Kenig,Lindgren,O'Hara,Aboona,Inc.

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MEMORANDUM TO: Mr. Jack Fugett
Highlander Development

FROM: Michael A. Werthmann, P.E., PTOE
Principal

DATE: October 31, 2025

SUBJECT: Preliminary Traffic Statement
Proposed Bridlewood Residential Development
Orland Park, Illinois

This memorandum summarizes the results and findings of a preliminary traffic statement prepared by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) for a proposed residential development to be located in Orland Park, Illinois. The site, which is currently vacant, is located on the east side of 108th Avenue at Doyle Avenue. As proposed, the development is to consist of 20 single-family homes with access provided via one access road located on the east side of 108th Avenue aligned opposite Doyle Court. **Figure 1** shows an aerial view of the existing site. A copy of the site plan is located in the Appendix.

The purpose of this memorandum is to summarize the existing roadway conditions, estimate the volume of traffic that will be generated by the development, and to review the access system.

Existing Roadway Characteristics

The following summarizes the physical and operating characteristics of the area roadways.

108th Avenue is a north-south, local roadway that has one travel lane in each direction. At its unsignalized intersection with Doyle Court, 108th Avenue has a shared left-turn/through lane on the northbound approach and a shared through/right-turn lane on the southbound approach. 108th Avenue is under the jurisdiction of the Village of Orland Park within the Village limits and Orland Township and has a posted speed limit of 30 miles per hour.

Doyle Court is an east-west, local roadway that extends west from 108th Avenue, serves eleven single-family homes, and has one travel lane in each direction. At its unsignalized intersection with 108th Avenue, Doyle Court has a shared left-turn/right-turn lane. Doyle Court is under the jurisdiction of the Village of Orland Park.

Crash Data Summary

KLOA, Inc. obtained crash data for the most recent available five years (2020 to 2024) for the intersection of 108th Avenue with Doyle Court. It should be noted that no crashes were reported at the intersection of 108th Avenue with Doyle Court over the five-year period.

Aerial View of Site **Figure 1**

Estimated Peak Hour Traffic Volumes

As discussed above, the proposed residential development is to consist of 20 single-family homes. The volume of peak hour trips estimated to be generated by the proposed development was based on "Single-Family Housing" (Land-Use Code 210) vehicle trip generation rates contained in *Trip Generation Manual*, 12th Edition, published by the Institute of Transportation Engineers (ITE). **Table 1** summarizes the weekday morning and weekday evening peak hour trips estimated to be generated by the proposed development. It should be noted that Table 1 shows the estimated traffic to be generated by the development based on both the ITE (1) average rates and (2) fitted curve rates. As such, Table 1 shows the estimated range of peak hour trips to be generated by the proposed residential development. Copies of the ITE trip generation sheets are included in the Appendix.

Table 1
ESTIMATED PEAK HOUR TRIP GENERATION

ITE Land-Use Code	Type/Size	Weekday Morning Peak Hour			Weekday Evening Peak Hour		
		In	Out	Total	In	Out	Total
210	Single-Family Housing (20 Units) ITE Average Rates	4	10	14	12	7	19
210	Single-Family Housing (20 Units) ITE Fitted Curve Rates	5	14	19	14	8	22

Review of Access System

Access to the development is proposed to be provided via a proposed full-movement access road located on the east side of 108th Avenue aligned opposite Doyle Court. The access road will provide one lane in each direction. At its intersection with 108th Avenue, the access road will provide one inbound lane and one outbound lane with the outbound lane striped for a shared left-turn/through/right-turn lane. The outbound lane will be under stop sign control. Given the low volume of traffic to be generated by the development and based on the left-turn lane and right-turn lane warrants (Figure 36-3.B and Figure 36-3.G**)** published in the IDOT *Bureau of Design and Environmental* (BDE) Manual, a separate left-turn lane or right-turn lane is not warranted on 108th Avenue serving the access road.

Sight Distance Analysis

Per the request of the Village of Orland Park, a vertical sight distance analysis was conducted for vehicles exiting the proposed access road and looking south along 108th Avenue. The sight distance analysis was conducted based on requirements of the Illinois Department of Transportation (IDOT) requirements and per the guidelines provided in *A Policy on Geometric Design of Highways and Street,* 2018 Edition (Green Book) published by the American Association of State Highway and Transportation Officials (AASHTO). The Green Book indicates that at a minimum, the location of a side road or access drive must meet the minimum stopping sight distance requirements. (Per the MUTCD, *If the available sight distance for an entering or crossing vehicle is at least equal to the appropriate stopping sight distance for the major road, then drivers have sufficient sight distance to anticipate and avoid collisions.)*. According to the Green Book, a road with a 30 mph speed limit (35 mph design speed) must have a minimum stopping sight distance of 250 feet on level grades and a minimum intersection sight distance of 390 feet on level grades. It should be noted that the stopping sight distance along 108th Avenue is slightly less than 250 feet as northbound vehicles are traversing an incline as they approach the access road.

A copy of the vertical sight distance analysis for the access road is located in the Appendix and was based on a centerline profile of 108th Avenue as provided ER engineering. According to the ER Engineering, the access road's approach to 108th Avenue will be at approximately the same elevation of the centerline. Further, it should be noted that the centerline profile was prepared based on a topographic survey which is not as precise as performing an actual survey of the centerline of 108th Avenue. As such, as part of the final engineering plans, the sight distance study should be updated/revised based on the actual profile of the 108th Avenue to confirm that the access road is located to meet the minimum stopping sight distance.

The results of the vertical sight distance analysis based on the ER Engineering centerline profile shows that the location of the access road has approximately 270 feet of sight distance looking south along 108th Avenue. The approximately 270 feet of sight distance exceeds the minimum stopping sight distance requirements (250 feet). However, it does not meet the intersection sight distance (390 feet) requirement. It is important to note that the access road will be aligned opposite Doyle Court and that the crash data obtained by IDOT indicates that the 108th Avenue/Doyle Court intersection has not experienced any crashes over the past five years (2020 to 2024).

Given that the location of the access road only exceeds the minimum sight distance requirements by approximately 20 feet based on the ER Engineering centerline profile, at a minimum, the following signs should be installed on the east side of 108th Avenue south of the access road.

- An Intersection Warning Sign (W2) which indicates the presence of the Doyle Road/access road intersection to motorists and the possibility of turning or entering traffic.
- An additional speed limit sign and trim the trees blocking any existing speed limit signs.

In addition, to reduce travel speeds along 108th Avenue and the resulting stopping distance, strong consideration should be given to implementing one or both of the following measures:

- Reduce the speed limit on 108th Avenue from 30 mph to 25 mph
- Install a radar speed feedback sign on the west side of 108th Avenue south of Doyle Road/access road intersection

Appendix

Site Plan

DATA BOX

A. TOTAL GROSS AREA		9.44 ACRES
B. NET BUILDABLE AREA		
GROSS AREA	9.44 ACRES	
STORMWATER MANAGEMENT	0.77 ACRES	
TOTAL		8.67 ACRES
C. CURRENT ZONING		E-1 ESTATE RESIDENTIAL
D. PROPOSED ZONING		R-3 RESIDENTIAL
E. INTERNAL R.O.W.		1.19 ACRES
F. OPENSPACE		
PARK	.28 ACRES	
STORMWATER MANAGEMENT	.77 ACRES	
COMMON AREA	.48 ACRES	
TOTAL		1.53 ACRES
G. ALLOWABLE DENSITY (2.5 DU X 8.80 ACRES)		22 UNITS
H. PROPOSED UNITS		20 UNITS
I. GROSS DENSITY		2.12 DU/ACRES
J. NET DENSITY		2.27 DU/ACRES
K. MIN. LOT WIDTH		43.92'
L. MIN. LOT SIZE		.22 ACRES
M. AVE. LOT SIZE		.34 ACRES
N. MAX LOT SIZE		.76 ACRES
O. SETBACKS		
FRONT YARD		25'
CORNER SIDE YARD		15'
INTERIOR SIDE YARD		8'
REAR YARD		30'
P. MAXIMUM LOT COVERAGE		45%
Q. GROSS IMPERVIOUS AREA		
SINGLE-FAMILY LOTS	1.92 ACRES	
ROADS	.71 ACRES	
SIDEWALKS	.27 ACRES	
PATHS	.16 ACRES	
TOTAL		3.06 ACRES

N

40 SCALE AT 22X34
80 SCALE AT 11X17

0 40' 80' 160'

SITE AREA: 9.44 ACRES / 411,135 SF
REDEVELOPMENT AREA: 8.36 ACRES / 364,222 SF

LANDSCAPE DESIGNER:
ALISA COUREY
627 GROVE ST EVANSTON, IL 60201
(847) 868-9902

PETITIONER:
RICK TURK
BRIDLEWOOD DEVELOPMENT

L-2.0 ILLUSTRATIVE SITE PLAN

BRIDLEWOOD

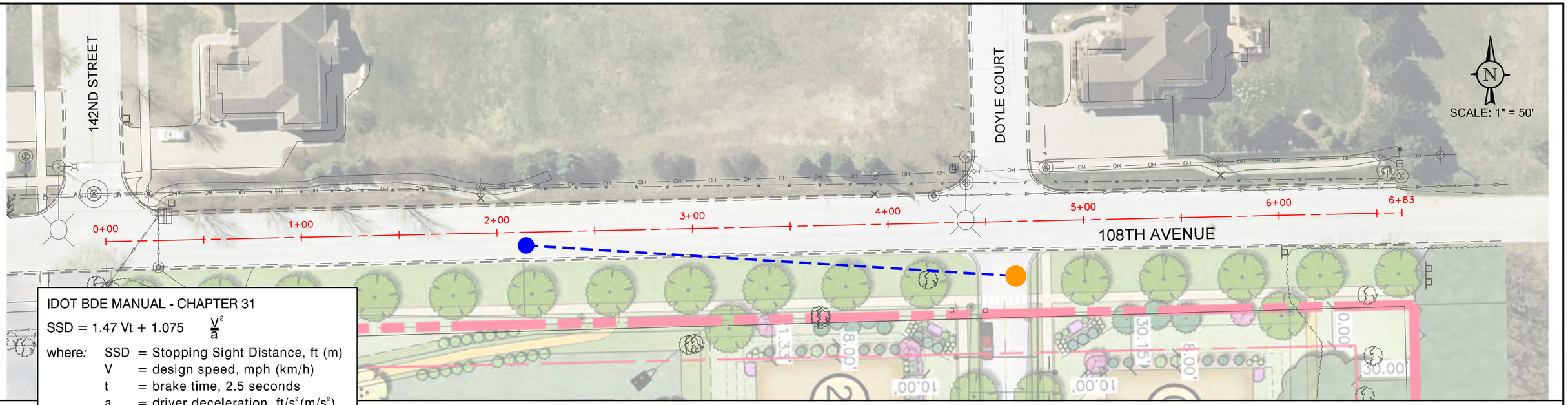
14137 SOUTH 108TH AVENUE - ORLAND PARK, IL

October 7th, 2025

RT MGR, LLC

teska associates
627 Grove Street
Evanston, Illinois

Sight Distance Analysis



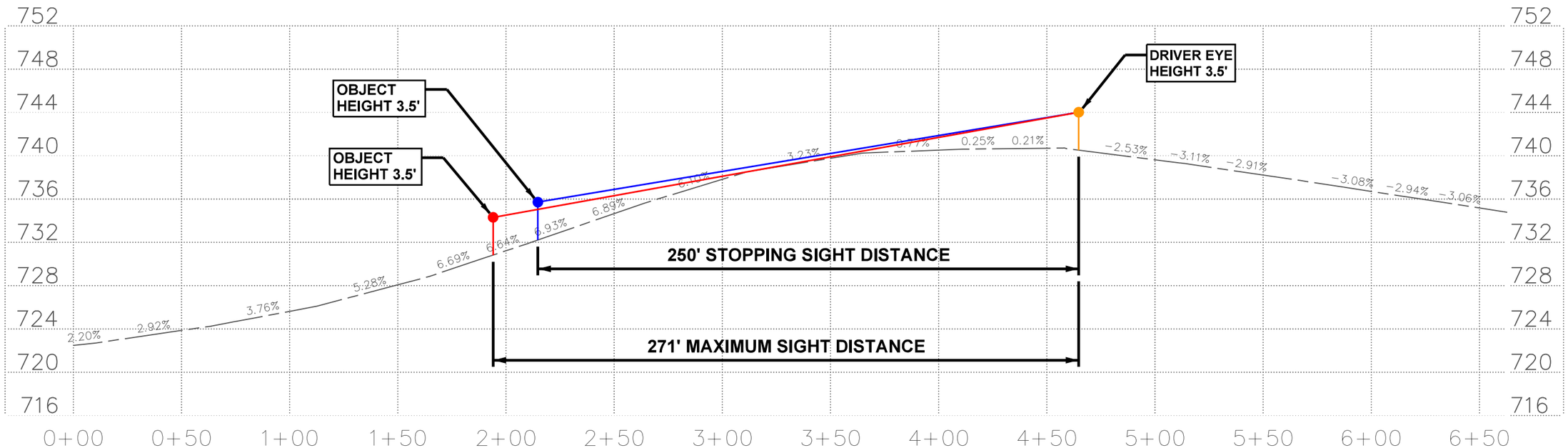
IDOT BDE MANUAL - CHAPTER 31

$SSD = 1.47\ Vt + 1.075\ \frac{V^2}{a}$

where: SSD = Stopping Sight Distance, ft (m)
V = design speed, mph (km/h)
t = brake time, 2.5 seconds
a = driver deceleration, $ft/s^2 (m/s^2)$

$250 = 1.47\ 35(2.5) + 1.075\ (\frac{1225}{11.2})$

POSTED SPEED LIMIT = 30 MPH
DESIGN SPEED = 35 MPH



108TH AVENUE
RESIDENTIAL DEVELOPMENT
ORLAND PARK, ILLINOIS

SIGHT DISTANCE STUDY

DRAWN: MD CHECKED: MW
DATE: 10-30-25 REV:
PROJECT # 25-312
EXHIBIT: A

KLOA
Kenig,Lindgren,O'Hara,Aboona,Inc.