharinum	Silver Maple	10	3	4	over-topped, slight sweep, trunk scar, double leader		Old co-leader rotted off at 2'.		DESIRABLE
2151	East of homestead	Acer saccharinum	Silver Maple	7	3	4	over-topped, slight sweep, double leader				DESIRABLE
2152	East of homestead	Acer saccharinum	Silver Maple	5	4	4	damaged leader, one-sided, minor deadwood, sparse foliage				DESIRABLE
2153	East of homestead	Acer saccharinum	Silver Maple	7	3	4	thin crown, slight sweep, minor deadwood		Old co-leader broken off at 2'.		DESIRABLE
2154	East of homestead	Acer saccharinum	Silver Maple	11	3	4	slight sweep, one-sided, multiple leaders				DESIRABLE
2155	East of homestead	Prunus serotina	Black Cherry	7	3	4	slight sweep, one-sided				UNDESIRABLE
2156	East of homestead	Prunus serotina	Black Cherry	7	4	4	slight sweep, over-topped, sparse foliage, minor deadwood, basal decay, girdling root				UNDESIRABLE
2157	East of homestead	Prunus serotina	Black Cherry	6	3	5	over-topped, sweep				UNDESIRABLE
2158	East of homestead	Malus spp.	Crabapple	6	3	4	over-topped, slight lean, suckering, decay, minor deadwood			Forked at base with 5", 4", 3" co-leaders.	DESIRABLE
2159	East property line	Malus spp.	Crabapple	4	4	4	trunk scar, minor deadwood, suckering	scab			DESIRABLE
2160	East property line	Acer saccharinum	Silver Maple	9	5	4	sparse foliage, minor deadwood, pruned for overhead wires		Overhead wires, stunted growth.		DESIRABLE
2161	East property line	Prunus serotina	Black Cherry	6	3	4	sweep, thin crown, sparse foliage				UNDESIRABLE
2162	East property line	Acer saccharinum	Silver Maple	4	3	4	over-topped, slight sweep, thin crown, sparse foliage				DESIRABLE
2163	East property line	Prunus serotina	Black Cherry	6	4	4	over-topped, sweep, vine infested, sparse foliage				UNDESIRABLE

Tree Inventory Listing
670 Old Rand Road
Lake Zurich, Illinois
Prepared by Urban Forest Management, Inc. 6/24/2022

Tag No.	Location	Botanical Name	Common Name	Size	Cond.	Form	Problems	Insect/Disease	Comments	Co-Leaders at DBH	Species Quality Rating
2164	East property line	Morus alba	White Mulberry (Common Mulberry)	4	4	4	over-topped, minor deadwood, slight lean				UNDESIRABLE
2165	East property line	Prunus serotina	Black Cherry	5	4	4	trunk scar, decay, slight sweep, thin crown				UNDESIRABLE
2166	East of homestead	Prunus serotina	Black Cherry	7	3	4	over-topped, slight sweep, twist in trunk, trunk scar				UNDESIRABLE
2167	East of homestead	Prunus serotina	Black Cherry	6	3	4	vine infested, thin crown, minor deadwood				UNDESIRABLE
2168	East of homestead	Prunus serotina	Black Cherry	10	4	4	excessive lean, trunk scar, broken limbs				UNDESIRABLE
2169	East of homestead	Acer saccharinum	Silver Maple	7	3	3	trunk scar, double leader, thin crown				DESIRABLE
2170	East of homestead	Acer saccharinum	Silver Maple	5	3	3	trunk scar				DESIRABLE
2171	East of homestead	Morus alba	White Mulberry (Common Mulberry)	5	3	4	over-topped, twist in trunk, minor deadwood, slight sweep			Forked at base with a 4" co-leader.	UNDESIRABLE
2172	East of homestead	Acer saccharinum	Silver Maple	13	3	3	twist in trunk, double leader, minor deadwood				DESIRABLE
2173	East of homestead	Ulmus americana	American Elm	6	3	3	over-topped, one-sided				N/A
2174	East of homestead	Acer saccharinum	Silver Maple	5	3	4	over-topped, weak crotch, double leader			Forked at 3' with a 4" co-leader.	DESIRABLE
2175	East of homestead	Morus alba	White Mulberry (Common Mulberry)	4	3	4	over-topped, twist in trunk, minor deadwood				UNDESIRABLE
2176	East of homestead	Acer saccharinum	Silver Maple	10	4	3	multiple leaders, thin crown, one-sided, trunk scar				DESIRABLE
2177	East of homestead	Acer saccharinum	Silver Maple	11	3	4	slight lean, one-sided, thin crown, weak crotch			Forked at 1.5' with an 8" co-leader.	DESIRABLE
2178	East of homestead	Acer saccharinum	Silver Maple	8	2	4	twist in trunk, one-sided, thin crown				DESIRABLE
2179	East of homestead	Acer saccharinum	Silver Maple	8	3	4	over-topped, slight sweep, minor deadwood, suckering, thin crown, weak crotch			Forked at 2' with a 7" co-leader.	DESIRABLE
2180	East of homestead	Acer saccharinum	Silver Maple	9	3	4	twist in trunk, thin crown, double leader				DESIRABLE
2181	East of homestead	Acer saccharinum	Silver Maple	12	3	4	over-topped, slight sweep, one-sided, multiple leaders				DESIRABLE
2182	East of homestead	Acer saccharinum	Silver Maple	13	3	4	slight sweep, thin crown			Forked at 3' with a 12" co-leader.	DESIRABLE
2183	East of homestead	Acer saccharinum	Silver Maple	13	3	4	slight lean, one-sided, multiple leaders, trunk scar				DESIRABLE
2184	East of homestead	Acer saccharinum	Silver Maple	7	3	4	slight lean, thin crown, suckering, trunk scar				DESIRABLE
2185	East of homestead	Acer saccharinum	Silver Maple	12	3	4	one-sided, thin crown, metal in trunk		Barbed wire embedded in trunk.		DESIRABLE
2186	East of homestead	Acer saccharinum	Silver Maple	17	3	4	over-topped, sweep, multiple leaders				DESIRABLE
2187	East of homestead	Acer saccharinum	Silver Maple	16	3	4	over-topped, one-sided, multiple leaders				DESIRABLE
2188	East of homestead	Acer saccharinum	Silver Maple	16	3	3	multiple leaders, suckering, basal scar				DESIRABLE
2189	East of homestead	Acer saccharinum	Silver Maple	12	3	3	twist in trunk, one-sided, thin crown, suckering				DESIRABLE
2190	East of homestead	Acer saccharinum	Silver Maple	9	4	3	one-sided, thin crown, suckering, twist in trunk				DESIRABLE
2191	East of homestead	Acer saccharinum	Silver Maple	13	3	4	one-sided, suckering, twist in trunk				DESIRABLE
2192	East of homestead	Acer saccharinum	Silver Maple	12	3	4	one-sided, thin crown, metal in trunk		Barbed wire embedded in trunk.		DESIRABLE
2193	East of homestead	Acer saccharinum	Silver Maple	9	3	4	twist in trunk, one-sided, thin crown, basal scar				DESIRABLE
2194	East of homestead	Acer saccharinum	Silver Maple	13	3	4	twist in trunk, one-sided, thin crown, minor deadwood				DESIRABLE
2195	East of homestead	Acer saccharinum	Silver Maple	8	3	4	over-topped, slight sweep				DESIRABLE
2196	East of homestead	Acer saccharinum	Silver Maple	14	3	4	one-sided, thin crown			Forked at 2.5' with a 10" co-leader.	DESIRABLE
2197	East of homestead	Acer saccharinum	Silver Maple	12	3	4	weak crotch, one-sided, thin crown			forked at 3.5' with a 9" co-leader.	DESIRABLE
2198	East of homestead	Acer saccharinum	Silver Maple	10	4	4	slight lean, trunk scar, damaged leader, one-sided, over-topped				DESIRABLE
2199	East of homestead	Acer saccharinum	Silver Maple	18	3	4	one-sided, multiple leaders, minor deadwood, basal scar				DESIRABLE
2200	East of homestead	Acer saccharinum	Silver Maple	12	2	4	slight lean, multiple leaders, minor deadwood				DESIRABLE
2201	East of homestead	Acer saccharinum	Silver Maple	8	3	4	over-topped, slight sweep, thin crown				DESIRABLE
2202	East of homestead	Acer saccharinum	Silver Maple	11	3	4	slight sweep, trunk scar, over-topped		Old co-leader rotted off at 2'.		DESIRABLE
2203	East of homestead	Prunus serotina	Black Cherry	4	3	4	over-topped, slight sweep				UNDESIRABLE
2204	East of homestead	Acer saccharinum	Silver Maple	5	3	4	over-topped, minor deadwood, slight sweep				DESIRABLE
2205	East of homestead	Acer saccharinum	Silver Maple	4	3	4	minor deadwood, one-sided, thin crown, sweep, over-topped				DESIRABLE
2206	East of homestead	Fraxinus pennsylvanica	Green Ash	16	6	4			Dead.		N/A
2207	East of homestead	Morus alba	White Mulberry (Common Mulberry)	5	3	3	over-topped, one-sided, minor deadwood				UNDESIRABLE
2208	East of homestead	Acer saccharinum	Silver Maple	5	3	4	twist in trunk, thin crown, slight sweep				DESIRABLE
2209	East property line	Juglans nigra	Black Walnut	20	3	4	multiple leaders, vine infested, broken limbs, suckering, pruned for side wires		Overhead wires.		LANDMARK

Tree Inventory Listing
670 Old Rand Road
Lake Zurich, Illinois
Prepared by Urban Forest Management, Inc. 6/24/2022

Tag No.	Location	Botanical Name	Common Name	Size	Cond.	Form	Problems	Insect/Disease	Comments	Co-Leaders at DBH	Species Quality Rating
2210	East property line	Acer negundo	Boxelder Maple	7	4	5	damaged leader, vine infested, pruned for overhead wires, sparse foliage		Overhead wires.		UNDESIRABLE
2211	East property line	Acer negundo	Boxelder Maple	9	5	5	dieback, heavy deadwood, girdling root				UNDESIRABLE
2212	East property line	Acer saccharinum	Silver Maple	15	4	4	broken limbs, minor deadwood, one-sided, vine infested, multiple leaders, decay				DESIRABLE
2213	East of homestead	Morus alba	White Mulberry (Common Mulberry)	16	4	4	one-sided, dieback, minor deadwood, multiple leaders				UNDESIRABLE
2214	East of homestead	Acer saccharinum	Silver Maple	13	6	4			Dead.		DESIRABLE
2215	East of homestead	Acer saccharinum	Silver Maple	9	4	4	dieback, heavy deadwood, double leader			Forked at 3.5' with an 8" co-leader.	DESIRABLE
2216	East of homestead	Prunus serotina	Black Cherry	9	4	4	dieback, slight sweep, thin crown, minor deadwood			Forked at 1' with an 8" co-leader.	UNDESIRABLE
2217	East of homestead	Prunus serotina	Black Cherry	13	6	4			Dead.		UNDESIRABLE
2218	East of homestead	Acer saccharinum	Silver Maple	5	3	4	slight sweep, one-sided, thin crown, erosion				DESIRABLE
2219	East of homestead	Acer saccharinum	Silver Maple	9	4	4	slight sweep, thin crown, heavy deadwood			Forked at 1.5' with 7"(dead), 6"(dead) co-leaders.	DESIRABLE
2220	East of homestead	Juglans nigra	Black Walnut	8	2	4	over-topped, twist in trunk, minor deadwood, one-sided				LANDMARK
2221	East of homestead	Acer saccharinum	Silver Maple	14	6	4			Dead.		DESIRABLE
2222	East of homestead	Acer saccharinum	Silver Maple	6	3	4	slight sweep, one-sided, thin crown, over-topped				DESIRABLE
2223	East of homestead	Malus spp.	Crabapple	5	4	4	over-topped, sweep, minor deadwood, suckering			Forked at 3" with a 4" co-leader.	DESIRABLE
2224	East of homestead	Acer saccharinum	Silver Maple	9	3	4	over-topped, weak crotch, slight sweep		In contact with tree #2225.	Forked at 3' with a5" co-leader.	DESIRABLE
2225	East of homestead	Prunus serotina	Black Cherry	8	3	5	over-topped, sweep		In contact with tree #2224.		UNDESIRABLE
2226	East of homestead	Acer saccharinum	Silver Maple	8	3	4	over-topped, slight sweep, one-sided				DESIRABLE
2227	East of homestead	Acer saccharinum	Silver Maple	11	3	4	twist in trunk, multiple leaders, trunk scar			Forked at 2' with an 11" co-leader.	DESIRABLE
2228	East of homestead	Acer saccharinum	Silver Maple	6	3	4	one-sided, trunk scar, thin crown, minor deadwood			Forked at 3.5' with a 6" co-leader.	DESIRABLE
2229	East of homestead	Acer saccharinum	Silver Maple	9	3	4	twist in trunk, thin crown, double leader				DESIRABLE
2230	East of homestead	Acer saccharinum	Silver Maple	11	4	4	heavy deadwood, thin crown, weak crotch, trunk scar			Forked at 3.5' with a 10" (dead) co-leader.	DESIRABLE
2231	East of homestead	Acer saccharinum	Silver Maple	10	3	3	thin crown, trunk scar, minor deadwood			Forked at 2' with a 7"(dead) co-leader.	DESIRABLE
2232	East of homestead	Acer saccharinum	Silver Maple	15	3	4	slight lean, multiple leaders				DESIRABLE
2233	East of homestead	Juglans nigra	Black Walnut	4	2	3	over-topped				LANDMARK
2234	East of homestead	Acer saccharinum	Silver Maple	16	3	4	over-topped, one-sided, multiple leaders, basal decay, trunk scar				DESIRABLE
2235	East of homestead	Acer saccharinum	Silver Maple	13	3	4	trunk scar, over-topped, one-sided, double leader				DESIRABLE
2236	East of homestead	Acer saccharinum	Silver Maple	16	3	4	slight lean, thin crown, minor deadwood				DESIRABLE
2237	East of homestead	Acer saccharinum	Silver Maple	13	3	4	one-sided, multiple leaders, suckering, trunk scar				DESIRABLE
2238	East of homestead	Acer saccharinum	Silver Maple	10	3	4	thin crown, twist in trunk				DESIRABLE
2239	East of homestead	Acer saccharinum	Silver Maple	7	3	4	over-topped, slight lean, suckering				DESIRABLE
2240	East of homestead	Acer saccharinum	Silver Maple	11	3	3	thin crown, twist in trunk, basal scar				DESIRABLE
2241	East of homestead	Acer saccharinum	Silver Maple	12	3	3	weak crotch, suckering, metal in trunk			Forked at 2.5' with an 11" co-leader.	DESIRABLE
2242	East of homestead	Acer saccharinum	Silver Maple	19	3	4	one-sided, suckering, metal in trunk, double leader, basal scar				DESIRABLE
2243	East of homestead	Acer saccharinum	Silver Maple	13	3	4	one-sided, basal scar, slight sweep				DESIRABLE
2244	East of homestead	Acer saccharinum	Silver Maple	10	3	4	sweep, thin crown, basal scar, suckering				DESIRABLE
2245	East of homestead	Acer saccharinum	Silver Maple	9	3	4	over-topped, basal scar, suckering				DESIRABLE
2246	East of homestead	Acer saccharinum	Silver Maple	17	3	3	multiple leaders, suckering				DESIRABLE
2247	East of homestead	Acer saccharinum	Silver Maple	11	4	4	over-topped, slight sweep, trunk scar, basal decay, basal scar		Hollow at base.		DESIRABLE
2248	East of homestead	Acer saccharinum	Silver Maple	10	4	4	trunk scar, over-topped, slight sweep, suckering				DESIRABLE

Tree Inventory Listing
670 Old Rand Road
Lake Zurich, Illinois
Prepared by Urban Forest Management, Inc. 6/24/2022

Tag No.	Location	Botanical Name	Common Name	Size	Cond.	Form	Problems	Insect/Disease	Comments	Co-Leaders at DBH	Species Quality Rating
2249	East of homestead	Acer saccharinum	Silver Maple	13	3	3	trunk scar, twist in trunk, thin crown, double leader				DESIRABLE
2250	East of homestead	Acer saccharinum	Silver Maple	14	3	4	over-topped, slight sweep, double leader, suckering				DESIRABLE
2251	East of homestead	Acer saccharinum	Silver Maple	13	4	4	trunk scar, over-topped, thin crown, basal scar, suckering, hollow				DESIRABLE
2252	East of homestead	Acer saccharinum	Silver Maple	13	3	4	twist in trunk, one-sided, thin crown, basal scar, trunk scar				DESIRABLE
2253	East of homestead	Acer saccharinum	Silver Maple	13	3	4	twist in trunk, thin crown				DESIRABLE
2254	East of homestead	Acer saccharinum	Silver Maple	28	3	4	slight lean, weak crotch, minor deadwood		Forked at 5'.		DESIRABLE
2255	East of homestead	Acer saccharinum	Silver Maple	9	3	4	slight sweep, thin crown, suckering, trunk scar				DESIRABLE
2256	East of homestead	Acer saccharinum	Silver Maple	13	3	4	slight sweep, multiple leaders, trunk scar				DESIRABLE
2257	East of homestead	Acer saccharinum	Silver Maple	9	3	4	over-topped, one-sided, trunk scar				DESIRABLE
2258	East of homestead	Ulmus americana	American Elm	7	3	4	over-topped, slight sweep, suckering, multiple leaders				N/A
2259	East of homestead	Acer saccharinum	Silver Maple	8	3	4	one-sided, slight sweep			Forked at 2.5' with a 6" co-leader.	DESIRABLE
2260	East of homestead	Acer saccharinum	Silver Maple	10	3	4	weak crotch, damaged leader, thin crown, trunk scar			Forked at 3' with a 6" co-leader.	DESIRABLE
2261	East of homestead	Ulmus americana	American Elm	7	3	4	sweep, over-topped, one-sided, suckering				N/A
2262	East of homestead	Acer saccharinum	Silver Maple	9	3	4	over-topped, slight sweep, thin crown				DESIRABLE
2263	East of homestead	Acer saccharinum	Silver Maple	13	4	4	trunk scar, decay, over-topped, one-sided, multiple leaders			Forked at 3.5' with a 7" co-leader.	DESIRABLE
2264	East of homestead	Acer saccharinum	Silver Maple	10	4	4	over-topped, sweep, weak crotch, basal decay, trunk scar		Old co-leader rotted off at 2'.	Forked at 2.5' with a 9" co-leader.	DESIRABLE
2265	East of homestead	Acer saccharinum	Silver Maple	6	3	4	over-topped, slight sweep, damaged leader, suckering				DESIRABLE
2266	East of homestead	Acer saccharinum	Silver Maple	13	3	4	one-sided, basal scar, double leader, over-topped				DESIRABLE
2267	East of homestead	Acer saccharinum	Silver Maple	8	3	4	over-topped, one-sided, suckering				DESIRABLE
2268	East of homestead	Acer saccharinum	Silver Maple	8	3	3	weak crotch, metal in trunk			Forked at 3' with 7", 3" co-leaders.	DESIRABLE
2269	East of homestead	Acer saccharinum	Silver Maple	7	3	4	slight sweep, thin crown			Forked at 1' with a 4" co-leader.	DESIRABLE
2270	East of homestead	Acer saccharinum	Silver Maple	5	3	4	over-topped, twist in trunk, thin crown				DESIRABLE
2271	East of homestead	Acer saccharinum	Silver Maple	7	3	4	over-topped, slight sweep, one-sided, double leader, basal scar		Old co-leader rotted off at 2'.		DESIRABLE
2272	East of homestead	Prunus serotina	Black Cherry	8	3	4	slight lean, one-sided, thin crown				UNDESIRABLE
2273	East of homestead	Acer negundo	Boxelder Maple	4	4	4	damaged leader, over-topped				UNDESIRABLE
2274	East property line	Acer negundo	Boxelder Maple	8	3	4	over-topped, sweep, minor deadwood, multiple leaders				UNDESIRABLE
2275	East property line	Acer saccharinum	Silver Maple	12	3	4	over-topped, slight sweep, pruned for side wires, suckering		Overhead wires.	Forked at 3' with a 5" co-leader.	DESIRABLE
2276	East property line	Acer saccharinum	Silver Maple	22	3	4	slight sweep, multiple leaders, pruned for side wires, minor deadwood		Overhead wires.		DESIRABLE
2277	East property line	Acer negundo	Boxelder Maple	5	4	4	excessive lean, basal swell, suckering, vine infested		Overhead wires.		UNDESIRABLE
2278	East of homestead	Acer saccharinum	Silver Maple	11	3	4	one-sided, thin crown, over-topped, slight sweep				DESIRABLE
2279	East of homestead	Morus alba	White Mulberry (Common Mulberry)	16	3	4	basal scar, over-topped, slight sweep, minor deadwood, multiple leaders				UNDESIRABLE
2280	East of homestead	Acer saccharinum	Silver Maple	23	3	3	weak crotch, multiple leaders, one-sided				DESIRABLE
2281	East of homestead	Ulmus americana	American Elm	6	3	3	suckering, minor deadwood				N/A
2282	East of homestead	Acer saccharinum	Silver Maple	12	3	3	heavy deadwood, weak crotch, multiple leaders, metal in trunk, basal decay, basal scar			Forked at 3.5' with 10", 6"(dead) co-leaders.	DESIRABLE
2283	East of homestead	Malus spp.	Crabapple	6	3	4	minor deadwood, suckering, over-topped				DESIRABLE
2284	East of homestead	Acer saccharinum	Silver Maple	23	3	3	multiple leaders			Forked at 3.5' with a 12" co-leader.	DESIRABLE
2285	East of homestead	Acer saccharinum	Silver Maple	10	3	3					DESIRABLE
2286	East of homestead	Acer saccharinum	Silver Maple	6	4	4	basal decay, slight sweep, thin crown				DESIRABLE
2287	East of homestead	Acer saccharinum	Silver Maple	10	3	4	slight sweep, thin crown, metal in trunk				DESIRABLE
2288	East of homestead	Acer saccharinum	Silver Maple	10	4	4	weak crotch, trunk scar, one-sided, thin crown			Forked at 3' with an 8"(dead) co-leader.	DESIRABLE

Tree Inventory Listing
670 Old Rand Road
Lake Zurich, Illinois
Prepared by Urban Forest Management, Inc. 6/24/2022

Tag No.	Location	Botanical Name	Common Name	Size	Cond.	Form	Problems	Insect/Disease	Comments	Co-Leaders at DBH	Species Quality Rating
2289	East of homestead	Acer saccharinum	Silver Maple	13	3	4	one-sided, double leader, over-topped, minor deadwood				DESIRABLE
2290	East of homestead	Acer saccharinum	Silver Maple	11	3	4	over-topped, slight sweep, one-sided, double leader, basal scar				DESIRABLE
2291	East of homestead	Acer saccharinum	Silver Maple	26	4	4	weak crotch, double leader, slight sweep, trunk scar, decay, metal in trunk				DESIRABLE
2292	East of homestead	Acer saccharinum	Silver Maple	8	4	4	over-topped, double leader, trunk scar, basal scar				DESIRABLE
2293	East of homestead	Acer saccharinum	Silver Maple	10	3	3	twist in trunk, thin crown, trunk scar				DESIRABLE
2294	East of homestead	Ulmus americana	American Elm	5	3	4	trunk scar, suckering, over-topped				N/A
2295	East of homestead	Acer negundo	Boxelder Maple	13	4	4	damaged leader, trunk scar, decay, double leader, suckering, minor deadwood		Electric fence attached to trunk.		UNDESIRABLE
2296	East of homestead	Acer saccharinum	Silver Maple	10	3	4	over-topped, damaged leader, basal decay, basal scar		Electric fence attached to trunk.		DESIRABLE
2297	East of homestead	Acer saccharinum	Silver Maple	13	3	4	over-topped, slight sweep, one-sided, over-topped				DESIRABLE
2298	East of homestead	Acer saccharinum	Silver Maple	11	3	4	over-topped, slight sweep, weak crotch, suckering			Forked at 3' with 11" co-leader.	DESIRABLE
2299	East of homestead	Acer saccharinum	Silver Maple	13	3	3	double leader, one-sided, basal scar				DESIRABLE
2300	East of homestead	Acer saccharinum	Silver Maple	16	3	3	multiple leaders, poison ivy				DESIRABLE
2301	East of homestead	Acer saccharinum	Silver Maple	6	3	4	over-topped, slight lean, twist in trunk, suckering				DESIRABLE
2302	East of homestead	Acer saccharinum	Silver Maple	9	3	4	twist in trunk, one-sided, thin crown, basal scar				DESIRABLE
2303	East of homestead	Acer saccharinum	Silver Maple	8	3	4	heavy deadwood, thin crown, twist in trunk, trunk scar		(1) co-leader is dead at 15'.		DESIRABLE
2304	East of homestead	Acer saccharinum	Silver Maple	11	3	4	slight sweep, suckering, thin crown, trunk scar				DESIRABLE
2305	East of homestead	Acer saccharinum	Silver Maple	10	3	4	trunk scar, slight sweep, thin crown, over-topped		Old co-leader rotted off at 1.5'.		DESIRABLE
2306	East of homestead	Acer saccharinum	Silver Maple	9	3	4	trunk scar, twist in trunk, thin crown, double leader				DESIRABLE
2307	East of homestead	Acer saccharinum	Silver Maple	7	3	4	over-topped, thin crown, suckering				DESIRABLE
2308	East of homestead	Acer saccharinum	Silver Maple	16	3	4	slight sweep, one-sided				DESIRABLE
2309	East of homestead	Acer saccharinum	Silver Maple	14	3	4	one-sided, heavy deadwood, twist in trunk				DESIRABLE
2310	East of homestead	Acer saccharinum	Silver Maple	10	4	4	minor deadwood, one-sided, twist in trunk, thin crown, suckering				DESIRABLE
2311	East of homestead	Acer saccharinum	Silver Maple	18	4	4	slight sweep, one-sided, multiple leaders, minor deadwood, trunk scar		Bark eaten off by horses, electric fence attached to trunk.		DESIRABLE
2312	East of homestead	Acer saccharinum	Silver Maple	14	3	3	multiple leaders, twist in trunk				DESIRABLE
2313	East of homestead	Acer negundo	Boxelder Maple	4	3	4	sweep, over-topped, suckering				UNDESIRABLE
2314	East of homestead	Acer saccharinum	Silver Maple	10	3	4	over-topped, slight sweep, one-sided, basal scar				DESIRABLE
2315	East of homestead	Acer saccharinum	Silver Maple	8	4	4	over-topped, slight sweep, trunk scar, suckering				DESIRABLE
2316	East of homestead	Acer negundo	Boxelder Maple	9	4	4	over-topped, slight lean, damaged leader			Forked at 1.5' with a 7" co-leader.	UNDESIRABLE
2317	East of homestead	Acer saccharinum	Silver Maple	10	6	4			Dead. electric fence attached to trunk.		DESIRABLE
2318	East of homestead	Acer negundo	Boxelder Maple	9	4	4	over-topped, slight lean, suckering, broken limbs, minor deadwood				UNDESIRABLE
2319	East of homestead	Acer saccharinum	Silver Maple	17	3	4	double leader, slight sweep, minor deadwood, metal in trunk		Electric fence attached to trunk.		DESIRABLE
2320	East of homestead	Acer saccharinum	Silver Maple	10	4	4	basal decay, slight sweep, thin crown, metal in trunk		Hollow at base. Electric fence attached to trunk.		DESIRABLE
2321	East of homestead	Acer saccharinum	Silver Maple	15	3	4	double leader, slight sweep				DESIRABLE
2322	East of homestead	Acer saccharinum	Silver Maple	11	3	4	slight sweep, thin crown, one-sided, minor deadwood, sparse foliage				DESIRABLE
2323	East of homestead	Acer saccharinum	Silver Maple	17	3	4	weak crotch, slight sweep, one-sided		Electric fence attached to trunk.	Forked at 1.5' with a 12" co-leader.	DESIRABLE
2324	East of homestead	Acer saccharinum	Silver Maple	10	4	4	trunk scar, over-topped, one-sided, thin crown				DESIRABLE
2325	East of homestead	Acer saccharinum	Silver Maple	12	3	4	over-topped, twist in trunk, thin crown, minor deadwood, suckering			Forked at base with a 7" co-leader.	DESIRABLE
2326	East of homestead	Acer saccharinum	Silver Maple	11	3	4	trunk scar, twist in trunk, thin crown, over-topped				DESIRABLE
2327	East of homestead	Acer saccharinum	Silver Maple	6	4	4	over-topped, basal decay, slight lean, suckering				DESIRABLE
2328	East of homestead	Acer saccharinum	Silver Maple	13	3	4	weak crotch, slight sweep, thin crown, minor deadwood			Forked at 3' with a 10" co-leader.	DESIRABLE

Tree Inventory Listing
670 Old Rand Road
Lake Zurich, Illinois
Prepared by Urban Forest Management, Inc. 6/24/2022

Tag No.	Location	Botanical Name	Common Name	Size	Cond.	Form	Problems	Insect/Disease	Comments	Co-Leaders at DBH	Species Quality Rating
2329	East of homestead	Acer saccharinum	Silver Maple	15	3	4	damaged leader, slight sweep, basal scar, suckering, trunk scar, surface roots, animal damage			Forked at 1.5' and 3' with 12", 11" co-leaders.	DESIRABLE
2330	East of homestead	Acer saccharinum	Silver Maple	13	3	4	minor deadwood, double leader, twist in trunk, thin crown, trunk scar		Old co-leader rotted off at 1'.		DESIRABLE
2331	North of barn	Acer saccharinum	Silver Maple	17	4	4	trunk scar, animal damage, weak crotch, slight sweep, minor deadwood, metal in trunk		Bark chewed off by horses, electric fence attached to trunk.	Forked at 1' and 1.5' with 15", 14", 11", 5" co-leaders.	DESIRABLE
2332	North of barn	Acer saccharinum	Silver Maple	15	4	4	slight lean, weak crotch, trunk scar, animal damage, minor deadwood		Bark chewed off by horses, electric fence attached to trunk.		DESIRABLE
2333	North of barn	Acer saccharinum	Silver Maple	13	3	4	slight sweep, one-sided, thin crown, basal scar, trunk scar				DESIRABLE
2334	North of barn	Acer saccharinum	Silver Maple	11	3	4	over-topped, twist in trunk, basal scar, suckering				DESIRABLE
2335	North of barn	Acer saccharinum	Silver Maple	9	3	4	over-topped, slight sweep, thin crown				DESIRABLE
2336	North of barn	Acer saccharinum	Silver Maple	9	3	4	twist in trunk, one-sided, thin crown, trunk scar				DESIRABLE
2337	North of barn	Acer negundo	Boxelder Maple	11	3	5	excessive lean, sweep, over-topped				UNDESIRABLE
2338	North of barn	Acer saccharinum	Silver Maple	8	3	4	over-topped, twist in trunk, minor deadwood, basal scar				DESIRABLE
2339	North of barn	Acer saccharinum	Silver Maple	4	4	4	over-topped, one-sided, slight lean, basal scar				DESIRABLE
2340	North of barn	Acer saccharinum	Silver Maple	18	3	4	twist in trunk, one-sided, multiple leaders				DESIRABLE
2341	North of barn	Acer saccharinum	Silver Maple	16	3	4	over-topped, slight sweep, basal scar				DESIRABLE
2342	North of barn	Acer negundo	Boxelder Maple	10	4	4	over-topped, slight sweep, suckering, minor deadwood, damaged leader				UNDESIRABLE
2343	North of barn	Acer negundo	Boxelder Maple	10	3	4	over-topped, excessive lean, multiple leaders, minor deadwood				UNDESIRABLE
2344	North of barn	Acer negundo	Boxelder Maple	14	3	4	slight lean, one-sided, multiple leaders, trunk scar				UNDESIRABLE
2345	North of barn	Acer saccharinum	Silver Maple	13	3	4	excessive lean, sweep, multiple leaders, basal scar				DESIRABLE
2346	North of barn	Acer saccharinum	Silver Maple	9	4	4	slight lean, suckering, minor deadwood, over-topped				DESIRABLE
2347	North of barn	Acer negundo	Boxelder Maple	15	4	4	excessive lean, suckering, minor deadwood, twist in trunk, broken limbs				UNDESIRABLE
2348	North of barn	Acer saccharinum	Silver Maple	8	3	4	over-topped, sweep, thin crown		In contact with tree #2349.		DESIRABLE
2349	North of barn	Acer saccharinum	Silver Maple	15	3	4	over-topped, slight sweep, weak crotch		In contact with tree #2348.	Forked at base and 4' with 13", 9" co-leaders.	DESIRABLE
2350	North of barn	Catalpa speciosa	Northern Catalpa	15	4	4	weak crotch, trunk scar, minor deadwood, basal decay, animal damage, suckering				LANDMARK
2351	North of barn	Acer platanoides	Norway Maple	4	2	4	slight lean, twist in trunk, multiple leaders, trunk scar				DESIRABLE
2352	North of barn	Acer saccharinum	Silver Maple	7	4	4	over-topped, sweep, trunk scar, suckering				DESIRABLE
2353	North of barn	Acer saccharinum	Silver Maple	17	3	4	over-topped, one-sided, multiple leaders, minor deadwood, vine infested			Forked at 3.5' with a 4"(dead) co-leader.	DESIRABLE
2354	North of barn	Acer saccharinum	Silver Maple	10	3	4	slight sweep, one-sided, trunk scar				DESIRABLE
2355	Northwest of barn	Acer saccharinum	Silver Maple	10	3	4	slight sweep, one-sided, minor deadwood				DESIRABLE
2356	Northwest of barn	Morus alba	White Mulberry (Common Mulberry)	21	5	3	dieback, decay, heavy deadwood, sparse foliage, metal in trunk, weak crotch				UNDESIRABLE
2357	Northwest of barn	Acer saccharinum	Silver Maple	11	3	3	weak crotch, slight sweep, suckering			Forked at 1' with 10", 10", 3", 3" co-leaders.	DESIRABLE
2358	Northwest of barn	Ulmus americana	American Elm	9	3	4	over-topped, slight sweep, one-sided, suckering				N/A
2359	Northwest of barn	Acer saccharinum	Silver Maple	6	4	4	over-topped, trunk scar, slight sweep, suckering				DESIRABLE
2360	Northwest of barn	Populus tremuloides	Quaking Aspen	10	3	3	slight lean, twist in trunk, thin crown, minor deadwood				DESIRABLE
2361	Northwest of barn	Populus tremuloides	Quaking Aspen	11	4	4	slight lean, twist in trunk, thin crown, heavy deadwood, decay			Forked at base with a 9"(dead) co-leader.	DESIRABLE
2362	North of driveway	Catalpa speciosa	Northern Catalpa	22	4	3	basal swell, dieback, minor deadwood, weak crotch, trunk scar				LANDMARK

Tree Inventory Listing
670 Old Rand Road
Lake Zurich, Illinois
Prepared by Urban Forest Management, Inc. 6/24/2022

Tag No.	Location	Botanical Name	Common Name	Size	Cond.	Form	Problems	Insect/Disease	Comments	Co-Leaders at DBH	Species Quality Rating
2363	North of driveway	Catalpa speciosa	Northern Catalpa	26	3	4	trunk scar, slight sweep, multiple leaders, minor deadwood				LANDMARK
2364	North of driveway	Morus alba	White Mulberry (Common Mulberry)	12	3	4	slight lean, thin crown, minor deadwood				UNDESIRABLE
2365	North of driveway	Acer saccharinum	Silver Maple	14	3	4	slight sweep, multiple leaders, heavy deadwood, one-sided				DESIRABLE
2366	North of driveway	Acer saccharinum	Silver Maple	29	3	3	minor deadwood			Forked at 4' with a 6" co-leader.	DESIRABLE
2367	North of driveway	Acer negundo	Boxelder Maple	7	3	4	slight lean, over-topped, crossing branches, suckering		In contact with tree #2368.		UNDESIRABLE
2368	North of driveway	Morus alba	White Mulberry (Common Mulberry)	9	3	4	trunk scar, crossing branches, one-sided		In contact with tree #2367.		UNDESIRABLE
2369	North of driveway	Acer negundo	Boxelder Maple	9	4	4	dead tree caught in crown, vine infested, minor deadwood, suckering				UNDESIRABLE
2370	North of driveway	Acer negundo	Boxelder Maple	10	4	4	trunk scar, suckering, over-topped, vine infested				UNDESIRABLE
2371	North of driveway	Acer negundo	Boxelder Maple	6	4	4	slight lean, damaged leader, suckering, vine infested		Overhead wires.	Forked at. 5' with a 6" co-leader.	UNDESIRABLE
2372	North of driveway	Acer negundo	Boxelder Maple	7	4	5	damaged leader, suckering, excessive lean, vine infested		Overhead wires.		UNDESIRABLE
2373	North of driveway	Rhus glabra	Smooth Sumac	7	4	4	damaged leader, decay, multiple leaders, pruned for overhead wires		Overhead wires.		N/A
2374	North of driveway	Ulmus americana	American Elm	4	3	4	damaged leader, pruned for overhead wires, suckering		Overhead wires.		N/A
2375	North of driveway	Juglans nigra	Black Walnut	9	3	5	damaged leader, pruned for overhead wires, suckering		Overhead wires.		LANDMARK
2376	North of driveway	Acer negundo	Boxelder Maple	15	5	4	excessive lean, suckering, decay, damaged leader, basal decay		Overhead wires.	Forked at base with a 7" co-leader.	UNDESIRABLE
2377	North of driveway	Juglans nigra	Black Walnut	9	3	5	damaged leader, pruned for overhead wires, suckering, weak crotch		Overhead wires.	Forked at 2.5' with an 8" co-leader.	LANDMARK
2378	North of driveway	Juglans nigra	Black Walnut	5	3	4	over-topped, slight lean, twist in trunk, double leader, vine infested, weak crotch				LANDMARK
2379	North of driveway	Ulmus americana	American Elm	10	4	3	multiple leaders, suckering, minor deadwood				N/A
2380	North of driveway	Ulmus americana	American Elm	5	3	3	thin crown, suckering				N/A
2381	North of driveway	Acer negundo	Boxelder Maple	4	4	5	excessive lean, over-topped, growing horizontally				UNDESIRABLE
2382	North of driveway	Acer negundo	Boxelder Maple	6	4	4	over-topped, slight lean, suckering, broken limbs				UNDESIRABLE
2383	North of driveway	Ulmus americana	American Elm	12	3	4	one-sided, multiple leaders, suckering, trunk scar				N/A
2384	North of driveway	Ulmus americana	American Elm	4	4	4	over-topped, slight sweep				N/A
2385	North of driveway	Ulmus americana	American Elm	6	3	4	over-topped, slight sweep, multiple leaders				N/A
2386	North of driveway	Acer negundo	Boxelder Maple	5	3	4	over-topped, minor deadwood, twist in trunk, trunk scar				UNDESIRABLE
2387	North of driveway	Acer negundo	Boxelder Maple	7	4	4	over-topped, trunk scar, twist in trunk, suckering				UNDESIRABLE
2388	North of driveway	Acer negundo	Boxelder Maple	4	3	4	over-topped, twist in trunk				UNDESIRABLE
2389	North of driveway	Acer platanoides	Norway Maple	11	3	4	over-topped, twist in trunk, vine infested				DESIRABLE
2390	North of driveway	Populus tremuloides	Quaking Aspen	10	4	3	minor deadwood, trunk scar, thin crown				DESIRABLE
2391	North of driveway	Populus tremuloides	Quaking Aspen	10	6	4			Dead.		DESIRABLE
2392	North of driveway	Populus tremuloides	Quaking Aspen	11	3	3	thin crown, minor deadwood				DESIRABLE
2393	North of driveway	Acer negundo	Boxelder Maple	6	3	4	over-topped, twist in trunk, thin crown, suckering, minor deadwood				UNDESIRABLE
2394	North of driveway	Acer saccharinum	Silver Maple	4	4	4	trunk scar, over-topped, slight sweep, thin crown				DESIRABLE
2395	North of driveway	Acer saccharinum	Silver Maple	5	3	4	over-topped, sweep, basal scar, suckering				DESIRABLE
2396	North of driveway	Acer saccharinum	Silver Maple	11	4	4	damaged leader, double leader, suckering, dieback				DESIRABLE
2397	North of driveway	Acer platanoides	Norway Maple	10	4	4	over-topped, weak crotch, double leader, slight sweep, trunk scar, decay, hollow		Hollow at 4'.		DESIRABLE
2398	North of driveway	Juglans nigra	Black Walnut	8	3	3	trunk scar, twist in trunk, multiple leaders, minor deadwood				LANDMARK
2399	North of driveway	Malus spp.	Crabapple	6	5	3	sparse foliage, decay, vine infested	scab			DESIRABLE
2400	North of driveway	Ulmus americana	American Elm	7	3	4	over-topped, sweep, dead tree caught in crown, trunk scar				N/A
2401	North of driveway	Juglans nigra	Black Walnut	10	3	4	over-topped, slight sweep, trunk scar				LANDMARK
2402	North of driveway	Salix nigra	Black Willow	15	5	5	top broken off, heavy deadwood, decay, metal in trunk, trunk scar				DESIRABLE

Tree Inventory Listing
670 Old Rand Road
Lake Zurich, Illinois
Prepared by Urban Forest Management, Inc. 6/24/2022

Tag No.	Location	Botanical Name	Common Name	Size	Cond.	Form	Problems	Insect/Disease	Comments	Co-Leaders at DBH	Species Quality Rating
2403	North of driveway	Juglans nigra	Black Walnut	20	3	3	weak crotch, multiple leaders, minor deadwood, suckering				LANDMARK
2404	North of driveway	Acer negundo	Boxelder Maple	4	4	5	damaged leader, slight lean, minor deadwood, vine infested				UNDESIRABLE
2405	North of driveway	Ulmus americana	American Elm	6	3	4	over-topped, slight sweep, suckering, minor deadwood				N/A
2406	North of driveway	Acer saccharinum	Silver Maple	9	3	4	over-topped, slight lean, multiple leaders, vine infested				DESIRABLE
2407	North of driveway	Quercus ellipsoidalis	Hill's Oak	8	3	4	over-topped, one-sided, vine infested, minor deadwood				HERITAGE
2408	North of driveway	Juglans nigra	Black Walnut	13	3	5	damaged leader, pruned for overhead wires, suckering, vine infested		Overhead wires.		LANDMARK
2409	North of driveway	Morus alba	White Mulberry (Common Mulberry)	4	3	4	over-topped, multiple leaders, minor deadwood, vine infested		Overhead wires.		UNDESIRABLE
2410	North of driveway	Ulmus americana	American Elm	4	3	4	damaged leader, slight sweep, double leader, vine infested		Overhead wires.		N/A
2411	North of driveway	Acer negundo	Boxelder Maple	10	6	4			Dead.		UNDESIRABLE
2412	North of driveway	Catalpa speciosa	Northern Catalpa	7	3	4	over-topped, slight sweep, multiple leaders, pruned for overhead wires		Overhead wires.		LANDMARK
2413	North of driveway	Malus spp.	Crabapple	5	4	4	suckering, minor deadwood, over-topped, basal scar				DESIRABLE
2414	North of driveway	Ulmus americana	American Elm	5	3	4	over-topped, one-sided				N/A
2415	North of driveway	Ulmus americana	American Elm	11	4	3	over-topped, multiple leaders, suckering, minor deadwood				N/A
2416	North of driveway	Tilia americana	Basswood (American Linden)	11	3	3	over-topped, trunk scar				LANDMARK
2417	North of driveway	Quercus ellipsoidalis	Hill's Oak	23	3	4	slight lean, multiple leaders, minor deadwood, vine infested				HERITAGE
2418	North of driveway	Prunus serotina	Black Cherry	22	5	4	dieback, heavy deadwood, decay, sparse foliage			Forked at base with an 8" co-leader.	UNDESIRABLE
2419	North of driveway	Morus alba	White Mulberry (Common Mulberry)	7	3	4	over-topped, slight sweep, twist in trunk, one-sided				UNDESIRABLE
2420	North of driveway	Ulmus americana	American Elm	5	3	4	over-topped, slight sweep, one-sided			Forked at base with a 5" co-leader.	N/A
2421	North of driveway	Acer saccharinum	Silver Maple	4	3	5	damaged leader, pruned for overhead wires		Overhead wires.	Forked at base with 2", 1" co-leaders.	DESIRABLE
2422	North of driveway	Juglans nigra	Black Walnut	9	3	5	damaged leader, pruned for overhead wires, suckering		Overhead wires.		LANDMARK
2423	North of driveway	Acer negundo	Boxelder Maple	6	4	4	damaged leader, decay, vine infested, minor deadwood				UNDESIRABLE
2424	North of driveway	Ulmus americana	American Elm	10	3	3	multiple leaders, vine infested, minor deadwood				N/A
2425	North of driveway	Prunus serotina	Black Cherry	12	6	4			Dead.	Forked at base with a 9" co-leader.	UNDESIRABLE
2426	North of driveway	Ulmus americana	American Elm	7	3	4	weak crotch, double leader, dead tree caught in crown				N/A
2427	North of driveway	Ulmus americana	American Elm	7	3	4	one-sided, thin crown, minor deadwood				N/A
2428	North of driveway	Acer saccharinum	Silver Maple	8	4	4	trunk scar, dieback, minor deadwood				DESIRABLE
2429	North of driveway	Fraxinus pennsylvanica	Green Ash	12	6	4			Dead	Forked at 2' with 8", 5" co-leaders.	N/A
2430	North of driveway	Acer negundo	Boxelder Maple	7	4	4	over-topped, slight sweep, damaged leader				UNDESIRABLE
2431	North of driveway	Acer negundo	Boxelder Maple	7	4	4	damaged leader, suckering, decay				UNDESIRABLE
2432	North of house	Acer negundo	Boxelder Maple	5	4	4	over-topped, slight sweep, suckering, trunk scar			Forked at 1' with a 5" co-leader.	UNDESIRABLE
2433	North of house	Prunus serotina	Black Cherry	8	4	4	sweep, minor deadwood, thin crown, sparse foliage, trunk scar				UNDESIRABLE
2434	North of house	Acer saccharinum	Silver Maple	8	3	4	over-topped, slight sweep, suckering			Forked at. 5' with an 8" co-leader.	DESIRABLE
2435	North of house	Fraxinus pennsylvanica	Green Ash	17	6	4			Dead.		N/A
2436	North of house	Acer saccharinum	Silver Maple	8	3	4	over-topped, one-sided, double leader, trunk scar				DESIRABLE
2437	North of house	Acer saccharinum	Silver Maple	9	3	4	over-topped, slight sweep, minor deadwood				DESIRABLE
2438	North of house	Acer saccharinum	Silver Maple	15	3	3	over-topped, multiple leaders, basal scar				DESIRABLE
2439	North of house	Acer saccharinum	Silver Maple	6	3	4	over-topped, slight sweep, heavy deadwood			Forked at 2' with a 6" (dead) co-leader.	DESIRABLE
2440	North of barn	Acer saccharinum	Silver Maple	19	3	3	multiple leaders, one-sided, weak crotch				DESIRABLE

Tree Inventory Listing
670 Old Rand Road
Lake Zurich, Illinois
Prepared by Urban Forest Management, Inc. 6/24/2022

Tag No.	Location	Botanical Name	Common Name	Size	Cond.	Form	Problems	Insect/Disease	Comments	Co-Leaders at DBH	Species Quality Rating
2441	North of barn	Acer saccharinum	Silver Maple	29	4	4	slight sweep, multiple leaders, minor deadwood, trunk scar, broken limbs, upper cavity				DESIRABLE
2442	North of barn	Ulmus americana	American Elm	7	3	4	suckering, double leader, trunk scar				N/A
2443	North of barn	Acer saccharinum	Silver Maple	7	3	4	over-topped, one-sided, thin crown, twist in trunk, trunk scar, suckering				DESIRABLE
2444	North of barn	Acer saccharinum	Silver Maple	9	3	4	twist in trunk, one-sided, thin crown, trunk scar				DESIRABLE
2445	North of barn	Acer saccharinum	Silver Maple	14	3	4	one-sided, multiple leaders				DESIRABLE
2446	North of barn	Acer saccharinum	Silver Maple	10	3	4	twist in trunk, thin crown, suckering, trunk scar, basal scar				DESIRABLE
2447	North of barn	Acer saccharinum	Silver Maple	11	4	3	trunk scar, minor deadwood, thin crown, suckering		Old co-leader rotted off at 14'.		DESIRABLE
2448	North of barn	Acer saccharinum	Silver Maple	7	3	4	over-topped, slight sweep, suckering, trunk scar				DESIRABLE
2449	Northeast of barn	Acer saccharinum	Silver Maple	10	3	4	slight lean, thin crown, suckering, heavy deadwood			Forked at 2' with a 9" (dead) co-leader.	DESIRABLE
2450	Northeast of barn	Acer saccharinum	Silver Maple	13	3	3	one-sided, thin crown				DESIRABLE
2451	Northeast of barn	Acer saccharinum	Silver Maple	27	3	4	slight lean, multiple leaders, minor deadwood, trunk scar				DESIRABLE
2452	Northeast of barn	Acer saccharinum	Silver Maple	6	3	4	twist in trunk, over-topped, suckering, basal scar				DESIRABLE
2453	Northeast of barn	Acer saccharinum	Silver Maple	14	3	4	slight sweep, one-sided, minor deadwood			Forked at 2.5' with a 12" (snapped off at 12').	DESIRABLE
2454	Northeast of barn	Acer saccharinum	Silver Maple	12	3	4	one-sided, heavy deadwood, trunk scar				DESIRABLE
2455	Northeast of barn	Acer saccharinum	Silver Maple	11	4	4	over-topped, slight sweep, trunk scar, suckering, animal damage		Bark chewed off by horse.	Forked at 1.5' with an 11" co-leader.	DESIRABLE
2456	Northeast of barn	Acer saccharinum	Silver Maple	17	3	4	over-topped, slight sweep, trunk scar				DESIRABLE
2457	Northeast of barn	Acer saccharinum	Silver Maple	15	3	4	over-topped, slight sweep, thin crown, basal scar				DESIRABLE
2458	Northeast of barn	Acer saccharinum	Silver Maple	15	3	4	slight sweep, thin crown, slight lean			Forked at 1' with 11", 8" co-leaders.	DESIRABLE
2459	Northeast of barn	Acer saccharinum	Silver Maple	11	3	4	over-topped, minor deadwood, multiple leaders, slight sweep, trunk scar				DESIRABLE
2460	Northeast of barn	Acer saccharinum	Silver Maple	22	3	4	one-sided, minor deadwood, slight lean, basal scar		Tree stand at 10'.	Forked at 2.5' with a 13" co-leader.	DESIRABLE
2461	Northeast of barn	Ulmus americana	American Elm	7	3	4	over-topped, suckering, basal scar				N/A
2462	Between horse corral and Buesching Road	Acer saccharinum	Silver Maple	10	3	3	weak crotch, thin crown, minor deadwood, metal in trunk			Forked at 3' with 9", 9" co-leaders.	DESIRABLE
2463	Between horse corral and Buesching Road	Prunus serotina	Black Cherry	15	3	4	slight sweep, minor deadwood, one-sided				UNDESIRABLE
2464	Between horse corral and Buesching Road	Acer negundo	Boxelder Maple	7	4	4	over-topped, slight sweep, minor deadwood, suckering				UNDESIRABLE
2465	Between horse corral and Buesching Road	Acer negundo	Boxelder Maple	8	4	4	trunk scar, hollow, multiple leaders, slight lean				UNDESIRABLE
2466	Between horse corral and Buesching Road	Acer negundo	Boxelder Maple	5	5	5	basal decay, split trunk, excessive lean				UNDESIRABLE
2467	Between horse corral and Buesching Road	Acer negundo	Boxelder Maple	6	5	5	damaged leader, slight lean, sparse foliage, trunk scar, decay				UNDESIRABLE
2468	Between horse corral and Buesching Road	Prunus serotina	Black Cherry	10	6	4			Dead.		UNDESIRABLE
2469	Between horse corral and Buesching Road	Acer negundo	Boxelder Maple	5	3	4	damaged leader, pruned for overhead wires, thin crown, one-sided		Overhead wires.		UNDESIRABLE
2470	Between horse corral and Buesching Road	Ulmus americana	American Elm	9	3	4	damaged leader, pruned for overhead wires, multiple leaders, suckering, vine infested		Overhead wires.		N/A
2471	Between horse corral and Buesching Road	Acer saccharinum	Silver Maple	17	4	3	heavy deadwood, vine infested, weak crotch, dieback, slight sweep			Forked at 1' and 2' with 12", 10" (dead), 7" co-leaders.	DESIRABLE
2472	Between horse corral and Buesching Road	Acer saccharinum	Silver Maple	13	3	4	one-sided, pruned for side wires, vine infested, twist in trunk		Overhead wires. Old co-leaders rotted off at 2.5'.		DESIRABLE

Tree Inventory Listing
670 Old Rand Road
Lake Zurich, Illinois
Prepared by Urban Forest Management, Inc. 6/24/2022

Tag No.	Location	Botanical Name	Common Name	Size	Cond.	Form	Problems	Insect/Disease	Comments	Co-Leaders at DBH	Species Quality Rating
2473	Between horse corral and Buesching Road	Juglans nigra	Black Walnut	5	2	4	over-topped, twist in trunk				LANDMARK
2474	Between horse corral and Buesching Road	Acer saccharinum	Silver Maple	9	4	4	thin crown, minor deadwood, weak crotch, twist in trunk			Forked at 2' with a 9" co-leader.	DESIRABLE
2475	Between horse corral and Buesching Road	Acer negundo	Boxelder Maple	10	4	4	slight sweep, dieback, one-sided, multiple leaders, minor deadwood				UNDESIRABLE
2476	Between horse corral and Buesching Road	Acer saccharinum	Silver Maple	15	3	3	double leader, minor deadwood				DESIRABLE
2477	Between horse corral and Buesching Road	Acer negundo	Boxelder Maple	15	4	4	excessive lean, suckering, multiple leaders, minor deadwood				UNDESIRABLE
2478	Between horse corral and Buesching Road	Acer negundo	Boxelder Maple	16	3	4	multiple leaders, minor deadwood, slight lean				UNDESIRABLE
2479	Between horse corral and Buesching Road	Prunus serotina	Black Cherry	14	4	4	slight sweep, suckering, minor deadwood, one-sided				UNDESIRABLE
2480	Between horse corral and Buesching Road	Acer saccharinum	Silver Maple	19	3	3	twist in trunk, thin crown, minor deadwood				DESIRABLE
2481	Between horse corral and Buesching Road	Prunus serotina	Black Cherry	14	4	4	trunk scar, decay, one-sided, thin crown, double leader, minor deadwood, basal decay, basal scar				UNDESIRABLE
2482	Horse corral northeast of barn	Acer saccharinum	Silver Maple	13	3	4	twist in trunk, one-sided, thin crown, metal in trunk		Electric fence attached to trunk.		DESIRABLE
2483	Horse corral northeast of barn	Acer saccharinum	Silver Maple	22	3	4	slight lean, twist in trunk, double leader, trunk scar			Forked at. 5' and 5' with a 14" co-leader.	DESIRABLE
2484	Horse corral northeast of barn	Acer negundo	Boxelder Maple	10	5	5	top broken off, decay, trunk scar, sparse foliage				UNDESIRABLE
2485	Horse corral northeast of barn	Ulmus americana	American Elm	10	3	4	over-topped, twist in trunk, one-sided				N/A
2486	Horse corral northeast of barn	Acer saccharinum	Silver Maple	12	4	4	one-sided, basal scar, slight sweep, thin crown				DESIRABLE
2487	Horse corral northeast of barn	Acer saccharinum	Silver Maple	20	3	4	slight lean, one-sided, multiple leaders, minor deadwood				DESIRABLE
2488	Horse corral northeast of barn	Acer saccharinum	Silver Maple	19	3	4	one-sided, weak crotch, multiple leaders, minor deadwood, trunk scar			Forked at 4' with a 12" co-leader.	DESIRABLE
2489	Horse corral northeast of barn	Prunus serotina	Black Cherry	4	4	4	over-topped, slight sweep, trunk scar, suckering, thin crown				UNDESIRABLE
2490	Horse corral northeast of barn	Acer saccharinum	Silver Maple	9	3	4	slight lean, slight sweep, thin crown, trunk scar				DESIRABLE
2491	Horse corral northeast of barn	Acer saccharinum	Silver Maple	11	4	4	over-topped, twist in trunk, thin crown, suckering, trunk scar				DESIRABLE
2492	Horse corral northeast of barn	Acer saccharinum	Silver Maple	15	3	4	slight lean, weak crotch, double leader, damaged leader, minor deadwood				DESIRABLE
2493	Horse corral northeast of barn	Acer saccharinum	Silver Maple	10	3	4	twist in trunk, thin crown, trunk swell				DESIRABLE
2494	Horse corral northeast of barn	Acer saccharinum	Silver Maple	15	3	5	sweep, one-sided, suckering				DESIRABLE
2495	Horse corral northeast of barn	Acer saccharinum	Silver Maple	7	4	4	over-topped, trunk swell, thin crown, suckering				DESIRABLE
2496	Horse corral northeast of barn	Acer saccharinum	Silver Maple	15	3	4	slight lean, thin crown, twist in trunk, weak crotch, basal scar			Forked at 2' with a 12" co-leader.	DESIRABLE
2497	Horse corral northeast of barn	Acer saccharinum	Silver Maple	7	3	4	over-topped, slight sweep, thin crown				DESIRABLE
2498	Horse corral northeast of barn	Acer saccharinum	Silver Maple	6	3	4	twist in trunk, thin crown, suckering				DESIRABLE
2499	Horse corral northeast of barn	Acer saccharinum	Silver Maple	13	3	4	thin crown, slight sweep, weak crotch, minor deadwood			Forked at 2.5' with an 8", 6" (snapped off) co-leader.	DESIRABLE
2500	Horse corral northeast of barn	Acer saccharinum	Silver Maple	8	3	4	slight lean, thin crown, sparse foliage, trunk scar			Forked at base with a 7" co-leader.	DESIRABLE
4001	Horse corral northeast of barn	Acer saccharinum	Silver Maple	16	3	4	twist in trunk, one-sided, multiple leaders				DESIRABLE
4002	Horse corral northeast of barn	Acer saccharinum	Silver Maple	10	3	4	slight sweep, over-topped				DESIRABLE
4003	Horse corral northeast of barn	Acer saccharinum	Silver Maple	5	3	3	over-topped, trunk scar, thin crown				DESIRABLE
4004	Horse corral northeast of barn	Acer saccharinum	Silver Maple	9	3	4	twist in trunk, thin crown, minor deadwood, trunk scar			Forked at base and 3.5' with 9", 7", 4"(snapped off) co-leaders.	DESIRABLE
4005	Horse corral northeast of barn	Acer saccharinum	Silver Maple	17	3	4	one-sided, broken limbs, heavy deadwood, thin crown				DESIRABLE

Tree Inventory Listing
670 Old Rand Road
Lake Zurich, Illinois
Prepared by Urban Forest Management, Inc. 6/24/2022

Tag No.	Location	Botanical Name	Common Name	Size	Cond.	Form	Problems	Insect/Disease	Comments	Co-Leaders at DBH	Species Quality Rating
4006	Horse corral northeast of barn	Acer saccharinum	Silver Maple	10	3	4	slight sweep, thin crown, twist in trunk			Forked at 2' with a 10" co-leader.	DESIRABLE
4007	Horse corral north of barn	Acer saccharinum	Silver Maple	11	3	4	over-topped, slight sweep, trunk scar, thin crown			Forked at 3' with an 11" co-leader.	DESIRABLE
4008	Horse corral north of barn	Acer saccharinum	Silver Maple	10	3	4	twist in trunk, thin crown, minor deadwood, trunk scar				DESIRABLE
4009	Horse corral north of barn	Acer saccharinum	Silver Maple	7	3	4	slight sweep, thin crown				DESIRABLE
4010	Horse corral north of barn	Acer saccharinum	Silver Maple	6	3	4	one-sided, thin crown, basal scar				DESIRABLE
4011	Horse corral north of barn	Acer saccharinum	Silver Maple	10	3	4	twist in trunk, one-sided, thin crown, basal scar				DESIRABLE
4012	Horse corral north of barn	Acer saccharinum	Silver Maple	7	3	4	over-topped, slight lean, trunk scar				DESIRABLE
4013	Horse corral north of barn	Acer saccharinum	Silver Maple	12	3	4	slight lean, twist in trunk, thin crown				DESIRABLE
4014	Horse corral north of barn	Acer saccharinum	Silver Maple	6	3	4	slight lean, twist in trunk, one-sided				DESIRABLE
4015	Horse corral north of barn	Acer saccharinum	Silver Maple	7	3	4	over-topped, slight sweep, double leader				DESIRABLE
4016	Horse corral north of barn	Acer saccharinum	Silver Maple	26	3	3	multiple leaders, minor deadwood				DESIRABLE
4017	Horse corral north of barn	Acer saccharinum	Silver Maple	21	3	4	one-sided, broken limbs, slight sweep, heavy deadwood			Forked at 2.5' with 15", 12" co-leaders.	DESIRABLE
4018	Horse corral north of barn	Ulmus americana	American Elm	7	3	4	slight sweep, suckering, multiple leaders				N/A
4019	Horse corral north of barn	Acer negundo	Boxelder Maple	11	4	4	excessive lean, damaged leader, trunk scar, suckering				UNDESIRABLE
4020	Horse corral north of barn	Acer saccharinum	Silver Maple	20	3	3	multiple leaders, one-sided, trunk scar				DESIRABLE
4021	Horse corral north of barn	Acer negundo	Boxelder Maple	7	4	4	basal scar, animal damage, minor deadwood, slight lean, suckering				UNDESIRABLE
4022	Horse corral north of barn	Acer saccharinum	Silver Maple	12	3	4	over-topped, one-sided				DESIRABLE
4023	Horse corral north of barn	Acer negundo	Boxelder Maple	7	4	4	suckering, damaged leader, metal in trunk				UNDESIRABLE
4024	North of driveway, West of house	Acer platanoides	Norway Maple	16	3	4	over-topped, slight sweep, one-sided, trunk scar				DESIRABLE
4025	North of driveway, West of house	Acer negundo	Boxelder Maple	7	5	5	excessive lean, split trunk, damaged leader, sparse foliage, suckering				UNDESIRABLE
4026	North of driveway, West of house	Morus alba	White Mulberry (Common Mulberry)	20	5	4	one-sided, sparse foliage, multiple leaders, dieback, girdling root		Girdled by buckthorn root.		UNDESIRABLE
4027	North of driveway, West of house	Prunus serotina	Black Cherry	18	4	4	basal decay, slight lean, multiple leaders, decay, minor deadwood			Forked at 2' with a 16" co-leader.	UNDESIRABLE
4028	North of driveway, West of house	Acer negundo	Boxelder Maple	14	5	5	top broken off, decay, suckering, sparse foliage				UNDESIRABLE
4029	North of driveway, West of house	Acer negundo	Boxelder Maple	20	4	4	damaged leader, decay, trunk scar, suckering			Forked at 3' with an 18" (top broken off) co-leader.	UNDESIRABLE
4030	North of driveway, West of house	Fraxinus pennsylvanica	Green Ash	11	6	4			Dead.		N/A
4031	North of driveway, West of house	Acer negundo	Boxelder Maple	7	4	4	damaged leader, twist in trunk, thin crown, minor deadwood				UNDESIRABLE
4032	North of driveway, West of house	Acer negundo	Boxelder Maple	7	4	5	split trunk, sweep, growing horizontally				UNDESIRABLE
4033	North of driveway, West of house	Acer saccharinum	Silver Maple	5	3	5	damaged leader, slight sweep, pruned for overhead wires		Overhead wires.		DESIRABLE
4034	North of driveway, West of house	Acer negundo	Boxelder Maple	5	4	5	slight sweep, over-topped, suckering, pruned for overhead wires		Overhead wires.		UNDESIRABLE
4035	North of driveway, West of house	Celtis occidentalis	Common Hackberry	4	3	5	damaged leader, pruned for overhead wires, suckering		Overhead wires.		HERITAGE
4036	North of driveway, West of house	Celtis occidentalis	Common Hackberry	7	3	5	damaged leader, pruned for overhead wires, suckering		Overhead wires.		HERITAGE
4037	North of driveway, West of house	Acer negundo	Boxelder Maple	19	5	5	top broken off, sparse foliage, trunk scar, decay				UNDESIRABLE
4038	B/W pond and Old Rand Rd.	Prunus serotina	Black Cherry	10	3	3	minor deadwood, twist in trunk				UNDESIRABLE
4039	B/W pond and Old Rand Rd.	Prunus serotina	Black Cherry	10	4	3	damaged leader, minor deadwood				UNDESIRABLE
4040	South of pond	Fraxinus pennsylvanica	Green Ash	10	6	4			Dead.		N/A
4041	South of pond	Prunus serotina	Black Cherry	16	4	4	over-topped, sweep, weak crotch, multiple leaders, minor deadwood, trunk scar				UNDESIRABLE
4042	South of pond	Populus deltoides	Eastern Cottonwood	28	3	3	multiple leaders, minor deadwood				DESIRABLE
4043	South of pond	Quercus ellipsoidalis	Hill's Oak	6	3	4	over-topped, slight lean, vine infested, epicormics, minor deadwood				HERITAGE
4044	South of pond	Populus deltoides	Eastern Cottonwood	21	3	4	one-sided, minor deadwood				DESIRABLE
4045	South of pond	Acer saccharinum	Silver Maple	12	2	4	over-topped, slight sweep, one-sided, vine infested				DESIRABLE
4046	Horse corral north of barn	Acer saccharinum	Silver Maple	19	2	4	slight lean, weak crotch, twist in trunk, double leader		Forked at 5'.		DESIRABLE
4047	Horse corral north of barn	Acer saccharinum	Silver Maple	14	3	4	slight sweep, multiple leaders		Old co-leader rotted off at 1'.		DESIRABLE

Tree Inventory Listing
670 Old Rand Road
Lake Zurich, Illinois
Prepared by Urban Forest Management, Inc. 6/24/2022

Tag No.	Location	Botanical Name	Common Name	Size	Cond.	Form	Problems	Insect/Disease	Comments	Co-Leaders at DBH	Species Quality Rating
4048	Horse corral north of barn	Acer negundo	Boxelder Maple	5	4	4	slight lean, one-sided, damaged leader, minor deadwood				UNDESIRABLE
4049	Horse corral north of barn	Acer negundo	Boxelder Maple	7	3	4	over-topped, one-sided, double leader				UNDESIRABLE
4050	Horse corral north of barn	Acer negundo	Boxelder Maple	7	3	4	twist in trunk, suckering, minor deadwood, trunk scar			Forked at 2' with a 5" co-leader.	UNDESIRABLE
4051	Horse corral north of barn	Acer negundo	Boxelder Maple	7	3	4	slight sweep, over-topped, suckering			Forked at 1.5' with 3", 3" co-leaders.	UNDESIRABLE
4052	Horse corral north of barn	Prunus serotina	Black Cherry	9	3	4	slight lean, double leader, minor deadwood				UNDESIRABLE
4053	Horse corral north of barn	Acer saccharinum	Silver Maple	6	4	4	basal decay, over-topped, twist in trunk			Forked at 2' with a 3" co-leader.	DESIRABLE
4054	Horse corral north of barn	Acer negundo	Boxelder Maple	7	5	4	damaged leader, minor deadwood, sparse foliage, suckering, trunk scar				UNDESIRABLE
4055	Horse corral north of barn	Acer negundo	Boxelder Maple	7	4	3	thin crown, minor deadwood, suckering, trunk scar				UNDESIRABLE
4056	Horse corral north of barn	Acer negundo	Boxelder Maple	11	3	4	excessive lean, multiple leaders, minor deadwood, suckering				UNDESIRABLE
4057	Horse corral north of barn	Acer negundo	Boxelder Maple	8	4	4	twist in trunk, suckering, broken limbs				UNDESIRABLE
4058	Horse corral north of barn	Acer negundo	Boxelder Maple	5	3	4	twist in trunk, double leader, trunk scar				UNDESIRABLE
4059	Horse corral north of barn	Juglans nigra	Black Walnut	7	4	4	over-topped, basal scar, one-sided				LANDMARK
4060	Horse corral north of barn	Juglans nigra	Black Walnut	12	3	3	687, exposed roots, root damage				LANDMARK
4061	Horse corral north of barn	Juglans nigra	Black Walnut	12	4	4	one-sided, split trunk, multiple leaders				LANDMARK
4062	Horse corral north of barn	Acer saccharinum	Silver Maple	18	3	4	slight lean, multiple leaders, one-sided			Forked at. 5' with a 7" co-leader.	DESIRABLE
4063	Horse corral north of barn	Acer negundo	Boxelder Maple	16	5	5	sparse foliage, decay, suckering, trunk scar		Dead co-leader, bark separating from trunk.		UNDESIRABLE
4064	Horse corral north of barn	Acer negundo	Boxelder Maple	11	3	4	over-topped, slight sweep, multiple leaders				UNDESIRABLE
4065	Horse corral north of barn	Acer saccharinum	Silver Maple	10	3	4	twist in trunk, thin crown, weak crotch			Forked at 2' with a 6" co-leader.	DESIRABLE
4066	Horse corral north of barn	Acer saccharinum	Silver Maple	9	3	4	slight sweep, thin crown				DESIRABLE
4067	Horse corral north of barn	Acer saccharinum	Silver Maple	5	3	4	slight sweep, one-sided, trunk scar				DESIRABLE
4068	Horse corral north of barn	Acer saccharinum	Silver Maple	8	3	4	one-sided, minor deadwood, trunk scar				DESIRABLE
4069	Horse corral north of barn	Acer saccharinum	Silver Maple	9	3	4	one-sided, thin crown, suckering				DESIRABLE
4070	Horse corral north of barn	Acer saccharinum	Silver Maple	13	3	4	over-topped, slight sweep		Forked at 2' with an 8"(dead) co-leader.		DESIRABLE
4071	Horse corral north of barn	Acer saccharinum	Silver Maple	10	3	4	slight sweep, thin crown, minor deadwood				DESIRABLE
4072	Horse corral north of barn	Acer saccharinum	Silver Maple	12	3	4	one-sided, thin crown, slight sweep, double leader, trunk scar				DESIRABLE
4073	Horse corral north of barn	Acer saccharinum	Silver Maple	6	3	4	slight sweep, thin crown, suckering, trunk scar				DESIRABLE
4074	Horse corral northeast of barn	Acer saccharinum	Silver Maple	8	3	4	sweep, one-sided, thin crown, trunk scar				DESIRABLE
4075	Horse corral northeast of barn	Acer saccharinum	Silver Maple	11	3	4	slight lean, twist in trunk, thin crown, trunk scar				DESIRABLE
4076	Horse corral northeast of barn	Acer saccharinum	Silver Maple	8	3	4	over-topped, thin crown, suckering, trunk scar				DESIRABLE
4077	Horse corral northeast of barn	Acer saccharinum	Silver Maple	11	4	4	basal decay, thin crown, slight sweep, suckering			Forked at 3' with an 8" co-leader.	DESIRABLE
4078	Horse corral northeast of barn	Acer saccharinum	Silver Maple	17	3	4	double leader, slight sweep, thin crown		Forked at 5'.		DESIRABLE
4079	Horse corral northeast of barn	Acer saccharinum	Silver Maple	15	3	4	slight sweep, heavy deadwood, thin crown		Dead co-leader.		DESIRABLE
4080	Horse corral northeast of barn	Acer saccharinum	Silver Maple	13	3	4	twist in trunk, one-sided, double leader, thin crown				DESIRABLE
4081	Horse corral northeast of barn	Acer saccharinum	Silver Maple	11	3	4	twist in trunk, one-sided, minor deadwood				DESIRABLE
4082	Horse corral northeast of barn	Acer negundo	Boxelder Maple	9	3	4	slight sweep, twist in trunk, over-topped, minor deadwood				UNDESIRABLE
4083	Horse corral northeast of barn	Acer negundo	Boxelder Maple	6	4	5	damaged leader, suckering				UNDESIRABLE
4084	Horse corral northeast of barn	Acer saccharinum	Silver Maple	21	3	3	slight lean, multiple leaders, heavy deadwood				DESIRABLE
4085	B/W corral and Buesching Road	Prunus serotina	Black Cherry	12	5	4	dieback, heavy deadwood, vine infested			Forked at 1.5' with an 8" co-leader.	UNDESIRABLE
4086	B/W corral and Buesching Road	Prunus serotina	Black Cherry	14	3	4	629, twist in trunk, minor deadwood, multiple leaders				UNDESIRABLE
4087	B/W corral and Buesching Road	Acer negundo	Boxelder Maple	17	4	4	one-sided, dieback, multiple leaders				UNDESIRABLE
4088	B/W corral and Buesching Road	Acer negundo	Boxelder Maple	9	4	4	over-topped, one-sided, suckering, minor deadwood				UNDESIRABLE
4089	B/W corral and Buesching Road	Acer negundo	Boxelder Maple	7	4	4	twist in trunk, thin crown, minor deadwood, basal decay				UNDESIRABLE

Tree Inventory Listing
670 Old Rand Road
Lake Zurich, Illinois
Prepared by Urban Forest Management, Inc. 6/24/2022

Tag No.	Location	Botanical Name	Common Name	Size	Cond.	Form	Problems	Insect/Disease	Comments	Co-Leaders at DBH	Species Quality Rating
4090	B/W corral and Buesching Road	Prunus serotina	Black Cherry	8	3	4	one-sided, double leader				UNDESIRABLE
4091	B/W corral and Buesching Road	Acer negundo	Boxelder Maple	9	4	5	excessive lean, damaged leader, heavy deadwood, sparse foliage				UNDESIRABLE
4092	B/W corral and Buesching Road	Acer saccharinum	Silver Maple	13	3	4	twist in trunk, thin crown				DESIRABLE
4093	B/W corral and Buesching Road	Acer saccharinum	Silver Maple	10	3	3	thin crown, double leader				DESIRABLE
4094	B/W corral and Buesching Road	Acer saccharinum	Silver Maple	11	3	4	excessive lean, sweep, double leader. exposed roots		Along creek.		DESIRABLE
4095	B/W corral and Buesching Road	Acer saccharinum	Silver Maple	12	3	4	minor deadwood, slight sweep, one-sided			Forked at 2' with a 7" co-leader.	DESIRABLE
4096	B/W corral and Buesching Road	Acer saccharinum	Silver Maple	9	3	4	over-topped, one-sided			Forked at 1' with a 6" co-leader.	DESIRABLE
4097	B/W corral and Buesching Road	Acer negundo	Boxelder Maple	6	4	4	slight lean, twist in trunk, vine infested				UNDESIRABLE
4098	B/W corral and Buesching Road	Ulmus americana	American Elm	6	3	4	slight lean, vine infested, over-topped				N/A
4099	B/W corral and Buesching Road	Salix nigra	Black Willow	5	4	4	damaged leader, pruned for overhead wires, trunk scar, suckering		Overhead wires, next to sewer inlet.		DESIRABLE
4100	B/W corral and Buesching Road	Morus alba	White Mulberry (Common Mulberry)	6	3	4	over-topped, twist in trunk, double leader				UNDESIRABLE
4101	B/W corral and Buesching Road	Acer saccharinum	Silver Maple	20	3	3	weak crotch, slight sweep, surface roots, erosion		Along creek.	Forked at 1' with a 16" co-leader.	DESIRABLE
4102	B/W corral and Buesching Road	Acer negundo	Boxelder Maple	13	3	4	slight sweep, suckering				UNDESIRABLE
4103	B/W corral and Buesching Road	Acer negundo	Boxelder Maple	15	4	4	basal decay, trunk scar, slight lean, multiple leaders, minor deadwood, suckering				UNDESIRABLE
4104	B/W corral and Buesching Road	Acer negundo	Boxelder Maple	12	4	4	heavy deadwood, excessive lean, suckering, trunk scar				UNDESIRABLE
4105	B/W corral and Buesching Road	Acer negundo	Boxelder Maple	11	4	4	slight lean, multiple leaders, one-sided, trunk scar, decay				UNDESIRABLE
4106	B/W corral and Buesching Road	Acer negundo	Boxelder Maple	7	4	4	slight lean, suckering, damaged leader, broken limbs				UNDESIRABLE
4107	B/W corral and Buesching Road	Acer negundo	Boxelder Maple	7	3	4	over-topped, slight sweep				UNDESIRABLE
4108	B/W corral and Buesching Road	Acer saccharinum	Silver Maple	13	3	3	weak crotch, multiple leaders			Forked at 3' with 13", 10" co-leaders.	DESIRABLE
4109	B/W corral and Buesching Road	Ulmus americana	American Elm	21	3	3	weak crotch, multiple leaders, suckering				N/A
4110	Horse corral northeast of homestead	Ulmus americana	American Elm	8	4	3	trunk scar, minor deadwood, suckering				N/A
4111	Horse corral northeast of homestead	Acer saccharinum	Silver Maple	18	3	4	slight sweep, weak crotch, double leader, minor deadwood				DESIRABLE
4112	Horse corral northeast of homestead	Acer negundo	Boxelder Maple	6	3	4	over-topped, slight sweep, suckering				UNDESIRABLE
4113	Horse corral northeast of homestead	Acer saccharinum	Silver Maple	11	3	4	slight sweep, double leader				DESIRABLE
4114	Horse corral northeast of homestead	Morus alba	White Mulberry (Common Mulberry)	4	3	4	over-topped, twist in trunk, dead tree caught in crown				UNDESIRABLE
4115	Horse corral northeast of homestead	Acer saccharinum	Silver Maple	21	3	3	multiple leaders, minor deadwood				DESIRABLE
4116	Horse corral northeast of homestead	Acer saccharinum	Silver Maple	4	3	4	over-topped, one-sided, twist in trunk, trunk scar				DESIRABLE
4117	Horse corral northeast of homestead	Acer saccharinum	Silver Maple	13	3	3	thin crown, double leader				DESIRABLE
4118	Horse corral northeast of homestead	Prunus serotina	Black Cherry	4	3	4	over-topped, one-sided. trunk scar				UNDESIRABLE
4119	Horse corral northeast of homestead	Acer saccharinum	Silver Maple	17	3	3	weak crotch, multiple leaders				DESIRABLE
4120	Horse corral northeast of homestead	Acer saccharinum	Silver Maple	13	3	4	slight lean, one-sided, trunk scar				DESIRABLE
4121	Horse corral northeast of homestead	Acer saccharinum	Silver Maple	12	3	4	twist in trunk, one-sided, double leader, thin crown				DESIRABLE
4122	Horse corral north of barn	Acer saccharinum	Silver Maple	7	3	3	over-topped, thin crown, minor deadwood				DESIRABLE
4123	Horse corral north of barn	Acer saccharinum	Silver Maple	8	3	4	one-sided, double leader, trunk scar, suckering				DESIRABLE
4124	Horse corral north of barn	Acer saccharinum	Silver Maple	11	3	4	twist in trunk, thin crown, minor deadwood				DESIRABLE
4125	Horse corral north of barn	Acer saccharinum	Silver Maple	9	3	4	twist in trunk, thin crown, multiple leaders, weak crotch			Forked at 3' with a 9" co-leader.	DESIRABLE

Tree Inventory Listing
670 Old Rand Road
Lake Zurich, Illinois
Prepared by Urban Forest Management, Inc. 6/24/2022

Tag No.	Location	Botanical Name	Common Name	Size	Cond.	Form	Problems	Insect/Disease	Comments	Co-Leaders at DBH	Species Quality Rating
4126	Horse corral north of barn	Acer saccharinum	Silver Maple	6	3	4	slight sweep, thin crown, trunk scar, basal scar				DESIRABLE
4127	Horse corral north of barn	Acer saccharinum	Silver Maple	10	3	4	twist in trunk, thin crown, over-topped, trunk scar				DESIRABLE
4128	Horse corral north of barn	Acer saccharinum	Silver Maple	13	3	3	weak crotch, thin crown			Forked at 3.5' with an 11" co-leader.	DESIRABLE
4129	Horse corral north of barn	Acer saccharinum	Silver Maple	6	4	4	over-topped, crossing branches		In contact with tree #4130.		DESIRABLE
4130	Horse corral north of barn	Acer saccharinum	Silver Maple	21	4	3	dieback, heavy deadwood, multiple leaders, weak crotch, crossing branches		In contact with tree #4129. Half of 21" leader is crown dead.	forked at base and 2.5' with 9", 7" co-leaders.	DESIRABLE
4131	Horse corral north of barn	Juglans nigra	Black Walnut	14	3	4	twist in trunk, one-sided, minor deadwood				LANDMARK
4132	Horse corral north of barn	Acer negundo	Boxelder Maple	12	4	4	slight lean, dieback, heavy deadwood, multiple leaders				UNDESIRABLE
4133	Horse corral north of barn	Fraxinus pennsylvanica	Green Ash	15	6	3			Dead.		N/A
4134	Horse corral north of barn	Acer negundo	Boxelder Maple	11	4	4	dieback, minor deadwood, over-topped, trunk scar				UNDESIRABLE
4135	Horse corral north of barn	Acer negundo	Boxelder Maple	7	4	4	slight lean, one-sided, dieback, minor deadwood, suckering				UNDESIRABLE
4136	Horse corral north of barn	Acer negundo	Boxelder Maple	7	4	4	slight lean, twist in trunk, suckering, minor deadwood			Forked at 2.5' with a 6" co-leader.	UNDESIRABLE
4137	Horse corral north of barn	Acer negundo	Boxelder Maple	5	3	4	over-topped, twist in trunk, one-sided				UNDESIRABLE
4138	Horse corral north of barn	Acer negundo	Boxelder Maple	7	3	4	thin crown, minor deadwood				UNDESIRABLE
4139	Horse corral north of barn	Acer negundo	Boxelder Maple	5	3	4	damaged leader, double leader				UNDESIRABLE
4140	Horse corral north of barn	Acer negundo	Boxelder Maple	9	3	4	slight lean, trunk scar, multiple leaders, suckering				UNDESIRABLE
4141	Horse corral north of barn	Acer saccharinum	Silver Maple	13	3	4	twist in trunk, multiple leaders, basal scar				DESIRABLE
4142	Horse corral north of barn	Acer negundo	Boxelder Maple	6	3	4	twist in trunk, slight lean, thin crown, minor deadwood				UNDESIRABLE
4143	Horse corral north of barn	Salix nigra	Black Willow	50	6	5	sparse foliage, dieback, heavy deadwood, multiple leaders, decay		(1) collapsed 9" co-leader is alive.		DESIRABLE
4144	Horse corral north of barn	Acer negundo	Boxelder Maple	5	4	4	one-sided, twist in trunk, minor deadwood				UNDESIRABLE
4145	Horse corral north of barn - along pond	Populus deltoides	Eastern Cottonwood	19	2	3	one-sided				DESIRABLE
4146	Horse corral north of barn - along pond	Acer saccharinum	Silver Maple	15	3	4	slight lean, multiple leaders, minor deadwood				DESIRABLE
4147	Horse corral north of barn - along pond	Ulmus americana	American Elm	9	3	4	slight lean, over-topped, one-sided				N/A
4148	Horse corral north of barn	Acer negundo	Boxelder Maple	5	4	4	one-sided, damaged leader, over-topped, suckering				UNDESIRABLE
4149	Horse corral north of barn	Acer negundo	Boxelder Maple	6	5	4	damaged leader, minor deadwood				UNDESIRABLE
4150	Horse corral north of barn	Juglans nigra	Black Walnut	11	3	4	one-sided, multiple leaders, minor deadwood				LANDMARK
4151	Horse corral north of barn - along pond	Populus deltoides	Eastern Cottonwood	26	3	3	multiple leaders, metal in trunk		Electric fence attached to trunk.		DESIRABLE
4152	Horse corral north of barn	Ulmus americana	American Elm	20	6	4			Dead.		N/A
4153	Horse corral north of barn	Morus alba	White Mulberry (Common Mulberry)	6	3	4	one-sided, multiple leaders, metal in trunk		Electric fence attached to trunk.		UNDESIRABLE
4154	Horse corral north of barn	Prunus serotina	Black Cherry	8	5	3	sparse foliage, decay, trunk scar				UNDESIRABLE
4155	Horse corral north of barn	Fraxinus pennsylvanica	Green Ash	19	6	4			Dead.		N/A
4156	Horse corral north of barn	Acer saccharinum	Silver Maple	15	3	3	weak crotch, multiple leaders, minor deadwood			Forked at 2' with 12", 11", 10", 6" co-leaders.	DESIRABLE
4157	Horse corral north of barn	Acer negundo	Boxelder Maple	8	5	4	twist in trunk, one-sided, over-topped, minor deadwood, suckering				UNDESIRABLE
4158	Horse corral north of barn	Juglans nigra	Black Walnut	11	3	3	trunk scar, broken limbs				LANDMARK
4159	Horse corral north of barn	Juglans nigra	Black Walnut	4	2	4	over-topped, slight lean, twist in trunk				LANDMARK
4160	Horse corral northeast of barn	Acer negundo	Boxelder Maple	6	5	4	over-topped, damaged leader, suckering, minor deadwood, decay				UNDESIRABLE
4161	Horse corral northeast of barn	Acer saccharinum	Silver Maple	16	3	4	one-sided, weak crotch, slight sweep, heavy deadwood, surface roots, lawnmower damage			Forked at 2' with 15", 11" co-leaders.	DESIRABLE
4162	Horse corral northeast of barn	Acer saccharinum	Silver Maple	9	4	3	thin crown, suckering				DESIRABLE
4163	Horse corral northeast of barn	Acer saccharinum	Silver Maple	14	3	3	weak crotch, multiple leaders, one-sided			Forked at 4' with a 12" co-leader.	DESIRABLE
4164	Horse corral northeast of barn	Acer saccharinum	Silver Maple	9	4	4	basal decay, twist in trunk, thin crown, minor deadwood				DESIRABLE
4165	Horse corral northeast of barn	Acer saccharinum	Silver Maple	13	3	4	over-topped, slight sweep, thin crown				DESIRABLE

Tree Inventory Listing
670 Old Rand Road
Lake Zurich, Illinois
Prepared by Urban Forest Management, Inc. 6/24/2022

Tag No.	Location	Botanical Name	Common Name	Size	Cond.	Form	Problems	Insect/Disease	Comments	Co-Leaders at DBH	Species Quality Rating
4166	Horse corral northeast of barn	Acer saccharinum	Silver Maple	18	3	3	multiple leaders, minor deadwood, basal scar				DESIRABLE
4167	Horse corral northeast of barn	Acer saccharinum	Silver Maple	7	3	4	over-topped, slight lean, trunk scar				DESIRABLE
4168	Horse corral northeast of barn	Acer saccharinum	Silver Maple	18	3	3	multiple leaders, heavy deadwood				DESIRABLE
4169	Horse corral northeast of barn	Acer saccharinum	Silver Maple	19	3	3	weak crotch, trunk scar, multiple leaders				DESIRABLE
4170	Horse corral northeast of barn	Ulmus americana	American Elm	12	3	3	multiple leaders, suckering, minor deadwood				N/A
4171	Horse corral northeast of barn	Acer saccharinum	Silver Maple	15	3	4	one-sided, multiple leaders, minor deadwood, weak crotch				DESIRABLE
4172	Horse corral northeast of barn	Acer saccharinum	Silver Maple	15	3	4	one-sided, thin crown, weak crotch				DESIRABLE
4173	Horse corral northeast of barn	Acer saccharinum	Silver Maple	22	3	4	weak crotch, minor deadwood, one-sided			Forked at 2' and 4' with 8", 7", 7" co-leaders.	DESIRABLE
4174	Horse corral northeast of barn	Acer saccharinum	Silver Maple	11	3	4	thin crown, slight sweep, minor deadwood, weak crotch			Forked at 1.5' with a 10" co-leader.	DESIRABLE
4175	Horse corral northeast of barn	Ulmus americana	American Elm	11	3	4	suckering, one-sided, thin crown, weak crotch			Forked at 3' with a 7" co-leader.	N/A
4176	Horse corral northeast of barn	Acer saccharinum	Silver Maple	19	3	4	trunk swell, basal scar, weak crotch, multiple leaders				DESIRABLE
4177	B/W corral and Buesching Road	Morus alba	White Mulberry (Common Mulberry)	10	3	4	over-topped, twist in trunk				UNDESIRABLE
4178	B/W corral and Buesching Road	Prunus serotina	Black Cherry	8	4	4	trunk scar, decay, over-topped, slight sweep				UNDESIRABLE
4179	B/W corral and Buesching Road	Morus alba	White Mulberry (Common Mulberry)	5	3	4	over-topped, twist in trunk, minor deadwood				UNDESIRABLE
4180	B/W corral and Buesching Road	Acer saccharinum	Silver Maple	18	3	3	trunk scar, multiple leaders, minor deadwood			Forked at 3' with 14", 13", 9" co-leaders.	DESIRABLE
4181	B/W corral and Buesching Road	Acer saccharinum	Silver Maple	11	3	4	over-topped, one-sided				DESIRABLE
4182	B/W corral and Buesching Road	Morus alba	White Mulberry (Common Mulberry)	8	4	4	slight lean, over-topped, trunk scar, one-sided, basal decay				UNDESIRABLE
4183	B/W corral and Buesching Road	Acer negundo	Boxelder Maple	11	4	4	excessive lean, one-sided, minor deadwood, suckering				UNDESIRABLE
4184	B/W corral and Buesching Road	Acer negundo	Boxelder Maple	10	4	5	sweep, damaged leader, vine infested, basal decay		Along creek.		UNDESIRABLE
4185	B/W corral and Buesching Road	Acer negundo	Boxelder Maple	5	3	4	slight lean, suckering, minor deadwood				UNDESIRABLE
4186	B/W corral and Buesching Road	Acer negundo	Boxelder Maple	9	4	4	excessive lean, sweep, weak crotch, minor deadwood				UNDESIRABLE
4187	B/W corral and Buesching Road	Acer negundo	Boxelder Maple	12	4	3	weak crotch, suckering, minor deadwood				UNDESIRABLE
4188	B/W corral and Buesching Road	Acer negundo	Boxelder Maple	4	4	4	over-topped, twist in trunk, suckering, minor deadwood				UNDESIRABLE
4189	B/W corral and Buesching Road	Acer negundo	Boxelder Maple	11	3	4	sweep, twist in trunk, one-sided				UNDESIRABLE
4190	B/W corral and Buesching Road	Acer negundo	Boxelder Maple	10	5	4	trunk scar, decay, double leader, one-sided, suckering				UNDESIRABLE
4191	Northeast corner	Acer saccharinum	Silver Maple	11	3	4	twist in trunk, thin crown, sparse foliage, vine infested				DESIRABLE
4192	Northeast corner	Juglans nigra	Black Walnut	13	2	3	twist in trunk, minor deadwood				LANDMARK
4193	Northeast corner	Morus alba	White Mulberry (Common Mulberry)	9	3	4	pruned for overhead wires, suckering, damaged leader				UNDESIRABLE
4194	Northeast corner	Prunus serotina	Black Cherry	10	3	4	sweep, pruned for overhead wires, minor deadwood				UNDESIRABLE
4195	Northeast corner	Acer negundo	Boxelder Maple	14	6	4			Dead.		UNDESIRABLE
4196	Northeast corner	Morus alba	White Mulberry (Common Mulberry)	12	3	4	over-topped, one-sided, twist in trunk, top broken off, vine infested				UNDESIRABLE
4197	Northeast corner	Prunus serotina	Black Cherry	10	3	4	one-sided, twist in trunk, minor deadwood				UNDESIRABLE
4198	Northeast corner	Acer negundo	Boxelder Maple	11	5	5	damaged leader, suckering, decay				UNDESIRABLE
4199	Northeast corner	Morus alba	White Mulberry (Common Mulberry)	12	3	3	thin crown, vine infested				UNDESIRABLE
4200	Northeast corner	Prunus serotina	Black Cherry	16	4	4	one-sided, double leader, heavy deadwood, sparse foliage				UNDESIRABLE
4201	Northeast corner	Juglans nigra	Black Walnut	13	2	3	twist in trunk, minor deadwood				LANDMARK
4202	Northeast corner	Prunus serotina	Black Cherry	6	4	4	excessive lean, one-sided, minor deadwood, trunk scar, decay				UNDESIRABLE
4203	Northeast corner	Acer negundo	Boxelder Maple	11	4	4	slight lean, slight sweep, suckering, minor deadwood				UNDESIRABLE
4204	Northeast corner	Morus alba	White Mulberry (Common Mulberry)	11	3	4	double leader, one-sided, twist in trunk, minor deadwood				UNDESIRABLE
4205	Northeast corner	Morus alba	White Mulberry (Common Mulberry)	5	3	4	slight lean, twist in trunk, suckering, minor deadwood				UNDESIRABLE
4206	Northeast corner	Prunus serotina	Black Cherry	7	5	4	thin crown, minor deadwood, sparse foliage		Twin leader dead at 1'.		UNDESIRABLE
4207	Northeast corner	Acer negundo	Boxelder Maple	7	5	5	damaged leader, suckering, minor deadwood				UNDESIRABLE
4208	Northeast corner	Unidentifiable	Unidentifiable	13	6	5			Dead. No bark.		N/A

Tree Inventory Listing
670 Old Rand Road
Lake Zurich, Illinois
Prepared by Urban Forest Management, Inc. 6/24/2022

Tag No.	Location	Botanical Name	Common Name	Size	Cond.	Form	Problems	Insect/Disease	Comments	Co-Leaders at DBH	Species Quality Rating
4209	Northeast corner	Prunus serotina	Black Cherry	8	5	4	excessive lean, damaged leader, sweep, sparse foliage, minor deadwood				UNDESIRABLE
4210	Northeast corner	Prunus serotina	Black Cherry	14	5	3	dieback, heavy deadwood, sparse foliage				UNDESIRABLE
4211	Northeast corner	Acer negundo	Boxelder Maple	6	3	4	one-sided, slight sweep, minor deadwood				UNDESIRABLE
4212	Northeast corner	Morus alba	White Mulberry (Common Mulberry)	9	3	4	over-topped, one-sided, minor deadwood				UNDESIRABLE
4213	Northeast corner	Morus alba	White Mulberry (Common Mulberry)	11	3	4	one-sided, twist in trunk, trunk scar, minor deadwood				UNDESIRABLE
4214	Northeast corner	Juglans nigra	Black Walnut	9	2	3	double leader, erosion, exposed roots		Along creek.		LANDMARK
4215	Northeast corner	Acer negundo	Boxelder Maple	9	5	5	damaged leader, heavy deadwood, suckering				UNDESIRABLE
4216	Northeast corner	Ulmus rubra	Slippery Elm (Red Elm)	15	3	3	multiple leaders, suckering, minor deadwood				N/A
4217	Northeast corner	Prunus serotina	Black Cherry	8	4	4	one-sided, over-topped, vine infested, minor deadwood				UNDESIRABLE
4218	Northeast corner	Prunus serotina	Black Cherry	5	4	4	excessive lean, one-sided, minor deadwood				UNDESIRABLE
4219	Northeast corner	Fraxinus pennsylvanica	Green Ash	13	6	5			Dead.		N/A
4220	Northeast corner	Acer saccharinum	Silver Maple	10	4	4	minor deadwood, slight sweep, one-sided, thin crown				DESIRABLE
4221	Northeast corner	Catalpa speciosa	Northern Catalpa	6	3	4	over-topped, double leader, vine infested, one-sided				LANDMARK
4222	Northeast corner	Prunus serotina	Black Cherry	6	4	4	over-topped, slight sweep, sparse foliage, one-sided				UNDESIRABLE
4223	Northeast corner	Prunus serotina	Black Cherry	8	3	4	excessive lean, thin crown, twist in trunk				UNDESIRABLE
4224	Northeast corner	Prunus serotina	Black Cherry	4	4	4	excessive lean, damaged leader, thin crown, minor deadwood				UNDESIRABLE
4225	Northeast corner	Prunus serotina	Black Cherry	6	4	4	excessive lean, vine infested, one-sided, decay				UNDESIRABLE
4226	Northeast corner	Prunus serotina	Black Cherry	6	3	4	twist in trunk, thin crown, sparse foliage				UNDESIRABLE
4227	Northeast corner	Acer negundo	Boxelder Maple	9	4	4	damaged leader, thin crown, twist in trunk, suckering			Forked at 1.5' with a 6" co-leader.	UNDESIRABLE
4228	Northeast corner	Acer negundo	Boxelder Maple	6	4	4	slight lean, over-topped, twist in trunk, minor deadwood				UNDESIRABLE
4229	Northeast corner	Acer negundo	Boxelder Maple	10	3	4	slight sweep, one-sided, suckering				UNDESIRABLE
4230	Northeast corner	Acer negundo	Boxelder Maple	5	3	4	over-topped, slight sweep, suckering			Forked at base with 14" co-leader (lying on ground).	UNDESIRABLE
4231	Northeast corner	Morus alba	White Mulberry (Common Mulberry)	5	3	4	slight lean, twist in trunk, vine infested, minor deadwood				UNDESIRABLE
4232	Northeast corner	Juglans nigra	Black Walnut	10	3	3	double leader, twist in trunk, suckering, minor deadwood, vine infested				LANDMARK
4233	Northeast corner	Morus alba	White Mulberry (Common Mulberry)	9	3	4	one-sided, suckering, minor deadwood				UNDESIRABLE
4234	Northeast corner	Prunus serotina	Black Cherry	7	5	4	dieback, damaged leader, slight lean, sparse foliage, minor deadwood				UNDESIRABLE
4235	Northeast corner	Juglans nigra	Black Walnut	9	2	4	one-sided, twist in trunk, minor deadwood				LANDMARK
4236	Northeast corner	Morus alba	White Mulberry (Common Mulberry)	5	3	4	over-topped, twist in trunk, suckering, minor deadwood				UNDESIRABLE
4237	Northeast corner	Acer saccharinum	Silver Maple	13	5	4	double leader, sparse foliage				DESIRABLE
4238	Northeast corner	Juglans nigra	Black Walnut	11	2	3	twist in trunk				LANDMARK
4239	Northeast corner	Morus alba	White Mulberry (Common Mulberry)	6	3	4	over-topped, twist in trunk, trunk scar				UNDESIRABLE
4240	Northeast corner	Morus alba	White Mulberry (Common Mulberry)	4	4	4	over-topped, twist in trunk, suckering				UNDESIRABLE
4241	Northeast corner	Prunus serotina	Black Cherry	7	4	4	sweep, sparse foliage, one-sided				UNDESIRABLE
4242	Northeast corner	Fraxinus pennsylvanica	Green Ash	10	6	4			Dead.		N/A
4243	Northeast corner	Acer negundo	Boxelder Maple	4	4	4	damaged leader, pruned for overhead wires, vine infested				UNDESIRABLE
4244	Northeast corner	Juglans nigra	Black Walnut	9	3	5	decay, pruned for overhead wires, suckering, vine infested				LANDMARK
4245	Northeast corner	Acer negundo	Boxelder Maple	7	4	4	damaged leader, multiple leaders, suckering, minor deadwood				UNDESIRABLE
4246	Northeast corner	Acer negundo	Boxelder Maple	4	5	5	damaged leader, vine infested, sparse foliage, suckering				UNDESIRABLE
4247	Northeast corner	Malus spp.	Crabapple	5	3	4	over-topped, slight sweep, double leader			Forked at 1' with a 3" co-leader.	DESIRABLE

Tree Inventory Listing
670 Old Rand Road
Lake Zurich, Illinois
Prepared by Urban Forest Management, Inc. 6/24/2022

Tag No.	Location	Botanical Name	Common Name	Size	Cond.	Form	Problems	Insect/Disease	Comments	Co-Leaders at DBH	Species Quality Rating
4248	North property line	Acer negundo	Boxelder Maple	12	3	4	twist in trunk, suckering, multiple leaders		Broken and hanging limb in crown. Old 12" co-leader rotted off at 2'.		UNDESIRABLE
4249	North property line	Prunus serotina	Black Cherry	6	4	4	slight lean, slight sweep, thin crown, minor deadwood, decay				UNDESIRABLE
4250	North property line	Ulmus rubra	Slippery Elm (Red Elm)	16	3	3	suckering				N/A
4251	North property line	Acer saccharinum	Silver Maple	6	3	4	slight sweep, thin crown			Forked at 2' with a 4" co-leader.	DESIRABLE
4252	North property line	Prunus serotina	Black Cherry	9	3	4	one sided, vine infested, thin crown, trunk scar				UNDESIRABLE
4253	North property line	Fraxinus pennsylvanica	Green Ash	10	6	4			Dead.		N/A
4254	North property line	Prunus serotina	Black Cherry	5	4	4	minor deadwood, vine infested, sparse foliage				UNDESIRABLE
4255	North property line	Morus alba	White Mulberry (Common Mulberry)	7	3	4	over-topped, one sided, multiple leaders				UNDESIRABLE
4256	North property line	Prunus serotina	Black Cherry	9	5	4	damaged leader, basal decay, sparse foliage, thin crown				UNDESIRABLE
4257	North property line	Acer saccharinum	Silver Maple	10	2	3	thin crown, twist in trunk				DESIRABLE
4258	North property line	Acer negundo	Boxelder Maple	8	4	4	over-topped, slight sweep, suckering, minor deadwood				UNDESIRABLE
4259	North property line	Morus alba	White Mulberry (Common Mulberry)	20	3	4	trunk scar, double leader, slight sweep, minor deadwood				UNDESIRABLE
4260	North property line	Acer negundo	Boxelder Maple	4	4	3	basal decay, vine infested, minor deadwood			Forked at base with 3", 3", 3" co-leaders.	UNDESIRABLE
4261	North property line	Acer negundo	Boxelder Maple	7	3	4	over-topped, one sided, twist in trunk				UNDESIRABLE
4262	North property line	Acer negundo	Boxelder Maple	8	4	4	over-topped, excessive lean, suckering, one sided		Uprooting and lying on tree #4264.		UNDESIRABLE
4263	North property line	Prunus serotina	Black Cherry	9	4	4	slight lean, vine infested, sparse foliage, minor deadwood				UNDESIRABLE
4264	North property line	Acer negundo	Boxelder Maple	5	5	5	damaged leader, top broken off, sparse foliage, over-topped		Leader damaged by tree #4264.		UNDESIRABLE
4265	North property line	Acer saccharinum	Silver Maple	14	2	4	slight lean, multiple leaders				DESIRABLE
4266	North property line	Prunus serotina	Black Cherry	7	5	4	slight lean, sparse foliage, suckering				UNDESIRABLE
4267	North property line	Morus alba	White Mulberry (Common Mulberry)	5	5	5	excessive lean, decay, minor deadwood, sparse foliage				UNDESIRABLE
4268	North property line	Acer negundo	Boxelder Maple	6	4	4	slight lean, twist in trunk, thin crown, minor deadwood				UNDESIRABLE
4269	North property line - east of pond	Acer negundo	Boxelder Maple	6	4	4	slight lean, double leader, minor deadwood				UNDESIRABLE
4270	North property line - east of pond	Salix nigra	Black Willow	21	4	4	trunk scar, suckering, decay, slight sweep		Old co-leader rotted off at 5'.		DESIRABLE
4271	North property line - east of pond	Acer saccharinum	Silver Maple	16	3	3	multiple leaders, minor deadwood				DESIRABLE
4272	North property line - east of pond	Morus alba	White Mulberry (Common Mulberry)	7	3	3	slight lean, minor deadwood			Forked at 2' with a 2" co-leader.	UNDESIRABLE
4273	West of pond	Prunus serotina	Black Cherry	15	4	4	double leader, twist in trunk, decay				UNDESIRABLE
4274	West of pond	Fraxinus pennsylvanica	Green Ash	11	6	4			Dead.		N/A
4275	West of pond	Prunus serotina	Black Cherry	12	6	4			Dead.		UNDESIRABLE
4276	West property line	Acer negundo	Boxelder Maple	10	4	3	suckering, decay, minor deadwood				UNDESIRABLE
4277	West property line	Acer negundo	Boxelder Maple	5	4	4	excessive lean, suckering, minor deadwood		Overhead wires.		UNDESIRABLE
4278	West property line	Acer saccharinum	Silver Maple	9	4	4	dieback, damaged leader, pruned for overhead wires, multiple leaders, suckering		Overhead wires.	Forked at base with a 7" co-leader.	DESIRABLE
4279	West of pond	Juglans nigra	Black Walnut	8	2	3	multiple leaders				LANDMARK
4280	West of pond on edge of water	Ulmus americana	American Elm	15	3	4	slight lean, weak crotch, multiple leaders				N/A
4281	West of pond	Morus alba	White Mulberry (Common Mulberry)	10	3	4	over-topped, slight sweep, multiple leaders				UNDESIRABLE
4282	West property line	Robinia pseudoacacia	Black Locust	8	3	3	multiple leaders, minor deadwood				UNDESIRABLE
4283	West property line	Acer saccharinum	Silver Maple	7	3	4	one sided, multiple leaders, suckering, pruned for side wires		Overhead wires.		DESIRABLE
4284	West property line	Morus alba	White Mulberry (Common Mulberry)	7	3	4	over-topped, slight lean, multiple leaders, pruned for overhead wires		Overhead wires.		UNDESIRABLE
4285	West property line	Morus alba	White Mulberry (Common Mulberry)	5	3	5	over-topped, slight sweep, damaged leader, pruned for overhead wires		Overhead wires.		UNDESIRABLE
4286	West property line	Acer saccharinum	Silver Maple	10	3	4	one sided, pruned for side wires, twist in trunk		Overhead wires.		DESIRABLE
4287	West property line	Prunus serotina	Black Cherry	9	3	3	multiple leaders, minor deadwood				UNDESIRABLE
4288	West property line	Prunus serotina	Black Cherry	9	3	4	one sided, minor deadwood				UNDESIRABLE

Tree Inventory Listing
670 Old Rand Road
Lake Zurich, Illinois
Prepared by Urban Forest Management, Inc. 6/24/2022

Tag No.	Location	Botanical Name	Common Name	Size	Cond.	Form	Problems	Insect/Disease	Comments	Co-Leaders at DBH	Species Quality Rating
4289	West property line	Prunus serotina	Black Cherry	6	3	4	over-topped, twist in trunk, minor deadwood				UNDESIRABLE
4290	West property line	Morus alba	White Mulberry (Common Mulberry)	7	3	4	twist in trunk, multiple leaders, minor deadwood				UNDESIRABLE
4291	West property line	Morus alba	White Mulberry (Common Mulberry)	7	3	4	over-topped, slight lean, one sided				UNDESIRABLE
4292	West property line	Prunus serotina	Black Cherry	11	3	4					UNDESIRABLE
4293	West property line	Prunus serotina	Black Cherry	4	3	4	minor deadwood, sweep				UNDESIRABLE
4294	West property line	Prunus serotina	Black Cherry	7	3	4	over-topped, slight sweep, one sided, vine infested				UNDESIRABLE
4295	West property line	Prunus serotina	Black Cherry	8	3	4	over-topped, slight sweep				UNDESIRABLE
4296	West property line	Robinia pseudoacacia	Black Locust	6	3	4	twist in trunk, minor deadwood, one sided				UNDESIRABLE
4297	West property line	Robinia pseudoacacia	Black Locust	12	3	3	twist in trunk, multiple leaders, minor deadwood			Forked at base with a 6" co-leader.	UNDESIRABLE
4298	West property line	Robinia pseudoacacia	Black Locust	9	3	4	pruned for overhead wires, one sided		Overhead wires.		UNDESIRABLE
4299	West property line	Robinia pseudoacacia	Black Locust	8	3	3	twist in trunk, thin crown				UNDESIRABLE
4300	Northwest of pond	Robinia pseudoacacia	Black Locust	7	3	4	twist in trunk, over-topped, double leader, thin crown				UNDESIRABLE
4301	Northwest property corner	Robinia pseudoacacia	Black Locust	11	4	4	one sided, trunk scar, decay, minor deadwood		Overhead wires.		UNDESIRABLE
4302	Northwest property corner	Robinia pseudoacacia	Black Locust	10	4	4	twist in trunk, trunk scar, minor deadwood, decay				UNDESIRABLE
4303	Northwest property corner	Robinia pseudoacacia	Black Locust	7	4	4	over-topped, basal decay, decay, minor deadwood				UNDESIRABLE
4304	North property line	Prunus serotina	Black Cherry	11	3	4	over-topped, basal scar, slight sweep, metal in trunk			Forked at 1' with a 10" co-leader.	UNDESIRABLE
4305	Northwest of pond	Robinia pseudoacacia	Black Locust	16	3	3	trunk scar, multiple leaders, minor deadwood				UNDESIRABLE
4306	Northwest of pond	Robinia pseudoacacia	Black Locust	5	3	3	thin crown				UNDESIRABLE
4307	Northwest of pond	Robinia pseudoacacia	Black Locust	6	3	3	one sided, double leader				UNDESIRABLE
4308	Northwest of pond	Prunus serotina	Black Cherry	5	3	4	thin crown, minor deadwood, twist in trunk				UNDESIRABLE
4309	Northwest of pond	Prunus serotina	Black Cherry	8	3	4	slight sweep, thin crown				UNDESIRABLE
4310	Northwest of pond	Prunus serotina	Black Cherry	8	4	4	dieback, minor deadwood, one sided, basal decay				UNDESIRABLE
4311	Northwest of pond	Prunus serotina	Black Cherry	10	3	4	one sided, thin crown				UNDESIRABLE
4312	Northwest of pond	Prunus serotina	Black Cherry	8	3	4	over-topped, slight lean, twist in trunk				UNDESIRABLE
4313	Northwest of pond	Prunus serotina	Black Cherry	7	3	4	excessive lean, over-topped, twist in trunk				UNDESIRABLE
4314	Northwest of pond	Morus alba	White Mulberry (Common Mulberry)	5	3	4	over-topped, twist in trunk, multiple leaders				UNDESIRABLE
4315	Northwest of pond	Morus alba	White Mulberry (Common Mulberry)	7	3	4	over-topped, suckering, minor deadwood				UNDESIRABLE
4316	Northwest of pond	Prunus serotina	Black Cherry	8	3	4	twist in trunk, thin crown, slight lean				UNDESIRABLE
4317	Northwest of pond	Prunus serotina	Black Cherry	8	3	4	twist in trunk, thin crown, one sided				UNDESIRABLE
4318	Northwest of pond	Prunus serotina	Black Cherry	11	4	4	over-topped, slight lean, one sided, dieback, minor deadwood			Forked at base with a 7" co-leader.	UNDESIRABLE
4319	Northwest of pond	Prunus serotina	Black Cherry	9	3	3	double leader, vine infested, metal in trunk				UNDESIRABLE
4320	Northwest of pond	Prunus serotina	Black Cherry	7	4	4	slight lean, dieback, minor deadwood, 670, sparse foliage				UNDESIRABLE
4321	Northwest of pond	Prunus serotina	Black Cherry	4	4	4	damaged leader, dead tree caught in crown				UNDESIRABLE
4322	Northwest of pond	Prunus serotina	Black Cherry	9	4	4	vine infested, minor deadwood, decay		Saprophytic fungi present, 1/2 of trunk is decayed.		UNDESIRABLE
4323	Northwest of pond	Prunus serotina	Black Cherry	7	4	3	double leader, one sided, suckering, over-topped				UNDESIRABLE
4324	Northwest of pond	Juglans nigra	Black Walnut	9	3	3	minor deadwood				LANDMARK
4325	Northwest of pond	Robinia pseudoacacia	Black Locust	6	3	4	over-topped, suckering, slight sweep, minor deadwood				UNDESIRABLE
4326	Northwest of pond	Robinia pseudoacacia	Black Locust	12	3	4	one sided, double leader, minor deadwood, suckering				UNDESIRABLE
4327	Northwest of pond	Juglans nigra	Black Walnut	8	2	4	minor deadwood, twist in trunk, multiple leaders				LANDMARK
4328	Northwest of pond	Prunus serotina	Black Cherry	7	3	5	excessive lean, sweep, over-topped, suckering				UNDESIRABLE
4329	Northwest of pond	Prunus serotina	Black Cherry	6	3	4	over-topped, slight lean, minor deadwood				UNDESIRABLE
4330	Northwest of pond	Acer saccharinum	Silver Maple	23	3	3	multiple leaders, one sided, minor deadwood				DESIRABLE
4331	Northwest of pond - along edge of water	Salix nigra	Black Willow	24	4	5	damaged leader, suckering, decay		Twin leader snapped off at 5'.		DESIRABLE
4332	Northwest of pond	Acer saccharinum	Silver Maple	17	3	4	over-topped, multiple leaders, weak crotch, slight sweep		Forked at 5'.		DESIRABLE
4333	Northwest of pond	Populus deltoides	Eastern Cottonwood	14	3	4	one sided, twist in trunk, slight over-topped, double leader				DESIRABLE
4334	Northwest of pond	Populus deltoides	Eastern Cottonwood	16	2	3	twist in trunk, multiple leaders				DESIRABLE
4335	Northwest of pond	Acer saccharinum	Silver Maple	5	3	4	over-topped, twist in trunk, sparse foliage, thin crown				DESIRABLE
4336	Northwest of pond	Acer saccharinum	Silver Maple	4	3	4	over-topped, twist in trunk, one sided				DESIRABLE
4337	Northwest of pond	Robinia pseudoacacia	Black Locust	5	4	4	one sided, thin crown, minor deadwood, over-topped				UNDESIRABLE

Tree Inventory Listing
670 Old Rand Road
Lake Zurich, Illinois
Prepared by Urban Forest Management, Inc. 6/24/2022

Tag No.	Location	Botanical Name	Common Name	Size	Cond.	Form	Problems	Insect/Disease	Comments	Co-Leaders at DBH	Species Quality Rating
4338	Northwest of pond	Robinia pseudoacacia	Black Locust	7	3	4	thin crown, minor deadwood, suckering, hollow				UNDESIRABLE
4339	Northwest of pond	Robinia pseudoacacia	Black Locust	8	4	3	one sided, thin crown, minor deadwood				UNDESIRABLE
4340	Northwest of pond	Robinia pseudoacacia	Black Locust	9	4	4	one sided, thin crown, minor deadwood, sparse foliage				UNDESIRABLE
4341	Northwest of pond	Robinia pseudoacacia	Black Locust	9	4	3	thin crown, dieback, minor deadwood, suckering				UNDESIRABLE
4342	Northwest of pond	Robinia pseudoacacia	Black Locust	10	4	3	dieback, minor deadwood, thin crown				UNDESIRABLE
4343	Northwest of pond	Robinia pseudoacacia	Black Locust	11	4	3	dieback, minor deadwood, thin crown, vine infested				UNDESIRABLE
4344	Northwest of pond	Prunus serotina	Black Cherry	7	3	4	slight lean, multiple leaders, one sided				UNDESIRABLE
4345	Northwest of pond	Prunus serotina	Black Cherry	10	3	4	one sided, thin crown				UNDESIRABLE
4346	Northwest of pond	Prunus serotina	Black Cherry	8	4	4	over-topped, slight lean, minor deadwood, sparse foliage				UNDESIRABLE
4347	Northwest of pond	Robinia pseudoacacia	Black Locust	11	3	3	thin crown, minor deadwood				UNDESIRABLE
4348	Northwest of pond	Morus alba	White Mulberry (Common Mulberry)	4	3	4	over-topped, twist in trunk				UNDESIRABLE
4349	Northwest of pond	Robinia pseudoacacia	Black Locust	9	3	4	twist in trunk, one sided, thin crown, minor deadwood				UNDESIRABLE
4350	Northwest of pond	Robinia pseudoacacia	Black Locust	8	3	4	one sided, thin crown				UNDESIRABLE
4351	Northwest of pond	Robinia pseudoacacia	Black Locust	7	4	4	one sided, thin crown, minor deadwood, sparse foliage				UNDESIRABLE
4352	Northwest of pond	Robinia pseudoacacia	Black Locust	9	4	4	one sided, thin crown, minor deadwood				UNDESIRABLE
4353	Northwest of pond	Robinia pseudoacacia	Black Locust	9	4	4	one sided, dieback, minor deadwood				UNDESIRABLE
4354	Northwest of pond	Robinia pseudoacacia	Black Locust	10	3	4	over-topped, one sided, thin crown				UNDESIRABLE
4355	Northwest of pond	Acer saccharinum	Silver Maple	9	3	4	over-topped, twist in trunk, multiple leaders				DESIRABLE
4356	Northwest of pond	Acer saccharinum	Silver Maple	10	3	4	slight sweep, one sided, double leader, over-topped				DESIRABLE
4357	North property line	Robinia pseudoacacia	Black Locust	9	3	4	over-topped, one sided, weak crotch			Forked at 3' with an 8" co-leader.	UNDESIRABLE
4358	North property line	Populus deltoides	Eastern Cottonwood	18	3	3	broken limbs, weak crotch, one sided,			Forked at 1.5' with a 16" co-leader.	DESIRABLE
4359	North property line	Robinia pseudoacacia	Black Locust	5	3	4	over-topped, twist in trunk, multiple leaders				UNDESIRABLE
4360	North property line	Populus deltoides	Eastern Cottonwood	5	3	5	sweep, over-topped, damaged leader				DESIRABLE
4361	North property line	Robinia pseudoacacia	Black Locust	14	3	4	one sided, double leader, minor deadwood				UNDESIRABLE
4362	North property line	Prunus serotina	Black Cherry	11	3	4	slight sweep, multiple leaders				UNDESIRABLE
4363	North property line	Prunus serotina	Black Cherry	5	4	4	double leader, one sided, slight sweep				UNDESIRABLE
4364	North property line	Robinia pseudoacacia	Black Locust	5	3	4	over-topped, double leader, slight sweep				UNDESIRABLE
4365	North property line	Robinia pseudoacacia	Black Locust	10	3	3	double leader, minor deadwood				UNDESIRABLE
4366	North property line	Robinia pseudoacacia	Black Locust	8	4	4	trunk scar, one sided, thin crown, minor deadwood, dieback, loose bark				UNDESIRABLE
4367	North property line	Prunus serotina	Black Cherry	6	4	4	over-topped, slight sweep, suckering				UNDESIRABLE
4368	North property line	Prunus serotina	Black Cherry	5	3	4	over-topped, minor deadwood				UNDESIRABLE
4369	North property line	Prunus serotina	Black Cherry	6	4	4	slight lean, dieback, minor deadwood				UNDESIRABLE
4370	North property line	Robinia pseudoacacia	Black Locust	14	3	4	one sided, minor deadwood				UNDESIRABLE
4371	North property line	Robinia pseudoacacia	Black Locust	10	3	3	thin crown, minor deadwood				UNDESIRABLE
4372	North property line	Robinia pseudoacacia	Black Locust	14	3	3	minor deadwood, one sided				UNDESIRABLE
4373	North property line	Robinia pseudoacacia	Black Locust	12	3	4	weak crotch, multiple leaders, minor deadwood				UNDESIRABLE
4374	North property line	Robinia pseudoacacia	Black Locust	17	4	4	one sided, weak crotch, multiple leaders, minor deadwood, 679				UNDESIRABLE
4375	North property line	Prunus serotina	Black Cherry	5	4	4	over-topped, slight sweep, minor deadwood				UNDESIRABLE
4376	North property line	Prunus serotina	Black Cherry	4	3	4	sweep, double leader, over-topped				UNDESIRABLE
4377	North property line	Prunus serotina	Black Cherry	6	3	4	over-topped, twist in trunk, minor deadwood				UNDESIRABLE
4378	North property line	Populus deltoides	Eastern Cottonwood	13	2	3	twist in trunk, minor deadwood				DESIRABLE

McSHANE CONSTRUCTION COMPANY

9500 W. Bryn Mawr Avenue, Suite 200
Rosemont, IL 60018
www.mcshaneconstruction.com

May 9, 2024

David Haymes, On Behalf of OSK Capital Partners
670 S Old Rand Rd LLC
c/o Ash, Anos, Freedman & Logan
95 Revere Drive, Suite G
Northbrook, IL 60062

RE: Site Development Budget | 670 Old Rand

Dear Mr. Haymes:

We have reviewed the Preliminary Pricing Set civil drawings dated 4/12/24 by Eriksson Engineering Associates along with the Preliminary for Review landscape drawings dated 3/20/24 by Eriksson Engineering Associates and have developed a budget of $2,632,427 for the site development work. The scope is further clarified below.

- Demo existing pavement and structures
- Strip existing topsoil and stock pile sufficient quantities for respread
- Cut site to fill. Export excess clay. *(Let's review as this is estimated at 22,500 CY of export)*
- Build pads for new single family and townhome units
- Landscaping only for detention area
- Curbs and roads including asphalt base course and asphalt surface course. Standard duty.
- Public walks along edges of roads
- Concrete aprons for driveways
- Storm as shown. No storm shown at ring road.
- Watermain as shown plus (18) stubs of 1" copper for single family homes and (5) stubs of 2" copper for townhome buildings to within 5' of building
- Sanitary as shown plus a 6" stub to each single family home and townhome building to within 5' of building
- Watermain and sanitary main bored under roads
- Supervision, management, insurance, and profit

We appreciate the opportunity to assist you and would be happy to meet with you to answer any questions on our budget. Please feel free to contact me at (847) 421-9178 or via email at drintz@mcshane.com.

Sincerely,

McSHANE CONSTRUCTION COMPANY

David J. Rintz
Regional Vice President – Multi-Family

Cc: N. Ornhoff

GARY R. WEBER ASSOCIATES, INC.
LAND PLANNING ECOLOGICAL CONSULTING LANDSCAPE ARCHITECTURE

Wetland Determination Report

Project Name:	670 S. Old Rand Road	**Client:**	Advantage Consulting Engineers
Location:	Lake Zurich, Ela Township, Lake County, Illinois 60047		
Parcel PIN #	1420400003		
PLSS	SE S20 T43N R10E		
Coordinates	Latitude: 42.189303 Longitude: -88.083428		
Ecologist:	Lisa Pajon		
Project #	AC2289		
Attachments	Preliminary Water Resource Summary: Exhibit A		

A wetland determination was conducted by Gary R Weber Associates, Inc. (GRWA) to establish the presence and location of any wetlands or other water resources on the above referenced property located on S Old Rand Road and Buesching Road in Lake Zurich; hereafter referred to as the study area.

Our investigation consisted of a review of available water resource maps and publicly available historic aerials to determine if any areas on-site contained wetland signatures or water resources identified on regional mapping (see summary below). This review was initiated during winter conditions and no site visit has been conducted at this time. A follow-up investigation to collect data and stake boundaries will be required for permitting.

One (1) wetland signature was identified within the study area. This report and the attached exhibits do not constitute a full wetland delineation report and is provided for planning purposes only.

Map Review

Prior to the field investigation, a preliminary site evaluation was performed using natural resource mapping. Reviewed maps are summarized below. A preliminary water resource exhibit provides an estimation of wetland boundaries and is included with this report (Exhibit A).

- The National Wetlands Inventory identifies a freshwater, unconsolidated bottom, semi-permanently flooded water body (PUBF) within the study area.
- The Lake County Wetland Inventory identifies wetland within the study area.
- The Soil Map identifies the following soils within the study area (Exhibit D):

  1103A Houghton Muck – Hydric soil
  531C2 Markham Silt Loam – Predominately non-hydric soil
  530D3 Ozaukee Silty Clay Loam – Non-hydric

- The United States Geologic Survey (USGS) Topographic Map identifies a perennial pond within the study area.
- The FEMA Flood Insurance Rate Map identifies the study area outside the 500-year floodplain.
- The **Preliminary Water Resource Summary: Exhibit A** identifies present conditions within the study area. Locations and estimated boundaries of water resources are denoted.

GARY R. WEBER ASSOCIATES, INC.
LAND PLANNING ECOLOGICAL CONSULTING LANDSCAPE ARCHITECTURE

Review Summary:

The project area consists of a single-family home with access drive and accessory structures. The central and northern portions are fully vegetated and contain an open water pond and associated drainageway (Wetland 1).

Two wetlands appear to be located off-site to the north and west. An unnamed tributary is located east of the study area and connects to Wetland 1 via the drainageway.

The pond and drainageway are identified on the Lake County Wetland Inventory. The pond is also identified on the USGS Topographic map and the National Wetland Inventory.

A review of publicly available historic aerials shows the drainageway and pond were present before local development which occurred circa 1962.

Conclusions:

One (1) wetland with an associated drainageway was determined to be located within the study area. The wetland may connect off-site with an unnamed tributary that is associated with Buffalo Creek.

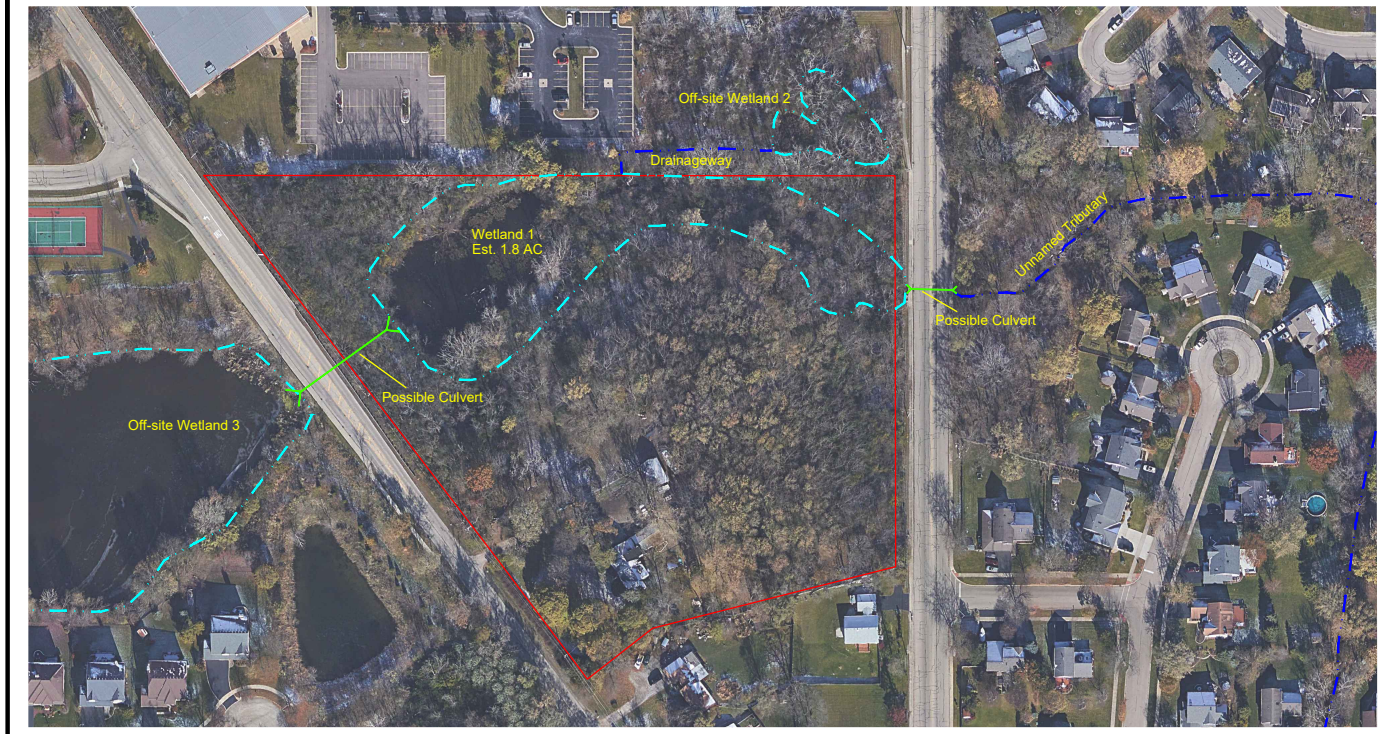
Wetlands in Lake Zurich are regulated under the Lake County Watershed Development Ordinance and may require a minimum buffer width of 50-ft.

This determination was done outside of the growing season using mapping resources and historic aerials. This report is to be used for planning purposes. Due to potential connectivity to Buffalo Creek, Wetland 1 will be under the jurisdiction of the U.S. Army Corps of Engineers.

Regulatory Summary:

The U.S. Army Corps of Engineers has the final authority in determining the jurisdictional status of the wetlands identified on site. GRWA recommends that a request for jurisdictional determination be sent to the U.S. Army Corps of Engineers as soon as possible. Any impacts to jurisdictional wetland, Waters of the U.S., or associated buffers will require U.S. Army Corps of Engineers notification.

The Village of Lake Zurich Stormwater Management Ordinance regulates the development of all areas within the Village. A Watershed Development Permit is required for the development of any site which impacts water resources.



LEGEND

Study Area

Estimated Wetland Boundaries

Estimated Non-wetland Waters Boundaries

Provided by: Google Earth - 2018 Aerial Image

0 80' 160'

SCALE: 1"=160' NORTH

GARY R. WEBER ASSOCIATES, INC.

670 S. Old Rand Road

Lake Zurich, Lake County, Illinois 60047

AC2289

Advantage Consulting Engineers

PRELIMINARY WATER RESOURCES SUMMARY

EXHIBIT A

L:\Projects\AC2289\Eco-Con\Wetland Report\Maps\Old Rand Rd_WL Exhibits.dwg

EcoCAT
Ecological Compliance Assessment Tool

Applicant:	Advantage Consulting Engineers	*IDNR Project Number:*	2301114
Contact:	Thakor Patel	*Date:*	07/18/2022
Address:	80 Main Street, Suite 17 Lemont, IL 60439	*Alternate Number:*	22-014
Project:	Lake Zurich Townhomes		
Address:	670 S Old Rand Rpad, Lake Zurich		

Description: Multifamily Residential Subdivision

Natural Resource Review Results

Consultation for Endangered Species Protection and Natural Areas Preservation (Part 1075)

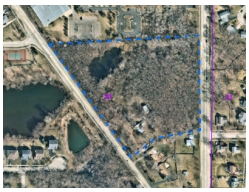
The Illinois Natural Heritage Database contains no record of State-listed threatened or endangered species, Illinois Natural Area Inventory sites, dedicated Illinois Nature Preserves, or registered Land and Water Reserves in the vicinity of the project location.

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, 20



IL Department of Natural Resources Contact
Adam Rawe
217-785-5500
Division of Ecosystems & Environment

Government Jurisdiction
IL Environmental Protection Agency
Division of Water Pollution Control Board
1021 North Grand Avenue East
Springfield, Illinois 62794

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: 2301114

Terms of Use

By using this website, you acknowledge that you have read and agree to these terms. These terms may be revised by IDNR as necessary. If you continue to use the EcoCAT application after we post changes to these terms, it will mean that you accept such changes. If at any time you do not accept the Terms of Use, you may not continue to use the website.

1. The IDNR EcoCAT website was developed so that units of local government, state agencies and the public could request information or begin natural resource consultations on-line for the Illinois Endangered Species Protection Act, Illinois Natural Areas Preservation Act, and Illinois Interagency Wetland Policy Act. EcoCAT uses databases, Geographic Information System mapping, and a set of programmed decision rules to determine if proposed actions are in the vicinity of protected natural resources. By indicating your agreement to the Terms of Use for this application, you warrant that you will not use this web site for any other purpose.

2. Unauthorized attempts to upload, download, or change information on this website are strictly prohibited and may be punishable under the Computer Fraud and Abuse Act of 1986 and/or the National Information Infrastructure Protection Act.

3. IDNR reserves the right to enhance, modify, alter, or suspend the website at any time without notice, or to terminate or restrict access.

Security

EcoCAT operates on a state of Illinois computer system. We may use software to monitor traffic and to identify unauthorized attempts to upload, download, or change information, to cause harm or otherwise to damage this site. Unauthorized attempts to upload, download, or change information on this server is strictly prohibited by law.

Unauthorized use, tampering with or modification of this system, including supporting hardware or software, may subject the violator to criminal and civil penalties. In the event of unauthorized intrusion, all relevant information regarding possible violation of law may be provided to law enforcement officials.

Privacy

EcoCAT generates a public record subject to disclosure under the Freedom of Information Act. Otherwise, IDNR uses the information submitted to EcoCAT solely for internal tracking purposes.

At the Heart of Community

COMMUNITY DEVELOPMENT DEPARTMENT

505 Telser Road
Lake Zurich, Illinois 60047

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

APPLICATION PZC 2024-08 **AGENDA ITEM 4.C**
PZC Hearing Date: June 19, 2024

STAFF REPORT

To: Chairperson Stratman and Members of the Planning & Zoning Commission

From: Sarosh Saher, Community Development Director

CC: Mary Meyer, Building Services Supervisor
Colleen McCauley, Village Planner

Date: June 19, 2024

Re: PZC 2024-08: 670 South Old Rand Road
Residential Development by OSK Capital LLC

SUBJECT

Mr. Lawrence M. Freedman, of Ash, Anos, Freedman & Logan, LLC, the agent and attorney for OSK Capital Partners, LLC, a Real Estate Developer of Highland Park, (the "Applicant"), is proposing the development of the property at 670 South Old Rand Road with a new residential subdivision. The property is an assemblage of two parcels containing 9-acres located between North Old Rand Road and Buesching Road, and legally described in Exhibit A attached hereto (the "Subject Property"). OSK Capital Partners, LLC is the contract purchaser of the property. The owner of the property is Mr. Henry C. Joern of Ingleside, IL.

GENERAL INFORMATION

Requested Action:	Special Use Permit for a Planned Unit Development (PUD) Zoning Map Amendment and Subdivision
Current Zoning:	R-1/2 Single Family Residential District
Proposed Zoning:	R-5 Single-family Residential District R-6 Multiple Family Residential District
Current Use:	Unimproved land & Single-Family Residence
Proposed Use:	Single-Family Homes and Residential Townhomes

Staff Report **Community Development Department**
APPLICATION PZC 2024-08 **PZC Hearing Date: June 19, 2024**

Property Location: 670 South Old Rand Road

Applicant: Lawrence M. Freedman, representing OSK Capital Partners, LLC

Owner: Henry C. Joern

Staff Coordinator: Colleen McCauley, Village Planner

LIST OF EXHIBITS

A. Legal Description
B. Public Hearing Sign
C. Site Photos
D. Aerial Map
E. Zoning Map
F. Parcel Map
G. Development Application and Attachments
H. Development Review Comments

BACKGROUND

The subject property is located on the east side of Old Rand Road near the intersection with Buesching Road, and is legally described in Exhibit A attached hereto (the "Subject Property"). Historical maps dating back to 1946 depict a single residential structure on the property. The building and associated accessory buildings are some of the oldest structures in the area and located on one of the main thoroughfares through the Village. The front of the property (Old Rand Road frontage) was maintained though the 1980s, while the rear was allowed to grow out to its current wooded state that exists today.

The Applicant has filed an application with the Village of Lake Zurich dated May 17, 2024 (the "Application") seeking:

- A Special Use Permit for a Planned Unit Development (PUD) and approval of a Development Concept Plan to develop the property with multiple-family residences and single-family homes
- Rezoning the property within the R-5 Single-family Residential District and R-6 Multiple-Family Residential District
- Exterior Appearance and Site Plan Approval consistent with a Development Concept Plan
- The grant of modifications to the Zoning Code under the PUD:
    - Bulk requirements for single-family residential development
    - Parking requirements for single-family residential development

Existing Conditions

The subject property is a 9-acre zoning lot, zoned R-1/2 Single-Family Residential and contains a single residential structure of approximately 2,060 square feet, with related improvements. Current frontage access is via South Old Rand Road. The subject property also contains a 2.16-acre wetland area along the north, which includes a pond and drainage creek. The wetlands are part of the Lake County Wetland Inventory, and the creek is under jurisdiction of the US Army Corps of Engineers. The drainage system connects Heatherleigh Pond to the west to detention areas within the Red Bridge Farm subdivision to the east, via culverts across South Old Rand Road and Buesching Road.

Proposal

The submitted plans include a complete redevelopment of the existing site, featuring a mix of detached single-family homes and attached single-family townhouses. Also included in the proposed plans is the development of a private road system with access from South Old Rand and South Buesching Road, improvements along the wetland/creek area respecting the 50-foot buffer, water/sewer improvements, streetlighting on-site, and creation of common open space areas with gazebos or similar structures.

The architect has submitted plans proposing three types of units:

- Single-family detached residences: 12 units proposed along the North side of the developed area, approximately 2,790 square feet of living space containing 3 bedrooms, featuring a 2-story layout with an attached 2-car garage facing the internal street.
- Single-family detached residences: 6 units proposed along the East with frontage along South Buesching Road, approximately 2,100 square feet of living space containing 3 bedrooms, featuring a 2-story layout. These units feature a 400 square-foot detached garage located at the rear of the lot and accessible from the internal roadway.
- Single-family attached townhomes (multiple-family residential buildings): 20 townhomes within 5 buildings, two of which have frontage on South Old Rand Road. Each townhome is configured with a 3-story layout with 3-bedrooms, a 2-garage attached garage, and approximately 2,640 square feet of living space.

The proposed buildings will be finished with fiber cement siding and shakes as the predominant material, with modular masonry brick, cast stone and wood used as accents along foundations, facades, railings and sills. The north single-family units also have a fiber cement shake detail on the porch roofs. Select east single-family units (along Buesching Road) have a cast stone element at the base of the structure. Only front elevations for the townhome and single-family units were provided in the architectural plans, and no elevations were provided for the proposed detached garages on site, although a three-dimensional rendering is included in the submission packet.

The southerly two-thirds of the property will be cleared of existing vegetation to make way for the development and new landscape material. The northerly one-third of the property will be reconfigured with a detention basin while maintaining the existing wetland and the vegetation that surrounds it.

Pursuant to public notice published on June 1, 2024, in the Daily Herald, a public hearing has been scheduled with the Lake Zurich Planning & Zoning Commission for June 19, 2024, to consider the Application. On June 4, 2024, the Village posted a public hearing sign on the Subject Property (Exhibit B)

Staff offers the following additional information:

A. **Previous Proposal.** In July 2022, the Applicant submitted an application requesting approval of a Planned Unit Development (PUD) to develop the property with 50 Townhomes within 12 buildings. That application was considered by the Village Board on January 3, 2023 but denied due to concerns related to density, parking, wetlands, and structures within the creek area. Following numerous discussions with village staff, the applicant presented a concept on July 17, 2023 at a Courtesy review of the Board.

B. **Courtesy Review**. Following the denial of the application on January 3, and to allow the applicant remain engaged with the project, but substantially revise it to be able to resubmit it for reconsideration, village staff recommended that the Applicant address the following:

- No structures should encroach into the flood plain
- The floodway (path of the stream) should not be impeded or altered by structures or features such as the retaining wall and/or the detention pond
- To meet the requirement for density, consider removing three buildings on the northwest side of the development, and remove a unit from the building nearest to the south lot line on the southeast side of the development. This would accomplish a reduction of 14 units from the recently proposed 50 units.
- Maintain the architectural character and materials as recently proposed. Staff also shared numerous examples of suggested architectural design and materials with the architect.
- Update the site grading and topo exhibits to reflect the mid-level entryways to the building
- Maintain all the proposed landscape features as submitted.
- Consider a mix of single-family residences and multiple-family townhouses to further reduce the density of the project.

The purpose of the Courtesy Review was to provide feedback, not a finding on whether the proposed concept would be acceptable. If intending to proceed, the Applicant was subsequently advised to return with a new proposal directly to the Planning and Zoning Commission.

C. **Zoning History.** The subject property was developed a single-family residential lot. Records indicate that the existing home on the property was constructed prior to 1947.

D. **Surrounding Land Use and Zoning.** The subject property is located on the eastern side of South Old Rand Road in a residential district, near the intersection of South Old Rand Road and Buesching Road. The properties to the east and west are located within the R-5 single-family residential district and developed within the Heatherleigh Subdivision to the west and Red Bridge Farm Subdivision to the east. The five properties to the south are of

similar vintage to the subject property and zoned within the R-1/2 single-family residential district. The properties to the north are zoned within the B-1 Local Community Business district and the O-2 Limited Office District and improved with larger commercial buildings containing Ela Soccer and the Barrington Christopher Club Banquet facility, both of which are developed with the Zurich Town Mall Subdivision with access from Surryse Road.

E. **Trend of Development.** The property is located within a mature residential neighborhood containing single-family homes and to the south of an established commercial area containing larger office and service use buildings. While the neighborhood is largely built out, many homes in the immediate vicinity including the Subject Property are of an older vintage and likely to be replaced with newer homes, such as the recently approved 2-lot residential subdivision at 545 Buesching Road. The proposed subdivision serves as a transition between the commercial zoning district to the north and the single-family detached houses to the south and will be in keeping with the trend of residential development of lots in the neighborhood.

F. **Zoning Districts**. The zoning code provides for five (5) zoning districts providing for all types of residential development. Taken as a whole, the residential district regulations are intended to preserve established neighborhoods and encourage new residential development, but only in a manner consistent with the overall character of the village.

Four (4) zoning districts are provided for single-family residential development. The single-family districts provide for a limited range of single-family detached housing densities consistent with the village's established single-family residential neighborhoods. The R-1/2 and R-3 districts allow for lower density residential use and larger lot sizes. The R-4 and R-5 districts allow for somewhat higher density residential use and smaller lot sizes.

The R-6 district is intended to function principally as a transition between single-family detached houses and other zoning districts and to provide for lower density townhouse and two-family building types, which may result in higher densities than in single-family developments.

G. **Density Discussion.** The proposed development area excluding wetlands is 7.14 acres. With a total of 38 units, the density of the proposed development is 5.32 units per acre. This density is in-line with other townhome and higher density developments in the Village.

GENERAL FINDINGS

The Application requires approval through a Planned Unit Development (PUD), which is classified as a Special Use Permit. As such the Application is reviewed against the standards for Special Use Permits and PUDs.

Staff of the Community Development Department's development review team has evaluated the development against the various standards and provisions of the Lake Zurich Municipal Code and offers findings on specific sections of the Code.

9-22-5: STANDARDS FOR PLANNED UNIT DEVELOPMENTS (PUDs).

Planned unit developments are included in the zoning code as a distinct category of special use. As such, they are authorized for the same general purposes as all other special uses and in recognition of the fact that traditional bulk, space, and yard regulations that may be useful in protecting the character of substantially developed and stable areas may impose rigidities on the development or redevelopment of parcels or areas that lend themselves to an individual, planned approach.

A. Special Use Permit Standards: No special use permit for a planned unit development shall be recommended or granted pursuant to this chapter unless the applicant shall establish that the proposed development will meet each of the standards made applicable to special use permits pursuant to chapter 19 of this title.

Staff Response: Standard met. The Planned Unit Development is being requested as a Special Use Permit. Please refer to the "Standards for Special Use Permits" contained within this report.

B. Additional Standards for All Planned Unit Developments: No special use permit for a planned unit development shall be recommended or granted unless the applicant shall establish that the proposed development will meet each of the following additional standards:

1. Unified Ownership Required: The entire property proposed for planned unit development treatment shall be in single ownership or under such unified control as to ensure that the entire property will be developed as a unified whole. All owners of the property shall be included as joint applicants on all applications and all approvals shall bind all owners. The violation of any owner as to any tract shall be deemed a violation as to all owners and all tracts.

Staff Response: Standard met. The entire property that is subject to the PUD is under contract to be purchased by the Applicant, OSK Capital Partners, LLC.

2. Minimum Area: The applicant shall have the burden of establishing that the subject property is of sufficient size and shape to be planned and developed as a unified whole capable of meeting the objectives for which planned unit developments may be established pursuant to this section.

Staff Response: Standard met. 2 parcels with total area of 384,250 sq. ft. (8.82 acres), of which approximately 94,089 sq. ft. (2.16 acres) will be dedicated wetland/green space. The total remaining buildable area is 290,109 sq. ft. (6.7

acres). The buildable area is an irregularly shaped assemblage of two parcels, whose shape is defined by the two relatively straight roadways along the east and west. The property possesses sufficient size and shape to be developed as a single planned unit development containing the mix of multiple-family and single-family lots as proposed.

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

   Staff Response: Standard met. Easements for onsite improvements will be provided at the time of Final Plan consideration. The residential development will need to be managed by a Homeowners Association that will be required to adopt its declarations of covenants, rights, and restrictions. The declarations will need to be reviewed and approved by the village prior to Final Plan approval.

4. Public Open Space and Contributions: Whenever the official comprehensive plan, zoning map, or official map indicates that development of a planned unit development will create a need for land for public purposes of the village within the proposed planned unit development, the board of trustees may require that such area be designated and to the extent such need is specifically and uniquely attributable to the proposed development, dedicated to the village for such use. In addition, the board of trustees may require evidence that all requirements of village ordinances pertaining to the dedication of land or the contribution of cash in connection with subdivisions or developments of land have been met as respects the proposed planned unit development.

   Staff Response: Standard met. The developer has proposed multiple areas of open space within the developable portion of the property. However, the approximately 19,300 square feet of the central oval open space or the northern wetland greenspace portions of the property does not constitute acceptable open space by the Village as dedicated public land.

   Fees will therefore be assessed by the village in lieu of or in combination with the dedication of land to the village for park purposes (public parks), per Section 10-4-5 of the municipal code. The developer will be provided with the estimates for contribution of funds (park impact fees) to be paid in lieu of land dedication

   Storm water detention areas, areas subject to natural resource protections, areas in the floodway or floodplain, and wetland are additionally not accepted as dedication for park purposes. The developer is additionally required to

stabilize the natural creek that flows along the northerly portion of the development. Such stabilization measures will have a regional effect on the flow of stormwater downstream from the development.

5. Common Open Space:

a. Amount, Location, And Use: The failure of a planned unit development to provide common open space shall be considered to be an indication that it has not satisfied the objectives for which such developments may be approved pursuant to this zoning code. When common open space is provided in a planned unit development, the amount and location of such open space shall be consistent with its intended function as set forth in the application and planned unit development plans. No such open space shall be used for the construction of any structure or improvement except such structures and improvements as may be approved in the final plan as appropriate to the intended leisure and recreational uses for which such open space is intended.

b. Preservation: Adequate safeguards, including recorded covenants or dedication of development rights, shall be provided to prevent the subsequent use of common open space for any use, structure, improvement, or development other than that shown on the approved final plan. The restrictions must be permanent and not for a given period of years and must run with the land. Such covenants and dedications may provide that they may be released, but only with the express written consent of the board of Trustees.

c. Ownership And Maintenance: The final plan shall include such provisions for the ownership and maintenance of such open space and improvements as are reasonably necessary to ensure their continuity, care, conservation, maintenance, and operation in accordance with predetermined standards and to ensure that remedial measures will be available to the village if such open space or improvements are permitted to deteriorate or are not maintained in a condition consistent with the best interests of the planned unit development or the village.

d. Property Owners' Association: When the requirements of subsection B5c of this section are to be satisfied by the ownership or maintenance of such open space or improvements by a property owners' association, such association shall meet each of the following standards:

i. The bylaws and rules of the association and all declarations, covenants, and restrictions to be recorded must be approved as part of the final plan prior to becoming effective. Each such document shall provide that it shall not be amended in any manner that would result in it being in violation of the requirements of this subsection B5d(1); and

ii. The association must be established and all covenants and restrictions must be recorded prior to the sale of any property within the area of the planned unit development designated to have the exclusive use of the proposed open space or improvements; and

iii. The association must be responsible for casualty and liability insurance, taxes, and the maintenance of the open space and improvements to be deeded to it; and

iv. Membership in the association must be mandatory for each property owner and any successive owner having a right to the use or enjoyment of such open space or improvements; and

v. Every property owner having a right to the use or enjoyment of such open space or improvements must pay its pro rata share of the cost of the association by means of an assessment to be levied by the association that meets the requirements for becoming a lien on the property in accordance with state statutes; and

vi. The association must have the right to adjust the assessment to meet changed needs. The membership vote required to authorize such adjustment shall not be fixed at more than two-thirds (2/3) of the members voting on the issue; and

vii. The village must be given the right to enforce the covenants; and

viii. The village must be given the right, after ten (10) days' written notice to the association, to perform any maintenance or repair work that the association has neglected to perform, to assess the membership for such work and to have a lien against the property of any member failing to pay such assessment. For this purpose alone, the village shall have all the rights and powers of the association and its governing body under the agreements and declarations creating the association.

Staff Response: Standard Met. The development contains common open space that includes private streets, land between the buildings, pedestrian pathways, the buffer open space between the wetland and the buildings, and stormwater management facilities. These areas are proposed to be owned and maintained by a Homeowner's Association (HOA). The specific responsibilities of the HOA will be provided for through declarations of covenants, rights and restrictions that will be required to be submitted for review and approval at the time of final plan consideration.

6. Landscaping and Perimeter Treatment: Any area of a planned unit development not used for structures or circulation elements shall be landscaped or otherwise

improved. The perimeter of the planned unit development shall be treated so as to ensure compatibility with surrounding uses by means such as provision of compatible uses and structures, setbacks, screening, or natural or manmade buffers.

Staff Response: Standard partially met. The development will be effectively separated from the property to the north by the larger approximately 2-acre green space. The screening along the southern lot line adjacent to the neighboring residential properties will be accomplished by means of a solid 6-foot high fence and additional landscape material. The subdivision boundaries with frontage along Old Rand and Buesching Roads will also be landscaped in the areas between the buildings and the street.

While the applicant has provided a color rendering for a subdivision wide landscape plan, a detailed count of the proposed plantings and a residential lot specific landscape plan will need to be submitted to calculate opacity values and replacement values. Staff has additionally requested that "trees classified as "heritage trees" in the tree survey shall be incorporated into the landscape plans to the greatest extent possible. A tree survey map would need to be provided to denote existing trees and trees to be removed.

7. Private Streets: Private streets are prohibited unless expressly approved by the board of trustees. If so approved, they shall meet all construction standards applicable to public streets. No such streets shall be approved except upon the condition that they shall be owned and maintained by a property owners' association meeting the requirements set forth in subsection B5d of this section

Staff Response: Standard met. This standard is written within the framework of single-family detached homes, whose subdivisions are developed with public streets. However, due to the nature of the subdivision and at the recommendation of the Village's Development Review Team (DRT), all streets within the development are proposed to be maintained as private streets. Such streets will be constructed to village construction standards applicable to public streets, and shall be owned and maintained by the HOA

8. Sidewalks: A sidewalk meeting the standards of the Lake Zurich subdivision ordinance shall be provided along at least one side of every street in or abutting a planned unit development; provided, however, that such sidewalk may be constructed in a street right of way or as a specific element of the design of the planned unit development.

Staff Response. Standard met. The plans include interior sidewalks throughout the subdivision, leading to all front door entrances and the common open space area. The sidewalks are also designed to provide a pedestrian connection between Old Rand and Buesching Roads.

Staff is also recommending that a 5-foot wide sidewalk be constructed along the frontage of the property along Old Rand Road. In lieu of the absence of such sidewalk, a fee shall be paid by the developer to be used by the village for sidewalk construction, replacement or repair within the village corporate boundaries. Such fee will be calculated at the rate of $20.00 per square-foot for a 5-foot wide sidewalk meeting village standards for the length of frontage of the property where no sidewalk is proposed.

Further, a crosswalk is proposed at the development entrance, which would allow pedestrians to continue traveling north/south along South Old Rand Road via the existing sidewalk network on the west side of the street. No public sidewalk exists on the east side of Old Rand Road, although townhomes with frontage along this roadway will have sidewalks connecting to the remainder of the walkway system. The development also includes connections to the existing sidewalk on the west side of Buesching Road.

The Traffic Study completed by Eriksson Engineering Associates also details sidewalk construction; their recommendation notes that pedestrian crosswalk signage should be provided (as well as advance warning signage).

9. Utilities: All utility lines shall be installed underground.

Staff Response: Currently, all private and public utilities proposed to serve the development itself are proposed to be installed underground.

The existing carriage walk along Buesching Road may be pulled off the back of curb and incorporated into the walk for the single-family homes. The sidewalk proposed along Old Rand Road shall similarly be located closer to the building. Utility pole conflicts to accommodate the sidewalk shall require the removal of such poles and burying existing utility lines within those areas.

10. Additional Standards for Specific Planned Unit Developments: When the district regulations authorizing any planned unit development use in a particular district impose standards to be met by such planned unit development in such district, a special use permit for such development shall not be recommended or granted unless the applicant shall establish compliance with such standards. (Ord., 10-2004)

Staff Response: Standard Met. There are no additional standards imposed through the establishment of a townhome multiple-family subdivision that are proposed within the R-5 or the R-6 district. Any conditions governing the development of the subdivision by the developer and home builder along with the future maintenance of common areas will be memorialized within a binding agreement between the village and developer.

9-19-3: STANDARDS FOR SPECIAL USE PERMITS.

Staff has reviewed the application and found that the proposal will continue to remain in substantial conformance with the standards for Special Use Permits as outlined below.

A. General Standards: No special use permit shall be recommended or granted unless the applicant shall establish substantial conformance with the following:

1. Zoning Code and Plan Purposes: The proposed use and development will be in harmony with the general and specific purposes for which this zoning code was enacted and for which the regulations of the district in question were established and with the general purpose and intent of the official Comprehensive plan.

Staff Response: Standard met. The development will continue to remain in substantial conformance with the purpose and intent of the R-5 single-family residential district and the R-6 Multiple-Family Residential District. The currently adopted 2003 Comprehensive Plan land use map designates the subject property as Open Space.

However, during the process of updating the plan, Village staff are recommending designating the subject property as low to medium density multi-family as a future land use. The development proposes a net density of 5.32 units per acre which is in keeping with similar medium density developments in the community.

The proposed development occupying the southernly buildable area meets the intent of these recommendations as it proposes to allow the remaining 14% of the property to remain as open space with the preservation of the wetlands and other open space features.

2. No Undue Adverse Impact. The proposed use and development will not have a substantial or undue adverse effect upon adjacent property, the character of the area, or the public health, safety, and general welfare.

Staff Response: Standard met. The developer has taken measures to reduce any impacts of flooding on the subject property and surrounding property through the installation of on-site stormwater management facilities.

The subdivision will not have any substantial or undue adverse effect upon any adjacent properties. The proposed development is consistent with the surrounding development in land use. The design of the single-family homes is unique in that it proposes a new trend of closer-spaced detached homes on smaller lots thereby providing for a higher density. This configuration requires modifications to the bulk requirements of the code to be accomplished.

Additionally, the submitted traffic study indicates that both Buesching Road and Old Rand Road have adequate capacity to handle the proposed vehicular load caused by the development.

3. No Interference with Surrounding Development. The proposed use and development will be constructed, arranged, and operated so as not to dominate the immediate vicinity or to interfere with the use and development of neighboring property in accordance with the applicable district regulations.

   Staff Response: Standard met. The proposed structures within the development will be constructed and arranged so as not to dominate the immediate vicinity, but instead strive for compatibility with surrounding residential uses.

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

   Staff Response: Standard Met. Existing utilities currently run in the vicinity of the Subject Property. the Applicant is required to connect to such utilities – water and sanitary sewer. The Applicant is proposing the most efficient layout for underground utilities.

5. No Traffic Congestion. The proposed use and development will not cause undue traffic congestion nor draw significant amounts of traffic through the surrounding streets.

   Staff Response: Standard met. The development is located between Buesching Road and South Old Rand Road, both of which are collector roadways, which serve the residential areas to the north/south and experience relatively low volumes of traffic. The developer has proposed two private roadways within the subdivision, to act as local roads, feeding into the above-mentioned collector roadways, similar to road network in the surrounding subdivisions.

   The Petitioner utilized Eriksson Engineering Associates to conduct a traffic study to evaluate the impact the proposed development would have on existing nearby roadways. The following conclusions and recommendations were included in the report:

   i. **The existing street network can accommodate the additional traffic from the proposed project, as projected to the year 2030.**
   ii. **Development of the site as proposed, with 38 residential units, will generate 26 additional A.M. peak hour trips. Note data was collected at Old Rand Rd at Grand/Buesching Roads from the 7:00 a.m. to 8:45 a.m. time period, with a "peak hour" established at 7:45 a.m. – 8:45 a.m.**

iii. **The report projects 31 additional peak hour trips during the evening commuter period of 4:45 p.m. and 5:45 p.m.; data was collected from 4:00 p.m. to 5:45 p.m. at the same aforementioned intersection.**
iv. **All intersections within the study area work at acceptable levels of service and delay, with Levels of Service (LOS) at C grade or better during peak hours. No turning movement at the Old Rand/Grand/Buesching intersection has a projected delay of greater than one (1) second for the year 2030.**

These recommendations are incorporated into the proposed site and engineering plans.

6. No Destruction of Significant Features. The proposed use and development will not result in the destruction, loss, or damage of any natural, scenic, or historic feature of significant importance.

Staff Response: Standard met. While the proposed development will result in the demolition of the existing residential home on the property, the building has not been identified as a designated historic property.

There are currently no wetland or natural resource protection areas within the buildable portion of the property.

The developer has proposed preserving existing "heritage" trees on the site where possible. Additionally, sustainable and environmentally sensitive measures are being proposed to ensure the control of stormwater quality being released into the creek onsite, including stabilization of the streambanks. The development will be required to conform to the Lake County Watershed Development Ordinance

7. Compliance with Standards. The proposed use and development complies with all additional standards imposed on it by the particular provision of this Code authorizing such use.

Staff Response: Standard met. The proposed development will comply with all other additional standards imposed through the building codes for Single-Family and Multiple-Family Residences, with the exception of the bulk requirement modifications to the code that are being requested by the developer.

8. Positive Effect. The proposed special use creating a positive effect for the zoning district, its purpose, and adjacent properties shall be placed before the benefits of the petitioner.

Staff Response: Standard met. The proposed development will assist in redeveloping and revitalizing an under-utilized parcel within a well-

established area of the Village. The development will provide additional housing options for the community.

B. Special Standards for Specified Special Uses. When the district regulations authorizing any special use in a particular district impose special standards to be met by such use in such district, a permit for such use in such district shall not be recommended or granted unless the applicant shall establish compliance with such special standards.

Staff Response: Not Applicable. The development does not require the imposing of any special standards in addition to those that are currently in place as the proposed use of the property is for the establishment of single-family residential uses.

C. Considerations. In determining whether the applicant's evidence establishes that the foregoing standards have been met, the Plan Commission and the Board of Trustees shall consider:

1. Benefit. Whether and to what extent the proposed use and development at the particular location requested is necessary or desirable to provide a service or a facility that is in the interest of the public convenience or that will contribute to the general welfare of the neighborhood or community.

Staff Response: Standard met. The piece of land between Buesching Road and Old Rand Road is developed with similar types of medium- to higher-density residential housing along with a variety of commercial and industrial uses. This development provides a transition from the higher intensity commercial and industrial uses to the north to the lower density residential uses along both Buesching and Old Rand Road. This development will provide new housing options for empty nesters, and first-time home buyers alike, who want to locate within the community.

2. Alternative Locations. Whether the purposes of the zoning code can be met by the location of the proposed use and development in some other area or zoning district that may be more appropriate than the proposed site.

Staff Response: Standard met. The proposed location is suitable for this type of residential use, and is based on its consistency with the land uses, comprehensive plan, architecture, and design surrounding the proposed development. No alternate locations are currently proposed.

3. Mitigation of Adverse Impacts. Whether all steps possible have been taken to minimize any substantial or undue adverse effects of the proposed use and development on the immediate vicinity through building design, site design, landscaping, and screening.

Staff Response: Standard met. All steps necessary will be taken to minimize any substantial adverse effects of the proposed development.

IDENTIFICATION AND ANALYSIS OF ZONING RELIEF FOR THE PLANNED UNIT DEVELOPMENT (PUD)

On analysis of the proposed development against the various standards contained within the municipal code, staff has identified the following modifications to the zoning code.

1. **Bulk Regulations.**
   The Village Code includes several Planned Unit Development (PUD) objectives, which discuss desirability, creative approaches, architectural coordination, preservation of characteristics such as natural topography, use of and creation of open space.

   The proposed development includes a mix of multiple-family and single-family residential lots. The single-family lots are proposed as a higher density residential component whose bulk requirements resemble the density of a townhouse development, but project the character of a single-family home community – with homes on individual lots containing attached or detached garages.

   As such the uniqueness of such a proposal is not generally reflected in the current zoning code which looks at single-family development in a standard conventional way. As a result, the proposal will require modifications to the bulk requirements of the code for all aspects of the single-family development, and they are listed below:

   Section 9-3-11. Bulk, Space and Yard Requirements.

Standard	Required	Proposed: 12 lots along North	Proposed: 6 lots East along Buesching
Minimum Lot Area Per Unit	5,000	4,680 (NW units) and 4,455 (NE units)	3,680
Minimum Lot Width (Feet)	75	45	32
Min. Interior Side Yard	7	4' between garages 7' between homes	4' for one side of the structure and 7' for the other
Front and Corner Side Yard Adjustment	51' for S. Old Rand Road 24' for S. Buesching Rd	27	25
Min. Rear Yard	30	20	40

   Section 9-10-1: OFF STREET PARKING:

Paragraph 2.a.(2) requires that single-family dwellings be provided with 3 parking spaces for each dwelling unit. The Applicant is proposing 2 spaces within a garage only for the single-family residential units facing Buesching Road.

Additional modifications to the Zoning and Land development Code may be identified upon submission of the documents requested by staff.

RECOMMENDATION

The recommendation of the Planning and Zoning Commission should be based on the standards included in the following Sections of the Lake Zurich Municipal Code:

- Section 9-22-5: Standards for Planned Unit Developments (PUD)
- Section 9-19-3: Standards for Special Use Permits

Staff has determined that all standards for approval have been met or will be met through approval of the identified modifications to the code and recommends that the Planning and Zoning Commission makes these standards a part of the official record of the Application.

Staff of the Community Development Department therefore recommends the approval of Application PZC 2024-08, 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, Village Engineer, Village Landscape Consultants and applicable governmental agencies:
   a. Zoning Application, Cover Letter and attachments dated May 17, 2024, prepared by Mr. Lawrence M. Freedman, of Ash, Anos, Freedman & Logan, LLC, the agent and attorney for OSK Capital Partners, LLC.
   b. Legal Description of the Subject Property.
   c. ALTA/NSPS Land Title Survey prepared by Regional Land Services, dated June 21, 2022.
   d. ALTA Commitment for Title Insurance Issued by Chicago Title Insurance Company dated April 20, 2022.
   e. Planning and Zoning Commission Submittal prepared by Pappageorge Haymes Partners dated May 15, 2024 and last updated on May 17, 2024 consisting of the following exhibits:

      Architectural Exhibits:
      i. Cover and Index – Sheet A00
      ii. Architectural Renderings – Sheets A01-A04
      iii. Current Site Plan – Sheet A05
      iv. Plat of Subdivision – Sheet A06
      v. Single-family Home Plans and Elevations – Sheets A07-A08
      vi. Row Home (multiple-family) Plans and Elevations – Sheets A09-A10

      Civil Exhibits
      vii. Site Demolition Plan – Sheet C100
      viii. Site Geometry Plan – Sheet C200
      ix. Site Utility Plan – Sheet C300
      x. Grading and Paving Plan – Sheet C400
      xi. Site work details – Sheets C500-C503

      Landscape Exhibits
      xii. Rendered Landscape Plan – Sheet L100 (color)

xiii. Landscape Plan – Sheet L100
xiv. Landscape Details (Sheet L200

f. Site Development Budget prepared by McShane Construction Company, dated May 9, 2024.
g. Site Lighting exhibits including the following:
   i. Photometric Plan prepared by LSI, dated May 17, 2024, models 1 and 2.
   ii. Light Fixture Specification prepared by LSI for Standard Lexington (LXM4).
h. Tree Inventory and Report prepared by Urban Forest Management, Inc. dated June 24, 2022.
i. Stormwater Management Report Prepared By: Melanie Carollo & Laura Rosenbauer, dated May 17, 2024.
j. Preliminary Jurisdictional Field Report prepared by Lake County dated August 25, 2022.
k. Preliminary Hydraulic Analysis Existing Conditions Report dated April 26, 2024 prepared by Eriksson Engineering Associates, Ltd.
l. Traffic and Parking Study prepared by Eriksson Engineering Associates, Ltd., dated May 14, 2024.

2. 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.

3. All trees, hedges, signs or other obstructions which could prevent persons driving vehicles on Buesching Road and Old Rand Road from obtaining a clear view of traffic when approaching the intersection or a pedestrian crosswalk shall be maintained at a low height and signs shall be adequately set back from the corner.

4. The Developer shall submit a Final Plan to the Village to particularize the details of the on-site and off-site improvements related to the development of the site including private and public roadway construction, stormwater management and flood mitigation, and pedestrian sidewalk and crosswalk construction. Such Final Plan shall also include a Final Plat of Subdivision delineating the final configuration of lots within the subdivision.

5. Prior to Final Plan approval, detailed landscape plans shall be submitted indicating compliance with the perimeter landscape requirements for the subdivisions, in this case as a PUD for development of the Property prescribed by Section 9-8A-5 of the Lake Zurich Municipal Code, with particular reference to the boundaries of the property along the east, south and west lot lines. The trees classified as "heritage trees" in the tree survey will be incorporated into the plans to the greatest extent possible. A tree survey map shall be provided to denote existing trees and trees to be removed. The developer shall utilize the "Village of Lake Zurich Tree Replacement Worksheet" to determine the replacement value in the form of either replacement trees within the development or fee in lieu of replacement trees at the "average market value" for a >2.5-inch Replacement Tree as denoted in the worksheet as updated from time to time.

6. The property line along the south of the project will be landscaped and screened from adjacent properties to the south with a combination of a 6-foot high solid privacy fence and landscape plant material consisting of canopy trees, evergreen trees, deciduous trees and shrubs. In order to accommodate the additional landscape material, the width of the landscape area along the south lot line of the project should be designed with adequate width.

7. The drainageway (creek) that runs along the northerly portion of the property that is associated with the wetland and pond shall have its banks stabilized and restored in accordance with a plan prepared by the Applicant that is approved by the Village. Such stabilization and restoration plan shall be submitted for review and approval prior to Final Plan Approval and shall be conducted in conjunction with the earthwork related to the project and completed prior to the construction of the first residential building on the property.

8. The Developer shall establish a Home Owners Association (HOA), 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. The provisions for such HOA 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.

9. 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.

10. 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').

11. A 5-foot wide sidewalk shall be constructed along the frontage of the property along Old Rand Road. In lieu of the absence of such sidewalk, a fee shall be paid by the developer to be used by the village for sidewalk construction, replacement or repair within the village corporate boundaries. Such fee will be calculated at the rate of $20.00 per square-foot for a 5-foot wide sidewalk meeting village standards for the length of frontage of the property where no sidewalk is proposed.

12. The existing carriage walk along Buesching Road may be pulled off the back of curb and incorporated into the walk for the houses. The sidewalk proposed along Old Rand Road shall similarly be located closer to the building. Utility pole conflicts to accommodate the sidewalk shall require the removal of such poles and burying existing utility lines within those areas.

13. A pedestrian crosswalk shall additionally be provided across Old Rand Road to connect the subject PUD to the existing sidewalk on the west side of Old Rand Road at a location immediately north of the main entrance and shall be constructed per village standards and accompanied by flashing beacons to warn of pedestrians within the crosswalk.

14. As part of Final Plan approval, the Developer shall enter into a binding development 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 HOA dissolution or its lack of required maintenance of these areas.

15. The Developer shall be responsible for payment of all Development Impact Fees as a condition of the approval of the PUD and Final Plat. The school impact fees, park impact fees, and library impact 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 residential building.

16. 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.

Respectfully Submitted,

Sarosh Saher, Community Development Director
Colleen McCauley, Planner

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

APPLICATION PZC 2024-08 **AGENDA ITEM 4.A**

PZC Hearing Opening Date: June 19, 2024
PZC Continued Consideration: July 17, 2024

STAFF REPORT

To: Chairperson Stratman and Members of the Planning & Zoning Commission

From: Sarosh Saher, Community Development Director

CC: Mary Meyer, Building Services Supervisor
Colleen McCauley, Village Planner

Date: July 17, 2024

Re: PZC 2024-08: 670 South Old Rand Road
Residential Development by OSK Capital LLC
Continued Consideration

This report serves as an addendum to the report presented to the Planning and Zoning Commission (PZC) at the hearing conducted on June 19, 2024, which contains the findings and recommendations of Village Staff. The report and all attachments can be viewed at the following link:
Link to June 19, 2024 Staff Report, Application Packet and Correspondence (OSK Residential Development)

SUBJECT

Mr. Lawrence M. Freedman, of Ash, Anos, Freedman & Logan, LLC, the agent and attorney for OSK Capital Partners, LLC, a Real Estate Developer of Highland Park, (the "Applicant"), is proposing the development of the property at 670 South Old Rand Road with a new residential subdivision. The property is an assemblage of two parcels containing 9-acres located between North Old Rand Road and Buesching Road, and legally described in Exhibit A attached hereto (the "Subject Property"). OSK Capital Partners, LLC is the contract purchaser of the property. The owner of the property is Mr. Henry C. Joern of Ingleside, IL.

The public hearing was opened by the PZC on June 19, 2024. The application was introduced by their Attorney and Agent, Mr. Lawrence Freedman. The project was then presented by the project architect, Mr. David Haymes of Papageorge Haymes Architects, Inc. Also present were the Civil Engineer, Traffic Engineer and Landscape Architect, who provided information on the project when requested. Testimony was received from residents who live in the vicinity of the property. While the residents generally acknowledged that the revised project had been well thought out and designed, they expressed their objections to the proposal at this location citing issues of density, housing type and proximity to their properties. Members of the PZC posed several questions of the applicant and staff which were answered.

Following the close of the hearing and deliberation and at the request of the Applicant, the PZC moved to continue deliberation to July 17, 2024. For your reference, the video stream of the June 19, 2024 meeting can be viewed online at:
https://play.champds.com/lakezurichil/event/125

LIST OF ADDITIONAL EXHIBITS
These exhibits should be considered in addition to those that were included as part of the June 19, 2024 staff report and packet.

A. Revised Overall Site Plan
B. Single-family and multiple-family building plans and elevations
C. Views from neighboring properties
D. Development Views
E. Site distance studies along Buesching and Old Rand Roads
F. Aerial Map showing residents distance from Subject Property

This report contains information that was submitted following the June 19 meeting date that is recommended to be added to the testimony and findings of the PZC.

Revised Overall Site Plan – In response to comments, provided at the June 19 meeting the applicant has revised the site plan to redesign and reconfigure the townhouses facing Old Rand Road. The revisions now propose five 2-story townhomes within 2 buildings instead of the previously proposed seven 3-story townhouses within 2 buildings. By means of the revisions, the Applicant proposes to accomplish the following:

- Reduce the bulk of the townhouse buildings that face Old Rand Road.
- Mitigate the bulk of the townhouses against the adjacent residence to the south. The residence is currently 45 feet to the south of the Subject Property line.

Based on comments and testimony provided at the hearing, staff has also prepared a map showing the proximity of the properties of residents who provided testimony at the meeting, as there were representations made that the proposed development was either directly across the street from such properties or would have a direct impact on their properties. To that end, the Applicant has provided views of what the proposed development would potentially look like from the streets adjacent to such neighboring properties.

The Applicant has also provided site distance studies with profiles of both Old Rand Road and Buesching Road to demonstrate whether traffic along these roads would be negatively impacted by residential traffic entering and leaving the subdivision.

RECOMMENDATION

Staff recommends that the PZC reopen the continued hearing and obtain any additional testimony that is presented by the Applicant, interested persons, or village staff.

Upon completion of the hearing and deliberation, staff recommends that the PZC adopt its findings and recommendation on the subject zoning application. Such findings and recommendations may be based upon the findings and recommendations of staff contained within the June 19, 2024 report and additional information submitted at the July 17, 2024 meeting.

The recommendation of the Planning and Zoning Commission to classify the development within the R-6 zoning district should be based on the standards included in the following Sections of the Lake Zurich Municipal Code:

- Section 9-18-3: Standards for Amendments
- Section 9-19-3 Standards for Special Use Permits
- Section 9-22-5 Standards for Planned Unit Developments (PUD)

Based on the review of staff contained within its June 19 and July 17 reports, the standards for approval will be met with the identified modifications to the zoning and land development codes and therefore staff recommends that the Planning and Zoning Commission make these standards a part of the official record of the Application.

Staff of the Community Development Department continues to recommend the approval of Application PZC 2024-08, 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, Village Engineer, Village Landscape Consultants and applicable governmental agencies:
    a. Zoning Application, Cover Letter and attachments dated May 17, 2024, prepared by Mr. Lawrence M. Freedman, of Ash, Anos, Freedman & Logan, LLC, the agent and attorney for OSK Capital Partners, LLC.
    b. Legal Description of the Subject Property.
    c. ALTA/NSPS Land Title Survey prepared by Regional Land Services, dated June 21, 2022.
    d. ALTA Commitment for Title Insurance Issued by Chicago Title Insurance Company dated April 20, 2022.
    e. Planning and Zoning Commission Submittal prepared by Pappageorge Haymes Partners dated May 15, 2024 and last updated on July 12, 2024 consisting of the Cover and Index, Current Site Plan, Single-family Home Plans and Elevations, Row Home (multiple-family) Plans and Elevations, views from neighboring

properties, Aerial Rendering, various views including – from central green space, from Buesching Road.

f. Site distance Studies Sheets CX1.0-2.0 prepared by Eriksson Engineering Associates, Ltd., dated July 1, 2024.

g. Civil Exhibits including the following and as updated per the current overall site plan:
   i. Site Demolition Plan – Sheet C100
   ii. Site Geometry Plan – Sheet C200
   iii. Site Utility Plan – Sheet C300
   iv. Grading and Paving Plan – Sheet C400
   v. Site work details – Sheets C500-C503

h. Landscape Exhibits including the following and as updated per the current overall site plan
   vi. Rendered Landscape Plan – Sheet L100 (color)
   vii. Landscape Plan – Sheet L100
   viii. Landscape Details (Sheet L200

i. Site Development Budget prepared by McShane Construction Company, dated May 9, 2024.

j. Site Lighting exhibits including the following:
   i. Photometric Plan prepared by LSI, dated May 17, 2024, models 1 and 2.
   ii. Light Fixture Specification prepared by LSI for Standard Lexington (LXM4).

k. Tree Inventory and Report prepared by Urban Forest Management, Inc. dated June 24, 2022.

l. Stormwater Management Report Prepared By: Melanie Carollo & Laura Rosenbauer, dated May 17, 2024.

m. Preliminary Jurisdictional Field Report prepared by Lake County dated August 25, 2022.

n. Preliminary Hydraulic Analysis Existing Conditions Report dated April 26, 2024 prepared by Eriksson Engineering Associates, Ltd.

o. Traffic and Parking Study prepared by Eriksson Engineering Associates, Ltd., dated May 14, 2024.

2. 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.

3. All trees, hedges, signs or other obstructions which could prevent persons driving vehicles on Buesching Road and Old Rand Road from obtaining a clear view of traffic when approaching the intersection or a pedestrian crosswalk shall be maintained at a low height and signs shall be adequately set back from the corner.

4. The Developer shall submit a Final Plan to the Village to particularize the details of the on-site and off-site improvements related to the development of the site including private and public roadway construction, stormwater management and flood mitigation, and pedestrian

sidewalk and crosswalk construction. Such Final Plan shall also include a Final Plat of Subdivision delineating the final configuration of lots within the subdivision.

5. Prior to Final Plan approval, detailed landscape plans shall be submitted indicating compliance with the perimeter landscape requirements for the subdivisions, in this case as a PUD for development of the Property prescribed by Section 9-8A-5 of the Lake Zurich Municipal Code, with particular reference to the boundaries of the property along the east, south and west lot lines. The trees classified as "heritage trees" in the tree survey will be incorporated into the plans to the greatest extent possible. A tree survey map shall be provided to denote existing trees and trees to be removed. The developer shall utilize the "Village of Lake Zurich Tree Replacement Worksheet" to determine the replacement value in the form of either replacement trees within the development or fee in lieu of replacement trees at the "average market value" for a >2.5-inch Replacement Tree as denoted in the worksheet as updated from time to time.

6. The property line along the south of the project will be landscaped and screened from adjacent properties to the south with a combination of a 6-foot high solid privacy fence and landscape plant material consisting of canopy trees, evergreen trees, deciduous trees and shrubs. In order to accommodate the additional landscape material, the width of the landscape area along the south lot line of the project should be designed with adequate width.

7. The drainageway (creek) that runs along the northerly portion of the property that is associated with the wetland and pond shall have its banks stabilized and restored in accordance with a plan prepared by the Applicant that is approved by the Village. Such stabilization and restoration plan shall be submitted for review and approval prior to Final Plan Approval and shall be conducted in conjunction with the earthwork related to the project and completed prior to the construction of the first residential building on the property.

8. The Developer shall establish a Home Owners Association (HOA), 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. The provisions for such HOA 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.

9. 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.

10. 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').

11. A 5-foot wide sidewalk shall be constructed along the frontage of the property along Old Rand Road. In lieu of the absence of such sidewalk, a fee shall be paid by the developer to be used by the village for sidewalk construction, replacement or repair within the village corporate boundaries. Such fee will be calculated at the rate of $20.00 per square-foot for a 5-foot wide sidewalk meeting village standards for the length of frontage of the property where no sidewalk is proposed.

12. The existing carriage walk along Buesching Road may be pulled off the back of curb and incorporated into the walk for the houses. The sidewalk proposed along Old Rand Road shall similarly be located closer to the building. Utility pole conflicts to accommodate the sidewalk shall require the removal of such poles and burying existing utility lines within those areas.

13. A pedestrian crosswalk shall additionally be provided across Old Rand Road to connect the subject PUD to the existing sidewalk on the west side of Old Rand Road at a location immediately north of the main entrance and shall be constructed per village standards and accompanied by flashing beacons to warn of pedestrians within the crosswalk.

14. As part of Final Plan approval, the Developer shall enter into a binding development 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 HOA dissolution or its lack of required maintenance of these areas.

15. The Developer shall be responsible for payment of all Development Impact Fees as a condition of the approval of the PUD and Final Plat. The school impact fees, park impact fees, and library impact 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 residential building.

16. 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.

Respectfully Submitted,

Staff Report **Community Development Department**
APPLICATION PZC 2024-08 **PZC Hearing Date: July 17, 2024**

Sarosh Saher, Community Development Director
Colleen McCauley, Planner

LAKE ZURICH PLANNING & ZONING COMMISSION
FINAL FINDINGS & RECOMMENDATIONS

670 South Old Rand Road
July 17, 2024

The Planning & Zoning Commission recommends approval of Application PZC 2024-08, and the Planning & Zoning Commission adopts the findings as contained within the Staff Report dated July 17, 2024 for this Application and subject to any changes or approval conditions as listed below:

1. Substantial conformance with the following documentation submitted as part of the application subject to revisions required by Village Staff, Village Engineer, Village Landscape Consultants and applicable governmental agencies:
   a. Zoning Application, Cover Letter and attachments dated July 12, 2024, prepared by Mr. Lawrence M. Freedman, of Ash, Anos, Freedman & Logan, LLC, the agent and attorney for OSK Capital Partners, LLC.
   b. Legal Description of the Subject Property.
   c. ALTA/NSPS Land Title Survey prepared by Regional Land Services, dated June 21, 2022.
   d. ALTA Commitment for Title Insurance Issued by Chicago Title Insurance Company dated April 20, 2022.
   a. Planning and Zoning Commission Submittal prepared by Pappageorge Haymes Partners dated May 15, 2024 and last updated on July 12, 2024 consisting of the Cover and Index, Current Site Plan, Single-family Home Plans and Elevations, Row Home (multiple-family) Plans and Elevations, views from neighboring properties, Aerial Rendering, various views including – from central green space, from Buesching Road.
   b. Site distance Studies Sheets CX1.0-2.0 prepared by Eriksson Engineering Associates, Ltd., dated July 1, 2024.
   c. Civil Exhibits including the following and as updated per the current overall site plan:
      ix. Site Demolition Plan – Sheet C100
      x. Site Geometry Plan – Sheet C200
      xi. Site Utility Plan – Sheet C300
      xii. Grading and Paving Plan – Sheet C400
      xiii. Site work details – Sheets C500-C503
   d. Landscape Exhibits including the following and as updated per the current overall site plan
      xiv. Rendered Landscape Plan – Sheet L100 (color)
      xv. Landscape Plan – Sheet L100
      xvi. Landscape Details (Sheet L200
   e. Site Development Budget prepared by McShane Construction Company, dated May 9, 2024.
   f. Site Lighting exhibits including the following:
      iii. Photometric Plan prepared by LSI, dated May 17, 2024, models 1 and 2.

iv. Light Fixture Specification prepared by LSI for Standard Lexington (LXM4).

g. Tree Inventory and Report prepared by Urban Forest Management, Inc. dated June 24, 2022.

h. Stormwater Management Report Prepared By: Melanie Carollo & Laura Rosenbauer, dated May 17, 2024.

i. Preliminary Jurisdictional Field Report prepared by Lake County dated August 25, 2022.

j. Preliminary Hydraulic Analysis Existing Conditions Report dated April 26, 2024 prepared by Eriksson Engineering Associates, Ltd.

k. Traffic and Parking Study prepared by Eriksson Engineering Associates, Ltd., dated May 14, 2024.

2. 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.

3. All trees, hedges, signs or other obstructions which could prevent persons driving vehicles on Buesching Road and Old Rand Road from obtaining a clear view of traffic when approaching the intersection or a pedestrian crosswalk shall be maintained at a low height and signs shall be adequately set back from the corner.

4. The Developer shall submit a Final Plan to the Village to particularize the details of the on-site and off-site improvements related to the development of the site including private and public roadway construction, stormwater management and flood mitigation, and pedestrian sidewalk and crosswalk construction. Such Final Plan shall also include a Final Plat of Subdivision delineating the final configuration of lots within the subdivision.

5. Prior to Final Plan approval, detailed landscape plans shall be submitted indicating compliance with the perimeter landscape requirements for the subdivisions, in this case as a PUD for development of the Property prescribed by Section 9-8A-5 of the Lake Zurich Municipal Code, with particular reference to the boundaries of the property along the east, south and west lot lines. The trees classified as “heritage trees” in the tree survey will be incorporated into the plans to the greatest extent possible. A tree survey map shall be provided to denote existing trees and trees to be removed. The developer shall utilize the “Village of Lake Zurich Tree Replacement Worksheet” to determine the replacement value in the form of either replacement trees within the development or fee in lieu of replacement trees at the “average market value” for a >2.5-inch Replacement Tree as denoted in the worksheet as updated from time to time.

6. The property line along the south of the project will be landscaped and screened from adjacent properties to the south with a combination of a 6-foot high solid privacy fence and landscape plant material consisting of canopy trees, evergreen trees, deciduous trees and shrubs. In order to accommodate the additional landscape material, the width of the landscape area along the south lot line of the project should be designed with adequate width.

7. The drainageway (creek) that runs along the northerly portion of the property that is associated with the wetland and pond shall have its banks stabilized and restored in accordance with a plan prepared by the Applicant that is approved by the Village. Such stabilization and restoration plan shall be submitted for review and approval prior to Final Plan Approval and shall be conducted in conjunction with the earthwork related to the project and completed prior to the construction of the first residential building on the property.

8. The Developer shall establish a Home Owners Association (HOA), 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. The provisions for such HOA 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.

9. 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.

10. 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').

11. A 5-foot wide sidewalk shall be constructed along the frontage of the property along Old Rand Road. In lieu of the absence of such sidewalk, a fee shall be paid by the developer to be used by the village for sidewalk construction, replacement or repair within the village corporate boundaries. Such fee will be calculated at the rate of $20.00 per square-foot for a 5-foot wide sidewalk meeting village standards for the length of frontage of the property where no sidewalk is proposed.

12. The existing carriage walk along Buesching Road may be pulled off the back of curb and incorporated into the walk for the houses. The sidewalk proposed along Old Rand Road shall similarly be located closer to the building. Utility pole conflicts to accommodate the sidewalk shall require the removal of such poles and burying existing utility lines within those areas.

13. A pedestrian crosswalk shall additionally be provided across Old Rand Road to connect the subject PUD to the existing sidewalk on the west side of Old Rand Road at a location immediately north of the main entrance and shall be constructed per village standards and accompanied by flashing beacons to warn of pedestrians within the crosswalk.

14. As part of Final Plan approval, the Developer shall enter into a binding development 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:

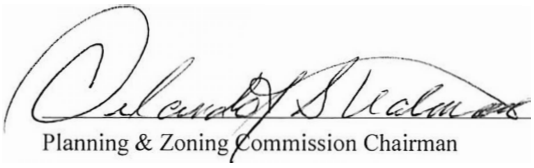
a. Establishment of a "backup" open space, stormwater management, snow removal, and private roadway repair and replacement Special Service Area (SSA) to ensure that these areas and features are cared for and maintained in the event of a future HOA dissolution or its lack of required maintenance of these areas.

15. The Developer shall be responsible for payment of all Development Impact Fees as a condition of the approval of the PUD and Final Plat. The school impact fees, park impact fees, and library impact 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 residential building.

16. 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.

☒ Without any further additions, changes, modifications and/or approval conditions.

☐ With the following additions, changes, modifications and/or approval conditions:



Planning & Zoning Commission Chairman

670 S. Old Rand Road (Petition for Zoning Map Amendment with PUD)
Exhibit A: Aerial Photo of Subject Property and Surrounding Land Uses

Subject Property

Surrounding Land Uses

1 Ela Soccer Club

2 Knights Banquets / Office Building

3 Ahlgrim Family Funeral Services

4 Red Bridge Farm Single-Family Subdivision

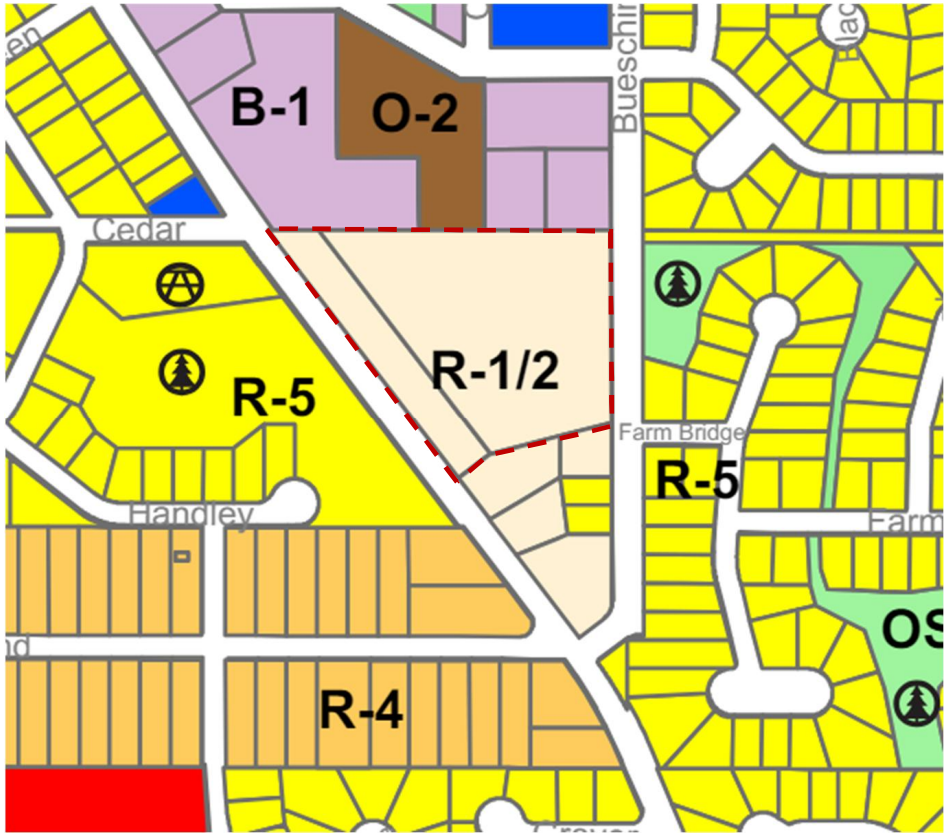
5 Single Family Homes

6 Heatherleigh Single-Family Subdivision

Sources: Lake County GIS Nearmap Image Viewer, Spring 2024 Aerial

NSB, Manhard Consulting, June 3, 2024

670 S. Old Rand Road (Petition for Zoning Map Amendment with PUD)
Exhibit B: Zoning Map of Subject Property and Surrounding Properties



Sources: Village of Lake Zurich Zoning Map, 2023

Subject Property Boundary

NSB, Manhard Consulting, June 3, 2024

ZONING DISTRICTS

RESIDENTIAL DISTRICTS
- R-1/2 Single Family Residential
- R-3 Single Family Residential
- R-4 Single Family Residential
- R-5 Single Family Residential
- R-6 Multiple Family Residential

BUSINESS DISTRICTS
- B-1 Local & Community Business
- B-2 Central Business
- B-3 Regional Shopping

OFFICE DISTRICTS
- O-1 Office/Residential
- O-2 Limited Office
- O-3 Office Campus

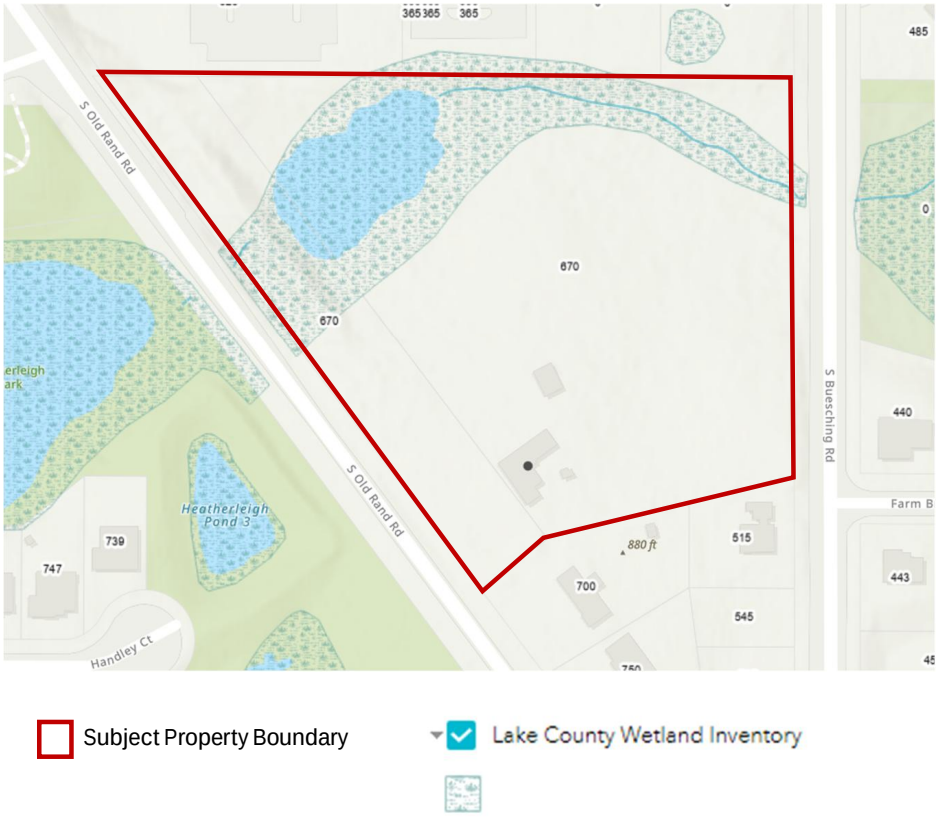
INDUSTRIAL DISTRICTS
- I Industrial

SPECIAL DISTRICTS
- IB Institutional Buildings
- OS Open Space
- Downtown Overlay District
- Lake Protection District

FEATURES
- Park
- Natural Resource Area
- Unimproved Roadway
- Village Boundary
- Railroad Tracks

0 500 1,000 2,000 Feet

670 S. Old Rand Road (Petition for Zoning Map Amendment with PUD)
Exhibit C : Lake County Wetland Inventory Exhibit



Description (from LCWI): The Lake County Wetland Inventory (LCWI) maps natural and artificial wetlands meeting definitions established by the federal agencies who work with the Lake County Geographic Information System staff to periodically review and update it. These agencies include the United States Environmental Protection Agency, the U.S. Fish and Wildlife Service, the USDA Natural Resources Conservation Service and the United States Army Corps of Engineers. The 1989 federal wetland delineation standards for offsite wetland mapping are used. This data was last published in March of 1993. This update includes changes to the previous version of LCWI including: adjust current wetland boundaries to omit development, including roads; to fine tune boundary placement where that was intended by the original delineation, in some cases, adjust the wetland to photographic features / signature; delete wetlands which the committee decided were mapped in error - for example, trees which were mistaken for wet areas; create polygons for newly delineated artificial wetlands; and newly delineated wetlands or farmed wetlands caused by the continued deterioration of the agricultural drain tile system and increased runoff due to urbanization.
The LCWI is a useful tool for general planning and review purposes, but it does not take the place of an on-site delineation by a certified wetland specialist. High resolution (1" = 100') orthorectified aerial imagery captured in April 2002 was used as the base for this update. Other data used as reference for this update include: 2004 SOIL SURVEY GEOGRAPHIC (SSURGO) DATABASE FOR LAKE COUNTY, IL - U.S. Department of Agriculture, Natural Resources Conservation Service; HYDROLOGY2002 - Lake County GIS/Map Division; 2' topography (CONTOURS) - Lake County GIS/Map Division; and various years of historical aerial photography for clarification. By using the more recent higher resolution photography, the resulting updated wetland boundaries are more accurate than the original boundaries published in 1993.

Source: Lake County GIS, Lake County Wetland Inventory

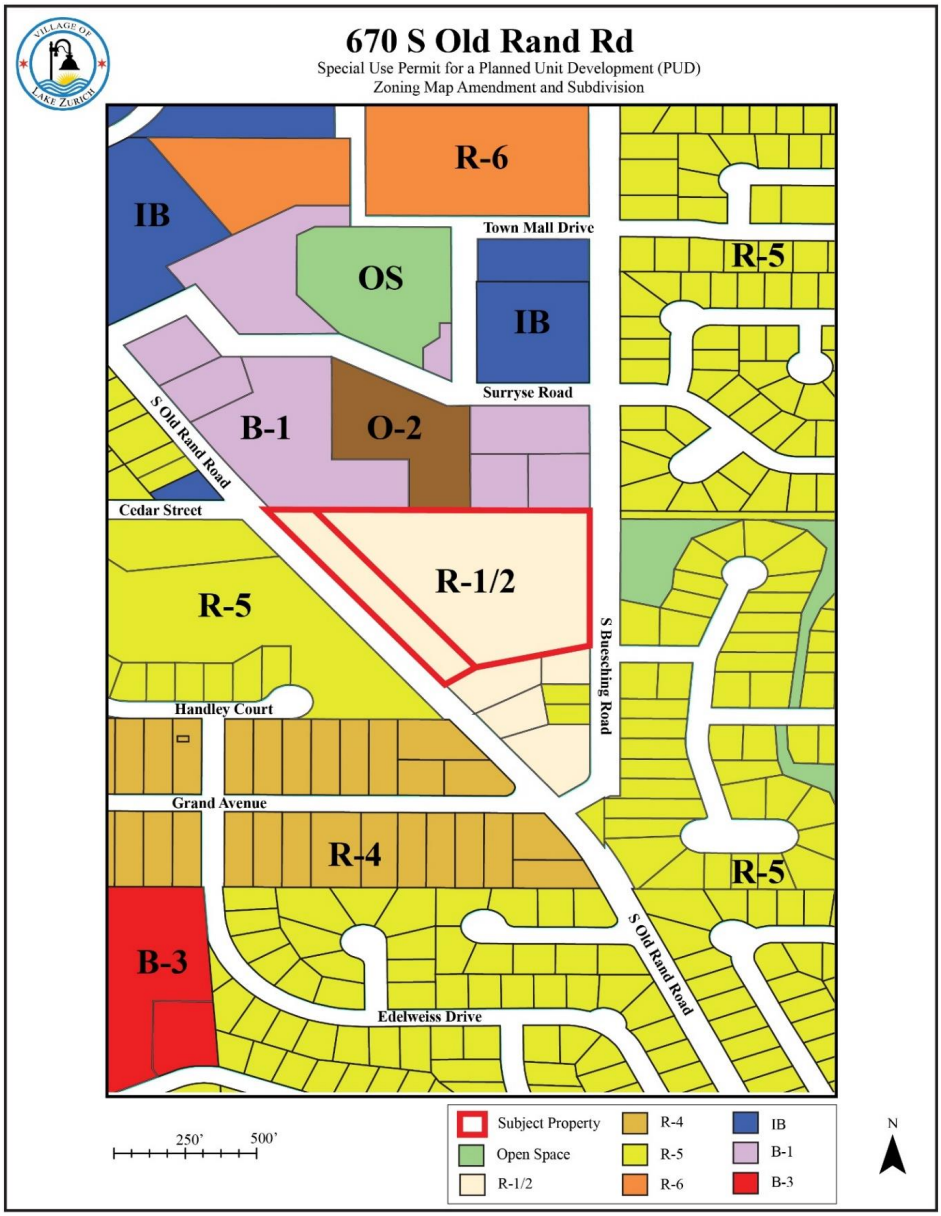
NSB, Manhard Consulting, June 3, 2024

Staff Report
APPLICATION PZC 2024-08

Community Development Department
PZC Hearing Date: June 19, 2024

EXHIBIT D
AERIAL MAP

EXHIBIT E
ZONING MAP



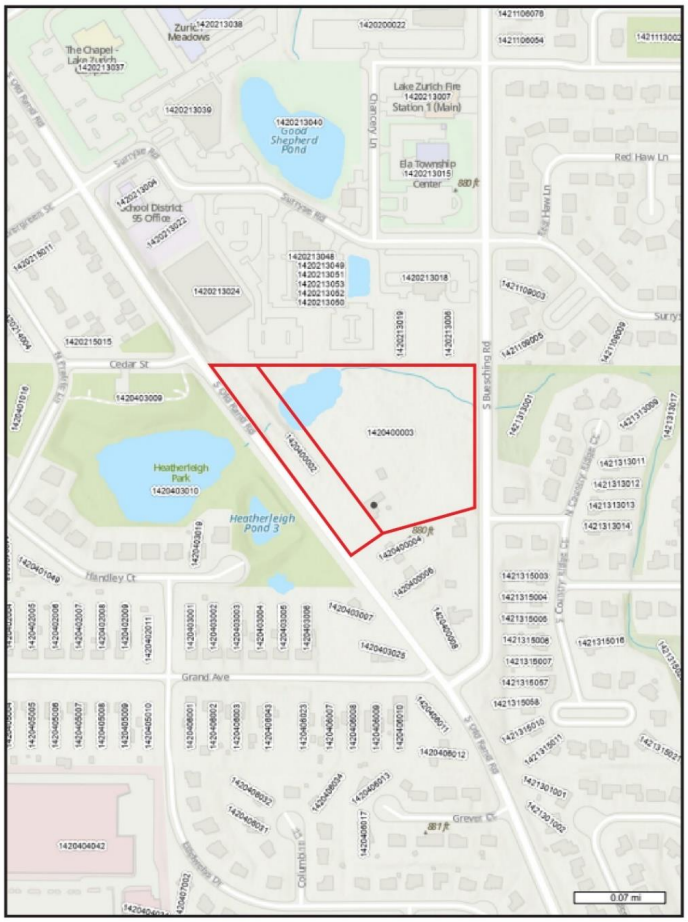
Staff Report
APPLICATION PZC 2024-08

Community Development Department
PZC Hearing Date: June 19, 2024

EXHIBIT F
PARCEL MAP

670 S Old Rand Rd

Special Use Permit for a Planned Unit Development (PUD)
Zoning Map Amendment and Subdivision



Subject Property

N

EXHIBIT B
PUBLIC HEARING SIGNS PRESENT AT SUBJECT PROPERTY

VILLAGE OF LAKE ZURICH
NOTICE OF PUBLIC HEARING

PUBLIC NOTICE IS HEREBY GIVEN to all persons that the Village of Lake Zurich Planning & Zoning Commission shall conduct a public hearing on **June 19, 2024,** at 7:00 P.M. in the Board Room of the Lake Zurich Village Hall, 70 East Main Street, Lake Zurich, Illinois for the purpose of considering a zoning application filed with the Village requesting approval for a Development Concept Plan as part of a Planned Unit Development (PUD), Rezoning of the property, and Preliminary Plat approval, for a residential subdivision, at the property whose common street address and property index number (PIN) are stated below. A copy of the application and the Zoning Code are on file with, and available for public inspection during regular Village business hours in the Lake Zurich Community Services Department.

Common Street Address: **670 S Old Rand Road**
Property Index Number (PIN): **14-20-400-002, 14-20-400-003**

At said public hearing, the Planning & Zoning Commission shall accept all testimony and evidence pertaining to said application and shall consider any and all possible zoning actions, including the granting of any necessary special use permits, variations, other special approvals, or amendments to the text of the Zoning Code that may be necessary or convenient to permit development of the proposed type at the described property. All interested persons are invited to attend and be heard.

DATED: May 28, 2024
Orlando Stratman
Chairperson, Planning & Zoning Commission
Published: The Daily Herald, June 1, 2024 (4616353)

CERTIFICATE OF PUBLICATION

Paddock Publications, Inc.

Lake County
Daily Herald

Corporation organized and existing under and by virtue of the laws of the State of Illinois, DOES HEREBY CERTIFY that it is the publisher of the **Lake County DAILY HERALD**. That said **Lake County DAILY HERALD** is a secular newspaper, published in Libertyville, Lake County, State of Illinois, and has been in general circulation daily throughout Lake County, continuously for more than 50 weeks prior to the first Publication of the attached notice, and a newspaper as defined by 715 ILCS 5/5.

I further certify that the **Lake County DAILY HERALD** is a newspaper as defined in "an Act to revise the law in relation to notices" as amended in 1992 Illinois Compiled Statutes, Chapter 715, Act 5, Section 1 and 5. That a notice of which the annexed printed slip is a true copy, was published 06/01/2024 in said **Lake County DAILY HERALD**. This notice was also placed on a statewide public notice website as required by 5 ILCS 5/2.1.

BY _____
Designee of the Publisher of the Daily Herald

Control # 4616353

PADDOCK PUBLICATIONS, INC. Corporate SEAL ILLINOIS

From:	Sarosh Saher
To:	Tom Poynton
Cc:	Ray Keller; Michael Duebner; Colleen McCauley
Subject:	RE: Re OSK DEVELOPMENT Proposal
Date:	Wednesday, August 21, 2024 7:38:00 AM
Attachments:	Comparison Chart.pdf Cost Comparison_Narrative by Developer.pdf OSK_Surrounding_Residents-Distances_Views.pdf

Good morning Mayor – following up on your email regarding the development, I'm responding to your comments and questions with the information below in blue font. I have also attached the following information prepared by our staff and the developer:

- Comparison chart of the differences between what was previously proposed and the current proposal.
- Map and table of surrounding property owners who attended the meetings when this application was considered by the PZC and provided their comment.
- Narrative provided by the developer regarding your question on cost comparisons between developing the site with only single-family homes vs. the mix of single-family and townhomes that they have currently proposed.

I hope this helps. Please let me know if you have any further questions or need more information.
Thanks.
Sarosh

Sarosh B. Saher, AICP
Community Development Director | Village of Lake Zurich | 505 Telser Road, Lake Zurich, IL 60047
sarosh.saher@lakezurich.org | Direct: 847-540-1754
Engage with Lake Zurich at LakeZurich.org/Connect

My additional comments are below in blue font.

From: Tom Poynton <tom.poynton@lakezurich.org>
Sent: Sunday, July 28, 2024 1:09 PM
To: Sarosh Saher <Sarosh.Saher@lakezurich.org>
Cc: Ray Keller <Ray.Keller@lakezurich.org>; Michael Duebner <michael.duebner@lakezurich.org>; Colleen McCauley <colleen.mccauley@lakezurich.org>
Subject: Re OSK DEVELOPMENT Proposal
Importance: High

OSK DEVELOPMENT Proposal
Sarosh …
I watched the recent PZC meeting and I have some comments **C**, and questions **Q?** and requests **REQ**
REQ: Can you please quantify, in some kind of a 2-column comparison chart format, … the key differences between the initial OSK proposal and the most current proposal.
For examples … the original proposal showed 56 units … the most current proposal showed 36 units. The original proposal showed 3 stores at X # of feet and the current proposal shows 2 stories at X # of feet open space, stormwater management, less lighting Etc, Etc … whatever

has changed for the better.
I have attached a comparison chart of the differences between what was previously proposed but denied by the Village Board and the current proposal.

REQ: Can you (or the developer) quantify the dollar value of the current project … cost to build THs, sale price of the total finished products, profit to the developer VS the same numbers of an alternative single-family home project (whether it exists or not) of equal or similar value?
I have attached narrative prepared by the developer.

Q?: Can you chartify (?) the actual distance that the public commenters live from the OSK project?
I have attached the map and table showing locations and distances of commenters from the Subject Property. I have also attached the views prepared by the developer showing what portions of the development will be visible from the adjacent streets. These pictures were presented at the last PZC meeting.

Q?: Is it *"usual"* for a developer to contribute to the re-paving of an existing road (In this case Old Rand Rd.).
You stated that we have a 25-year CIP … I believe it is 20 years and an Old Rand Rd. (I stand corrected – thank you!) re-do (I believe for next year) from Main Street to Route 12 is in CIP (Mike Brown has details has details). How might this be affected. I don't want the residents paying for the same new road 203 times after it is re done.
It is not unusual for municipalities to require developers to contribute land or funds towards work that would be directly related to the development. Since the current proposal is being considered as a Planned Unit Development (PUD), where the developer is asking for zoning relief on certain zoning requirements, we are requiring the developer to contribute the following:

- Complete the stabilization of the streambank of the creek that flows along the northerly portion of the property. This project is similar to what the Village completed along Cedar Creek and Coventry Creek, and what is similarly under way along Buffalo Creek.
- Park land contributions in lieu of actual park land donation – reasons being 1) the property is not large enough to accommodate a new park of 3 acres or more; 2) we have 32 parks in the village which satisfies the village's population equivalent requirement.
- Roadway contributions for the resurfacing of Old Rand Road. We are currently in discussion with the developer to determine the extent of their contributions.

C: I believe that we have an application (or at least a CRev presentation) for the construction of 2 homes adjacent to the OSK property. (By the Polish deli guys?).
Their Subdivision (Solowiej Subdivision) for 2 lots was approved in 2021. However, they have indicated that they would like to wait and see what improvements are proposed at the OSK property to bring water and sanitary closer to their property as these utilities are currently approx. 300 feet away.

Q?: How will they be affected? Are they aware of this project? Do we know their thoughts? What will their "contribution" be. What is the impact on them. Or, are they riding on the coat tails of the bigger money project? They will be right next door.

- They are aware of this project – they were notified of the hearings because of their location within 250 feet of the development.

- While they will not be directly affected, since there is an intervening property between them and the development – they stand to positively benefit with a new development in their neighborhood. There is potential positive effect on their property values.
- There is no direct contribution to this development. However, with the development of their properties (2 lots) once utilities are brought closer to their property, they potentially contribute through the construction of 2 new homes in the neighborhood.
-

C: There seems to be some "selective" PZC Board members remembrances (stated as facts) of how things came to be and/or how things were developed over the years. IMHO … these should not be taken as factual without a challenge of some sort by you. *"I'm not aware of that as it was before my time. I will have to check back for accuracy"*
Noted.

Q?: So, if I buy a home with a private road system within the complex and the HOA is responsible and assesses for the maintenance, snow removal and replacement of the road (Meadow Wood, Flint Creek, Concord, and Schwermer) … and I pay the **same** level of Village property taxes as someone else who pays taxes and gets their road maintained without an HOA assessment … but my roads are extra? How is that fair and equitable? And justified?
The HOA will be responsible for the maintenance of all common areas of the development – private roads, stormwater management facilities and in this case, the central open area with gazebo, and in the case of this development, the creek (long-term maintenance).
In the case of the townhomes, the amount of land that is taxed would only be the fee simple portion which is immediately around the unit, private driveway to garage and a small private rear yard as provided by the developer. The remaining tax burden on the common areas will be shared by the HOA.
Ultimately, it's a lifestyle choice. Townhouse dwellers who choose this option, do so for the benefit of paying somewhat less in taxes, and in return having an HOA conduct all exterior maintenance for an assessed fee.

Thanks in advance.

Tom Poynton

Mayor, Village of Lake Zurich, IL

Cell: 847-207-1745

August 2022 initial proposal later revised in October 2022 Denied by Village Board in January 2023	**May 17, 2024 – Current Proposal**
Density and number of Units	
52 units within eight 4-unit buildings and four 5-unit buildings Revised to 50 units within ten 4-unit buildings and two 5-unit buildings	36 units as follows: - 18 single-family homes with 6 units facing Buesching Road, and 12 along the north of the property; - 18 townhouses within 5 buildings as follows: - 5 2-story townhouses within two buildings facing Old Rand Road - 13 3-story townhouses in the interior of the property within 3 buildings.
12 buildings	18 single-family homes 5 townhouse buildings
5.59 units/acre	4 units/acre
3-story Townhouse Buildings facing Old Rand Road and Buesching Road set back to 40 feet	2-story townhouses and 2 story Single-family homes facing Buesching road setback 25 feet. These homes face the street and following the standard setback requirement for residential districts.
Visitor parking combined into three areas.	Visitor parking provided in three areas surrounding the townhouses.
Sidewalks	
Continuous sidewalk (Carriage walk) between Old Rand Road and Buesching Road. *Note: Carriage walk in front of Building 7 does not leave adequate room for off-street parking in front of garages.*	
A separate Public sidewalk along property line added in addition to the service walk in front of the units facing Old Rand Road.	
Building Elevations	
 3 Story townhouse Elevation 33’-0” structure height.	 Single-family Elevations facing interior Road. 26’-0” structure height. Single-family elevations facing Buesching Road. 30’-0” structure height.

 3-story, “Mid-level” entries proposed to reduce front elevation height by approx 3-4 feet 29’ to 30’ structure height.	 2-story townhomes facing Old Rand Road 22’-4” structure height 3-story townhouses facing interior of property. 33’-2” structure height.
Landscaping and Amenities	
Increased (continuous) landscaping provided along Old Rand Road and Buesching Road within 40-foot wide setback.	Due to front facing single-family homes along Buesching Road and 2-story townhouses facing Old Rand Road, regular front-yard landscaping provided.
Significant trees within central open space and high-quality trees to be preserved where possible.	Trees proposed within oval central open space and high-quality trees to be preserved where possible.
Central open space 12,500 sq.ft. with gazebo as amenity.	Central open space 17,500 sq.ft. with gazebo amenity.
Stormwater management	
Construction extended up to wetland boundary, in some area within wetland buffer, requiring a retaining wall to allow for calculated detention.	Construction outside of wetland and wetland buffer no longer requiring a retaining wall. Detention area designed with natural slope. New path leading to an amenity (gazebo) overlooking the wetlands and detention proposed.

KLLM, INC.
Veteran Owned
1430 Lee Street, Des Plaines, IL. 60018
P: 312-315-0083
Email: dkulak@kllm1.com Web: kllmarchitects.com

August 12, 2024
Mr. Sarosh Saher, AICP
Community Development Director
Village of Lake Zurich
505 Tesler Road
Lake Zurich, IL 60047

Re: Village Request
670 S. Old Rand Road,
Lake Zurich, IL. 60047

Dear Mr. Saher:

We represent OSK Capital Partners, LLC ("OSK"), the contract purchaser of the subject property which comprises approximately 9.3 acres and is currently under the R-1/2 zoning classification. Per your request "Can you (or the developer) quantify the dollar value of the current project … cost to build THs, sale price of the total finished products, profit to the developer vs. the same numbers of an alternative single family home project (whether it exists or not) of equal or similar value?"

OSK is seeking to develop the subject property with 18 single-family and 18 attached single-family rowhomes in 5 buildings for a total of 36 units. In conjunction therewith, OSK will be requesting that the property be rezoned to the R-6 Multiple Family Residential District.

The development proposed consist of 18 single-family homes a with a sales price of $700k to 800k average value of $13,050,000.00, and 18 attached single-family rowhomes with a sales price of $500k to 550k average value of $9,450,000.00 totaling $22,500,000.00.

If the development was all single-family with R-5 zoning, with minimum 10,000 S.F. lot size the yield would be between 11 and 13 lots, these would need to be 900k to 1.1 million due to higher land cost for a total value of $13,000,000.00

The land cost would be the same for either type of development with the site improvement cost similar. Therefore, the pad/lot cost for 36 units would be an average of $125k for the development as proposed, the pad cost for 13 single-family lots would be $346k for the development of all single family as requested. The profit to the developer as well as the tax revenue to the Village would be significantly less if the property was developed as all single-family. Please contact me with any questions

Sincerely

Dennis M Kulak

Dennis Kulak, NCARB

OSK Development
670 South Old Rand Road
Residents' Distances from Subject Property in Feet

OSK Develpment
670 South Old Rand Road

Name	Address	Distance from OSK Development (property line to property line)
Mary Ann Philips & Gary Levine	749 S Old Rand Road	122 feet
Brian & Elizabeth Hart	763 Handley Court	458 feet
Chirag Patel	747 Handley Court	295 feet
Elise Hood	739 Handley Court	240 feet
William Hartig	449 Farm Bridge	189 feet
Gerald & Theresa Volkman	771 Handley Court	530 feet

Current View from 749 S Old Rand Rd

Current View from Farm Bridge Rd

Proposed View from 749 S Old Rand Rd

Proposed View from Farm Bridge Rd

OSK Capital Partners

670 Old Rand Rd LLC
Lake Zurich, IL

View from Neighboring Properties
7/12/24

N

Pappageorge Haymes Partners

Current View from Handley Court

Proposed View from Handley Court

OSK Capital Partners

670 Old Rand Rd LLC
Lake Zurich, IL

View from Neighboring Properties
7/12/24

N

Pappageorge Haymes Partners

To: Lake Zurich Planning Commission

RE: Proposed special use permit for PUD (2024-08) project at 670 South Old Rand Road

At the public meeting on June 19, 2024, the Planning Commission members stated residents of Lake Zurich should have anticipated development such as the one proposed at 670 South Old Rand Road, because they should have known the land would not remain vacant for an indefinite amount of time. While I enjoy the greenery the undeveloped land provides, I assumed one day, based on existing zoning regulations, new single-family homes might be built on the property. However, I never would have or could have anticipated the zoning being changed to allow for 20 multi-family and 18 unattached homes, with some exceeding the current height tolerances per current Village of Lake Zurich residential zoning regulations. Additionally, I never anticipated such development would allow for densities far greater than the immediate neighboring residential areas and greater than what currently exists per Village of Lake Zurich residential zoning regulations.

In order for this project to be approved, the zoning for this region must be changed from the current zone of R-1/2 to the proposed zones of R-5 and R-6. Further, the currently approved zoning for R-5 and R-6 zones will also need to be changed to allow the construction of taller housing on smaller lot sizes than current zoning permits. Therefore, not just one, but two zoning changes need to occur for this project to move forward. Again, one of the ways in which this development will deviate from neighboring structures is in height. The project proposes townhomes with "3-story layout[s]"; however, the requested modifications to the Bulk Requirements per the Staff Report dated 6/19/24) ("Staff Report") do not appear to address this height differential. As of now, all housing in the immediate adjacent areas seems to conform to R-4 and R-5 zoning.

Just to reiterate, allowing the requested zone changes for this parcel of land will result in a development in which the structures are taller and closer together than those of the surrounding area. In other words, the new housing area will be denser and will stand out from the surrounding existing homes due to the height of the new structures. Since the proposed development does not conform to the current standards in the area, it can only be built if there is a need for this type of housing or if it will beneficial to the surrounding properties.

Because the developer needs to provide a rational for the zoning change, they have stated the new development will provide needed housing for first-time buyers and empty nesters. However, most first-time buyers typically seek lower cost housing than this development will offer. The reported lowest priced housing (as stated by the developer spokesperson at June 19th meeting) of $550,000 in this development will far exceed the median cost of a home in Illinois as of May 2024 ($302,000), Lake County ($365,000) and even exceed the current median home price in Lake Zurich ($500,000) (https://www.redfin.com/state/Illinois/housing-market). Further, while empty nesters may have more money to spend, they are typically downsizing in square footage and often purchase ranch-style dwellings, neither of which will be offered.

In order to further bolster why this development should be built, the Staff Report states this type of development represents a new trend in Lake Zurich, a trend in which "closer-spaced detached homes on smaller lots are being built in Lake Zurich thereby providing for a higher density." I believe several of the examples used to support this statement are somewhat misleading. I have lived in Lake Zurich for 35 years, during that time most of the development along the Rand Road corridor in Lake County has been through single family homes. I agree that multi-family and denser developments have been constructed in the area. However, I believe these were the result of developers reverse engineering challenging

parcels to provide adequate risk-adjusted projected returns on investment. This would include the newer development of townhomes built along the railroad tracks along Route 22 west of Old Rand Rd in Lake Zurich. The 545 Buesching Road property is used as another example to support the trend of denser housing being built in the Lake Zurich area. The 545 property was never a single-family home but was previously the site of a tree removal and fire log business. The Staff Report used the example of this site to further make an unsubstantiated statement that "many homes in the immediate vicinity including the subject property are of an older vintage and likely to be replaced with newer homes, such as the recently approved 2-lot residential subdivision at 545 Buesching Road." What evidence is there to support that old homes have been or will be replaced with newer "2-lot" homes?

According to the Staff Report, in order for the proposed development to proceed, "the proposed use and development must not have a substantial or undue adverse effect upon adjacent property, the character of the area, or the public health, safety, and general welfare." One adverse effect of such a development may be the impact on local traffic. Eriksson Engineering reportedly conducted a traffic study on a single day, April 16, 2024 and concluded "the street network can accommodate the additional traffic from the proposed project." Although I don't purport to be a traffic expert, a one-day study somehow seems insufficient to be representative of average traffic flows in the area. Several internet sites, including the Institute of Traffic Engineers (ITE), Federal Highway Administration (FHWA) and Illinois Department of Transportation (IDOT), indicated a traffic impact study should be conducted for a minimum of 3-7 days, including both weekday and weekends, to adequately capture typical traffic patterns. Additionally, consideration may be given to seasonal variations. I believe conducting further studies would be extremely helpful, given Eriksson noted one of the intersections currently has a rating of C at a particular time of the day.

Second, the Staff Report states "The subdivision will not have any substantial or undue adverse effect upon any adjacent properties. The proposed development is consistent with the surrounding development in land use. The design of the single-family homes is unique in that it proposes a **new trend** of closer-spaced detached homes on smaller lots thereby providing for a higher density." In fact, doesn't the idea of a "new trend" by definition imply the development will change the character of the immediately surrounding residential area? At the June 19th meeting, concerned residents also expressed their disapproval of the proposed development. This should be evidence residents in the immediate area believe there will be an undue adverse impact.

In summary, I am against the development as currently proposed. At the meeting, a commission member implied growth is inevitable. However, it should be smart growth. The Village (via the planning commission) should view quality of life to be equally as important as village growth. If the development is limited to single family homes, and complies with current zoning, it would align with the style and nature of the immediately adjacent residential neighborhoods. This would also minimize the impact on local traffic. Last, if the developer needs to add significantly more housing than the current zoning allows, in order to turn a profit, it would appear the development is not a good fit for the area.

Bill Hartig
449 Farm Bridge Rd, LZ
7/12/24

blhartig@sbcglobal.net

VILLAGE OF LAKE ZURICH ILLINOIS

PLANNING & ZONING COMMISSION

SIGN-IN

JULY 19, 2024

PRINT NAME	SIGNATURE
Mary Ann Phillips	
DAVID A HAYNES	
Lawrence Feldman	
Bill Hartig	BILL HARTIG
Elise Hood	Elise Hood
Chirag Patel	
Jerry & Terry Volkman	
Mike Hilt	
Nick Wastrak	
MIKE RENNER	
GARY LEVINE	

OFFICE OF THE VILLAGE MANAGER

70 East Main Street
Lake Zurich, Illinois 60047

(847) 438-5141
LakeZurich.org

At the Heart of Community

AGENDA ITEM 7b

Date: August 29, 2024

To: Ray Keller, Village Manager RK

From: Michael Duebner, Assistant Village Manager

Subject: Ordinance Approving Increase in Non-Home-Rule Sales Tax

Issue: The Village has executed contracts and membership agreements to bring Lake Michigan water to the community, planned for completion in 2028. Costs for the project are estimate at $154 Million to be funded by the Water and Sewer Enterprise Fund.

Analysis: The Lake Michigan water infrastructure project is the largest infrastructure initiative ever undertaken by the Village. The project cost is estimated at $154 Million, requiring $7.5 Million in annual debt service for 30 years through the Water and Sewer Enterprise Fund. On December 4th, 2023 a Lake Michigan Water rate line item on the monthly water statement was authorized at $3 per 1,000 gallons increasing by $3 each year thereafter up to $15 in 2028.

The Non-Home Rule Sales Tax (NHR) was initially approved in 2011 at a rate of 0.5%, which has been used to fund the Village's road program. The revenues from the proposed 0.5% rate increase would generate an additional $2.5 million annually for the Lake Michigan project. The NHR will therefore fund 33% of the total project cost, reducing the reliance on future Lake Michigan water rate increases for utility customers.

Staff identified that approximately 40% of retail purchases at Lake Zurich establishments that are subject to sales tax are made by non-residents. Considering an increase in the NHR, non-Lake Zurich residents would contribute approximately 15% of the project cost to bring Lake Michigan water into the Village.

Public Act 103-0781, Section 8-11-1.1 of the Code was recently amended to now authorize the Village to impose or change the rate of taxes authorized in Sections 8-11-1.3 and 8-11-1.4 of the Code without requiring a voter approval through a referendum.

Recommendation: Staff is recommending the approval of an ordinance to increase the non-home rule sale tax by 0.5% to the maximum permitted amount of 1% as of January 1st, 2025.

VILLAGE OF LAKE ZURICH

ORDINANCE NO. 2024-09-586

AN ORDINANCE APPROVING AN INCREASE IN THE VILLAGE OF LAKE ZURICH NON-HOME RULE MUNICIPAL RETAILERS' OCCUPATION TAX AND NON-HOME RULE MUNICIPAL SERVICE OCCUPATION TAX

WHEREAS, the Village of Lake Zurich ("Village") is a non-home rule municipality and can exercise certain powers, including those pursuant to the Illinois Municipal Code ("Code"); and

WHEREAS, pursuant to the Code, 65 ILCS 5/1-2-1, the Village has the authority to enact and adopt those ordinances, rules and regulations the Village finds proper or necessary to carry into effect its powers; and

WHEREAS, Section 8-11-1.1 of the Code authorizes the Village to impose the taxes in Sections 8-11-1.3 (Non-Home Rule Municipal Retailers' Occupation Tax) and 8-11-1.4 (Non-Home Rule Municipal Service Occupation Tax) of the Code, as outlined and provided therein; and

WHEREAS, Public Act 103-0781, Section 8-11-1.1 of the Code was recently amended by Public Act 103-0781 to now authorize the Village to impose or change the rate of taxes authorized in Sections 8-11-1.3 and 8-11-1.4 of the Code without any requirement for prior voter approval at referendum; and

WHEREAS, Sections 8-11-1.3 and 8-11-4 of the Code authorize the Village to impose the respective taxes in one quarter percent (1/4%) increments up to a maximum rate of one percent (1%) and to impose such taxes at "the same rate"; and,

WHEREAS, those funds generated and collected pursuant to taxes imposed pursuant to Sections 8-11-1.3 and 8-11-1.4 of the Code are required to be used for "public infrastructure" or "property tax relief," as those terms are defined at Section 8-11-1.2 of the Code; and,

WHEREAS, to provide for and properly maintain the public infrastructure of the Village for the benefit of its residents, the corporate authorities of the Village of Lake

Zurich have determined that it is proper, necessary and in the best interests of the residents of the Village that the Village approve and adopt a Non-Home Rule Municipal Retailers' Occupation Tax under Section 8-11-1.3 of the Code and a Non-Home Rule Municipal Service Occupation Tax under Section 8-11-1.4 of the Code and to increase such Section 8-11-1.3 and 8-11-1.4 taxes to the maximum statutory tax rate of one percent (1%).

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

SECTION 1: INCORPORATION OF RECITALS. The foregoing recitals are hereby incorporated herein as findings of fact.

SECTION 2: NON-HOME RULE MUNICIPAL RETAILERS' OCCUPATION TAX IMPOSED AND INCREASED. Pursuant to and in accordance with the provisions of Section 8-11-3 of the Code, a tax is hereby imposed upon all persons engaged in the business of selling tangible personal property, (other than an item of tangible personal property titled or registered with an agency of this state's government), at retail in the Village to increase the current rate of 0.50% to the maximum rate of 1.00% of the gross receipts from such sales made in the course of such business following the passage of this Ordinance.

SECTION 3: NON-HOME RULE MUNICIPAL SERVICE OCCUPATION TAX IMPOSED AND INCREASED. Pursuant to and in accordance with the provisions of Section 8-11-4 of the Code, a tax is hereby imposed upon all persons engaged in this municipality in the business of making sales of service, of the selling price of all tangible personal property transferred by such serviceman as an incident to a sale of service. to increase the current rate of 0.50% to the maximum rate of 1.00% of the gross receipts from such sales made in the course of such business, the same as that increase set forth in Section 2 above, following the passage of this Ordinance.

SECTION 4: ADMINISTRATION OF TAX. The taxes hereby imposed, and all civil penalties that may be assessed as an incident thereto, shall be administered, collected and enforced by the Illinois Department of Revenue. The Department of Revenue is authorized to administer and enforce the provisions of this Ordinance.

SECTION 5: FILING OF ORDINANCE. The Village Clerk is hereby authorized and directed to file a certified copy of this Ordinance with the Illinois Department of Revenue upon its adoption and passage, but no later than October 1, 2024. Following said timely adoption and filing with the Illinois Department of Revenue, this Ordinance will take effect on January 1, 2025.

SECTION 6: USE OF TAX PROCEEDS. The funds generated and collected pursuant to these taxes being imposed pursuant to Sections 8-11-1.3 and 8-11-1.4 of the Code are required to be used for the following "public infrastructure" or "property tax relief," purposes, as those terms are defined at Section 8-11-1.2 of the Code:

a. Expenditures related to "municipal roads and streets, access roads, bridges, and sidewalks; waste disposal systems; and water and sewer line extensions, water distribution and purification facilities, storm water drainage and retention facilities, and sewage treatment facilities";
b. Actions to "reduce the levy for real estate taxes or avoid an increase in the levy for real estate taxes that would otherwise have been required" by the Village; or
c. Any other or further permitted uses under the Code as may now or hereafter be authorized.

SECTION 7: SUPERCEDER. All Code provisions, ordinances or resolutions in conflict herewith Ordinance are, to the extent of the conflict, expressly superceded by this Ordinance.

SECTION 8: SEVERABILITY. If any provision of this Ordinance or application thereof is found to be unlawful or otherwise invalid, such unlawful status or invalidity shall not affect other provisions or applications of this Ordinance that can be given effect without the invalid application or provision, and each invalid provision or invalid application of this Ordinance is severable.

SECTION 9: EFFECTIVE DATE. The Clerk is directed by the corporate authorities to publish this Ordinance in pamphlet form. This Ordinance shall be in full force and effect after its passage and publication in accordance with applicable law.

PASSED and ADOPTED by the following roll call vote this _____ day of - _____, 2024.

Ayes:

Nays:

Absent:

Abstain:

APPROVED this _____ day of _____, 2024.

_____
Mayor Tom Poynton

ATTEST:

_____
Village Clerk
Kathleen Johnson