

AGENDA
Municipal Services Committee
September 23, 2019
7:00 P.M. – Council Chambers

1. **Call to Order & Roll Call**
2. **Establishment of Quorum**
3. **Old Business**
 - a. **Discussion** – Regarding the 67th Street and Clarendon Hills Road traffic signal warrant study and options from Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA), traffic-engineering consultants.
4. **New Business**
 - a. **Resolution** – Authorizing the Mayor to accept a proposal from Christopher B. Burke Engineering, Ltd. for the professional engineering services related to the design and preparation of construction documents for the 67th Street Improvements Project in an amount not to exceed \$32,017.
 - b. **Motion** - Recommend to the City Council zoning ordinance revisions to comply with the Cannabis Regulation and Tax Act and to forward the draft revisions to the Planning and Zoning Commission for public hearing and commission review.
 - c. **Ordinance** - Amending the Darien Building Code by adoption of the Illinois Energy Conservation Code.
 - d. **Minutes** – **August 26, 2019** Municipal Services Committee
September 3, 2019 Municipal Services Committee – Special Meeting
4. **Director's Report**
5. **Next scheduled meeting** – Monday, October 28, 2019
6. **Adjournment**

AGENDA MEMO
Municipal Services Meeting
September 23, 2019

OLD BUSINESS - ISSUE STATEMENT

Discussion and Recommendation - regarding the 67th Street and Clarendon Hills Road traffic signal warrant study and options from Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA), traffic-engineering consultants.

BACKGROUND - *Updates from the July 22, 2019 Municipal Services Committee-Italicized*
The Municipal Services Committee discussed this item on July 22, 2019. Director Gombac presented the traffic engineering report as prepared by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA). The report included traffic counts, accident history and general comments regarding the intersection.

Upon review, the two options considered by the Municipal Services were Option 1-Traffic signalization and Option 3-Roadway modifications. Upon discussion the following was determined

Option 1-Traffic signalization

Does not meet the warrants per the Manual on Uniform Control Devices (MUTCD)
 Cost prohibitive-Grants are not available due to lack of warrants
 Joint Share Project-Committee directed Staff to contact Willowbrook for a cost share

Willowbrook representatives were contacted and will not participate with the signalization. Attached and labeled as [Attachment 1](#) (Pages 1-5) is the correspondence regarding the signal warrant analysis.

Upon review, Staff recommends not to move forward with Option 1.

Option 3-Roadway modifications.

Presented in bold, below are additional comments

The results of the evaluation for the roadway modifications recommend maintaining the existing two-way stop sign control and implementing the following enhancements:

- Trim the trees along the intersection's right-of-way and, if possible, along the private properties adjacent to the intersection. Cost \$1,000.
Municipal Services Dept. trimmed the trees and will maintain to a turf area.
- Relocate the stop bar on the eastbound approach of 67th Street. Cost \$1,000.
The striping will be completed next year as 67th Street is scheduled for a resurfacing project for 2020.
- Install Cross Road (MUTCD W2 -1) warning signs with an advance street name plaque on Clarendon Hills Road. Cost \$5,000.

Cost revised to under \$1,000-To be completed by Municipal Services Dept. by November, 2019

- Install Cross Road warning signs on both sides of the road both north and south of the intersection. Cost include within the above item.

The proposed signs are scheduled to be completed by November, 2019

- Install warning beacons on the warning signs. Cost include with the above item.

The Cost for warning beacons is estimated to be approximately \$1,500 and is tentatively scheduled for inclusion with the above, pending Committee and City Council recommendation. Funds for the beacons are available through the FY19/20 Budget under the Sign line item.

- Install speed limits signs and/or radar speed feedback signs on Clarendon Hills Road both north and south of the intersection. Cost \$10,000.

The FY19/20 Budget currently has a line item for the purchase of 2 Solar Speed Limit Flashing Signs. The signs were earmarked for Beller Road in the event additional signage was required. Currently there are 2 Solar Signs that were placed mid-block of Beller in 2018. To date, no additional concerns of speeding have been received.

Staff recommends to utilize the funds for the signs at the above locations, pending Committee concurrence and recommendation.

- Widen the eastbound approach of 67th Street to provide a westbound lane and an eastbound separate left-turn lane and a shared through/right-turn lane. \$425,000.

The 67th Street roadway is scheduled for a resurfacing project in 2020. Upon a field review the following concerns have been identified for treatment:

- 1. Limited curb and gutter will be included for removal and replacement*
- 2. Striping will be required upon resurfacing completion*
- 3. The existing northern right of way shoulder area continues to be damaged due to the existing tight radius.*

Since the roadway is slated for a resurfacing project, there is an opportunity to construct the suggested geometrical reconfiguration with cost savings. The reasoning is since the city bids and oversees various facets of road construction; curb and gutter, paving and striping, the items would be included as part of our annual contracts. The cost savings would be further realized due to the above-mentioned versus the project being bid as a sole contract.

Should the Committee and City Council consider to implement Option 3, Staff would request approval of an engineering agreement with Christopher Burke Engineering for the geometrical reconfiguration. The engineering design and plans would be required for quantities and field layout. The engineering agreement will be presented through a separate agenda at a cost not to exceed \$31,522. While the engineering for the proposed work was not considered for this year's budget, costs saving have been recognized within this year's Road Program that would allow the expense to be absorbed.

BACKGROUND-As presented on July 22, 2019

The City Council approved a resolution with Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA), traffic-engineering consultants Ltd. On May 6, 2019 to perform, an intersection evaluation and

traffic signal warrant study at Clarendon Hills Road and 67th Street. The intersection is located on the border with the Village of Willowbrook. Currently, the intersection operates with two-way stop signs at 67th Street, for east and westbound traffic. The primary purpose of this study was to determine if the existing intersection traffic and pedestrian volumes and/or crash experience warrant the need for the following:

- Traffic signalization
- Multi-way stop sign
- Roadway modifications

Attached and labeled as [Attachment 2](#), is the report as prepared by KLOA dated July 17, 2019, and addresses the above components in greater detail.

In summary, the report concludes the following as it relates to the following:

- **Option 1-Traffic signalization**

The existing traffic volumes do not meet the requirements for a traffic signal, with the exception of one of nine requirements/warrants. Regardless, the City could install a traffic signal. The cost of the signal and limited roadway reconfigurations would be approximately \$750,000. Please note, while the report states the cost of the signal (\$675,000), it does not include preliminary site valued at approximately engineering, \$75,000.

- **Option 2- Multi-way stop sign**

The results of the evaluation does not warrant a multi-way stop sign and indicates that the intersection currently satisfies only one of the various criteria for the installation of a multi-way stop sign control. Due to the volume of traffic on Clarendon Hills Road and the vertical curve along the road north of 67th Street, the multi-way stop sign control may result in additional crashes.

The cost to implement a multi-way stop sign would cost approximately \$475,500. Please note, while the report states the cost of the multi way stop (\$425,500), it does not include preliminary site engineering valued at approximately \$50,000.

- **Option 3-Roadway modifications**

The results of the evaluation for the roadway modifications recommend maintaining the existing two-way stop sign control and implementing the following enhancements:

- Trim the trees along the intersection's right-of-way and, if possible, along the private properties adjacent to the intersection. Cost \$1,000.
- Relocate the stop bar on the eastbound approach of 67th Street. Cost \$1,000.
- Install Cross Road (MUTCD W2 -1) warning signs with an advance street name plaque on Clarendon Hills Road. Cost \$5,000.

- Install Cross Road warning signs on both sides of the road both north and south of the intersection. Cost include with the above item.
- Install warning beacons on the warning signs. Cost include with the above item.
- Install speed limits signs and/or radar speed feedback signs on Clarendon Hills Road both north and south of the intersection. Cost \$10,000.
- Widen the eastbound approach of 67th Street to provide a westbound lane and an eastbound separate left-turn lane and a shared through/right-turn lane. \$425,000.

The cost to implement the roadway modifications would cost approximately \$492,000. Please note, while the report states the cost of the roadway modifications (\$442,000), it does not include preliminary site engineering valued at approximately \$50,000.

STAFF RECOMMENDATION

Staff requests further input with a recommendation to be forwarded to the City Council. Pending the decision mode the Staff would include the item for the FY20/21 budget.

STAFF RECOMMENDATION-September 23, 2019

Staff recommends to move forward with Option 3-Roadway Reconfiguration.

ALTERNATE CONSIDERATION

As directed.

DECISION MODE

This item will be placed on the agenda for the October 7, 2019 City Council agenda, New Business, for discussion.

Frank Trilla

From: Tim Halik
Sent: Thursday, March 21, 2019 8:43 AM
To: Dan Gombac
Cc: Bryon Vana
Subject: RE: 67th& Cl Hills Rd intersection

Dan –

You may want to further discuss with Dan Lynch or Michael Werthmann, but I question whether performing a full signal warrant analysis is needed at this time. It didn't meet warrants in 2012 and it may not meet them now, but that doesn't matter if you're looking to signalize the intersection as a local safety improvement project. It's very doubtful that the project would qualify for STP grant funding anyway, especially with DMMC's new scoring methodology in place as mandated by CMAP. It just won't rank high enough for funding unless you can include other new scoring criteria such as improvements to other modes of transportation (e.g., pedestrians, bicyclists), green improvements, improvements to a mass transit system, or show that the project will help improve low-income areas or create jobs. I agree that traffic counts will be needed for the IDS, but this stand-alone signal improvement will likely need to be locally funded.

As you know, through past developer contribution, Willowbrook has already completed intersection improvements to the north leg (located in Willowbrook) and the south leg (located in Darien). In 2016 we also completed the necessary geometric improvements to the east leg (located in Willowbrook) at our own expense. So, all that's left to do now to signalize is to design and construct the required improvements on the west leg (located in Darien) and install signals. If you are asking whether we'll agree to cost share the design and construction of the necessary improvements to the last leg of the intersection (the west leg, located in Darien), the answer is no. At this time, I also cannot commit to any possible cost share arrangement for signals, since the intersection itself is in Darien's jurisdiction and our FY 2019/20 budget is already set. I will need to speak further with Mayor Trilla, and you would likely be working with a new Willowbrook administrator on that project.

I'll let you decide if you want to share this response with the others you included in your e-mail, but I intend to share it with Mayor Trilla and the two (2) Willowbrook Trustees that have been heavily involved in trying to obtain safety improvements to your intersection since at least 2012.

Tim Halik
Village Administrator
Village of Willowbrook
835 Midway Drive
Willowbrook, IL 60527

Office (direct): 630.920.2261
Fax: 630.323.0787
E-mail: thalik@willowbrook.il.us
Web: www.willowbrookil.org



From: Dan Gombac <dgombac@darienil.gov>
Sent: Wednesday, March 20, 2019 10:06 AM
To: Michael Werthmann <mwerthmann@kloainc.com>; Tim Halik <thalik@willowbrook.il.us>
Cc: Lynch, Daniel L <dlynch@cbbel.com>; Bryon Vana <bvana@darienil.gov>; Kathy Weaver (Kathy_Weaver@AJG.com) <Kathy_Weaver@AJG.com>; Lester.Vaughan <lester.vaughan@gmail.com>
Subject: FW: 67th& Cl. Hills Rd intersection

Good morning Mike,

Regarding the intersection of 67th Street and Clarendon Hills Rd, would you forward a preliminary estimate for the following items,

1. Reevaluate and update the attached 2012 report to determine whether signalization of the intersection is warranted. We understand that the 2012 study did not warrant a signal through state funding. If required, Darien could provide a traffic count for the legs as directed.
2. Cost for design, letting and construction observation
3. Preliminary estimate for an intersection configuration and signalization. The structures should include street lights.

Good morning Tim,

City Staff was directed to revisit the abovementioned intersection for signalization. While the City did not participate in 2012 with the study or the geometrical configuration, would Willowbrook consider a cost share for the project as broken down above, pending support and costs?

Thanks to all.

Daniel Gombac
Director of Municipal Services
630-353-8106

To receive important information from the City of Darien sign up for our electronic newsletter:

DARIEN DIRECT CONNECT

Follow the link below and subscribing is simple!

<http://www.darien.il.us/Departments/Administration/CityNews.html>

From: Tim Halik <thalik@willowbrook.il.us>
Sent: Monday, December 18, 2017 4:10 PM
To: Dan Gombac <dgombac@darienil.gov>
Subject: RE: 67th& Cl. Hills Rd intersection

I was advised of that recent tragic accident from our police chief. My understanding was that Darien PD and FIAT were completing the investigation, since it's your intersection. So, I wouldn't have any details.

If you recall, we never performed a comprehensive engineering analysis of that intersection. Willowbrook wanted to do so back in 2015 at a cost of \$14,250 (\$7,125/each town) as part of a plan to consider signalization, but Darien declined due to lack of available funding. Therefore, we moved forward on our own to determine whether Willowbrook could do anything within the areas under our control (i.e., portions of the north and east legs) to improve conditions. We hired CBBEL to perform an evaluation (copy attached). Several available options were recommended to improve traffic flow. The preferred option identified at that time was a widening of the east leg to provide for a separate dedicated left turn lane. The Willowbrook Village Board approved the completion of the project in July of 2016 at a final cost of \$108,818.

I continue to believe that the ultimate design improvement at that intersection would be signalization.

Tim Halik
Village Administrator
Village of Willowbrook
835 Midway Drive
Willowbrook, IL 60527

Office (direct): 630.920.2261
Fax: 630.920.2427
E-mail: thalik@willowbrook.il.us
Web: www.willowbrookil.org



From: Dan Gombac [<mailto:dgombac@darienil.gov>]
Sent: Monday, December 18, 2017 3:09 PM
To: Tim Halik <thalik@willowbrook.il.us>
Subject: FW: 67th& Cl. Hills Rd intersection

Hey Tim.

Pls see below regarding a recent fatality at 67th& Cl. Hills Rd. Not sure if the person below will be reaching out to you. I don't have any details of the accident. She is apparently coming to our meeting tonight and wanted to see if you have an executive summary regarding the traffic signal study for above.

Thanks

Daniel Gombac

Director of Municipal Services

630-353-8106

To receive important information from the City of Darien sign up for our electronic newsletter:

DARIEN DIRECT CONNECT

Follow the link below and subscribing is simple!

<http://www.darien.il.us/Departments/Administration/CityNews.html>

From: Lauren Kaeseberg [<mailto:laurenkaeseberg@gmail.com>]

Sent: Monday, December 18, 2017 12:01 PM

To: Dan Gombac <dgombac@darienil.gov>; Bryon Vana <bvana@darienil.gov>; Tina M. Beilke <tbeilke@darienil.gov>;

Kathy Weaver (Kathy_Weaver@AJG.com) <Kathy_Weaver@ajg.com>

Subject: 67th& Cl. Hills Rd intersection

Hi - As you may recall, I have spoken at the city council meeting and with a number of you personally about my concerns over the intersection at 67th Street and Clarendon Hills Road (as well as issues surrounding a crosswalk for residents on the east side of Clarendon Hills Road to be able to safely cross).

I was heartbroken and so troubled by the news of the woman who was killed a little over a week ago at that intersection. This is simply unacceptable and tragic and it has become increasingly more dangerous with the amount of cars taking Clarendon Hills Road as an alternate to avoid the traffic on Route 83. I would like to address this with the city council and propose at a stop sign be put in at the corner for drivers going N/S.

I'll plan on attending the meeting tonight - please let me know if there is already something on the agenda addressing this? Or if I should be there for public comments?

Thanks - please let me know.

On Friday, October 20, 2017, Lauren Kaeseberg <laurenkaeseberg@gmail.com> wrote:

Hi Dan, Tina & Bryan,

Just heard about this scary situation about gasoline or volatile gasses in the sewer system just down the street at the Knolls and on 63rd street (you'll recall our home is very close to the Darien/Willowbrook border). Should we be concerned? Is Darien looking into this too?

Thanks.

Here's a link: <http://cltv.com/2017/10/20/possible-building-explosion-reported-in-willowbrook/>

Lauren Kaeseberg

Legal Director, Chicago office
Illinois Innocence Project
T: 773.517.0622
E: LaurenKaeseberg@gmail.com

This e-mail message and any attachments may contain confidential and/or privileged information. If you have received this e-mail message in error, please immediately notify the sender by reply message and then delete the electronic message and any attachments. Thank you.

Lauren Kaeseberg
Legal Director, Chicago office
Illinois Innocence Project
T: 773.517.0622
E: LaurenKaeseberg@gmail.com

This e-mail message and any attachments may contain confidential and/or privileged information. If you have received this e-mail message in error, please immediately notify the sender by reply message and then delete the electronic message and any attachments. Thank you.

Traffic Signal Warrant Study

Clarendon Hills Road with 67th Street

Darien, Illinois



Prepared For:



July 17, 2019

1. Introduction

This report summarizes the methodologies, results, and findings of a traffic signal warrant and operational evaluation conducted by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) for the intersection of Clarendon Hills Road with 67th Street in Darien, Illinois. The intersection is located in the northwest quadrant of the City of Darien on the border with the Village of Willowbrook. Currently, the intersection operates with the 67th Street approaches under stop sign control (two-way stop sign control).

The sections of this report present the following:

- A summary of the existing roadway conditions including vehicle traffic volumes at the study intersection
- A traffic signal warrant analysis for the study intersection assuming existing traffic conditions
- A multi-way stop sign control evaluation assuming the existing traffic volumes

The primary purpose of this study is to determine if the existing intersection traffic and pedestrian volumes and/or crash experience warrant the need for a traffic signal or multi-way stop sign control. In addition, the study also examined other intersection improvements, traffic control modifications, and/or safety measures to improve the operation of the intersection.

2. Existing Conditions

Existing transportation conditions in the vicinity of the intersection were documented based on field visits conducted by KLOA, Inc. in order to obtain a database for projecting future conditions. The following provides a description of the geographical location of the intersection, physical characteristics and operation of the intersection, the existing traffic volumes, and the intersection crash data.

Study Intersection Location

The intersection of Clarendon Hills Road with 67th Street is located in the northeast quadrant of the City of Darien on the border with the Village of Willowbrook. The closest signalized intersections to the subject intersection are 63rd Street approximately 3,500 feet to the north, Plainfield Road approximately 3,500 feet to the south, IL 83 approximately 2,700 feet to the east, and Cass Avenue approximately one mile to the west. Land uses in the vicinity of the site are primarily residential and include multi-family housing to the north and east and single-family housing to the west and south. **Figure 1** shows an aerial of the study intersection and **Figure 2** shows the location of the intersection with respect to the area roadways.

Existing Roadway System Characteristics

The intersection of Clarendon Hills Road with 67th Street is under the jurisdiction of the City of Darien. The characteristics of the existing roadways that form the subject intersection are described below.

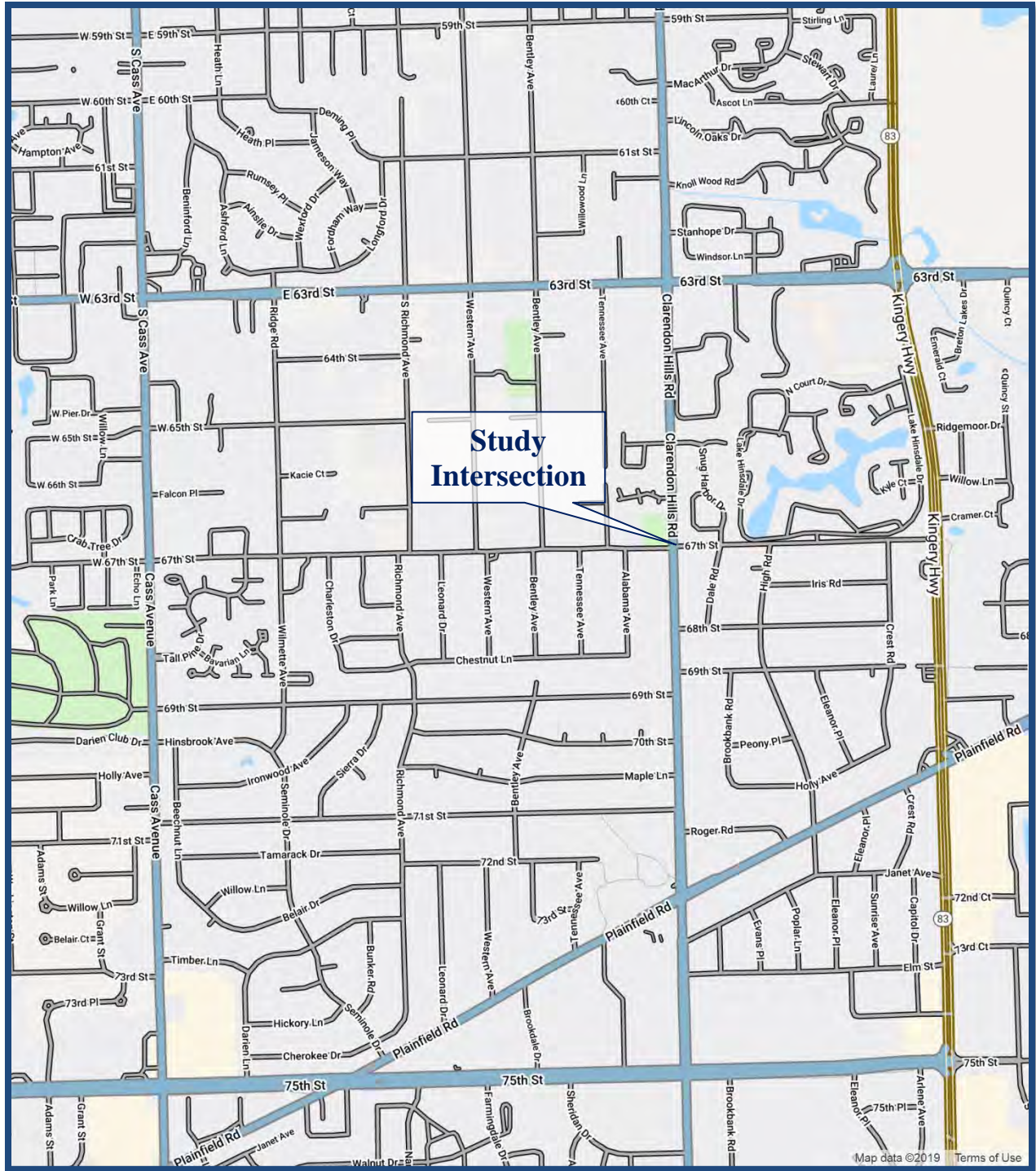
Clarendon Hills Road is a north-south, major collector roadway that has one lane in each direction. At its unsignalized intersection with 67th Street, Clarendon Hills Road has an exclusive left-turn lane and a shared through/right-turn lane on both approaches. Clarendon Hills Road has a posted speed limit of 30 mph, carries an annual average daily traffic volume (AADT) of 8,450 vehicles (Illinois Department of Transportation [IDOT] 2016), and is under the jurisdiction of the City of Darien south of 67th Street and the Village of Willowbrook north of 67th Street.

67th Street is an east-west, minor collector that has one lane in each direction. At its unsignalized intersection with Clarendon Hills Road, 67th Street provides a shared left-turn/through/right-turn lane on the eastbound approach and an exclusive left-turn lane and a shared through/right-turn lane on the westbound approach. Both approaches are under stop sign control. 67th Street has a posted speed limit of 25 mph, carries an AADT of 2,400 vehicles (IDOT 2016), and is under the jurisdiction of the City of Darien west of Clarendon Hills Road and the Village of Willowbrook east of Clarendon Hills Road.



Aerial View of Intersection

Figure 1



Site Location

Figure 2

Clarendon Hills Road and 67th Street
 Darien, Illinois

Intersection Enhancements and Safety /Measures

The following intersection enhancements and safety measures have been installed at the intersection in order to enhance its operation:

- Overhead street lights are located in the northwest and southeast corners of the intersection.
- Flashing stop signs are located on both approaches of 67th Street.
- Cross Traffic Does Not Stop warning signs are located below the stop signs on both approaches of 67th Street.
- A crosswalk is located on the east leg of 67th Street.

Intersection Sight Distance

The sight distance from the 67th Street approaches is reduced due to the landscaping, utility poles, and fencing along Clarendon Hills Road in addition to the slight vertical curve along Clarendon Hills Road north of 67th Street. A *Policy on Geometric Design of Highways and Streets* (Green Book) published by the American Association of State Highway and Transportation Officials (AASHTO) indicates that, at a minimum, the location of a side road or access road must meet the minimum stopping sight distance requirements. According to the Green Book, the minimum stopping sight distance for a road with a 30 mph speed limit (35 mph design speed) is 250 feet.

Field inspection of the intersection shows that the sight distance for traffic along 67th Street when stopped at the stop bars is impaired, particularly for eastbound traffic looking north along Clarendon Hills Road. However, when traffic pulls up past the stop bar closer to the 67th Street edge of pavement, the 67th Street traffic has sufficient sight lines that meet and exceed the minimum stopping sight distance. It is important to note that it is common for traffic to have to pull up after stopping at the stop bar in order to improve sight lines. Pictures are included in the Appendix showing the sight lines for each 67th Street approach at both the stop bar and when pulling up past the stop bar.

Crash Data

KLOA, Inc. obtained crash data¹ from IDOT and the City of Darien for the past five years (2014 to 2018) for the subject intersection. **Tables 1** and **2** provide summaries of the crash data. In addition, the City of Darien provided a comprehensive analysis of the crash history at the subject intersection, which is included in the Appendix.

¹ IDOT DISCLAIMER: The motor vehicle crash data referenced herein was provided by the Illinois Department of Transportation. Any conclusions drawn from analysis of the aforementioned data are the sole responsibility of the data recipient(s). Additionally, for coding years 2015 to present, the Bureau of Data Collection uses the exact latitude/longitude supplied by the investigating law enforcement agency to locate crashes. Therefore, location data may vary in previous years since data prior to 2015 was physically located by bureau personnel.

Table 1
CLARENDON HILLS ROAD WITH 67TH STREET – CRASH TYPE

Year	Crash Type						Total
	Angle	Object	Rear End	Sideswipe	Turning	Other	
2014	4	0	0	0	0	0	4
2015	8	0	1	0	1	0	10
2016	4	0	1	0	0	0	5
2017	9	2	1	0	0	1	13
2018	<u>7</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>2</u>	<u>0</u>	<u>9</u>
Total	32	2	3	0	3	1	41
Average/Year	6.4	<1.0	<1.0	<1.0	<1.0	<1.0	8.2

Table 2
CLARENDON HILLS ROAD WITH 67TH STREET – CRASH SEVERITY

Year	Crash Severity			Total
	Property Damage Crash	Injury Crash	Fatality Crash	
2014	1	3	0	4
2015	7	3	0	10
2016	4	1	0	5
2017	8	4	1	13
2018	<u>6</u>	<u>3</u>	<u>0</u>	<u>9</u>
Total	26	14	1	41
Average/Year	5.2	2.8	<1.0	8.2

The following summarizes the crash experience over the past five years:

- The intersection had a total of 41 crashes between 2014 and 2018, which averages to just over eight crashes per year.
- Of the 41 crashes, 14 of the crashes resulted in injuries and one crash resulted in a fatality. It should be noted that the fatal crash was a head-on collision with a driver that was under the influence of alcohol.
- 35 of the 41 crashes were either angle or turning crashes, which are the type of crashes that can be corrected by a traffic signal or multi-way stop sign control.

IDOT Five Percent Crash Locations

IDOT reviews statewide crash data every other year to identify approximately five percent of all roadway locations and intersections within the State of Illinois with the greatest potential for safety improvement (PSI). The process identifies those locations and intersections experiencing a higher severity of crashes when compared to similar locations statewide based on the latest available crash data for a five-year period. The most recent Five Percent reports produced by IDOT were in 2014, which is based on crash data from 2008 through 2012, and 2017, which is based on crash data for 2011 through 2015. The Clarendon Hills Road/67th Street intersection was classified as a Five Percent location in 2017, but was not classified as a Five Percent location in 2014.

Existing Traffic Volumes

In order to determine the volume of traffic traversing the intersection of Clarendon Hills Road with 67th Street, KLOA, Inc. conducted a 13-hour traffic count (6:00 A.M. to 7:00 P.M.) on Thursday, May 17, 2019. The hourly results of the traffic count are summarized in **Table 3**, which shows the individual movements for each intersection approach. The raw traffic count data is included in the Appendix. Based on a review of the traffic data, it was determined that the morning peak hour of traffic occurred from 7:30 to 8:30 A.M. and the evening peak hour of traffic occurred from 5:00 to 6:00 P.M. **Figure 3** illustrates the peak hour hourly traffic volumes as well as the existing roadway characteristics. It should be noted that the intersection of IL 83 with Plainfield Road was under construction when the traffic counts were conducted. As such, the volume of traffic traversing the intersection was likely higher than normal.

Existing Intersection Operation

Analysis of the existing operation of the intersection of Clarendon Hills Road with 67th Street was performed for the weekday morning and weekday evening peak hours. The traffic analyses were performed using the methodologies outlined in the Transportation Research Board's *Highway Capacity Manual (HCM)*, 6th Edition and analyzed using Synchro/SimTraffic 10 software.

The ability of an intersection to accommodate traffic flow is expressed in terms of level of service, which is assigned a letter from A to F based on the average control delay experienced by vehicles passing through the intersection. The *Highway Capacity Manual* definitions for levels of service and the corresponding control delay for signalized intersections and unsignalized intersections are shown in the Appendix.

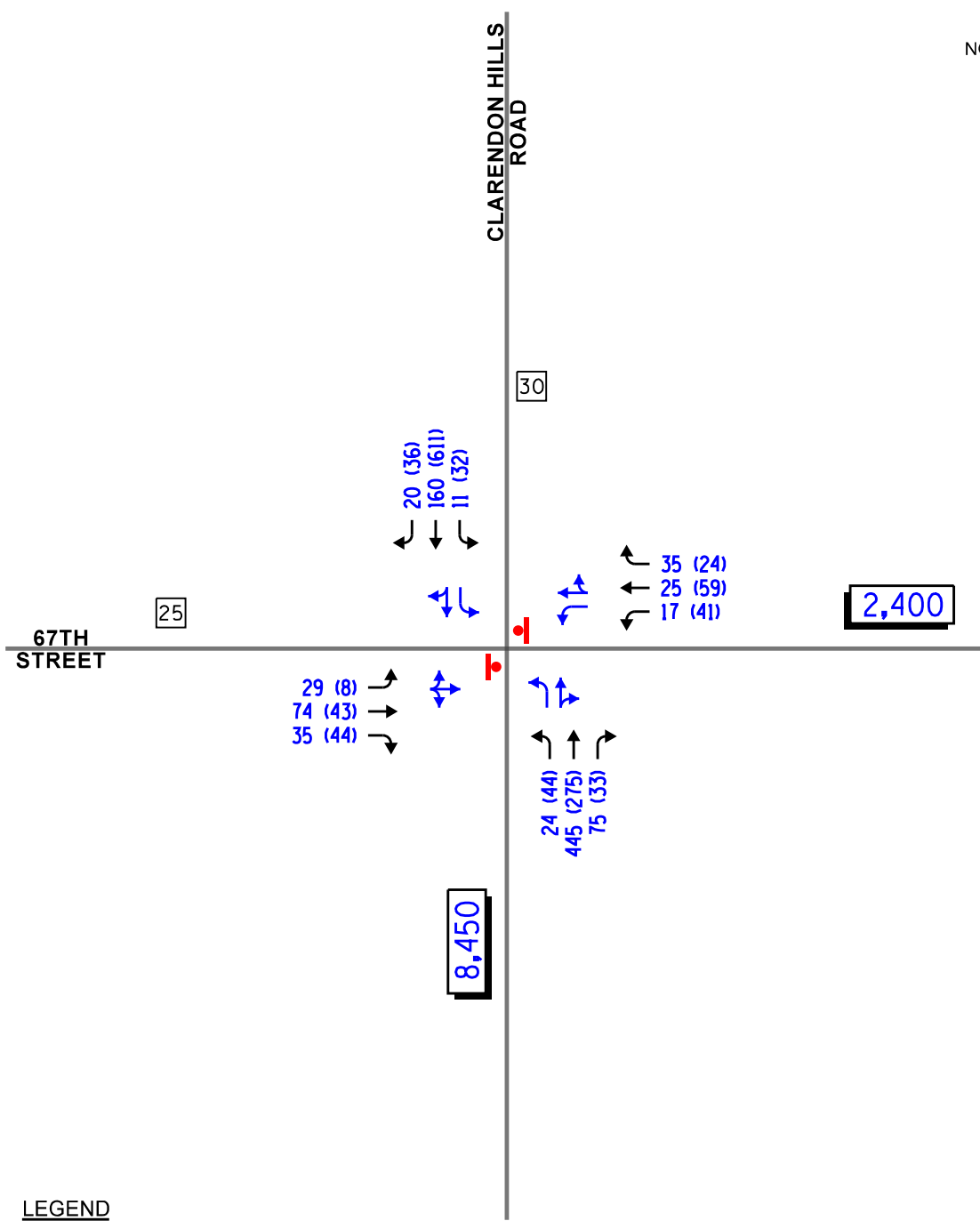
Summaries of the traffic analysis results showing the level of service and delay (measured in seconds) for the existing conditions are presented in **Table 4**. Summary sheets for the capacity analyses are included in the Appendix. From Table 4 it can be seen that all of the critical movements at the intersection are operating at Level of Service (LOS) D or better, except the westbound left-turn movement. During the evening peak hour, the left-turn movement is operating on the threshold between a LOS E and LOS F. This level of service is common for stop sign controlled movements or approaches along major collector and arterial roads such as Clarendon Hills Road. The 67th Street traffic is able to enter or cross Clarendon Hills Road. However, during the morning and evening peak periods, this movement experiences some additional delay. As such, the intersection has sufficient capacity to accommodate the existing traffic volumes.

Table 3
 CLARENDON HILLS ROAD WITH 67TH STREET
 TRAFFIC VOLUME SUMMARY - THURSDAY, MAY 17, 2019

Time	67 th Street Eastbound Approach			67 th Street Westbound Approach			Clarendon Hills Road Northbound Approach			Clarendon Hills Road Southbound Approach		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
6:00 AM	12	31	20	19	15	20	8	232	32	10	66	8
7:00 AM	16	61	33	18	24	28	21	370	74	7	172	16
8:00 AM	27	58	36	10	26	35	24	416	66	16	139	20
9:00 AM	8	38	29	18	26	33	17	221	30	23	146	14
10:00 AM	11	41	21	19	29	30	21	225	43	17	155	14
11:00 AM	15	39	18	17	29	23	21	196	40	20	195	18
12:00 PM	15	43	31	34	47	18	32	222	31	26	249	16
1:00 PM	5	29	23	26	35	27	22	200	21	20	178	15
2:00 PM	11	28	30	38	37	25	29	179	30	16	264	20
3:00 PM	15	43	41	54	44	27	38	271	38	28	466	34
4:00 PM	9	43	45	27	51	27	29	250	32	32	555	29
5:00 PM	8	43	44	41	59	24	44	275	33	32	611	36
6:00 PM	10	33	37	50	56	27	43	255	29	30	447	33
Total	162	530	408	371	478	344	349	3312	499	277	3643	273



NOT TO SCALE



LEGEND

- TRAVEL LANE
- STOP SIGN
- SPEED LIMIT
- 00** - AM PEAK HOUR (7:30-8:30 AM)
- (00)** - PM PEAK HOUR (5:00-6:00 PM)
- 00** - AVERAGE DAILY TRAFFIC (ADT)

Traffic Signal Warrant Study
Clarendon Hills Rd & 67th St
Darien, Illinois

Existing Roadway Characteristics
and Traffic Volumes

KLOA
Kenig, Lindgren, O'Hara, Aboona, Inc.
Job No: 19-127 Figure: 3

Table 4
 CAPACITY ANALYSIS - EXISTING CONDITIONS
 CLARENDON HILLS ROAD WITH 67TH STREET

Intersection	Weekday Morning Peak Hour 7:30-8:30 A.M.		Weekday Evening Peak Hour 5:00-6:00 P.M.	
	LOS	Delay	LOS	Delay
Two-Way Stop Sign Control				
• Northbound Left Turn	A	7.7	A	9.2
• Southbound Left Turn	A	8.7	A	8.0
• Eastbound Approach	C	21.9	D	31.8
• Westbound Left Turn	C	22.4	F	57.0
• Westbound Through/Right Turn	B	14.9	D	29.6

3. Traffic Signal Warrant Analysis

Typically, the installation of a traffic signal requires the satisfaction of one or more of the following nine warrants from the Federal Highway Administration's *Manual on Uniform Traffic Control Devices for Streets and Highways* (MUTCD), 2009. The satisfaction of one or more of the warrants does not in itself justify the installation of a traffic signal. A review of the intersection's physical characteristics and traffic conditions is also necessary to determine whether a traffic control signal installation is justified. It should be noted that due to the low volume of left-turn movements, the intersection was assumed to provide one lane on all approaches.

- Warrant 1 (A and B): Eight-Hour Vehicular Volume
- Warrant 2: Four-Hour Vehicular Volume
- Warrant 3: Peak Hour
- Warrant 4: Pedestrian Volume
- Warrant 5: School Crossing
- Warrant 6: Coordinated Signal System
- Warrant 7: Crash Experience
- Warrant 8: Roadway Network
- Warrant 9: Intersection Near a Railroad Grade Crossing

A description of each of the nine warrants is summarized below:

Warrant 1 (Eight-Hour Vehicular Volume) has three conditions: Condition A-Minimum Vehicular Volume, Condition B-Interruption of Continuous Traffic, or a combination of both Condition A and B. Condition A is intended for application where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal. Condition B is intended for application where the traffic volume on a major street is so heavy the traffic on a minor intersecting street suffers excessive delay or conflict in entering or crossing the major street. Warrant 1 Conditions A or B are satisfied when the traffic volumes for each of any eight hours of an average day are above a threshold value of minor street traffic, which varies depending on the major street traffic volume and the number of travel lanes on the major and minor streets. For this analysis, a minimum of 500 vehicles and 150 vehicles are needed for each hour on Clarendon Hills Road and 67th Street, respectively, for Warrant 1A. For Warrant 1B, a minimum of 750 vehicles and 75 vehicles are needed on Clarendon Hills Road and 67th Street, respectively. For the combination, both Condition A and Condition B need to be meet 80 percent of the required volume for any eight hours of an average day.

Warrant 2 (Four-Hour Vehicular Volume) 2 is applied when the volume of intersecting traffic is the principal reason to consider installing a traffic signal. The warrant is satisfied when the traffic volumes for each of any four hours of an average day are above a threshold value of minor street traffic, which varies depending on the major street traffic volume and the number of travel lanes.

Warrant 3 (Peak Hour) is intended for application when traffic conditions are such that for a minimum of one hour of an average day, the minor-street traffic suffers undue delay when entering or crossing the major street. As with Warrant 2, the threshold value of minor street traffic varies depending on the major street traffic volume and number of travel lanes. This signal warrant is primarily used in cases where a high volume of traffic is discharged over a short time.

Warrant 4 (Pedestrian Volume) is intended for application where the traffic volume on the major street is so heavy that pedestrians experience excessive delay in crossing the major street. The warrant is satisfied when the pedestrian volumes for each of any four hours of an average day are above a threshold value of major street traffic, which varies depending on the major street traffic volume and has a minimum value of 75 pedestrian crossings per hour. The warrant can also be satisfied when the pedestrian volumes for any one-hour period of an average day are above a threshold value of major street traffic, which also varies depending on the major street traffic volume and has a minimum value of 93 pedestrian crossings per hour. The volume thresholds can be reduced by 50 percent if the 15th-percentile crossing speed of pedestrians is less than 3.5 feet/second.

Warrant 5 (School Crossing) applies to locations where the fact that school children cross the major street is the principal reason to consider installing a traffic control signal. This warrant evaluates the number of adequate gaps in the traffic stream of the major street and has a threshold value of 20 student crossings during the highest hour. In addition, other remedial measures should be considered first, such as warning signs, flashers, school speed zones, and school crossing guards.

Warrant 6 (Coordinated Signal System) applies when the upstream traffic control signals do not provide the necessary degree of vehicle platooning, but the proposed signal in combination with the upstream signal will collectively provide a progressive operation.

Warrant 7 (Crash Experience) is applicable where the severity and frequency of traffic crashes are susceptible to correction by the presence of a traffic signal. The warrant is satisfied when five or more crashes have occurred within a 12-month period and specific traffic or pedestrian volume threshold values are exceeded for the major and minor streets.

Warrant 8 (Roadway Network) states that installing a traffic control signal at some intersections might be justified to encourage concentration and organization of traffic flow on a roadway network. It is intended to be applied to the intersection of two major through routes in a city.

Warrant 9 (Intersection Near a Railroad Grade Crossing) is intended for use at a location where none of the conditions described in the other eight warrants are met, but the proximity of a grade crossing to an intersection controlled by a STOP or YIELD sign is the principal reason to consider installing a traffic control signal. There are two criteria for this warrant, one related to the distance between the grade crossing and the intersection, and the other related to the volume of traffic on the intersecting roadways.

Traffic Signal Warrant Analysis

A traffic signal warrant analysis was performed for the Clarendon Hills Road with 67th Street intersection to determine if the existing traffic conditions warrant the installation of a traffic signal. Of the nine warrants that can be applied in establishing the justification for a traffic signal, only the following five warrants were considered for this analysis:

- Warrant 1, Eight-Hour Vehicular Volume
- Warrant 2, Four-Hour Vehicular Volume
- Warrant 3, Peak Hour
- Warrant 4, Pedestrian Volume
- Warrant 7, Crash Experience

The other four warrants were not considered as the intersection is not a primary school crossing (Warrant 5) or part of a coordinated traffic signal system (Warrant 6), does not consist of two major through routes (Warrant 8), and is not located near a railroad crossing (Warrant 9).

Evaluation of Warrants 1, 2, and 3 - Intersection Traffic Volumes

Table 5 summarizes the hourly and peak hour traffic volumes traversing the intersection of Clarendon Hills Road and 67th Street (refer to Table 3) for the 13-hour traffic count performed on May 17, 2019. The table also highlights which hours of the day satisfy the minimum volume threshold for Warrant 1A, Warrant 1B, combination of Warrant 1A/1B, Warrant 2, and Warrant 3. The Warrants computer program was used to evaluate the existing traffic volumes to determine if they satisfy any of the three traffic volume warrants.

The following and Table 2 summarize the results of the evaluation of the existing traffic volumes:

- Warrant 1A: None of the hourly volumes satisfy the minimum volumes when eight hours are required.
- Warrant 1B: Only four hours satisfy the minimum volumes when eight hours are required.
- Combination of Warrants 1A/1B: Only four hours satisfy the minimum volumes when eight hours are required.
- Warrant 2: Only one hour satisfies the minimum volumes when four hours are required.
- Warrant 3: None of the hourly volumes satisfy the minimum volumes when one hour is required.

Therefore, the existing traffic volumes do not satisfy Warrant 1, Warrant 2, or Warrant 3. The existing traffic volumes are closest to satisfying Warrant 1B where four of eight hours are met.

Table 5

VOLUME WARRANT SUMMARY - CLARENDON HILLS ROAD AND 67TH STREET

Hour	Clarendon Hills Road (Major)	67 th Street Eastbound (Minor)	67 th Street Westbound (Minor)	Signal Warrants					
				Warrant 1				Warrant 2 (4-Hour)	Warrant 3 (1-Hour)
				Warrant 1A (8-Hour)	Warrant 1B (8-Hour)	Combination			
						1A 80%	1B 80%		
6:00 to 7:00 AM	356	63	54	No	No	No	No	No	No
7:00 to 8:00 AM	660	110	70	No	No	No	Yes	No	No
8:00 to 9:00 AM	681	121	71	No	No	Yes	Yes	No	No
9:00 to 10:00 AM	451	75	77	No	No	No	No	No	No
10:00 to 11:00 AM	475	73	78	No	No	No	No	No	No
11:00 AM to 12:00 PM	490	72	69	No	No	No	No	No	No
12:00 to 1:00 PM	576	89	99	No	No	No	No	No	No
1:00 to 2:00 PM	456	57	88	No	No	No	No	No	No
2:00 to 3:00 PM	538	69	100	No	No	No	No	No	No
3:00 to 4:00 PM	875	99	125	No	Yes	Yes	Yes	No	No
4:00 to 5:00 PM	927	97	105	No	Yes	No	Yes	No	No
5:00 to 6:00 PM	1031	95	124	No	Yes	Yes	Yes	Yes	No
6:00 to 7:00 PM	837	80	133	No	Yes	Yes	Yes	No	No
Total Hours Met:				0	4	4	6	1	0
Required Hours:				8	8	8	8	4	1
Warrant Satisfied:				No	No	No		No	No

Evaluation of Warrant 4 - Intersection Pedestrian Volumes

The intersection had a total of 30 pedestrians during the 13-hour count. As such, given the low pedestrian activity, this intersection does not satisfy Warrant 4.

Evaluation of Warrant 7 – Crash Experience

Per the MUTCD, the following indicates the requirements to meet Warrant 7 – Crash Experience:

The need for a traffic control signal shall be considered if an engineering study finds that all of the following criteria are met:

- A. Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency; and*
- B. Five or more reported crashes, of types susceptible to correction by a traffic control signal, have occurred within a 12-month period, each crash involving personal injury or property damage apparently exceeding the applicable requirements for a reportable crash; and*
- C. For each of any 8 hours of an average day, the vehicles per hour (vph) given in both of the 80 percent columns of Condition A in Table 4C-1 (see Section 4C.02), or the vph in both of the 80 percent columns of Condition B in Table 4C-1 exists on the major-street and the higher-volume minor-street approach, respectively, to the intersection, or the volume of pedestrian traffic is not less than 80 percent of the requirements specified in the Pedestrian Volume warrant. These major-street and minor-street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.*

The following evaluates each of the three criteria required to satisfy Warrant 7.

Criteria A requires that adequate trial of alternative measures at the intersection has failed to reduce the crash frequency. The MUTCD provides the following guidance as to alternatives to traffic signal control.

Since vehicle delay and the frequency of some types of crashes are sometimes greater under traffic signal control than under stop sign control, consideration should be given to providing alternatives to traffic control signals even if one or more of the signal warrants have been satisfied.

Table 6 lists 13 potential alternative measures to traffic signal control as outlined in the MUTCD and whether the alternatives have been implemented or considered at the intersection. It is important to note that the MUTCD indicates that the alternatives are not limited to those shown in Table 6.

Table 6

ALTERNATIVE MEASURES TO BE CONSIDERED BEFORE INSTALLING A TRAFFIC SIGNAL

Measure	Currently Installed	Comments
Installing signs along the major street to warn road users approaching the intersection	No	
Relocating the stop line(s) and making other changes to improve the sight distance at the intersection	No	
Installing measures designed to reduce speeds on the approaches	No	
Installing a flashing beacon at the intersection to supplement STOP control	Yes	Flashing STOP signs located on 67 th Street
Installing flashing beacons on warning signs in advance of a STOP sign controlled intersection on major- and/or minor-street approaches	No	
Adding one or more lanes on a minor-street approach to reduce the number of vehicles per lane on the approach	Yes	Westbound approach provides separate left-turn lane
Revising the geometrics at the intersection to channelize vehicular movements and reduce the time required for a vehicle to complete a movement, which could also assist pedestrians	No	
Revising the geometrics at the intersection to add pedestrian median refuge islands and/or curb extensions	N.A.	Intersection has minimal pedestrian activity
Installing roadway lighting if a disproportionate number of crashes occur at night	Yes	Overhead streetlights are located in NW and SE corners of the intersection
Restricting one or more turning movements, perhaps on a time-of-day basis, if alternate routes are available	No	
If the warrant is satisfied, installing multi-way STOP sign control	No	As discussed later, traffic volumes do not warrant all-way STOP sign control
Installing a pedestrian hybrid beacon (see Chapter 4F) or In-Roadway Warning Lights (see Chapter 4N) if pedestrian safety is the major concern	N.A.	Intersection has minimal pedestrian activity
Installing a roundabout	No	Not feasible given right-of-way constraints
Employing other alternatives, depending on conditions at the intersection	No	

Table 6 shows that only several of the alternative measures have been implemented at the intersection. The following lists other alternative measures that could be implemented to enhance the operation and safety of the intersection:

- Trim the trees along the intersection's right-of-way and, if possible, along private properties adjacent to the intersection to improve the sight lines for the 67th Street traffic.
- Relocate the stop bar on the eastbound approach of 67th Street several feet east in order to improve the sight lines for the eastbound 67th Street traffic.
- Install Cross Road (MUTCD W2 -1) warning signs with an advance street name plaque on Clarendon Hills Road both north and south of the 67th Street to indicate the presence of the intersection and the possibility of turning or entering traffic.
- Consideration should be given to (1) installing the warning signs on both sides of the road both north and south of the intersection and (2) to installing warning beacons on the warning signs to further emphasize the Cross Road warning signs.
- Install additional speed limit signs and/or radar speed feedback signs on Clarendon Hills Road both north and south of the intersection to further remind motorists of the posted speed limit through the intersection.
- Widen the eastbound approach of 67th Street to provide a westbound lane and an eastbound separate left-turn lane and a shared through/right-turn lane similar to the westbound approach of 67th Street. The addition of the left-turn lane will enhance the capacity of the 67th Street approach, reduce the number of vehicles per lane, and provide for a safer intersection by aligning the through lanes and left-turn lanes opposite one another.

Since only several of the alternative measures have been implemented, the intersection most likely is on the threshold between satisfying and not satisfying the criteria.

Criteria B is satisfied when five or more crashes have occurred within a 12-month period that can be corrected by a traffic signal. As Table 1 shows, the intersection has had five or more angle and turning crashes, which can often be prevented with the provision of a traffic signal, in 2015, 2017 and 2018. Further, the intersection was identified by IDOT as a Five Percent location in 2017. As such, the intersection crash experience does satisfy *Criteria B* of Warrant 7.

Criteria C requires that the intersection meet minimum traffic or pedestrian volumes. The minimum volumes required are the same for the Combination of Warrant 1A and Warrant 1B. As discussed previously and shown in Table 5, the existing traffic volumes only meet the minimum volumes for the Combination of Warrant 1A and Warrant 1B for four hours when eight hours are required. Further, due to the very low pedestrian activity, the existing pedestrian volumes are not met. As such, the traffic volumes at the intersection do not satisfy *Criteria C* of Warrant 7.

While the existing intersection conditions satisfies *Criteria B*, the existing traffic volumes do not satisfy *Criteria C* and *Criteria A* is generally on the threshold between satisfying and not satisfying the criteria. As such, the intersection does not satisfy all three criteria of Warrant 7.

Traffic Signal Warrant Findings

The results of the traffic signal warrant study have shown that the intersection does not currently satisfy any of the traffic volume warrants (Warrants 1, 2, and 3), the pedestrian volume warrant (Warrant 4), or the crash experience warrant (Warrant 7). However, it is important to note that the intersection does satisfy Criteria B of Warrant 7 given the existing crash experience at the intersection. Further, satisfying one or more of the traffic signal warrants is only classified as a Guidance Statement in the MUTCD. The MUTCD defines a Guidance Statement as “*a statement of recommendation, but not mandatory, practice in typical situations, with deviations allowed if engineering judgment or engineering study indicates the deviation to be appropriate.*” As such, while the intersection currently does not satisfy any of the traffic signal warrants, the City can install a traffic signal if, in their judgment, they deem it appropriate.

If a traffic signal is installed at this intersection, consideration should be given to installing the following geometric improvements and/or safety measures:

- The widening of the eastbound approach of 67th Street to provide a separate left-turn lane so that the eastbound and westbound approaches mirror each other. In addition to increasing the capacity of the intersection, the widening of the approach will provide for a safer condition as the 67th Street through lanes and the left-turn lanes will be aligned opposite one another.
- The installation of Traffic Signal Ahead (MUTCD W3-3) warning signs on Clarendon Hills Road north and south of the intersection with or without flashing beacons.

Further, it should be noted that additional right-of-way may need to be acquired in order to accommodate the traffic signal equipment and/or the widening of the 67th Street eastbound approach.

4. Multi-Way Stop Sign Control Evaluation

This section evaluates if the intersection of Clarendon Hills Road and 67th Street meets the multi-way stop sign control criteria and also examines how the intersection will operate under multi-way stop sign control.

MUTCD Multi-Way Stop Sign Control Criteria

The MUTCD indicates that multi-way stop control can be useful as a safety measure at intersections if certain traffic conditions exist. Per the MUTCD, the following criteria should be considered in an engineering study for a multi-way STOP sign installation:

- A. *Where traffic control signals are justified, the multi-way stop is an interim measure that can be installed quickly to control traffic while arrangements are being made for the installation of the traffic control signal.*
- B. *Five or more reported crashes in a 12-month period that are susceptible to correction by a multi-way stop installation. Such crashes include right-turn and left-turn collisions as well as right-angle collisions.*
- C. *Minimum volumes:*
 1. *The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day; and*
 2. *The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour; but*
 3. *If the 85th-percentile approach speed of the major-street traffic exceeds 40 mph, the minimum vehicular volume warrants are 70 percent of the values provided in Items 1 and 2.*
- D. *Where no single criterion is satisfied, but where Criteria B, C.1, and C.2 are all satisfied to 80 percent of the minimum values. Criterion C.3 is excluded from this condition.*

Other criteria that may be considered in an engineering study include:

- A. The need to control left-turn conflicts;*
- B. The need to control vehicle/pedestrian conflicts near locations that generate high pedestrian volumes;*
- C. Locations where a road user, after stopping, cannot see conflicting traffic and is not able to negotiate the intersection unless conflicting cross traffic is also required to stop; and*
- D. An intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics where multi-way stop control would improve traffic operational characteristics of the intersection.*

MUTCD Criteria Evaluation

The following evaluates the criteria required to satisfy the installation of multi-way stop sign control.

Criteria A: Criteria A does not apply to this intersection.

Criteria B: As discussed in Chapter 3, the intersection has experienced more than five angled and and/or turning crashes in 2015, 2017, and 2018. Further, the intersection was identified by IDOT as a Five Percent location in 2017. As such, the crash experience at this intersection satisfies Criteria B.

Criteria C: The existing traffic volumes on 67th Street do not satisfy the minimum traffic volumes and, as such, the intersection does not satisfy Criteria C.

Criteria D: Even with a 30 percent reduction, the existing traffic volumes on 67th Street do not satisfy the minimum traffic volume and, as such, the intersection does not satisfy Criteria D.

Other Criteria: Criteria A, B and D of the other criteria to consider do not apply to this intersection. However, as indicated in Chapter 2, the sight distance along Clarendon Hills Road is impaired, particularly for eastbound traffic looking north along Clarendon Hills Road. However, when traffic pulls up past the stop bar closer to the 67th Street edge of pavement, the 67th Street traffic has sufficient sight lines that meet and exceed the minimum stopping sight distance.

Traffic Volume: The MUTCD states multi-way stop control is used where the volume of traffic on the intersecting roads is approximately equal. Based on IDOT data, Clarendon Hills Road has an average daily traffic volume of approximately 8,450 vehicles and 67th Street has an average daily traffic of 2,400 vehicles. Further, during the critical peak periods, the Clarendon Hills Road traffic is three to five times higher than the 67th Street traffic. As such, the traffic volumes along the two streets are not similar.

Therefore, the intersection only meets one of the various criteria required for multi-way stop sign control.

Multi-Way Traffic Control Operational Evaluation

Analysis of the projected operation of the intersection of Clarendon Hills Road with 67th Street under multi-way stop sign control was performed for the weekday morning and weekday evening peak hours. The traffic analyses were performed using the methodologies outlined in the Transportation Research Board's *Highway Capacity Manual (HCM)*, 6th Edition and analyzed using Synchro/SimTraffic 10 software. Summaries of the traffic analysis results showing the level of service and delay (measured in seconds) for the existing conditions are presented in **Table 7**. Summary sheets for the capacity analyses are included in the Appendix.

Table 7
CAPACITY ANALYSIS RESULTS
EXISTING VOLUMES WITH MULTI-WAY STOP SIGN CONTROL
CLARENDON HILLS ROAD WITH 67TH STREET

Intersection	Weekday Morning Peak Hour 7:30-8:30 A.M.		Weekday Evening Peak Hour 5:00-6:00 P.M.	
	LOS	Delay	LOS	Delay
Multi-Way Stop Sign Control				
• Intersection	C	21.0	F	58.6
• Northbound Left Turn	A	9.2	B	10.3
• Northbound Through/Right Turn	D	28.9	C	16.9
• Southbound Left Turn	A	9.5	A	9.6
• Southbound Through/Right Turn	B	11.6	F	99.7
• Eastbound Approach	B	12.2	B	12.7
• Westbound Left Turn	B	10.5	B	12.0
• Westbound Through/Right Turn	B	10.2	B	12.0
LOS = Level of Service Delay is measured in seconds.				

Assuming multi-way stop sign control, the overall intersection is projected to operate at LOS C during the weekday morning peak hour and LOS F during the evening peak hour. All of the movements are projected to operate at a good level of service, except the southbound through/right-turn movement. During the evening peak hour this movement is projected to operate at a LOS F with long delays and queues. This is due in part to the fact that the southbound through/right-turn movement has a total of 647 vehicles during the evening peak hour.

Multi-Way Stop Sign Control Findings

The results of the evaluation have shown that the intersection currently satisfies only one of the criteria for the installation of multi-way stop sign control. Further, the traffic volumes are significantly higher along Clarendon Hills Road compared to 67th Street, which does not meet the general requirement that the traffic volumes on the two roads be similar at multi-way stop sign controlled intersections. In addition, the capacity analyses have shown that the intersection and the southbound through/right-turn movement are projected to operate at a LOS F during the evening peak hour. However, it is important to note that the intersection does satisfy Criteria B given the existing crash experience at the intersection. Further, the MUTCD indicates that the criteria should be considered and is only classified as a Guidance Statement. The MUTCD defines a Guidance Statement as “*a statement of recommendation, but not mandatory, practice in typical situations, with deviations allowed if engineering judgment or engineering study indicates the deviation to be appropriate.*” As such, while the intersection currently does not satisfy any of the criteria, the City has the authority to install a multi-way stop sign control at the intersection if, in their judgment, they deem it appropriate.

It should be noted that due to the volume of traffic on Clarendon Hills Road and the vertical curve along the road north of 67th Street, multi-way stop sign control may result in additional crashes along Clarendon Hills Road. If multi-way stop sign control is to be installed at the intersection, Stop Ahead (MUTCD W3-1) warning signs should be installed on Clarendon Hills Road north and south of the intersection with consideration given to a flashing beacon on the signs. In addition, consideration should be given to installing flashing stop signs on the Clarendon Hills Road approaches similar to those provided on the 67th Street approaches. Further, consideration should be given to widening the eastbound approach of 67th Street to provide a separate left-turn lane.

5. Summary of Alternative Options and Conceptual Level Opinion of Costs

The following lists the various alternative options to enhance the operation and safety of the intersection based on the traffic analyses:

- Maintain the existing two-way stop sign control and install one or more of the following intersection geometric improvements and/or safety measures:
 - Trim the trees along the intersection's right-of-way and, if possible, along the private properties adjacent to the intersection.
 - Relocate the stop bar on the eastbound approach of 67th Street.
 - Install Cross Road (MUTCD W2 -1) warning signs with an advance street name plaque on Clarendon Hills Road.
 - Install Cross Road warning signs on both sides of the road both north and south of the intersection.
 - Install warning beacons on the warning signs.
 - Install speed limits signs and/or radar speed feedback signs on Clarendon Hills Road both north and south of the intersection.
 - Widen the eastbound approach of 67th Street to provide a westbound lane and an eastbound separate left-turn lane and a shared through/right-turn lane.
- Install multi-way stop sign control at the intersection with the appropriate warning signs. It should be noted that the existing intersection only satisfies one of the MUTCD criteria for multi-way stop sign control. Consideration should be given to widening the eastbound approach of 67th Street to provide a separate left-turn lane.
- Install a traffic signal at the intersection with the appropriate warning signs. It should be noted that the intersection does not currently satisfy any of the MUTCD warrants for traffic signal control. Further, with the installation of a traffic signal, the eastbound approach of 67th Street should be widened to provide a separate left-turn lane similar to the cross section of the westbound approach of 67th Street.

Table 8 lists the conceptual level opinion of costs for the various alternative options and indicates if the alternative options satisfy the MUTCD criteria and/or warrants. It should be noted that the conceptual level opinion of costs does not include the costs for surveying, preliminary or final design, or construction observation. If the City wishes to move forward with the widening of the eastbound approach of 67th Street and/or the installation of a traffic signal, a preliminary engineering design should be prepared and the right of way surveyed so that the scope of construction can be defined and concept level costs can be refined for project budgeting.

Table 8
INTERSECTION ALTERNATIVE OPTIONS
CONCEPTUAL COST ESTIMATES

Alternative Options	Meets MUTCD Criteria/Warrants	Cost Estimates
Geometric and Safety Improvements	N.A.	
• Improve sight lines (trim the trees)		Less than \$1,000
• Relocate stop bar		Less than \$1,000
• Install Cross Road (W2 -1) warning signs with or without warning beacons		Less than \$5,000
• Install speed limit signs and/or radar speed feedback signs		Less than \$10,000
• Widen eastbound approach of 67 th Street		\$375,000 to \$425,000
Install Multi-Way Stop Sign Control	Satisfies One of the Criteria	
• Install stop sign and warning signs		Less than \$500
• Widen eastbound approach of 67 th Street		\$375,000 to \$425,000
Install Traffic Signal Control	NO	
• Install traffic signal and warning signs		\$200,000 to \$250,000
• Widen eastbound approach of 67 th Street		\$375,000 to \$425,000

Appendix

Intersection Photos
City of Darien Police Department Crash
Evaluation
Traffic Count Summary Sheets
Level of Service Table
Two-Way Stop Control Capacity
Analysis Summary Sheets
Multi-Way Stop Control Capacity
Analysis Summary Sheets

Intersection Photos



Westbound 67th Street Looking North at Stop Bar



Westbound 67th Street Looking North at Edge of Road



Westbound 67th Street Looking South at Stop Bar



Westbound 67th Street Looking South at Edge of Road



Eastbound 67th Street Looking North at Stop Bar



Eastbound 67th Street Looking North at Edge of Road



Eastbound 67th Street Looking South at Stop Bar



Eastbound 67th Street Looking South at Edge of Road

City of Darien Police Department Crash Evaluation

Accident Data

Clarendon Hills Road & 67th Street

2014 to 2018 (Complete Years)
2019 (January through 03/13)

From January 2014 through March 2019 there have been a total of 29 crashes that have occurred. For this purpose I have discounted cases of head-on (1), rear-end (5) and fixed object (2) crashes as these have nothing to do with traffic control devices and we wouldn't want data from those accidents tainting the analysis. Traffic control devices may add to left turn accidents and rear-end accidents. The head-on accident was the result of an intoxicated driver and no traffic control devices will have prevented that accident. That leaves 21 accidents over 63 months.

The intersection currently has two through north south lanes on Clarendon Hills Road and a left turn lane for both north and southbound traffic. Westbound traffic on 67th Street has a through lane and a left turn lane. Eastbound traffic has a through lane no left turn lane.

Sight lines are good. Eastbound 67th Street looking north a driver has "limited" vision (200 feet). Once the driver has stopped at the stop line and pulls forward s/he can see for 400 feet before making a decision to enter the intersection. Traffic in all directions is 30 miles per hour.

There are flashing lights on the stop signs to draw attention to the stop sign. There are warning signs posted x feet prior to the intersection. There are warning signs that cross traffic does not have a stop.

Vegetation and other sight line blockers were not observed.



Crashes by Year

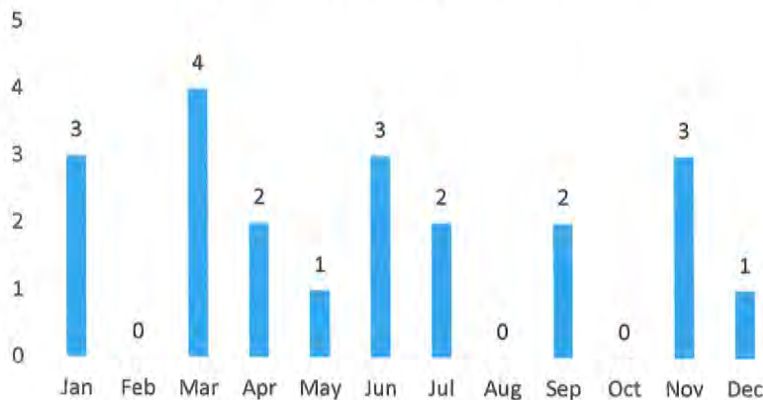


Crashes by year indicates a spike in 2017 and though dropped in 2018 was still higher than previous years. Not sure what would have happened in 2017 that created a sharp increase possibly a traffic reroute, etc. may cause this type of a spike.

It was determined that Route 83 was under construction for a part of 2017 and 2018. Without more examination it is hard to

state that there was an increased volume of traffic that accounted for an increase in the number of crashes. A check of other intersections along Clarendon Hills Road may reveal something.

Crashes by Month of the Year



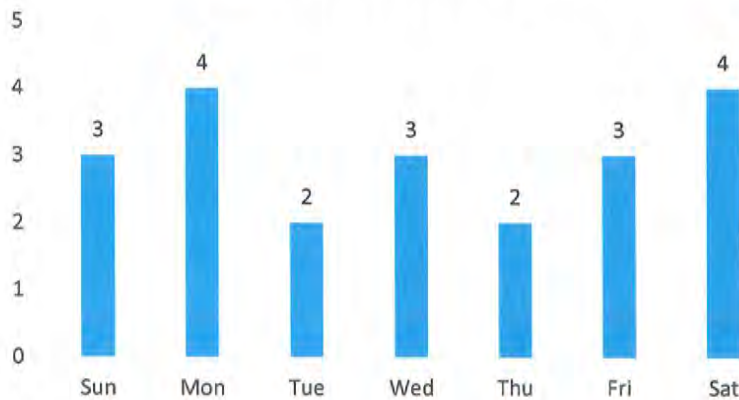
Crashes by the month doesn't indicate that there is a seasonality to the crashes. For example, winter months do not show a dramatic increase over summer months.

Crashes by Hour of the Day



There is an interesting spike at the late afternoon, early evening hours. Possibly due to increase traffic for rush hour, school dismissal, or other cause.

Crashes by Day of the Week



The day of week is also inconsequential, though Fridays are higher than the rest of the days.

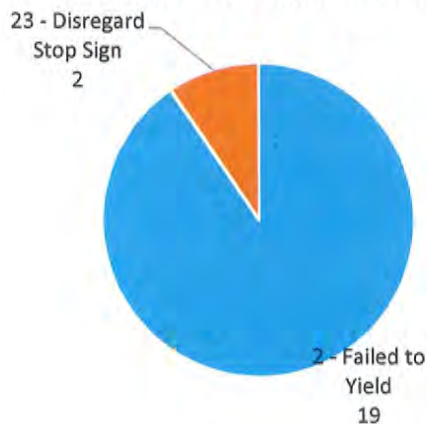
Crashes by Injury Type



Having a fatal is bad, but the cause of that accident had nothing to do with the roadway or car it was an intoxicated driver. Thus no change to the roadway or vehicle would have prevented the crash from occurring.

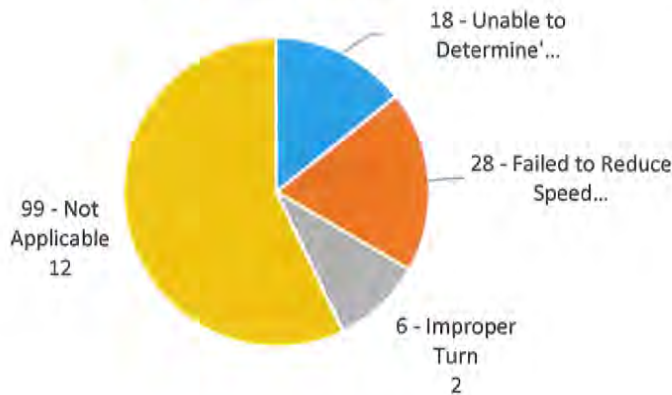
Most of the crashes did not result in an injury in fact only three had some type of visible injury.

Crashes by Primary Cause



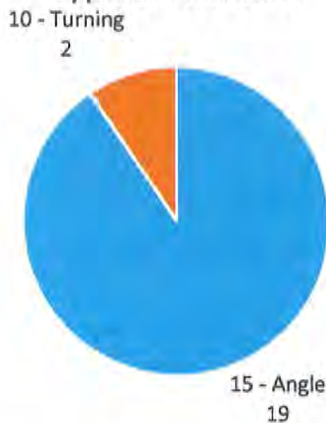
The primary cause appears to be failure to yield right-of-way. Followed distantly by disregarding stop sign. Both of these violations are in reality the same. For example, if the officer cannot prove (at-fault driver statement, witness statements or prima facie evidence) the driver failed to stop they will typically write the failed to yield.

Secondary Cause



The most frequently occurring secondary cause is failure to reduce speed to avoid an accident (4). Improper turn is also identified.

Type of Accident



The most frequent type of crash is the angle collision. This coincides with the primary cause data of Failure to Yield Right-Of-Way in that someone failed to stop for the stop sign (3 occurrences) or stopped and proceeded through the intersection when not safe to do so (14 occurrences). Next most frequent is the rear-end collision. Highly unlikely a traffic control device will solve this type of crash. In fact a

traffic control device may increase rear-end collisions as some drivers try to make the light and others stop on yellow.

Cass Ave	75th ST	191
75th ST	Plainfield Rd	125
Cass Ave	Plainfield Rd	109
Lemont Rd	87th ST	104
Lemont Rd	83rd ST	97
Plainfield Rd	Clarendon Hills Rd	64
Cass Ave	Frontage Rd	61
Lemont Rd	Cheese Rd	33
Lemont Rd	103rd ST	33

Above chart simply shows other accident locations during the same time frame to give some context to frequency of accidents.

Traffic Count Summary Sheets

Study Name Clarendon Hills Rd with 67th St
Start Date Thursday, May 16, 2019 6:00 AM
End Date Thursday, May 16, 2019 7:00 PM
Site Code

Road Volumes

TMV Interval	Movement Eastbound				Eastbound To				Westbound To				Northbound				Northbound To				Southbound				Grand Total
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
5/16/2019 6:00	0	3	4	3	10	0	0	4	3	7	0	3	32	7	42	0	1	14	1	16	75				
5/16/2019 6:15	0	6	3	7	16	0	0	2	9	11	0	2	62	7	71	0	5	10	2	17	115				
5/16/2019 6:30	0	0	13	3	16	0	5	4	4	13	0	2	64	9	75	0	0	22	2	24	128				
5/16/2019 6:45	0	3	11	7	21	0	14	5	4	23	0	1	74	9	84	0	4	20	3	27	155				
5/16/2019 7:00	0	4	15	4	23	0	4	3	5	12	0	3	74	13	90	0	2	30	1	33	158				
5/16/2019 7:15	0	3	12	7	22	0	4	9	9	22	0	4	88	24	116	0	2	51	7	60	220				
5/16/2019 7:30	0	4	15	8	27	0	4	7	5	16	0	4	96	21	121	0	1	54	3	58	222				
5/16/2019 7:45	0	5	19	14	38	0	6	5	9	20	0	10	112	16	138	0	2	37	5	44	240				
5/16/2019 8:00	0	7	18	3	28	0	3	9	12	24	0	3	124	23	150	0	3	39	3	45	247				
5/16/2019 8:15	0	13	22	10	45	0	4	4	9	17	0	7	113	15	135	0	5	30	9	44	241				
5/16/2019 8:30	0	3	8	8	19	0	3	5	7	15	0	8	103	11	122	0	4	41	3	48	204				
5/16/2019 8:45	0	4	10	15	29	0	0	8	7	15	0	6	76	17	99	0	4	29	5	38	181				
5/16/2019 9:00	0	1	14	4	19	0	7	5	13	25	0	3	47	12	62	0	10	36	4	50	156				
5/16/2019 9:15	0	2	9	7	18	0	3	7	6	16	0	2	61	4	67	0	3	40	3	46	147				
5/16/2019 9:30	0	3	8	9	20	0	2	6	5	13	0	7	50	8	65	0	5	35	3	43	141				
5/16/2019 9:45	0	2	7	9	18	0	6	8	9	23	0	5	63	6	74	0	5	35	4	44	159				
5/16/2019 10:00	0	0	12	2	14	0	3	11	12	26	0	3	58	10	71	0	5	32	3	40	151				
5/16/2019 10:15	0	4	4	6	14	0	6	6	4	16	0	8	52	10	70	0	6	35	3	44	144				
5/16/2019 10:30	0	5	11	9	25	0	7	5	10	22	0	3	55	14	72	0	4	49	3	56	175				
5/16/2019 10:45	0	2	14	4	20	0	3	7	4	14	0	7	60	9	76	0	2	39	5	46	156				
5/16/2019 11:00	0	6	8	1	15	0	4	6	6	16	0	4	44	9	57	0	5	50	4	59	147				
5/16/2019 11:15	0	1	10	3	14	0	1	7	4	12	1	6	50	12	69	0	5	46	3	54	149				
5/16/2019 11:30	0	4	10	7	21	0	4	7	9	20	0	4	46	12	62	0	5	48	5	58	161				
5/16/2019 11:45	0	4	11	7	22	0	8	9	4	21	0	6	56	7	69	0	5	51	6	62	174				
5/16/2019 12:00	0	6	16	11	33	0	5	13	10	28	0	6	60	7	73	0	8	74	4	86	220				
5/16/2019 12:15	0	4	10	7	21	0	7	11	6	24	0	12	61	12	85	0	4	53	6	63	193				
5/16/2019 12:30	0	3	11	11	25	0	13	9	1	23	0	8	49	6	63	0	8	58	2	68	179				
5/16/2019 12:45	0	2	6	2	10	0	9	14	1	24	0	6	52	6	64	0	6	64	4	74	172				
5/16/2019 13:00	0	2	5	7	14	0	5	10	6	21	0	9	39	4	52	0	7	45	1	53	140				
5/16/2019 13:15	0	0	12	5	17	0	4	5	5	14	1	5	59	5	70	0	6	48	3	57	158				
5/16/2019 13:30	0	1	6	3	10	0	7	7	4	18	0	2	40	8	50	0	2	29	6	37	115				
5/16/2019 13:45	0	2	6	8	16	0	10	13	12	35	0	5	62	4	71	0	5	56	5	66	188				
5/16/2019 14:00	0	3	6	4	13	0	19	11	3	33	0	8	42	10	60	0	3	62	4	69	175				
5/16/2019 14:15	0	2	5	6	13	0	6	11	6	23	0	9	46	9	64	0	2	67	4	73	173				
5/16/2019 14:30	0	4	10	9	23	0	7	10	11	28	0	7	40	7	54	0	6	59	9	74	179				
5/16/2019 14:45	0	2	7	11	20	0	6	5	5	16	0	5	51	4	60	0	5	76	3	84	180				
5/16/2019 15:00	0	4	8	14	26	0	14	10	7	31	0	5	57	6	68	0	5	99	7	111	236				
5/16/2019 15:15	0	4	11	9	24	0	12	13	8	33	0	8	81	6	95	0	5	105	9	119	271				
5/16/2019 15:30	0	1	12	11	24	0	17	15	5	37	0	18	81	12	111	0	7	114	8	129	301				
5/16/2019 15:45	0	6	12	7	25	0	11	6	7	24	0	7	52	14	73	0	11	148	10	169	291				
5/16/2019 16:00	0	2	9	9	20	0	2	13	6	21	0	8	63	10	81	0	6	123	7	136	258				
5/16/2019 16:15	0	2	10	8	20	0	3	9	7	19	0	7	69	10	86	0	7	157	8	172	297				
5/16/2019 16:30	0	2	10	15	27	0	7	13	5	25	0	6	59	6	71	0	12	134	8	154	277				
5/16/2019 16:45	0	3	14	13	30	0	15	16	9	40	0	8	59	6	73	0	7	141	6	154	297				
5/16/2019 17:00	0	0	10	10	20	0	6	8	7	21	0	10	67	10	87	0	13	179	10	202	330				
5/16/2019 17:15	0	1	16	16	33	0	12	18	6	36	0	10	68	5	83	0	3	127	4	134	286				
5/16/2019 17:30	0	2	9	9	20	0	14	11	5	30	0	14	70	12	96	0	6	140	10	156	302				
5/16/2019 17:45	0	5	8	9	22	0	9	22	6	37	0	10	70	6	86	0	10	165	12	187	332				
5/16/2019 18:00	0	0	11	6	17	0	11	17	8	36	0	16	70	5	91	0	5	125	11	141	285				
5/16/2019 18:15	0	3	9	7	19	0	13	5	10	28	0	4	45	7	56	0	12	120	12	144	247				
5/16/2019 18:30	0	3	5	13	21	0	16	14	2	32	0	14	73	5	92	0	9	99	4	112	257				
5/16/2019 18:45	0	4	8	11	23	0	10	20	7	37	0	9	67	12	88	0	4	103	6	113	261				
Grand Total	0	162	530	408	1100	0	371	478	344	1193	2	347	3312	499	4160	0	277	3643	273	4193	10646				

Level of Service Table

LEVEL OF SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS

Level of Service	Average Total Delay (SEC/VEH)
A	0 - 10
B	> 10 - 15
C	> 15 - 25
D	> 25 - 35
E	> 35 - 50
F	> 50

Source: *Highway Capacity Manual*, 2010.

Two-Way Stop Control Capacity Analysis Summary Sheets

HCM 6th TWSC
3: Clarendon Hills Road & 67th Street

06/18/2019

Intersection												
Int Delay, s/veh	4.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕		↕	↕		↕	↕	
Traffic Vol, veh/h	29	74	35	17	25	35	24	445	75	11	160	20
Future Vol, veh/h	29	74	35	17	25	35	24	445	75	11	160	20
Conflicting Peds, #/hr	0	0	2	2	0	0	0	0	2	2	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	110	-	-	90	-	-	90	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	3	3	6	0	4	6	8	3	3	9	10	15
Mvmt Flow	30	77	36	18	26	36	25	464	78	11	167	21

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	784	794	180	813	765	505	188	0	0	544	0	0
Stage 1	200	200	-	555	555	-	-	-	-	-	-	-
Stage 2	584	594	-	258	210	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.26	7.1	6.54	6.26	4.18	-	-	4.19	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.1	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.1	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.354	3.5	4.036	3.354	2.272	-	-	2.281	-	-
Pot Cap-1 Maneuver	310	320	853	299	331	559	1351	-	-	991	-	-
Stage 1	800	734	-	520	510	-	-	-	-	-	-	-
Stage 2	496	491	-	751	725	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	266	310	851	225	320	558	1351	-	-	989	-	-
Mov Cap-2 Maneuver	266	310	-	225	320	-	-	-	-	-	-	-
Stage 1	785	726	-	510	499	-	-	-	-	-	-	-
Stage 2	431	481	-	634	717	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	21.9		16.6		0.3		0.5	
HCM LOS	C		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1351	-	-	355	225	426	989	-	-
HCM Lane V/C Ratio	0.019	-	-	0.405	0.079	0.147	0.012	-	-
HCM Control Delay (s)	7.7	-	-	21.9	22.4	14.9	8.7	-	-
HCM Lane LOS	A	-	-	C	C	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.9	0.3	0.5	0	-	-

HCM 6th TWSC
3: Clarendon Hills Road & 67th Street

06/18/2019

Intersection												
Int Delay, s/veh	6.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕		↕	↕		↕	↕	
Traffic Vol, veh/h	8	43	44	41	59	24	44	275	33	32	611	36
Future Vol, veh/h	8	43	44	41	59	24	44	275	33	32	611	36
Conflicting Peds, #/hr	0	0	2	2	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	-	-	-	110	-	-	90	-	-	90	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	11	2	0	0	2	1	0	0	1	0
Mvmt Flow	9	46	47	44	63	26	47	293	35	34	650	38

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1186	1159	671	1191	1161	311	688	0	0	328	0	0
Stage 1	737	737	-	405	405	-	-	-	-	-	-	-
Stage 2	449	422	-	786	756	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.31	7.12	6.5	6.2	4.12	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.12	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.12	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.399	3.518	4	3.3	2.218	-	-	2.2	-	-
Pot Cap-1 Maneuver	167	197	441	164	197	734	906	-	-	1243	-	-
Stage 1	413	428	-	622	602	-	-	-	-	-	-	-
Stage 2	593	592	-	385	419	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	111	182	440	111	182	734	906	-	-	1243	-	-
Mov Cap-2 Maneuver	111	182	-	111	182	-	-	-	-	-	-	-
Stage 1	392	416	-	590	571	-	-	-	-	-	-	-
Stage 2	483	561	-	297	408	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	31.8		38.7		1.1		0.4	
HCM LOS	D		E					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	906	-	-	233	111	233	1243	-	-
HCM Lane V/C Ratio	0.052	-	-	0.434	0.393	0.379	0.027	-	-
HCM Control Delay (s)	9.2	-	-	31.8	57	29.6	8	-	-
HCM Lane LOS	A	-	-	D	F	D	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	2	1.6	1.7	0.1	-	-

Multi-Way Stop Control Capacity Analysis Summary Sheets

HCM 6th AWSC
3: Clarendon Hills Road & 67th Street

06/24/2019

Intersection	
Intersection Delay, s/veh	21
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕		↕	↕		↕	↕	
Traffic Vol, veh/h	29	74	35	17	25	35	24	445	75	11	160	20
Future Vol, veh/h	29	74	35	17	25	35	24	445	75	11	160	20
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	3	3	6	0	4	6	8	3	3	9	10	15
Mvmt Flow	30	77	36	18	26	36	25	464	78	11	167	21
Number of Lanes	0	1	0	1	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	1
HCM Control Delay	12.2	10.3	28	11.5
HCM LOS	B	B	D	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	21%	100%	0%	100%	0%
Vol Thru, %	0%	86%	54%	0%	42%	0%	89%
Vol Right, %	0%	14%	25%	0%	58%	0%	11%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	24	520	138	17	60	11	180
LT Vol	24	0	29	17	0	11	0
Through Vol	0	445	74	0	25	0	160
RT Vol	0	75	35	0	35	0	20
Lane Flow Rate	25	542	144	18	62	11	188
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.043	0.826	0.267	0.037	0.114	0.021	0.316
Departure Headway (Hd)	6.18	5.487	6.694	7.423	6.567	6.636	6.066
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	580	661	535	481	544	539	593
Service Time	3.914	3.221	4.751	5.184	4.328	4.384	3.814
HCM Lane V/C Ratio	0.043	0.82	0.269	0.037	0.114	0.02	0.317
HCM Control Delay	9.2	28.9	12.2	10.5	10.2	9.5	11.6
HCM Lane LOS	A	D	B	B	B	A	B
HCM 95th-tile Q	0.1	8.8	1.1	0.1	0.4	0.1	1.3

HCM 6th AWSC
3: Clarendon Hills Road & 67th Street

06/24/2019

Intersection	
Intersection Delay, s/veh	58.6
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕		↕	↕		↕	↕	
Traffic Vol, veh/h	8	43	44	41	59	24	44	275	33	32	611	36
Future Vol, veh/h	8	43	44	41	59	24	44	275	33	32	611	36
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	0	0	11	2	0	0	2	1	0	0	1	0
Mvmt Flow	9	46	47	44	63	26	47	293	35	34	650	38
Number of Lanes	0	1	0	1	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	1
HCM Control Delay	12.7	12	16.1	95.5
HCM LOS	B	B	C	F

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	8%	100%	0%	100%	0%
Vol Thru, %	0%	89%	45%	0%	71%	0%	94%
Vol Right, %	0%	11%	46%	0%	29%	0%	6%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	44	308	95	41	83	32	647
LT Vol	44	0	8	41	0	32	0
Through Vol	0	275	43	0	59	0	611
RT Vol	0	33	44	0	24	0	36
Lane Flow Rate	47	328	101	44	88	34	688
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.088	0.56	0.206	0.096	0.179	0.061	1.129
Departure Headway (Hd)	6.97	6.366	7.708	8.375	7.617	6.434	5.904
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	517	570	469	430	474	558	619
Service Time	4.67	4.066	5.708	6.075	5.317	4.157	3.628
HCM Lane V/C Ratio	0.091	0.575	0.215	0.102	0.186	0.061	1.111
HCM Control Delay	10.3	16.9	12.7	12	12	9.6	99.7
HCM Lane LOS	B	C	B	B	B	A	F
HCM 95th-tile Q	0.3	3.4	0.8	0.3	0.6	0.2	21.7

AGENDA MEMO
Municipal Services Meeting
September 23, 2019

ISSUE STATEMENT

Approval of a [resolution](#) authorizing the Mayor to accept a proposal from Christopher B. Burke Engineering, Ltd. for the professional engineering services related to the design and preparation of construction documents for the 67th Street Improvements Project in an amount not to exceed \$32,017.

Please note this agenda memo is being presented due to timing constraints and pending City Council approval of a previous memo addressing 67th and Clarendon Hills Road - traffic signal warrant study and options from Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA), traffic-engineering consultants, Option 3.

BACKGROUND

Recently, the City Council has been reviewing the 67th Street and Clarendon Hills Road traffic signal warrant study and options as prepared by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA), traffic-engineering consultants.

Since the roadway is slated for a resurfacing project, there is an opportunity to construct the suggested geometrical reconfiguration with cost savings. The reasoning is since the city bids and oversees various facets of road construction; curb and gutter, paving and striping, the items would be included as part of our annual contracts. The cost savings would be further realized due to the above-mentioned versus the project being bid as a sole contract.

In anticipation of the approval of the geometrical configuration, referred to as Option No 3, the engineering services would include the reconstruction of the west leg of the 67th Street/Clarendon Hills Road intersection to mirror the east leg of the intersection (owned by the Village of Willowbrook). The scope of work includes the following:

- Widening the western mouth of the intersection
- Constructing a right turn lane
- Constructing a left turn lane, and a thru lane.

The scope of services includes the following:

PHASE I – PRELIMINARY ENGINEERING:

- Task 1 – Project Kick-off Meeting
- Task 2 – Topographic Survey
- Task 3 – Geotechnical Investigation
- Task 4 – Evaluation of Geotechnical Report
- Task 5 – Field Reconnaissance

PHASE II – ENGINEERING DESIGN AND BIDDING:

- Task 6 – J.U.L.I.E. Utility Coordination
- Task 7 – Preparation of Preliminary Concept Plan (50% Submittal)
- Task 8 – Meeting with City

DESIGN ENGINEERING PHASE:

Task 9 – Preliminary Contract Documents & Cost Estimate (95% Submittal)

Task 10 – QA/QC Submittal & Final Plans, Specifications & Cost Estimate(100% Submittal)

Task 11 – Bidding Assistance

Please note the engineering services for the proposed work was not considered for this year's budget. Costs savings have been recognized within this year's Road Program that would allow the expense to be absorbed.

ACCOUNT NUMBER	ACCOUNT DESCRIPTION	FY19-20 BUDGET	PROPOSED EXPENDITURE
25-35-4325	Engineering - 67 th Street – Clarendon Hills Rd to Alabama Ave	\$ 0	\$ 32,017

STAFF RECOMMENDATION

Approval of a resolution authorizing the Mayor to accept a proposal from Christopher B. Burke Engineering, Ltd. for the professional engineering services related to the design and preparation of construction documents for the 67th Street Improvements Project in an amount not to exceed \$32,017.

ALTERNATE CONSIDERATION

Not approving the resolution.

DECISION MODE

This item will be placed on the agenda for the October 7, 2019 City Council agenda for formal approval.



RESOLUTION NO. _____

A RESOLUTION AUTHORIZING THE MAYOR TO ACCEPT A PROPOSAL FROM CHRISTOPHER B. BURKE ENGINEERING, LTD. FOR THE PROFESSIONAL ENGINEERING SERVICES RELATED TO THE DESIGN AND PREPARATION OF CONSTRUCTION DOCUMENTS FOR THE 67TH STREET IMPROVEMENTS PROJECT IN AN AMOUNT NOT TO EXCEED \$32,017.

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF DARIEN, DU PAGE COUNTY, ILLINOIS, as follows:

SECTION 1: The City Council of the City of Darien, hereby authorizes the Mayor to accept a proposal from Christopher B. Burke Engineering, Ltd. for the professional engineering services related to the design and preparation of construction documents for the 67th Street improvements project in an amount not to exceed \$32,017, a copy of which is attached hereto as "**Exhibit A**" and is by this reference expressly incorporated hereto.

SECTION 2: This Resolution shall be in full force and effect from and after its passage and approval as provided by law.

PASSED BY THE CITY COUNCIL OF THE CITY OF DARIEN, DU PAGE COUNTY, ILLINOIS, this 7th day of October 2019.

AYES: _____

NAYS: _____

ABSENT: _____

APPROVED BY THE MAYOR OF THE CITY OF DARIEN, DU PAGE COUNTY, ILLINOIS, this 7th day of October 2019.

JOSEPH MARCHESE, MAYOR

ATTEST:

JOANNE E. RAGONA, CITY CLERK

APPROVED AS TO FORM:

CITY ATTORNEY



CHRISTOPHER B. BURKE ENGINEERING, LTD.

9575 West Higgins Road Suite 600 Rosemont, Illinois 60018 TEL (847) 823-0500 FAX (847) 823-0520

September 4, 2019

City of Darien
City Hall
1702 Plainfield Road
Darien, Illinois 60561

Attention: Dan Gombac

Subject: Proposal for Professional Engineering Services
67th Street Improvements Project–Clarendon Hills Road to Alabama Avenue

Dear Dan:

At your request, Christopher B. Burke Engineering, Ltd. (CBBEL) is pleased to provide this proposal for professional engineering services related to the design and preparation of construction documents for the 67th Street Improvements Project. Included below you will find our Understanding of the Assignment, Scope of Services, and Estimate of Fee.

UNDERSTANDING OF THE ASSIGNMENT

We understand the City of Darien would like to reconstruct the west leg of the 67th Street/Clarendon Hills Road intersection to mirror the east leg of the intersection (owned by the Village of Willowbrook). This includes a right turn/thru lane, a striped left turn lane, and a thru lane. This proposal assumes the existing 67th Street pavement from Clarendon Hills Road to the west will be reconstructed with 2" of Hot-Mix Asphalt Surface Course, 4" of Hot-Mix Asphalt Binder Course, and 12" of Aggregate Base Course will be utilized to widen the roadway to the north of the existing pavement. The improvement length is approximately 400 linear feet.

CBBEL proposes the following Scope of Services for the 67th Street Improvements Project.

PHASE I – PRELIMINARY ENGINEERING:

Task 1 – Project Kick-off Meeting

CBBEL will meet with City staff to discuss the project goals and objectives and collect all pertinent data. At the kick-off meeting, the Project Team will formalize working relationships, establish primary points of contact and review project procedures. The kick-off meeting will also serve as an opportunity to discuss project constraints and identify anticipated design, permitting and construction issues. CBBEL will prepare meeting notes with action items identified and distribute to the meeting attendees.

Task 2 – Topographic Survey

As part of this task, CBBEL will perform Full Topographic Survey of 67th Street and the adjacent Clarendon Hills Road intersection (500'LF±) to be used as a base map for Design purposes. The following scope items will be included in this task:

Horizontal Control: Utilizing state plane coordinates, CBBEL will set recoverable primary control utilizing state of the art GPS equipment based on NGS Control Monumentation.

Vertical Control: CBBEL will establish benchmarks and assign elevations to the horizontal control points. This will be based on GPS observed NGS Control Monumentation (NAVD'88 vertical control datum).

Existing Right-of-Way: CBBEL will establish the approximate existing right-of-way of the roadways within the project limits based on monumentation found in the field, plats of highways, subdivision plats and any other available information.

Topographic Survey: CBBEL will field locate all pavements, driveways, bike path, curb and gutters, pavement markings, signs, manholes, utility vaults, drainage structures, utilities, driveway culverts, cross road culverts, etc. within the project limits (as per attached exhibit). Field location of all above ground utilities including, but not limited to: water, sanitary sewer, storm sewer, telephone, electric, cable and gas, etc. Identify size, type, rim, and invert elevations.

Cross Sections: CBBEL will survey cross sections along the project limits at 50' intervals, at driveways, and at all other grade controlling features. Survey will be obtained for 10 feet beyond the existing right-of-way line.

Utility Survey and Coordination: All existing storm and sanitary sewers will be surveyed to determine rim and invert elevations and pipe sizes. Above ground facilities of any additional underground utilities including water main, gas, electric, cable, etc. will also be located. No J.U.L.I.E. Utility Survey Coordination is included in this task.

Tree Survey: CBBEL will locate all trees over 6" inches in diameter within the existing right-of-way and ultimately the proposed right-of-way for the project in order to assess potential tree impacts, if any, associated with the project. The located trees will be identified by species (deciduous or coniferous) and the size and condition determined as appropriate.

Base Mapping: CBBEL will compile all of the above information onto base maps at 1'=20' scale that is representative of existing conditions for use as the base sheet for the construction of any public or private improvements.

Task 3 – Geotechnical Investigation

One (1) pavement core will be obtained as part of the Geotechnical Exploration by Testing Services Corporation (TSC) for compliance with the Clean Construction Demolition Debris (CCDD).

The report will give complete pavement and base surface thickness, as well as subgrade description and laboratory test dates. Comments will also be made concerning proposed pavement overlay and/or maintenance.

We recommend that the CCDD/USFO facility destination to be used for a particular project be contacted to verify the analytical parameters proposed will be sufficient.

The objectives of the Study are to determine whether the associated laboratory analysis provide a basis for TSC to sign IEPA Form LPC-663, Unincorporated Soil Certification by a Licensed Professional Engineer.

Uncontaminated soil including uncontaminated soil mixed with clean construction for demolition debris (CCDD) accepted at a CCDD fill operation must be certified to be uncontaminated soil in accordance with Section 22.51(f)(2)(B) of the Environmental Protection Act {415 ILCS 5/22 (f)(2)(B)}. Uncontaminated soil accepted at an uncontaminated soil fill operation (USFO) must be certified to be uncontaminated soil in accordance with Section 22.51a(d)(2)(B) of the Environmental Protection Act {415 ILCS 5/22.51a(d)(2)(B)}. These certifications must be made by a licensed professional engineer or geologists (PE/PG) using the attached Form LPC-663 when the soil is removed from a site which is determined by the PE/PG to be a "Potentially Impacted Property" (PIP) based on review of readily ascertainable property history, environmental databases and site reconnaissance. Uncontaminated soil from a site which is not identified as a PIP by the PE/PG may be certified by either the source site owner or operator using LPC-662 with pH analysis only.

A summary report will be prepared which describes the sampling procedures followed and presents results of the analytical laboratory testing. If all analytical results meet their respective MACs, Form LPC-663 will be filled out and signed by a Licensed Professional Engineer or Geologist. The report will be included.

Task 4 – Evaluation of Geotechnical Report

CBBEL and City Staff will evaluate the geotechnical report to determine any changes to the proposed typical section and project specifications, including any additional pay items that may be required.

Task 5 – Field Reconnaissance: CBBEL Design and Construction Staff will perform a Field Reconnaissance of the pavement to be widened and reconstructed. The purpose of the Field Reconnaissance will be to determine the limits and drainage issues. The results of the Field Reconnaissance will be used to prepare the bid booklet. The results of the Field Reconnaissance will be reviewed with the City Staff and compared to previous estimates to determine the impact on the estimated construction cost.

PHASE II –ENGINEERING DESIGN AND BIDDING:

Task 6 – J.U.L.I.E. Utility Coordination

CBBEL will coordinate with JULIE to retrieve atlas information for all applicable underground utilities including water main, gas, electric, cable, etc. CBBEL will compile all Utility Atlas information into the base map. Locations of existing utilities /obstructions / systems shown on the base map are the compilation of available utility plans provided by utility owners and JULIE Utility Coordination. All utilities /obstructions / systems may not be shown. Contractor shall be responsible for locating and protecting all underground utilities /obstructions / systems whether or not shown on base map. JULIE Utility Coordination Atlas information is typically isolated to Public Right-of-Way & limited areas adjacent to Public Right-of-Way. Identification of all private utilities within project area (on-site) is the responsibility of the client.

Task 7 – Preparation of Preliminary Concept Plan (50% Submittal)

CBBEL will prepare a preliminary concept plan showing the proposed layout of the propose roadway improvements, including widening limits, proposed striping, and drainage improvements, as well as a detailed proposed typical section. A preliminary estimate of cost will also be provided to the City at this time.

Task 8 – Meeting with City

CBBEL will meet on-site with representatives from the City to discuss the project implications as shown on the Preliminary Concept Plan detailed in Task 7. This task assumes one (1) meeting at two (2) hours with two (2) CBBEL employees and the preparation of meeting minutes.

At this time, the City will determine if they want to proceed with the project.

DESIGN ENGINEERING PHASE:

Task 9 – Prefinal Contract Documents and Cost Estimate (95% Submittal)

CBBEL will prepare plans, specifications, and cost and working day estimates in accordance with all applicable City, IDOT, Illinois Sewer and Water Standards and other agency standards. Plans will be prepared using MicroStation CAD software.

CBBEL will use IDOT standard pay items or City standard special provisions where applicable. Otherwise, project-specific special provisions will be written as needed. Plans, specifications and estimates will be submitted to the City for review.

Detailed plans will be developed and are anticipated to consist the following:

SHEET	# OF SHEETS	HOURS PER SHEET	HOURS
Title Sheet	1	8	8
General Notes	1	8	8
Summary of Quantities	1	12	12
Earthwork Schedule	1	12	12
Alignment, Ties and Benchmarks	1	8	8
Typical Section	1	12	12
Existing Conditions and Removal Plan (1" = 20')	1	10	10
Roadway Plan and Profile (1" = 20')	1	12	12
Drainage Plan and Profile (1" = 20')	1	10	10
Proposed Striping Plan (1" = 20')	1	10	10
Soil Erosion/Sediment Control Plan	1	10	10
Construction Details	1	8	8
Soil Erosion/Sediment Control Notes and Details	1	8	8
Cross Sections	2	8	16
Specification	--	--	8
Cost Estimate/Quantities	--	--	8
TOTAL	15		160

Task 10 – QA/QC Submittal and Final Plans, Specifications and Cost Estimate (100% Submittal)

CBBEL will make the final revisions to the 95% submittal based on the review comments from the City and permitting agencies. The City will perform a QA/QC review and CBBEL will then finalize the documents for bidding. The requested number of copies of plans and specifications will be submitted to the City. A final estimate of cost will be provided to the City. CBBEL will provide plans and specifications to the City in the requested hard copy and electronic format.

Task 11 – Bidding Assistance

CBBEL will advertise for bidding, distribute plans and specifications to all bidders, and hold a bid opening. CBBEL will review and tabulate all of the bids and make a recommendation of award.

ESTIMATE OF FEE

CBBEL estimates the following fees for each of the tasks described above:

Task 1 – Project Kick-off Meeting	\$	500
Task 2 – Topographic Survey	\$	4,500
Task 3 – Geotechnical Investigation	\$	3,667
Task 4 – Evaluation of Geotechnical Report	\$	500
Task 5 – Field Reconnaissance	\$	800
Task 6 – J.U.L.I.E. Utility Coordination	\$	500
Task 7 – Preparation of Preliminary Concept Plan (50% Submittal)	\$	10,000
Task 8 – Meeting with City	\$	800
Task 9 – Preliminary Contract Documents and Cost Estimate (95% Submittal)	\$	9,000
Task 10 – QA/QC Submittal and Final Plans, Specifications and Cost Estimate (100% Submittal)	\$	1,000
Task 11 – Bidding Assistance	\$	750
Total	\$	32,017

Tasks 1-8 will be completed for a fee not to exceed \$21,267 within 6 to 8 weeks of receiving notice to proceed. We will not proceed with Tasks 9-11 until directed to do so, and those tasks will take additional 4 to 6 weeks.

We will bill you at the hourly rates specified on the attached Schedule of Charges and General Terms and Conditions. Direct costs for blueprints, photocopying, mailing, overnight delivery, messenger services and report compilation are not included in the Estimate of Fee. These General Terms and Conditions are expressly incorporated into and are an integral part of this contract for professional services. It should be emphasized that any requested additional services that are not included in the preceding Estimate of Fee will be billed at the attached hourly rates.

Please sign and return one copy of this agreement as an indication of acceptance and notice to proceed. Please feel free to contact us anytime.

Sincerely,



Christopher B. Burke, PhD, PE, D.WRE, Dist.M.ASCE
President

Encl. Schedule of Charges
General Terms and Conditions

THIS PROPOSAL, SCHEDULE OF CHARGES AND GENERAL TERMS AND
CONDITIONS ACCEPTED FOR THE CITY OF DARIEN.

BY: _____

TITLE: _____

DATE: _____

CHRISTOPHER B. BURKE ENGINEERING, LTD.
STANDARD CHARGES FOR PROFESSIONAL SERVICES
JANUARY, 2019

<u>Personnel</u>	<u>Charges*</u> <u>(\$/Hr)</u>
Principal	265
Engineer VI	241
Engineer V	200
Engineer IV	163
Engineer III	146
Engineer I/II	116
Survey V	220
Survey IV	188
Survey III	165
Survey II	121
Survey I	96
Engineering Technician V	190
Engineering Technician IV	155
Engineering Technician III	140
Engineering Technician I/II	65
CAD Manager	170
Assistant CAD Manager	147
CAD II	130
GIS Specialist III	142
GIS Specialist I/II	90
Landscape Architect	163
Environmental Resource Specialist V	208
Environmental Resource Specialist IV	163
Environmental Resource Specialist III	134
Environmental Resource Specialist II	90
Environmental Resource Technician	110
Administrative	100
Engineering Intern	61
Information Technician III	125
Information Technician I/II	112
<u>Direct Costs</u>	
Outside Copies, Blueprints, Messenger, Delivery Services, Mileage	Cost + 12%

*Charges include overhead and profit

Christopher B. Burke Engineering, Ltd. reserves the right to increase these rates and costs by 5% after December 31, 2019.

CHRISTOPHER B. BURKE ENGINEERING, LTD.
GENERAL TERMS AND CONDITIONS

10/1/2010 10:11:17 AM

1. Relationship Between Engineer and Client: Christopher B. Burke Engineering, Ltd. (Engineer) shall serve as Client's professional engineer consultant in those phases of the Project to which this Agreement applies. This relationship is that of a buyer and seller of professional services and as such the Engineer is an independent contractor in the performance of this Agreement and it is understood that the parties have not entered into any joint venture or partnership with the other. The Engineer shall not be considered to be the agent of the Client. Nothing contained in this Agreement shall create a contractual relationship with a cause of action in favor of a third party against either the Client or Engineer.

Furthermore, causes of action between the parties to this Agreement pertaining to acts of failures to act shall be deemed to have accrued and the applicable statute of limitations shall commence to run not later than the date of substantial completion.

2. Responsibility of the Engineer: Engineer will strive to perform services under this Agreement in accordance with generally accepted and currently recognized engineering practices and principles, and in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions. No other representation, express or implied, and no warranty or guarantee is included or intended in this Agreement, or in any report, opinion, document, or otherwise.

Notwithstanding anything to the contrary which may be contained in this Agreement or any other material incorporated herein by reference, or in any Agreement between the Client and any other party concerning the Project, the Engineer shall not have control or be in charge of and shall not be responsible for the means, methods, techniques, sequences or procedures of construction, or the safety, safety precautions or programs of the Client, the construction contractor, other contractors or subcontractors performing any of the work or providing any of the services on the Project. Nor shall the Engineer be responsible for the acts or omissions of the Client, or for the failure of the Client, any architect, engineer, consultant, contractor or subcontractor to carry out their respective responsibilities in accordance with the Project documents, this Agreement or any other agreement concerning the Project. Any provision which purports to amend this provision shall be without effect unless it contains a reference that the content of this condition is expressly amended for the purposes described in such amendment and is signed by the Engineer.

3. Changes: Client reserves the right by written change order or amendment to make changes in requirements, amount of work, or engineering time schedule adjustments, and Engineer and Client shall negotiate appropriate adjustments acceptable to both parties to accommodate any changes, if commercially possible.
4. Suspension of Services: Client may, at any time, by written order to Engineer (Suspension of Services Order) require Engineer to stop all, or any part, of the services required by this Agreement. Upon receipt of such an order, Engineer shall immediately comply with its terms and take all reasonable steps to minimize the costs associated with the services affected by such order. Client, however, shall pay all costs incurred by the suspension, including all costs necessary to maintain continuity and for the

resumptions of the services upon expiration of the Suspension of Services Order. Engineer will not be obligated to provide the same personnel employed prior to suspension, when the services are resumed, in the event that the period of suspension is greater than thirty (30) days.

5. Termination: This Agreement may be terminated by either party upon thirty (30) days written notice in the event of substantial failure by the other party to perform in accordance with the terms hereof through no fault of the terminating party. This Agreement may be terminated by Client, under the same terms, whenever Client shall determine that termination is in its best interests. Cost of termination, including salaries, overhead and fee, incurred by Engineer either before or after the termination date shall be reimbursed by Client.
6. Documents Delivered to Client: Drawings, specifications, reports, and any other Project Documents prepared by Engineer in connection with any or all of the services furnished hereunder shall be delivered to the Client for the use of the Client. Engineer shall have the right to retain originals of all Project Documents and drawings for its files. Furthermore, it is understood and agreed that the Project Documents such as, but not limited to reports, calculations, drawings, and specifications prepared for the Project, whether in hard copy or machine readable form, are instruments of professional service intended for one-time use in the construction of this Project. These Project Documents are and shall remain the property of the Engineer. The Client may retain copies, including copies stored on magnetic tape or disk, for information and reference in connection with the occupancy and use of the Project.

When and if record drawings are to be provided by the Engineer, Client understands that information used in the preparation of record drawings is provided by others and Engineer is not responsible for accuracy, completeness, nor sufficiency of such information. Client also understands that the level of detail illustrated by record drawings will generally be the same as the level of detail illustrated by the design drawing used for project construction. If additional detail is requested by the Client to be included on the record drawings, then the Client understands and agrees that the Engineer will be due additional compensation for additional services.

It is also understood and agreed that because of the possibility that information and data delivered in machine readable form may be altered, whether inadvertently or otherwise, the Engineer reserves the right to retain the original tapes/disks and to remove from copies provided to the Client all identification reflecting the involvement of the Engineer in their preparation. The Engineer also reserves the right to retain hard copy originals of all Project Documentation delivered to the Client in machine readable form, which originals shall be referred to and shall govern in the event of any inconsistency between the two.

The Client understands that the automated conversion of information and data from the system and format used by the Engineer to an alternate system or format cannot be accomplished without the introduction of inexactitudes, anomalies, and errors. In the event Project Documentation provided to the Client in machine readable form is so converted, the Client agrees to assume all risks associated therewith and, to the fullest

extent permitted by law, to hold harmless and indemnify the Engineer from and against all claims, liabilities, losses, damages, and costs, including but not limited to attorney's fees, arising therefrom or in connection therewith.

The Client recognizes that changes or modifications to the Engineer's instruments of professional service introduced by anyone other than the Engineer may result in adverse consequences which the Engineer can neither predict nor control. Therefore, and in consideration of the Engineer's agreement to deliver its instruments of professional service in machine readable form, the Client agrees, to the fullest extent permitted by law, to hold harmless and indemnify the Engineer from and against all claims, liabilities, losses, damages, and costs, including but not limited to attorney's fees, arising out of or in any way connected with the modification, misinterpretation, misuse, or reuse by others of the machine readable information and data provided by the Engineer under this Agreement. The foregoing indemnification applies, without limitation, to any use of the Project Documentation on other projects, for additions to this Project, or for completion of this Project by others, excepting only such use as may be authorized, in writing, by the Engineer.

7. Reuse of Documents: All Project Documents including but not limited to reports, opinions of probable costs, drawings and specifications furnished by Engineer pursuant to this Agreement are intended for use on the Project only. They cannot be used by Client or others on extensions of the Project or any other project. Any reuse, without specific written verification or adaptation by Engineer, shall be at Client's sole risk, and Client shall indemnify and hold harmless Engineer from all claims, damages, losses, and expenses including attorney's fees arising out of or resulting therefrom.

The Engineer shall have the right to include representations of the design of the Project, including photographs of the exterior and interior, among the Engineer's promotional and professional materials. The Engineer's materials shall not include the Client's confidential and proprietary information if the Client has previously advised the Engineer in writing of the specific information considered by the Client to be confidential and proprietary.

8. Standard of Practice: The Engineer will strive to conduct services under this agreement in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions as of the date of this Agreement.
9. Compliance With Laws: The Engineer will strive to exercise usual and customary professional care in his/her efforts to comply with those laws, codes, ordinance and regulations which are in effect as of the date of this Agreement.

With specific respect to prescribed requirements of the Americans with Disabilities Act of 1990 or certified state or local accessibility regulations (ADA), Client understands ADA is a civil rights legislation and that interpretation of ADA is a legal issue and not a design issue and, accordingly, retention of legal counsel (by Client) for purposes of interpretation is advisable. As such and with respect to ADA, Client agrees to waive any action against Engineer, and to indemnify and defend Engineer against any claim arising from Engineer's alleged failure to meet ADA requirements prescribed.

Further to the law and code compliance, the Client understands that the Engineer will strive to provide designs in accordance with the prevailing Standards of Practice as previously set forth, but that the Engineer does not warrant that any reviewing agency having jurisdiction will not for its own purposes comment, request changes and/or additions to such designs. In the event such design requests are made by a reviewing agency, but which do not exist in the form of a written regulation, ordinance or other similar document as published by the reviewing agency, then such design changes (at substantial variance from the intended design developed by the Engineer), if effected and incorporated into the project documents by the Engineer, shall be considered as Supplementary Task(s) to the Engineer's Scope of Service and compensated for accordingly.

10. Indemnification: Engineer shall indemnify and hold harmless Client up to the amount of this contract fee (for services) from loss or expense, including reasonable attorney's fees for claims for personal injury (including death) or property damage to the extent caused by the sole negligent act, error or omission of Engineer.

Client shall indemnify and hold harmless Engineer under this Agreement, from loss or expense, including reasonable attorney's fees, for claims for personal injuries (including death) or property damage arising out of the sole negligent act, error omission of Client.

In the event of joint or concurrent negligence of Engineer and Client, each shall bear that portion of the loss or expense that its share of the joint or concurrent negligence bears to the total negligence (including that of third parties), which caused the personal injury or property damage.

Engineer shall not be liable for special, incidental or consequential damages, including, but not limited to loss of profits, revenue, use of capital, claims of customers, cost of purchased or replacement power, or for any other loss of any nature, whether based on contract, tort, negligence, strict liability or otherwise, by reasons of the services rendered under this Agreement.

11. Opinions of Probable Cost: Since Engineer has no control over the cost of labor, materials or equipment, or over the Contractor(s) method of determining process, or over competitive bidding or market conditions, his/her opinions of probable Project Construction Cost provided for herein are to be made on the basis of his/her experience and qualifications and represent his/her judgement as a design professional familiar with the construction industry, but Engineer cannot and does not guarantee that proposal, bids or the Construction Cost will not vary from opinions of probable construction cost prepared by him/her. If prior to the Bidding or Negotiating Phase, Client wishes greater accuracy as to the Construction Cost, the Client shall employ an independent cost estimator Consultant for the purpose of obtaining a second construction cost opinion independent from Engineer.
12. Governing Law & Dispute Resolutions: This Agreement shall be governed by and construed in accordance with Articles previously set forth by (Item 9 of) this Agreement, together with the laws of the **State of Illinois**.

Any claim, dispute or other matter in question arising out of or related to this Agreement, which can not be mutually resolved by the parties of this Agreement, shall be subject to mediation as a condition precedent to arbitration (if arbitration is agreed upon by the parties of this Agreement) or the institution of legal or equitable proceedings by either party. If such matter relates to or is the subject of a lien arising out of the Engineer's services, the Engineer may proceed in accordance with applicable law to comply with the lien notice or filing deadlines prior to resolution of the matter by mediation or by arbitration.

The Client and Engineer shall endeavor to resolve claims, disputes and other matters in question between them by mediation which, unless the parties mutually agree otherwise, shall be in accordance with the Construction Industry Mediation Rules of the American Arbitration Association currently in effect. Requests for mediation shall be filed in writing with the other party to this Agreement and with the American Arbitration Association. The request may be made concurrently with the filing of a demand for arbitration but, in such event, mediation shall proceed in advance of arbitration or legal or equitable proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order.

The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

13. Successors and Assigns: The terms of this Agreement shall be binding upon and inure to the benefit of the parties and their respective successors and assigns: provided, however, that neither party shall assign this Agreement in whole or in part without the prior written approval of the other.
14. Waiver of Contract Breach: The waiver of one party of any breach of this Agreement or the failure of one party to enforce at any time, or for any period of time, any of the provisions hereof, shall be limited to the particular instance, shall not operate or be deemed to waive any future breaches of this Agreement and shall not be construed to be a waiver of any provision, except for the particular instance.
15. Entire Understanding of Agreement: This Agreement represents and incorporates the entire understanding of the parties hereto, and each party acknowledges that there are no warranties, representations, covenants or understandings of any kind, matter or description whatsoever, made by either party to the other except as expressly set forth herein. Client and the Engineer hereby agree that any purchase orders, invoices, confirmations, acknowledgments or other similar documents executed or delivered with respect to the subject matter hereof that conflict with the terms of the Agreement shall be null, void & without effect to the extent they conflict with the terms of this Agreement.
16. Amendment: This Agreement shall not be subject to amendment unless another instrument is duly executed by duly authorized representatives of each of the parties and entitled "Amendment of Agreement".

17. Severability of Invalid Provisions: If any provision of the Agreement shall be held to contravene or to be invalid under the laws of any particular state, county or jurisdiction where used, such contravention shall not invalidate the entire Agreement, but it shall be construed as if not containing the particular provisions held to be invalid in the particular state, country or jurisdiction and the rights or obligations of the parties hereto shall be construed and enforced accordingly.
18. Force Majeure: Neither Client nor Engineer shall be liable for any fault or delay caused by any contingency beyond their control including but not limited to acts of God, wars, strikes, walkouts, fires, natural calamities, or demands or requirements of governmental agencies.
19. Subcontracts: Engineer may subcontract portions of the work, but each subcontractor must be approved by Client in writing.
20. Access and Permits: Client shall arrange for Engineer to enter upon public and private property and obtain all necessary approvals and permits required from all governmental authorities having jurisdiction over the Project. Client shall pay costs (including Engineer's employee salaries, overhead and fee) incident to any effort by Engineer toward assisting Client in such access, permits or approvals, if Engineer perform such services.
21. Designation of Authorized Representative: Each party (to this Agreement) shall designate one or more persons to act with authority in its behalf in respect to appropriate aspects of the Project. The persons designated shall review and respond promptly to all communications received from the other party.
22. Notices: Any notice or designation required to be given to either party hereto shall be in writing, and unless receipt of such notice is expressly required by the terms hereof shall be deemed to be effectively served when deposited in the mail with sufficient first class postage affixed, and addressed to the party to whom such notice is directed at such party's place of business or such other address as either party shall hereafter furnish to the other party by written notice as herein provided.
23. Limit of Liability: The Client and the Engineer have discussed the risks, rewards, and benefits of the project and the Engineer's total fee for services. In recognition of the relative risks and benefits of the Project to both the Client and the Engineer, the risks have been allocated such that the Client agrees that to the fullest extent permitted by law, the Engineer's total aggregate liability to the Client for any and all injuries, claims, costs, losses, expenses, damages of any nature whatsoever or claim expenses arising out of this Agreement from any cause or causes, including attorney's fees and costs, and expert witness fees and costs, shall not exceed the total Engineer's fee for professional engineering services rendered on this project as made part of this Agreement. Such causes included but are not limited to the Engineer's negligence, errors, omissions, strict liability or breach of contract. It is intended that this limitation apply to any and all liability or cause of action however alleged or arising, unless otherwise prohibited by law.

24. Client's Responsibilities: The Client agrees to provide full information regarding requirements for and about the Project, including a program which shall set forth the Client's objectives, schedule, constraints, criteria, special equipment, systems and site requirements.

The Client agrees to furnish and pay for all legal, accounting and insurance counseling services as may be necessary at any time for the Project, including auditing services which the Client may require to verify the Contractor's Application for Payment or to ascertain how or for what purpose the Contractor has used the money paid by or on behalf of the Client.

The Client agrees to require the Contractor, to the fullest extent permitted by law, to indemnify, hold harmless, and defend the Engineer, its consultants, and the employees and agents of any of them from and against any and all claims, suits, demands, liabilities, losses, damages, and costs ("Losses"), including but not limited to costs of defense, arising in whole or in part out of the negligence of the Contractor, its subcontractors, the officers, employees, agents, and subcontractors of any of them, or anyone for whose acts any of them may be liable, regardless of whether or not such Losses are caused in part by a party indemnified hereunder. Specifically excluded from the foregoing are Losses arising out of the preparation or approval of maps, drawings, opinions, reports, surveys, change orders, designs, or specifications, and the giving of or failure to give directions by the Engineer, its consultants, and the agents and employees of any of them, provided such giving or failure to give is the primary cause of Loss. The Client also agrees to require the Contractor to provide to the Engineer the required certificate of insurance.

The Client further agrees to require the Contractor to name the Engineer, its agents and consultants as additional insureds on the Contractor's policy or policies of comprehensive or commercial general liability insurance. Such insurance shall include products and completed operations and contractual liability coverages, shall be primary and noncontributing with any insurance maintained by the Engineer or its agents and consultants, and shall provide that the Engineer be given thirty days, unqualified written notice prior to any cancellation thereof.

In the event the foregoing requirements, or any of them, are not established by the Client and met by the Contractor, the Client agrees to indemnify and hold harmless the Engineer, its employees, agents, and consultants from and against any and all Losses which would have been indemnified and insured against by the Contractor, but were not.

When Contract Documents prepared under the Scope of Services of this contract require insurance(s) to be provided, obtained and/or otherwise maintained by the Contractor, the Client agrees to be wholly responsible for setting forth any and all such insurance requirements. Furthermore, any document provided for Client review by the Engineer under this Contract related to such insurance(s) shall be considered as sample insurance requirements and not the recommendation of the Engineer. Client agrees to have their own risk management department review any and all insurance requirements for adequacy and to determine specific types of insurance(s) required for the project. Client further agrees that decisions concerning types and amounts of insurance are

specific to the project and shall be the product of the Client. As such, any and all insurance requirements made part of Contract Documents prepared by the Engineer are not to be considered the Engineer's recommendation, and the Client shall make the final decision regarding insurance requirements.

25. Information Provided by Others: The Engineer shall indicate to the Client the information needed for rendering of the services of this Agreement. The Client shall provide to the Engineer such information as is available to the Client and the Client's consultants and contractors, and the Engineer shall be entitled to rely upon the accuracy and completeness thereof. The Client recognizes that it is impossible for the Engineer to assure the accuracy, completeness and sufficiency of such information, either because it is impossible to verify, or because of errors or omissions which may have occurred in assembling the information the Client is providing. Accordingly, the Client agrees, to the fullest extent permitted by law, to indemnify and hold the Engineer and the Engineer's subconsultants harmless from any claim, liability or cost (including reasonable attorneys' fees and cost of defense) for injury or loss arising or allegedly arising from errors, omissions or inaccuracies in documents or other information provided by the Client to the Engineer.

26. Payment: Client shall be invoiced once each month for work performed during the preceding period. Client agrees to pay each invoice within thirty (30) days of its receipt. The client further agrees to pay interest on all amounts invoiced and not paid or objected to for valid cause within said thirty (30) day period at the rate of eighteen (18) percent per annum (or the maximum interest rate permitted under applicable law, whichever is the lesser) until paid. Client further agrees to pay Engineer's cost of collection of all amounts due and unpaid after sixty (60) days, including court costs and reasonable attorney's fees, as well as costs attributed to suspension of services accordingly and as follows:

Collection Costs. In the event legal action is necessary to enforce the payment provisions of this Agreement, the Engineer shall be entitled to collect from the Client any judgement or settlement sums due, reasonable attorneys' fees, court costs and expenses incurred by the Engineer in connection therewith and, in addition, the reasonable value of the Engineer's time and expenses spent in connection with such collection action, computed at the Engineer's prevailing fee schedule and expense policies.

Suspension of Services. If the Client fails to make payments when due or otherwise is in breach of this Agreement, the Engineer may suspend performance of services upon five (5) calendar days' notice to the Client. The Engineer shall have no liability whatsoever to the Client for any costs or damages as a result of such suspension caused by any breach of this Agreement by the Client. Client will reimburse Engineer for all associated costs as previously set forth in (Item 4 of) this Agreement.

27. When construction observation tasks are part of the service to be performed by the Engineer under this Agreement, the Client will include the following clause in the construction contract documents and Client agrees not to modify or delete it:

Kotecki Waiver. Contractor (and any subcontractor into whose subcontract this clause is incorporated) agrees to assume the entire liability for all personal injury claims suffered by its own employees, including without limitation claims under the Illinois Structural Work Act, asserted by persons allegedly injured on the Project; waives any limitation of liability defense based upon the Worker's Compensation Act, court interpretations of said Act or otherwise; and to the fullest extent permitted by law, agrees to indemnify and hold harmless and defend Owner and Engineer and their agents, employees and consultants (the "Indemnitees") from and against all such loss, expense, damage or injury, including reasonable attorneys' fees, that the Indemnitees may sustain as a result of such claims, except to the extent that Illinois law prohibits indemnity for the Indemnitees' own negligence. The Owner and Engineer are designated and recognized as explicit third party beneficiaries of the Kotecki Waiver within the general contract and all subcontracts entered into in furtherance of the general contract.

28. Job Site Safety/Supervision & Construction Observation: The Engineer shall neither have control over or charge of, nor be responsible for, the construction means, methods, techniques, sequences of procedures, or for safety precautions and programs in connection with the Work since they are solely the Contractor's rights and responsibilities. The Client agrees that the Contractor shall supervise and direct the work efficiently with his/her best skill and attention; and that the Contractor shall be solely responsible for the means, methods, techniques, sequences and procedures of construction and safety at the job site. The Client agrees and warrants that this intent shall be carried out in the Client's contract with the Contractor. The Client further agrees that the Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the work; and that the Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to all employees on the subject site and all other persons who may be affected thereby. The Engineer shall have no authority to stop the work of the Contractor or the work of any subcontractor on the project.

When construction observation services are included in the Scope of Services, the Engineer shall visit the site at intervals appropriate to the stage of the Contractor's operation, or as otherwise agreed to by the Client and the Engineer to: 1) become generally familiar with and to keep the Client informed about the progress and quality of the Work; 2) to strive to bring to the Client's attention defects and deficiencies in the Work and; 3) to determine in general if the Work is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Engineer shall not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. If the Client desires more extensive project observation, the Client shall request that such services be provided by the Engineer as Additional and Supplemental Construction Observation Services in accordance with the terms of this Agreement.

The Engineer shall not be responsible for any acts or omissions of the Contractor, subcontractor, any entity performing any portions of the Work, or any agents or employees of any of them. The Engineer does not guarantee the performance of the

Contractor and shall not be responsible for the Contractor's failure to perform its Work in accordance with the Contract Documents or any applicable laws, codes, rules or regulations.

When municipal review services are included in the Scope of Services, the Engineer (acting on behalf of the municipality), when acting in good faith in the discharge of its duties, shall not thereby render itself liable personally and is, to the maximum extent permitted by law, relieved from all liability for any damage that may accrue to persons or property by reason of any act or omission in the discharge of its duties. Any suit brought against the Engineer which involve the acts or omissions performed by it in the enforcement of any provisions of the Client's rules, regulation and/or ordinance shall be defended by the Client until final termination of the proceedings. The Engineer shall be entitled to all defenses and municipal immunities that are, or would be, available to the Client.

29. Insurance and Indemnification: The Engineer and the Client understand and agree that the Client will contractually require the Contractor to defend and indemnify the Engineer and/or any subconsultants from any claims arising from the Work. The Engineer and the Client further understand and agree that the Client will contractually require the Contractor to procure commercial general liability insurance naming the Engineer as an additional named insured with respect to the work. The Contractor shall provide to the Client certificates of insurance evidencing that the contractually required insurance coverage has been procured. However, the Contractor's failure to provide the Client with the requisite certificates of insurance shall not constitute a waiver of this provision by the Engineer.

The Client and Engineer waive all rights against each other and against the Contractor and consultants, agents and employees of each of them for damages to the extent covered by property insurance during construction. The Client and Engineer each shall require similar waivers from the Contractor, consultants, agents and persons or entities awarded separate contracts administered under the Client's own forces.

30. Hazardous Materials/Pollutants: Unless otherwise provided by this Agreement, the Engineer and Engineer's consultants shall have no responsibility for the discovery, presence, handling, removal or disposal of or exposure of persons to hazardous materials/pollutants in any form at the Project site, including but not limited to mold/mildew, asbestos, asbestos products, polychlorinated biphenyl (PCB) or other toxic/hazardous/pollutant type substances.

Furthermore, Client understands that the presence of mold/mildew and the like are results of prolonged or repeated exposure to moisture and the lack of corrective action. Client also understands that corrective action is a operation, maintenance and repair activity for which the Engineer is not responsible.

AGENDA MEMO
Municipal Services Meeting
September 23, 2019

ISSUE STATEMENT

Motion to recommend zoning ordinance revisions to the City Council to comply with the Cannabis Regulation and Tax Act and to forward the draft revisions to the Planning and Zoning Commission for public hearing and commission review.

BACKGROUND

The State of Illinois enacted the Cannabis Regulation and Tax Act (Act), which pertains to the possession, use, cultivation, transportation and dispensing of adult-use cannabis, which became effective June 25, 2019. The Darien City Council did not prohibit these cannabis activities, therefore, the City will review its zoning codes for compliance with the Act. The City may enact reasonable zoning ordinances or resolutions not in conflict with the Act, regulating cannabis business establishments, including rules adopted governing the time, place, manner and number of cannabis business establishments, and minimum distance limitations between cannabis business establishments and locations the City deems sensitive.

1. Definitions

The following are critical definitions regarding zoning code modifications:

ADULT-USE CANNABIS BUSINESS ESTABLISHMENT:	A cultivation center, craft grower, processing organization, infuser organization, dispensing organization or transporting organization.
---	--

ADULT-USE CANNABIS CRAFT GROWER:	A facility operated by an organization or business that is licensed by the Department of Agriculture to cultivate, dry, cure, and package cannabis and perform other necessary activities to make cannabis available for sale at a dispensing organization or use at a processing organization. A craft grower may contain up to 5,000 square feet of canopy space on its premises for plants in the flowering state. The Department of Agriculture may authorize an increase or decrease of flowering stage cultivation space in increments of 3,000 square feet by rule based on market need, craft grower capacity, and the licensee's history of compliance or noncompliance, with a maximum space of 14,000 square feet and shall not be located within 1,500 feet of another craft grower or a cultivation center.
-------------------------------------	--

ADULT-USE CANNABIS CULTIVATION CENTER:	A facility operated by an organization or business that is licensed by the Illinois Department of Agriculture to cultivate, process, transport and perform necessary activities to provide cannabis
---	---

and cannabis-infused products to licensed cannabis business establishments(s). A cultivation center may not contain more than 210,000 square feet of canopy space for plants in the flowering stage for cultivation of adult use cannabis as provided in this Act.

ADULT-USE CANNABIS
DISPENSING ORGANIZATION:

A facility operated by an organization or business that is licensed by the Illinois Department of Financial and Professional Regulation to acquire cannabis from licensed cannabis business establishments for the purpose of selling or dispensing cannabis, cannabis-infused products, cannabis seeds, paraphernalia or related supplies to purchasers or to qualified registered medical cannabis patients and caregivers.

ADDITIONAL NOTES

- Operation is allowed between 6 A.M. and 10 P.M.
- Operation is prohibited when video surveillance equipment is inoperative.
- Operation is prohibited when point-of-sale equipment is inoperative.
- Operation is prohibited when the State's cannabis electronic verification system is inoperative.
- Operation is prohibited when there are fewer than 2 people working.

ADULT-USE CANNABIS
INFUSER ORGANIZATION OR
INFUSER:

A facility operated by an organization or business that is licensed by the Illinois Department of Agriculture to directly incorporate cannabis or cannabis concentrate into a product formulation to produce a cannabis-infused product

ADULT-USE CANNABIS
PROCESSING ORGANIZATION OR
PROCESSOR:

A facility operated by an organization or business that is licensed by the Illinois Department of Agriculture to either extract constituent chemicals or compounds to produce cannabis concentrate or incorporate cannabis or cannabis concentrate into a product formulation to produce a cannabis product.

ADULT-USE CANNABIS
TRANSPORTING ORGANIZATION
OR TRANSPORTER:

An organization or business that is licensed by the Department of Agriculture to transport cannabis on behalf of a cannabis business establishment or a community college licensed under the Community College Cannabis Vocational Training Program.

2. Locations

The Committee is requested to review and recommend the proposed location(s) for the Adult-Use Cannabis business establishments. This item will require a text amendment to certain B-2 Shopping Districts for the retail sale of Cannabis Retail Outlets-Locations, see attached aerials respectively labeled.

- A. 75th Street and Lemont Road-Chestnut Court Shopping Center-[Aerial A](#)
Zoning B-3-General Business District
Cannabis Dispensing Organization

- B. 75th Street—east to 2100 block-[Aerial B](#)
Zoning B-3-General Business District
Cannabis Dispensing Organization
75th west of Lyman Avenue to 2400 block
Zoning B-2-Community Shopping Center Business District
Cannabis Dispensing Organization

- C. 7800 Lemont Road-Warehouse-[Aerial C](#)
Zoning OR&I-Office, Research and Light Industrial
 - 1. Cannabis Dispensing Organization
 - 2. Cannabis Craft Grower
 - 3. Cannabis Cultivation Center
 - 4. Cannabis Infuser Organization Or Infuser
 - 5. Processing Organization Or Processor
 - 6. Transporting Organization Or Transporter

- D. 1035 South Frontage Road-Warehouse-[Aerial D](#)
Zoning I-1-General Industrial District
 - 1. Cannabis Craft Grower
 - 2. Cannabis Cultivation Center
 - 3. Cannabis Infuser Organization or Infuser
 - 4. Processing Organization or Processor
 - 5. Transporting Organization or Transporter

- E. 6800 Route 83-Darien Center-[Aerial E](#)
Zoning B-2-Community Shopping Centre Business District
Cannabis Dispensing Organization

3. Business License(s)

The Committee is requested to review and recommend the proposed number of Business license(s) to be issued. This item only applies to Cannabis Dispensing Organization/Retail. All proposed retail outlet(s) shall have a 1,000 feet buffer from any school, preschool and kindergarten through grade 12, day care centers, parks, youth centers, libraries, junior colleges, colleges, or universities.

- A. Limit of one license-one location
- B. Limit of two licenses-two locations
- C. Limit of three licenses-three locations

4. Lounges and other methods of on-site consumption

The Committee is requested to review and affirm the following:

No Cannabis Product shall be smoked, ingested or otherwise consumed on the premises of a permit holder or in the public right-of way within twenty-five feet of a Cannabis Retailer. Cannabis Retailers shall post a sign near their entrances and exits providing notice of this policy.

Attached and labeled as [Attachment A](#) is a Fact Sheet assembled through the Illinois Municipal League. Also please note, the State Law defines various conditions with limits and protocols regarding each use.

COMMITTEE RECOMMENDATION

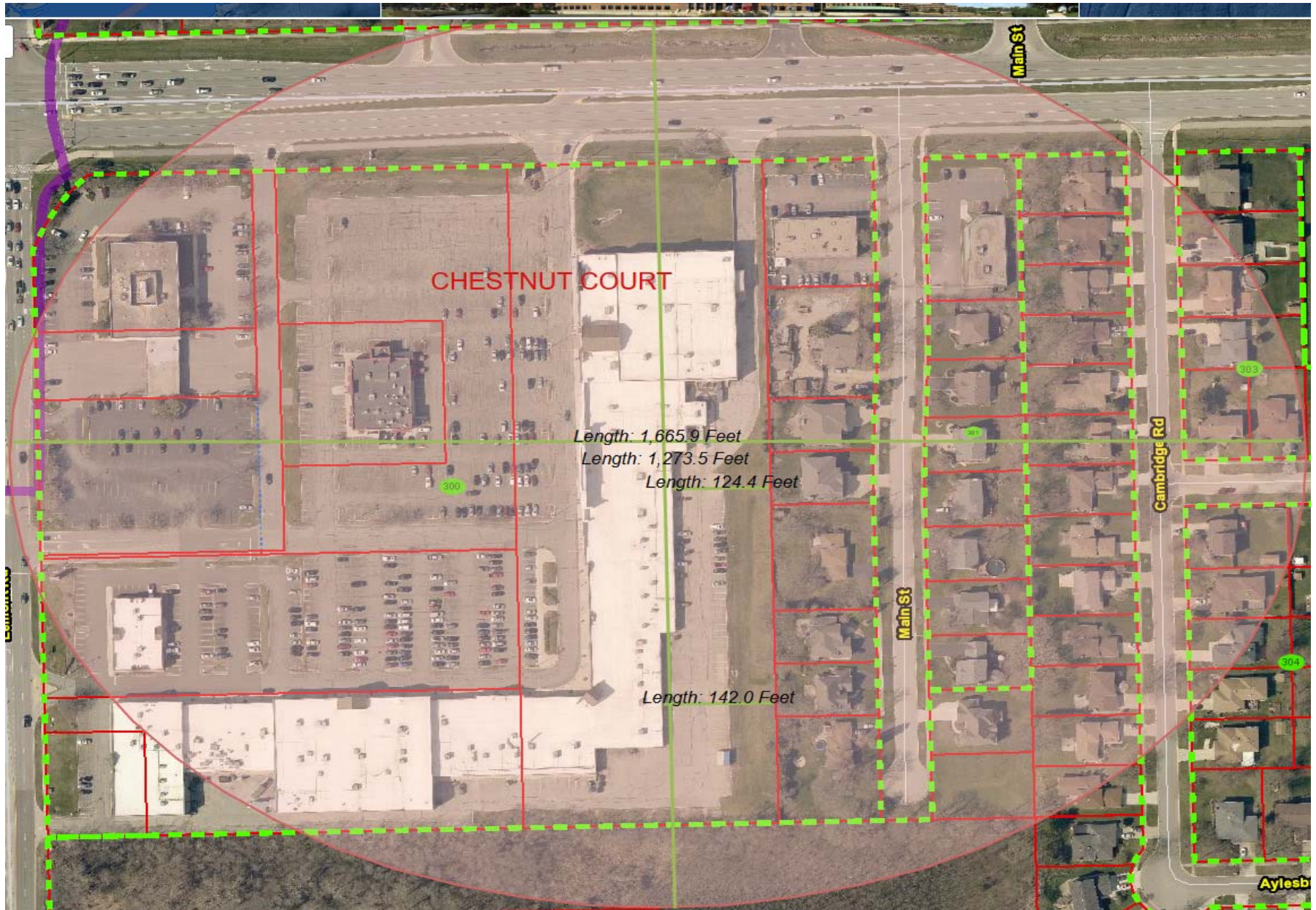
The Municipal Services Committee is to forward a recommendation to the City Council. Upon City Council approval, the item will be forwarded to the Planning and Zoning Commission for a Public Hearing. The Planning and Zoning Commission shall forward their findings back to the Municipal Services Committee followed by the City Council.

ALTERNATE CONSIDERATION

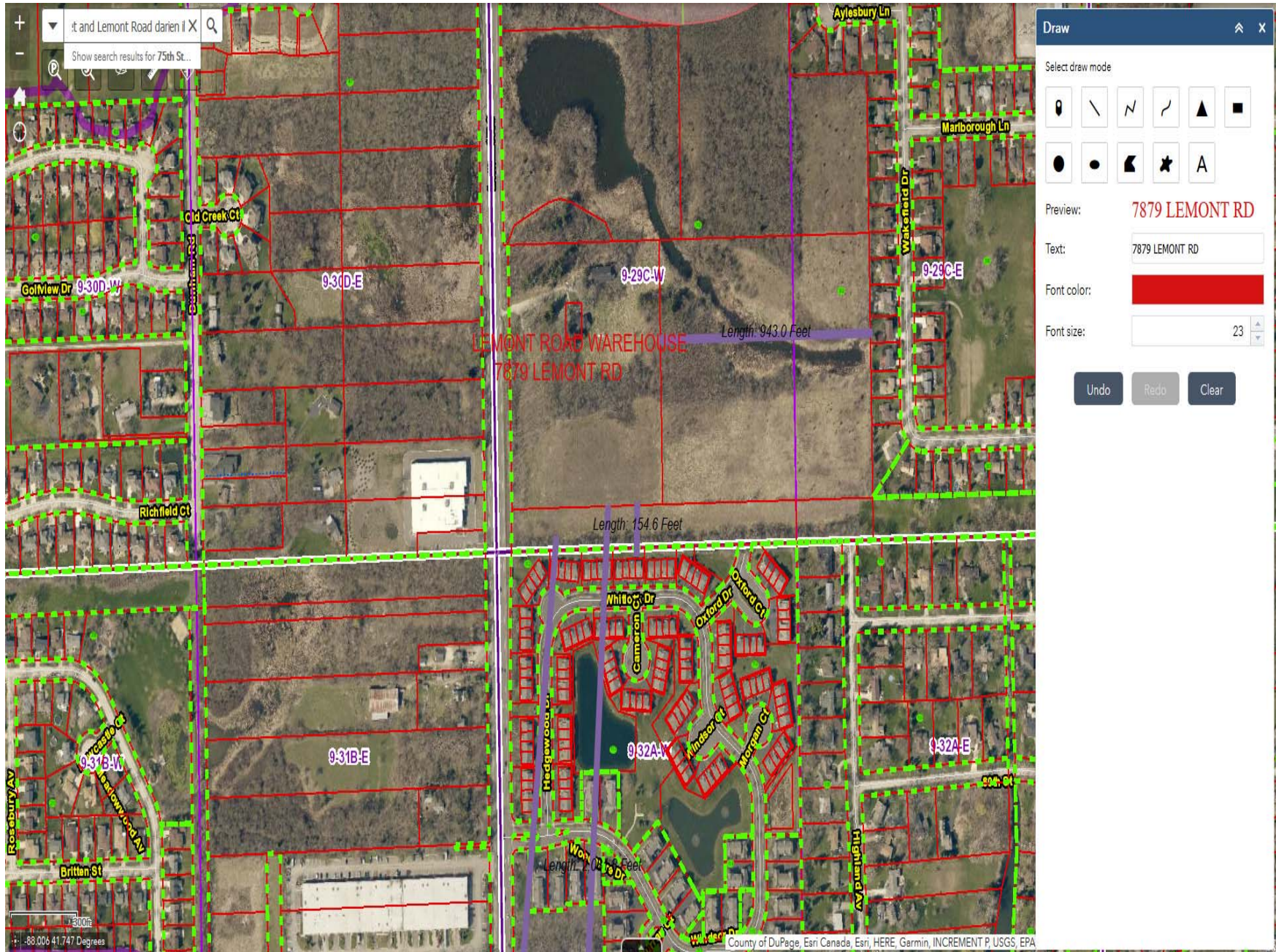
As recommended by the Committee.

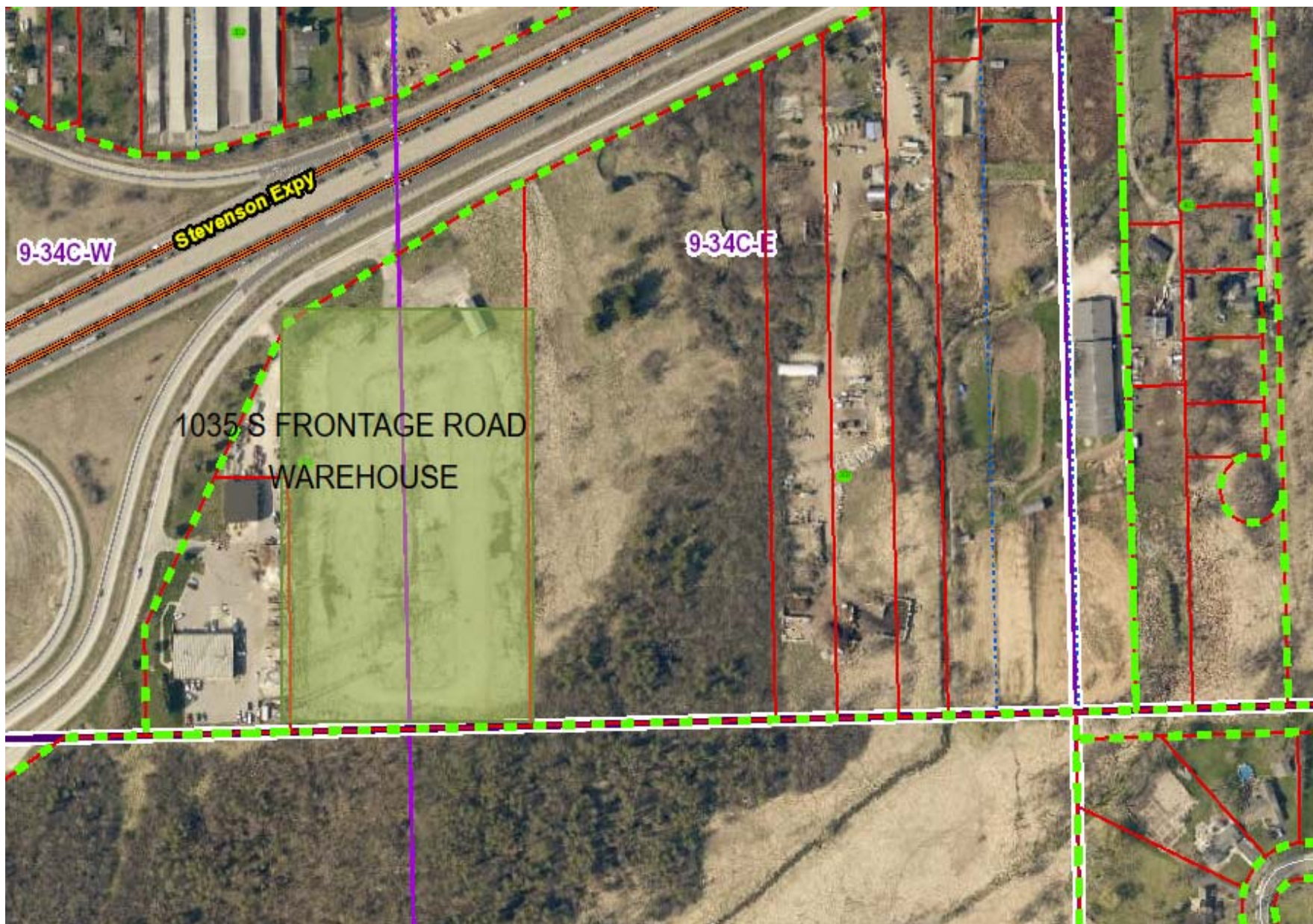
DECISION MODE

This item will be placed on the October 7, 2019 City Council agenda for formal consideration.











FACT SHEET

Adult-Use Cannabis

Public Act 101-0027 creates the Cannabis Regulation and Tax Act and was signed into law by Governor JB Pritzker on June 25, 2019. Effective January 1, 2020, the Act legalizes the possession and private use of cannabis for Illinois residents over 21 years of age.



7/15/19

LOCAL REGULATION OF CONSUMPTION

Municipalities may not restrict the private consumption of cannabis that is authorized by the Act. However, the Act prohibits the use of cannabis in public places, schools and child care facilities among other locations. Municipalities may adopt and enforce local ordinances to regulate possession and public consumption of cannabis so long as the regulations and penalties are consistent with the Act.

HOME GROW LIMITED TO MEDICAL PROGRAM PARTICIPANTS

Home grow cannabis will be authorized only for medical cannabis program participants, and is limited to five plants in their residence and subject to specified restrictions. Home grow of recreational cannabis by non-medical participants is prohibited. [More information about the medical cannabis program is available via this link.](#)



ZONING

The Act preserves local zoning authority and directly authorizes municipalities to prohibit (opt out) or significantly limit the location of cannabis businesses by ordinance. Municipalities will have the authority to enact reasonable zoning regulations that are not in conflict with the act. This would include the authority to opt out of either commercial production or distribution (dispensaries) of adult-use cannabis within their jurisdiction. Municipalities also may enact zoning ordinances and regulations designating the time, place, manner and number of cannabis business operations, including minimum distances between locations through conditional use permits.

BUSINESS REGULATION

In addition to zoning authority, municipalities will have the authority to allow for on-premise use of cannabis at locations to be determined locally. The Act anticipates that local authorities will engage in inspections of cannabis-related businesses. Municipalities may establish and impose civil penalties for violations of the local ordinances and regulations.



LOCAL REVENUE

Municipalities, by ordinance, may impose a Municipal Cannabis Retailers' Occupation Tax on adult-use cannabis products of up to 3% of the purchase price, in .25% increments. Counties may impose up to 3.75% in unincorporated areas, in .25% increments. The taxes imposed under this Act shall be in addition to all other occupation, privilege or excise taxes imposed by the State of Illinois or by any unit of local government, such as sales tax.



SMOKE FREE ILLINOIS ACT

The Act applies the restrictions of the Smoke Free Illinois Act on smoking cannabis, and provides that property owners may prohibit the use of cannabis by any guest, lessee, customer or visitor. In addition, lessors may prohibit cultivation of cannabis by their lessees.

EMPLOYER PROVISIONS

The Act provides employer protections including that nothing in the enactment prohibits employers from adopting reasonable zero-tolerance or drug-free workplace employment policies concerning drug testing, smoking, consumption, storage or use of cannabis in the workplace or while on-call. These policies must be applied in a nondiscriminatory manner. Employers may prohibit the use of cannabis by employees in the workplace, and engage in discipline, including termination, for violations of those policies and workplace rules.

STATE LICENSING

The Act authorizes the production and distribution of cannabis and cannabis products through state-licensed cultivators, craft growers, infusers, transporters and dispensaries. Cannabis transporters will be separately licensed by the Act, as well. A market study due in March 2021 will inform future licensing. The state will issue licenses according to a graduated scale. By the end of the first year, there will be up to 295 dispensing organizations. The Act will allow up to 500 dispensing organizations by January 1, 2022. Cultivators will be capped at 50, and 100 craft growers will be allowed. By that same date, 100 infusers will also be authorized to be licensed.

GRANTS AND INVESTMENT

The Act establishes the Restore, Reinvest and Renew (R3) Program to invest in communities historically impacted by economic disinvestment and violence. The Illinois Criminal Justice Information Authority (ICJIA) will identify R3 areas that qualify for funding, and grants will be awarded by the R3 Board. A 22-member R3 Board will award grants throughout the state, subject to an application process and the Government Accountability and Transparency Act (GATA); the R3 Board shall be chaired by the Lt. Governor.

SOCIAL EQUITY

The Act provides for a social equity program to establish a legal cannabis industry that is accessible to those most adversely impacted by the enforcement of drug-related laws in this state, including cannabis-related laws. Qualifying social equity applicants may be awarded financial assistance and incentives if they are interested in establishing cannabis related businesses.

DECRIMINALIZATION AND EXPUNGEMENTS

A significant portion of the Act addresses the decriminalization of cannabis through mandatory and discretionary expungements of criminal convictions relating to non-violent cannabis offenses.

STATE REVENUE

State revenues derived from the Cannabis Regulation and Tax Act will be deposited into the Cannabis Regulation Fund. The funds will be distributed to multiple state agencies for implementation of the Act. The legalization of adult cannabis also includes a new source of Local Government Distributive Fund (LGDF) dollars. A portion of the Cannabis Regulation Fund revenues (8% of deposits) will go to local governments, through LGDF, which will be used to fund crime prevention programs, training and interdiction efforts. The Cannabis Regulation Fund is derived from moneys collected from state taxes, license fees and other amounts required to be transferred into the Fund.

Recreational Cannabis FAQ's

The following list of Frequently Asked Questions about Recreational Cannabis was published by the Village of Lombard and modified for the Village of Downers Grove

1. When was cannabis made legal in Illinois?

On Tuesday 6/25/2019, Governor JB Pritzker signed Illinois House Bill 1438, better known as the Cannabis Regulation and Tax Act (CRTA), thus legalizing the consumption and possession of cannabis for adults 21 and older in Illinois.

2. Can the consumption/possession of cannabis be banned by a local municipality like Downers Grove?

No, municipalities cannot ban or override the CRTA.

3. Will the Village have any regulatory abilities?

Yes. When it comes to restrictions, municipalities have the ability to:

- ban the selling of recreational cannabis within Village limit*
- dictate the amount of legal dispensaries within the Village*
- determine how cannabis businesses are operated such as hours of operation*
- dictate the location of cannabis businesses as they relate to points of interest such as schools, churches, government buildings, and liquor stores.*
- regulate the zoning of cannabis businesses in specific districts*

4. What regulatory abilities, if any, do business owners and landlords have?

Any person, business, public entity, or landlord may prohibit the use of cannabis on private property.

5. If the sale of recreational cannabis were to be allowed in Downers Grove, how many licenses would be issued?

While many individual cities have a limitation on the amount of recreational cannabis facilities (dispensaries) that are allowed within their limits, Downers Grove is part of a larger Bureau of Labor Statistics Region within the state. The region Downers Grove is a part of is the Chicago-Naperville, Elgin region. The State is allowing up to 47 licenses within the region.

6. Who can legally purchase and consume cannabis?

As a result of the new State legislation, the consumption of cannabis as of 1/1/2020, will be treated similarly to that of the consumption of alcohol with any Illinois resident, or non-resident, ages 21 or over, now being able to purchase and consume cannabis.

7. Who can legally grow and sell recreational cannabis?

Only licensed businesses will be able to legally grow and sell cannabis. Medical cannabis patients will be allowed to grow up to five plants each within their home.

8. What will the Village's role be in the licensing process?

The Village plays no role in the licensing process as it is left up to the Department of Financial and Professional Regulation to select and process those individuals attempting to obtain a license.

9. How much cannabis may an individual possess?

Illinois residents may possess up to:

-30 grams, or just over one ounce of "flower"

-5 grams of cannabis concentrate

-500 milligrams of THC - the chemical that makes users high – in a cannabis infused product such as gummies, candy, other consumable products (referred to as "edibles"), or tinctures, and lotions

Non-Illinois residents may legally possess up to ½ of these amounts.

10. What action is required by the Village Council to allow recreational cannabis to be sold in Downers Grove?

The Village Council would need to amend the Village zoning ordinance to authorize the sale of recreational cannabis by cannabis business establishments and approve of a Municipal Cannabis Retailers' Occupation Tax. The Illinois Municipal Code requires that a public hearing be conducted by the Plan Commission before any amendment to a zoning ordinance.

11. Will cannabis consumption be allowed in public spaces?

No, the consumption of cannabis in public will be considered unlawful.

12. Where will consumption be allowed?

The consumption of cannabis will be allowed on private property or potentially, specifically designated establishments such as dispensaries or smoking lounges.

13. Are there any changes to existing medical cannabis laws?

Yes; the list of conditions that are covered under the use of medical cannabis was expanded to now include chronic pain, autism, migraines, irritable bowel syndrome, osteoarthritis, and anorexia.

14. Is the sale of medical cannabis currently allowed in Downers Grove? If so, where?

Yes. The locations where medical cannabis businesses may locate, subject to special use approval, can be found [here](#). There are no medical cannabis businesses currently located in the Village of Downers Grove.

15. How is cannabis taxed?

Sales will be taxed at 10% for cannabis with THC levels at or less 35%; 25% for cannabis with THC levels above 35%; and 20% for cannabis infused products such as edibles. This is in addition to standard state and local sales taxes. Additionally, municipalities may add a special tax of up to 3% and counties may add a special tax up to 3.75% in unincorporated areas.

16. How will the potential tax revenue generated be used?

Within the bill, any government proceeds associated with the sale of recreational cannabis was established as follows:

- 20% to State mental health services and substance abuse programs*
- 10% to pay unpaid State bills*
- 35% to the State General Revenue Fund*
- 2% to public education and safety campaigns*
- 8% to Local Government, for prevention and training for law enforcement*
- 25% for identified social equity programs*

17. How will the potential tax revenue from the (3%) tax be used by Downers Grove?

Currently, the Village has no plans in place for these potential funds.

18. How do federal laws affect Illinois' law?

Although cannabis remains illegal at the federal level, federal law enforcement has rarely interfered with individuals possessing the state regulated legal amount or businesses complying with state enforced programs. Any questions related to

Federal or State regulations should be directed to the proper agencies.

19. How does recreational cannabis affect criminal records?

Illinois Governor JB Pritzker has stated that he will pardon past convictions for possession of up to 30 grams, with the attorney general going to court to delete public records of a conviction or arrest for the now legal amount. Regarding possession of 30-500 grams, an individual or a state's attorney may petition the court to vacate or expunge the conviction.

20. What are some potential impacts to the State's decision to allow recreational marijuana use when it comes to policing?

It is reasonable to assume that the legalization of cannabis will increase the demand for police services as well as the number of drug impaired drivers on our roadways, due to the state-wide allowance of marijuana, regardless of whether or not such a facility is located within the city limits of Downers Grove.

AGENDA MEMO
MUNICIPAL SERVICES COMMITTEE
September 23, 2019

ISSUE STATEMENT

Amending the Darien Building Code by adoption of the Illinois Energy Conservation Code.

BACKGROUND

Last August, the City passed ordinance O-15-18 updating the various component codes that together makeup the Darien Building Code in Title 4 Chapter 1 of the City Code. One of those updated codes adopted was the (IECC) International Energy Conservation Code 2015.

The International Code Council that researches, writes, and publishes the IECC codes employ experts and use an extensive public input process to analyze and update standards. The codes reflect new materials, innovative methods, and improved safety practices that result in a higher quality of construction. The IECC has standards for insulation, vapor barriers, roof penetrations, HVAC heating ventilation air conditioning, water heating, space heating, refrigerated storage, lighting, and related systems for residential and commercial buildings.

This year, the State of Illinois enacted the Illinois Energy Conservation Code that requires that all municipalities must adopt the 2018 edition of the IECC with several 'adaptions' or changes by the State. This can be considered as part of a trend whereby the State mandated municipal adoption of the State Plumbing Code, Accessibility Code, and Elevator Code.

The City utilizes the services of Don Morris Architects for plan review and inspections. Morris has highlighted the major IECC 2018 standards that have been updated over the 2015 standards, including; improved U-factor for windows, R-5 insulation for heated slabs, higher-efficiency lighting, commercial lighting sensors, duct leakage tests, showerhead flow reducers.

ATTACHMENTS

- A. [Ordinance O-15-18](#)
- B. [List of Adopted Building Codes, City of Darien](#)
- C. [IECC 2018 Contents](#)
- D. [Morris highlighted 2018 IECC updates](#)
- E. [Illinois Energy Conservation Code](#)

STAFF RECOMMENDATION

Staff recommends approval of adoption of the Illinois Energy Conservation Code.

DECISION MODE

If recommended by the MSC on September 23, this item will be placed on the October 7, 2019 City Council agenda with an ordinance for approval.



**CITY OF DARIEN
DU PAGE COUNTY, ILLINOIS**

ORDINANCE NO. 0-15-18

**AN ORDINANCE AMENDING VARIOUS SECTIONS OF TITLE 4,
"BUILDING REGULATIONS", CHAPTER 1, "DARIEN BUILDING
CODE", OF THE DARIEN CITY CODE**

**ADOPTED BY THE
MAYOR AND CITY COUNCIL
OF THE
CITY OF DARIEN
THIS 6th DAY OF AUGUST, 2018**

**Published in pamphlet form by authority
of the Mayor and City Council of the City
of Darien, DuPage County, Illinois, this
7th day of August, 2018.**

ORDINANCE NO. 0-15-18

AN ORDINANCE AMENDING VARIOUS SECTIONS OF TITLE 4, "BUILDING REGULATIONS", CHAPTER 1, "DARIEN BUILDING CODE", OF THE DARIEN CITY CODE

WHEREAS, the City of Darien is a home rule unit of government pursuant to the provisions of Article VII, Section 6 of the Illinois Constitution of 1970; and

WHEREAS, as a home rule unit of local government, the City may exercise any power and perform any function pertaining to its government except as limited by Article VII, Section 6; and

WHEREAS, the City has adopted building regulations set forth in Title 4, "Building Regulations", Chapter 1, "Darien Building Code", of the City of Darien City Code; and

WHEREAS, the City Council has deemed it necessary to periodically review said Building Code and to make the necessary changes thereto; and

WHEREAS, on July 23, 2018, the Municipal Services Committee has filed its findings and recommendations with the City Council recommending approval of the text amendment described herein; and

WHEREAS, the City Council hereby approves and adopts the findings and recommendations of the Municipal Services Committee and incorporates such findings and recommendation herein by reference as if fully set forth herein.

NOW THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF DARIEN, DU PAGE COUNTY, ILLINOIS, IN THE EXERCISE OF ITS HOME RULE POWERS, as follows:

AN ORDINANCE AMENDING VARIOUS SECTIONS OF TITLE 4, "BUILDING REGULATIONS", CHAPTER 1, "DARIEN BUILDING CODE", OF THE DARIEN CITY CODE

SECTION 1: Chapter 1, "Darien Building Code", of Title 4, "Building Regulations", of the Darien City Code, as amended, is hereby further amended to read as follows:

4-1-3-1: **ADOPTION OF RESIDENTIAL CODE:** There is hereby adopted and incorporated by reference as a part of this section, the code entitled 2015 International Residential Code, one (1) copy of which is on file in the office of the City.

4-3-3-2: **AMENDMENTS TO RESIDENTIAL CODE:** The International Residential Code, as adopted in section 4-1-3-1 of this Chapter, shall be amended as follows:

Section R-403.1 - Revise to read as follows:

Pier footings are acceptable for open porches, and for screened-in porches, 3-season rooms, or sunrooms if designed and certified by a licensed architect.

4-1-4-1: **ADOPTION OF BUILDING CODE:** There is hereby adopted and incorporated by reference as part of this section, the code entitled the 2015 International Building Code, one (1) copy of which is on file in the office of the City.

4-1-4-2: **AMENDMENTS TO BUILDING CODE:** The International Building Code as adopted in section 4-1-4-1 of this Chapter, shall be amended as follows:

4-1-5-1: **ADOPTION OF MECHANICAL CODE:** There is hereby adopted and incorporated by reference as part of this section, the code entitled 2015 International Mechanical Code, one (1) copy of which is on file in the office of the City.

4-1-5-2: **AMENDMENTS TO MECHANICAL CODE:** The International Mechanical Code as adopted in section 4-1-5-1 of this Chapter, shall be amended as follows:

4-1-5-3: **ADOPTION OF ELEVATOR SAFETY CODE:** There is hereby adopted and incorporated by reference as part of this section, the code entitled Illinois Elevator Safety Code (41 Ill. Adm. Code, Chapter II, Part 1000, and as amended from time to time) of the City.

ORDINANCE NO. 0-15-18

**AN ORDINANCE AMENDING VARIOUS SECTIONS OF TITLE 4,
“BUILDING REGULATIONS”, CHAPTER 1, “DARIEN BUILDING
CODE”, OF THE DARIEN CITY CODE**

4-1-5-4: AMENDMENTS TO ELEVATOR SAFETY CODE: The Elevator Safety Code, as adopted in section 4-1-5-3 of this Chapter, shall be amended as follows Section 1.4: Definitions - Revise to read as follows:

Building Code: The International Building Code as adopted in Section 4-1-4-1 of the City Code, and as amended from time to time.

4-1-6-1: ADOPTION OF ELECTRICAL CODE: The standards and specifications, rules and regulations of the National Fire Protection Association National Electrical Code, 2014 edition, as published by the National Fire Protection Association except as amended herein, are hereby adopted as the standards and specifications, rules and regulations for installation, alteration, repair and use of electrical equipment, subject however, to the additional standards and specifications, rules and regulations as hereinafter set forth, and except where they are in conflict with the other provisions of this code and said code is hereby incorporated herein by reference, one (1) copy of which is on file in the office of the City.

4-1-6-2: AMENDMENTS TO ELECTRICAL CODE: The Electrical Code, as adopted in section 4-1-6-1 of this Chapter, shall be amended as follows:

- (A) All conductors shall be copper.
- (B) All services shall be installed in rigid metal or intermediate metal conduit. Rigid aluminum may be used for above-ground installations only. EMT shall not be used for electrical services.
- (C) All underground electrical services shall be installed in rigid metal conduit, intermediate metal conduit, or PVC.
- (D) In poured concrete, only rigid metal conduit, intermediate metal conduit, or PVC shall be used. PVC shall convert to rigid conduit prior to emergence.
- (E) Where used underground, PVC shall not emerge from below grade. PVC shall convert to rigid metal conduit prior to emergence.

ORDINANCE NO. 0-15-18

**AN ORDINANCE AMENDING VARIOUS SECTIONS OF TITLE 4,
"BUILDING REGULATIONS", CHAPTER 1, "DARIEN BUILDING
CODE", OF THE DARIEN CITY CODE**

- (F) All electrical wiring shall be installed in metal conduit, EMT, IMC, or RMC only, except low voltage wiring. PVC may be permitted in wet or corrosive areas.
- (G) Section 314.27(A)(2), "Ceiling Outlets" - Add the following:

Fan rated boxes are required in all bedroom ceiling lighting outlets.
- (H) Section 320, "Armored Cable", is hereby deleted in its entirety.
- (I) Section 322, "Flat Cable Assemblies", is hereby deleted in its entirety.
- (J) Section 324, "Flat Conductor Cable", is hereby deleted in its entirety.
- (K) Section 326, "Integrated Gas Spacer Cable", is hereby deleted in its entirety.
- (L) Section 328, "Medium Voltage Cable", is hereby deleted in its entirety.
- (M) Section 330.10(A), "Uses Permitted" - Add the following:

MC Cable may be used for concealed work, in dry locations, where conduit is not practical to install or to be fished through existing walls, ceilings, or floors. Where exposed, MC Cable shall not be longer than three (3) feet before converting to conduit.
- (N) Section 332, "Mineral-Insulate Metal-Sheathed Cable", is hereby deleted in its entirety.
- (O) Section 334, "Nonmetallic-Sheathed Cable", is hereby deleted in its entirety.
- (P) Section 338, "Service-Entrance Cable" is hereby deleted in its entirety.
- (Q) Section 340, "Underground Feeder and Branch-Circuit Cable" is hereby deleted in its entirety.
- (R) Section 352.10, "Uses Permitted" - Revise to read as follows:

(A), (C), (E), (F), and (H) are hereby deleted in their entirety.

AN ORDINANCE AMENDING VARIOUS SECTIONS OF TITLE 4, "BUILDING REGULATIONS", CHAPTER 1, "DARIEN BUILDING CODE", OF THE DARIEN CITY CODE

Section 35210(D) may be approved on review of application.

(S) Section 355.10, "Uses Permitted" - Revise to read as follows:

(A), (C), (E), and (F) are hereby deleted in their entirety.

(T) Section 362, "Electrical Nonmetallic Tubing", is hereby deleted in its entirety.

(U) Section 382, "Nonmetallic Extensions" is hereby deleted in its entirety.

(V) Section 394, "Concealed Knob-and-Tub Wiring" is hereby deleted in its entirety.

(W) Section 396, "Messenger-Supported Wire" is hereby deleted in its entirety.

(X) Section 410.36, "Suspended Ceilings", - Revise to read as follows:

Florescent fixtures installed in suspended ceiling shall not be attached to the ceiling grid by screws, clips, or rivets. Florescent fixtures shall be supported by two pencil wires from the structural framing of the building to two angled corners of the fixture.

(Y) All flexible conduits shall contain an equipment grounding conductor and not be longer than 6 feet.

(Z) Commercial wiring shall be a minimum #12 AWG, except for flexible connections to lighting fixtures or control wiring.

4-1-7-1: **ADOPTION OF PLUMBING CODE:** There is hereby adopted and incorporated by reference as part of this section, the code entitled Illinois Plumbing Code (77 Ill.Adm.Code, Chapter 1, Part 890, and as amended from time to time), one (1) copy of which is on file in the office of the City.

4-1-8-1: **ADOPTION OF FIRE CODE:** There is hereby adopted and incorporated by reference as part of this section, the code entitled 2015 International Fire Code, printed in pamphlet form, one (1) copy of which is on file in the office of the City.

ORDINANCE NO. 0-15-18

AN ORDINANCE AMENDING VARIOUS SECTIONS OF TITLE 4, "BUILDING REGULATIONS", CHAPTER 1, "DARIEN BUILDING CODE", OF THE DARIEN CITY CODE

- 4-1-9-1: **ADOPTION OF ENERGY CONSERVATION CODE:** There is hereby adopted and incorporated by reference as part of this section, the code entitled 2015 International Energy Conservation Code, printed in pamphlet form by the International Code Council, including no errata sheets inserted therein as modified in certain respects as set forth herein, one (1) copy of which is on file in the office of the City.
- 4-1-10-1: **ADOPTION OF PROPERTY MAINTENANCE CODE:** There is hereby adopted and incorporated by reference as part of this section, the code entitled 2015 International Property Maintenance Code, printed in pamphlet form by the International Code Council, including no errata sheets inserted therein as modified in certain respects as set forth herein, one (1) copy of which is on file in the office of the City.
- 4-1-11-1: **ADOPTION OF FUEL GAS CODE:** There is hereby adopted and incorporated by reference as part of this section, the code entitled 2015 International Fuel Gas Code, printed in pamphlet form by the International Code Council, including no errata sheets inserted therein as modified in certain respects as set forth herein, one (1) copy of which is on file in the office of the City.
- 4-1-12-1: **ADOPTION OF SWIMMING POOL AND SPA CODE:** There is hereby adopted and incorporated by reference as part of this section, the code entitled 2015 International Swimming Pool and Spa Code, printed in pamphlet form by the International Code Council, including no errata sheets inserted therein as modified in certain respects as set forth herein, one (1) copy of which is file in the office of the City.
- 4-1-13-1: **ADOPTION OF ACCESSIBILITY CODE:** There is hereby adopted and incorporated by reference as part of this section, the code entitled Illinois Accessibility Code (71 Ill. Adm. Code, Chapter I, Subchapter b, and as amended from time to time), one (1) copy of which is on file in the office of the City.

SECTION 2: Sections 4-1-11 through 4-1-13-3 are hereby renumbered and codified as follows:

ORDINANCE NO. 0-15-18

AN ORDINANCE AMENDING VARIOUS SECTIONS OF TITLE 4, "BUILDING REGULATIONS", CHAPTER 1, "DARIEN BUILDING CODE", OF THE DARIEN CITY CODE

<u>Current Number</u>	<u>New Number</u>
4-1-11	4-1-14
4-1-11-1	4-1-14-1
4-1-11-2	4-1-14-2
4-1-11-3	4-1-14-3
4-1-11-4	4-1-14-4
4-1-11-5	4-1-14-5
4-1-12	4-1-15
4-1-12-1	4-1-15-1
4-1-12-2	4-1-15-2
4-1-12-3	4-1-15-3
4-1-12-4	4-1-15-4
4-1-13	4-1-16
4-1-13-1	4-1-16-1
4-1-13-2	4-1-16-2
4-1-13-3	4-1-16-3

SECTION 3: This ordinance and each of its terms shall be the effective legislative act of a home rule municipality without regard to whether such ordinance should (a) contain terms contrary to the provisions of current or subsequent non-preemptive state law, or (b) legislate in a manner or regarding a matter not delegated to municipalities by state law. It is the intent of the corporate authorities of the City of Darien that to the extent that the terms of this ordinance should be inconsistent with any non-preemptive state law, that this ordinance shall supersede state law in that regard within its jurisdiction.

SECTION 4: This Ordinance shall be in full force and effect from and after its passage and approval, and shall subsequently be published in pamphlet form as provided by law.

ORDINANCE NO. 0-15-18

AN ORDINANCE AMENDING VARIOUS SECTIONS OF TITLE 4,
"BUILDING REGULATIONS", CHAPTER 1, "DARIEN BUILDING
CODE", OF THE DARIEN CITY CODE

PASSED BY THE CITY COUNCIL OF THE CITY OF DARIEN, DU PAGE
COUNTY, ILLINOIS, this 6th day of August, 2018.

ABSENT: 1 - Kenny

AYES: 6 - Belczak, Chlystek, Marchese, McIvor, Schauer, Vaughan

NAYS: 0 - NONE

APPROVED BY THE MAYOR OF THE CITY OF DARIEN, DU PAGE COUNTY,
ILLINOIS, this 6th day of August, 2018.

Kathleen Moesle Weaver
KATHLEEN MOESLE WEAVER, MAYOR

ATTEST:
Joanne E. Ragona
JOANNE E. RAGONA, CITY CLERK

APPROVED AS TO FORM:
John S. Murphy
CITY ATTORNEY



STATE OF ILLINOIS)
) SS
COUNTY OF DU PAGE)

I, JoAnne E. Ragona, do hereby certify that I am the duly qualified CITY CLERK of the CITY OF DARIEN of DuPage County, Illinois, and as such officer I am the keeper of the records and files of the City;

I do further certify that the foregoing constitutes a full, true and correct copy of **ORDINANCE NO. 0-15-18 "AN ORDINANCE AMENDING VARIOUS SECTIONS OF TITLE 4, "BUILDING REGULATIONS", CHAPTER 1, "DARIEN BUILDING CODE", OF THE DARIEN CITY CODE"** of the City of Darien, Du Page County, Illinois, duly passed and approved by the Mayor and City Council at a meeting held on August 6, 2018.

IN WITNESS WHEREOF, I have hereunto affixed my official hand and seal this 6th day of August, 2018.





City Clerk



City of Darien
Adopted Building Codes
Amended 8.6.18

2014 Edition

NEC National Electrical Code

2015 Editions

IBC International Building Code
IRC International Residential Code
IMC International Mechanical Code
IFC International Fire Code
IECC International Energy Conservation Code
IFGC International Fuel Gas Code
ISEP International Solar Energy Provisions Code
ISPSC International Swimming Pool and Spa Code
IPMC International Property Maintenance Code

State Codes – Latest Editions

Illinois Plumbing Code
Illinois Accessibility Code
Illinois Elevator Safety Code

IECC—COMMERCIAL PROVISIONS

TABLE OF CONTENTS

CHAPTER 1 SCOPE AND ADMINISTRATION	C-3	CHAPTER 4 COMMERCIAL ENERGY EFFICIENCY	C-31
PART 1—SCOPE AND APPLICATION	C-3	Section	
Section		C401 General	C-31
C101 Scope and General Requirements	C-3	C402 Building Envelope Requirements	C-31
C102 Alternative Materials, Design and Methods of Construction and Equipment	C-3	C403 Building Mechanical Systems	C-41
PART 2—ADMINISTRATION AND ENFORCEMENT	C-3	C404 Service Water Heating (Mandatory)	C-70
C103 Construction Documents	C-3	C405 Electrical Power and Lighting Systems	C-74
C104 Fees	C-5	C406 Additional Efficiency Packages	C-85
C105 Inspections	C-5	C407 Total Building Performance	C-89
C106 Validity	C-5	C408 Maintenance Information and System Commissioning	C-95
C107 Referenced Standards	C-6	CHAPTER 5 EXISTING BUILDINGS	C-101
C108 Stop Work Order	C-6	Section	
C109 Board of Appeals	C-6	C501 General	C-101
CHAPTER 2 DEFINITIONS	C-7	C502 Additions	C-101
Section		C503 Alterations	C-102
C201 General	C-7	C504 Repairs	C-103
C202 General Definitions	C-7	C505 Change of Occupancy or Use	C-103
CHAPTER 3 GENERAL REQUIREMENTS	C-13	CHAPTER 6 REFERENCED STANDARDS	C-105
Section		APPENDIX CA SOLAR-READY ZONE—COMMERCIAL	C-113
C301 Climate Zones	C-13	Section	
C302 Design Conditions	C-28	CA101 Scope	C-113
C303 Materials, Systems and Equipment	C-28	CA102 General Definition	C-113
		CA103 Solar-ready Zone	C-113
		INDEX	C-115

IECC—RESIDENTIAL PROVISIONS

TABLE OF CONTENTS

CHAPTER 1 SCOPE AND ADMINISTRATION	R-3	CHAPTER 5 EXISTING BUILDINGS	R-45
PART 1—SCOPE AND APPLICATION	R-3	Section	
Section		R501 General	R-45
R101 Scope and General Requirements	R-3	R502 Additions	R-45
R102 Alternative Materials, Design and Methods of Construction and Equipment	R-3	R503 Alterations	R-46
PART 2—ADMINISTRATION AND ENFORCEMENT	R-3	R504 Repairs	R-46
R103 Construction Documents	R-3	R505 Change of Occupancy or Use	R-47
R104 Fees	R-4	CHAPTER 6 REFERENCED STANDARDS	R-49
R105 Inspections	R-4	APPENDIX RA SOLAR-READY PROVISIONS—DETACHED ONE- AND TWO-FAMILY DWELLINGS AND TOWNHOUSES	R-53
R106 Validity	R-5	Section	
R107 Referenced Standards	R-5	RA101 Scope	R-53
R108 Stop Work Order	R-5	RA102 General Definition	R-53
R109 Board of Appeals	R-6	RA103 Solar-ready Zone	R-53
CHAPTER 2 DEFINITIONS	R-7	INDEX	R-55
Section			
R201 General	R-7		
R202 General Definitions	R-7		
CHAPTER 3 GENERAL REQUIREMENTS	R-11		
Section			
R301 Climate Zones	R-11		
R302 Design Conditions	R-26		
R303 Materials, Systems and Equipment	R-26		
CHAPTER 4 RESIDENTIAL ENERGY EFFICIENCY	R-29		
Section			
R401 General	R-29		
R402 Building Thermal Envelope	R-29		
R403 Systems	R-35		
R404 Electrical Power and Lighting Systems	R-37		
R405 Simulated Performance Alternative (Performance)	R-37		
R406 Energy Rating Index Compliance Alternative	R-42		

To: Dan Gombac

From: Jason Noe

Date: 8/29/2019

RE: State of Illinois 2018 Illinois Energy Conservation Code Law

The State of Illinois passed a law requiring all construction to comply with the 2018 International Energy Conservation Code and ANSI/ASHRAE/IES Standard 90.1 and State of Illinois Amendments effective July 1st, 2019.

The changes from the 2015 International Energy Conservation Code and 2018 International Energy Conservation Code are minor in nature for new and existing construction.

Some of the changes for residential include the following: U-Factor for windows improved, lighting shall be high efficiency in 75% to 90% of permanently installed fixtures, heated slabs require R-5 insulation, duct leakage test less stringent, etc.

Some of the changes to commercial include the following: Shower head flow reduced to 2 gpm, additional lighting sensors, heated slabs require R-5 insulation, U-Factor for windows, etc. The state also adopted amendments to the 2018 IECC which can be viewed by the attached documents.

At this time all new permits are being reviewed under the 2018 International Energy Conservation Code. I recommend that the City of Darien revise the City Code Section 4-1-9-1 to read: The most current adopted Illinois Energy Conservation Code. By doing so this will help the City of Darien to stay up to date with the current codes adopted by the state without having to codify the city code whenever the state changes the requirements.

**CHAPTER 1 [CE]
SCOPE AND ADMINISTRATION**

**SECTION C101
SCOPE AND GENERAL REQUIREMENTS**

C101.1 Title. This code shall be known as the *Illinois Energy Conservation Code* or "this Code" and shall mean:

With respect to the State facilities covered by 71 Ill. Adm. Code 600.Subpart B:

This Part, all additional requirements incorporated within Subpart B (including the 2018 International Energy Conservation Code, including all published errata but excluding published supplements that encompass ASHRAE 90.1-2016), and any statutorily authorized adaptations to the incorporated standards adopted by CDB are effective July 1, 2019.

With respect to the privately funded commercial facilities covered by 71 Ill. Adm. Code 600.Subpart C:

This Part, all additional requirements incorporated within Subpart C (including the 2018 International Energy Conservation Code, including all published errata and excluding published supplements that encompass ASHRAE 90.1-2016), and any statutorily authorized adaptations to the incorporated standards adopted by CDB, are effective July 1, 2019.

C101.1.2 Adoption. The Board shall adopt amendments to this Code within 12 months after publication of changes to the International Energy Conservation Code. Any such update in this Code shall take effect within 6 months after it is adopted by the Board and shall apply to any new building or structure in this State for which a building permit application is received by a municipality or county, except as otherwise provided by the EEB Act.

C101.1.3 Adaptation. The Board may appropriately adapt the International Energy Conservation Code to apply to the particular economy, population, distribution, geography and climate of the State and construction within the State, consistent with the public policy objectives of the EEB Act.

C101.5 Compliance. *Commercial buildings* shall meet the provisions of the *Illinois Energy Conservation Code* covered by 71 Ill. Adm. Code 600.Subpart C. The local authority having jurisdiction (AHJ) shall establish its own procedures for enforcement of the Illinois Energy Conservation Code. Minimum compliance shall be demonstrated by submission of:

1. Compliance forms published in the ASHRAE 90.1 User's Manual; or
2. Compliance Certificates generated by the U.S. Department of Energy's COMcheck™ Code compliance tool; or
3. Other comparable compliance materials that meet or exceed, as determined by the AHJ, the compliance forms published in the ASHRAE 90.1 User's Manual or the U.S. Department of Energy's COMcheck™ Code compliance tool; or
4. The seal of the architect/engineer as required by Section 14 of the Illinois Architectural Practice Act [225 ILCS 305], Section 12 of the Structural Engineering Licensing Act [225 ILCS 340] and Section 14 of the Illinois Professional Engineering Practice Act [225 ILCS 325].

**SECTION C102
ALTERNATIVE MATERIALS, DESIGN AND
METHODS OF CONSTRUCTION AND
EQUIPMENT**

C102.1.1 Above code program. No unit of local government, including any home rule unit, may apply energy efficient building standards to privately funded commercial facilities in a manner that is less stringent than the Code as described in 71 Ill. Adm. Code 600. Subpart C. However, nothing in the EEB Act or Subpart C prevents a unit of local government from adopting an energy efficiency code or standards that are more stringent than this Code. The requirements identified as “mandatory” in Chapter 4 shall be met.

**SECTION C109
BOARD OF APPEALS**

C109.1 General. In order to hear and decide appeals of orders, decisions or determinations made by the *code official* relative to the application and interpretation of this Code, there may be created a board of appeals. The *code official* shall be an ex officio member of the board of appeals but shall not have a vote on any matter before the board. The board of appeals shall be appointed by the governing body and shall hold office at its pleasure. The board shall adopt rules of procedure for conducting its business, and shall render all decisions and findings in writing to the appellant with a duplicate copy to the *code official*.

C109.3 Qualifications. The board of appeals shall consist of members who are qualified by experience and training.

**CHAPTER 2 [CE]
DEFINITIONS**

**SECTION C202
GENERAL DEFINITIONS**

ADD THE FOLLOWING Definitions:

AUTHORITY HAVING JURISDICTION or AHJ. The organization, officer or individual responsible for approving equipment, materials, an installation or procedure.

BOARD. The Illinois Capital Development Board.

COUNCIL. The Illinois Energy Conservation Advisory Council whose purpose is to recommend modifications to the *Illinois Energy Conservation Code*.

EEB ACT. The Energy Efficient Building Act [20ILCS 3125].

ROOF MEMBRANE PEEL AND REPLACEMENT. Where an existing weather resisting roof membrane alone is removed, exposing insulation or sheathing and only a new weather resisting roof membrane is installed.

CHAPTER 4 [CE] COMMERCIAL ENERGY EFFICIENCY

SECTION C402 BUILDING ENVELOPE REQUIREMENTS

C402.5.1 Air barriers. A continuous air barrier shall be provided throughout the building thermal envelope. The air barriers shall be permitted to be located on the inside or outside of the building envelope, located within the assemblies composing the envelope, or any combination thereof. The air barrier shall comply with

Sections C402.5.1.1 and C402.5.1.2. For roof air barriers on existing buildings, refer to Section C503.1 or C504.2.

Exception: Air barriers are not required in buildings located in *Climate Zone 2B*.

C402.5.1.1 Air barrier construction. The *continuous air barrier* shall be constructed to comply with the following:

1. The air barrier shall be continuous for all assemblies that are the thermal envelope of the building and across the joints and assemblies.
2. Air barrier joints and seams shall be sealed, including sealing transitions at joints between dissimilar materials. The joints and seals shall be securely installed in or on the joint for its entire length so as not to dislodge, loosen or otherwise impair its ability to resist positive and negative pressure from wind, stack effect and mechanical ventilation.
3. Penetrations of the air barrier shall be caulked, gasketed or otherwise sealed in a manner compatible with the construction materials and location. Sealing shall allow for expansion, contraction and mechanical vibration. Paths for air leakage from the building to the space between the roof deck and roof covering used as an air barrier, shall be caulked, gasketed or otherwise covered with a moisture vapor-permeable material. Joints and seams associated with penetrations shall be sealed in the same manner or taped. Sealing materials shall be securely installed around the penetration so as not to dislodge, loosen or otherwise impair the penetrations' ability to resist positive and negative pressure from wind, stack effect and mechanical ventilation. Sealing of concealed fire sprinklers, where required, shall be in a manner that is recommended by the manufacturer. Caulking or other adhesive sealants shall not be used to

fill voids between fire sprinkler cover plates and walls or ceilings.

4. Recessed lighting fixtures shall comply with Section C402.5.8. Where similar objects are installed that penetrate the air barrier, provisions shall be made to maintain the integrity of the air barrier.

SECTION C405 ELECTRICAL POWER AND LIGHTING SYSTEMS

C405.1 General (Mandatory). This section covers lighting system controls, the maximum lighting power for interior and exterior applications and electrical energy consumption.

No less than 90% of the permanently installed lighting serving *dwelling units* shall be provided by lamps with an efficacy of not less than 65 lm/W or light fixtures with an efficacy of not less than 55 lm/W, or with Sections C405.2.4 and C405.3. *Sleeping units* shall comply with Section C405.2.4, and with Section R404.1 or C405.3. Lighting installed in walk-in coolers, walk-in freezers, refrigerated warehouse coolers and refrigerated warehouse freezers shall comply with the lighting requirements of Section C403.10.1 or C403.10.2.

CHAPTER 5 [CE] EXISTING BUILDINGS

SECTION C503 ALTERATIONS

C503.1 General. *Alterations* to any *building* or structure shall comply with the requirements of Section C503 and the code for new construction. *Alterations* shall be such that the existing *building* or structure is not less conforming to the provisions of this code than the existing *building* or structure was prior to the *alteration*. *Alterations* to an existing *building*, *building* system or portion thereof shall conform to the provisions of this code as those provisions relate to new construction without requiring the unaltered portions of the existing *building* or *building* system to comply with this code. *Alterations* shall not create an unsafe or hazardous condition or overload existing *building* systems.

Alterations complying with ANSI/ASHRAE/IESNA 90.1 need not comply with Sections C402, C403, C404 and C405.

Exceptions: The following *alterations* need not comply with the requirements for new construction, provided the energy use of the building is not increased:

1. Storm windows installed over existing *fenestration*.
2. Surface-applied window film installed on existing single-pane *fenestration* assemblies reducing solar heat gain, provided the code does not require the *glazing* or *fenestration* to be replaced.
3. Existing ceiling, wall or floor cavities exposed during construction, provided that these cavities are filled with insulation.
4. Construction where the existing roof, wall or floor cavity is not exposed.
5. *Roof recover*.
6. *Roof Membrane Peel and Replacement*
7. *Air barriers* shall not be required for *roof recover* and roof replacement where the *alterations* or renovations to the *building* do not include *alterations*, renovations or *repairs* to the remainder of the building envelope.
8. Roof replacements for roof systems 2:12 slope

or less shall comply with the low slope roof insulation requirements unless the installation of insulation above the structural roof deck, and necessary to achieve the code-required R-Value, is deemed infeasible by the code official to accommodate the added thickness of insulation above the roof deck. Conditions of infeasibility due to flashing heights presented by existing rooftop conditions include, but are not limited to, HVAC or skylight curb, low door or glazing, parapet, weep holes, drainage patterns, cricket or saddle construction. These conditions are subject to manufacturer's specifications, manufacturers installation instructions and code official approval.

**CHAPTER 1 [RE]
SCOPE AND ADMINISTRATION**

**SECTION R101
SCOPE AND GENERAL REQUIREMENTS**

R101.1 Title. This code shall be known as the *Illinois Energy Conservation Code* or “this Code”, and shall mean:

With respect to the residential buildings covered by 71 Ill. Adm. Code 600.Subpart D:

This Part, all additional requirements incorporated within Subpart D (including the 2018 International Energy Conservation Code, including all published errata but excluding published supplements) and any statutorily authorized adaptations to the incorporated standards adopted by CDB is effective July 1, 2019).

R101.1.2 Adoption. The Board shall adopt amendments to this Code within 12 months after publication of changes to the International Energy Conservation Code. Any such update in this Code shall take effect within 6 months after it is adopted by the Board and shall apply to any new building or structure in this State for which a building permit application is received by a municipality or county, except as otherwise provided by the EEB Act.

R101.1.3 Adaptation. The Board may appropriately adapt the International Energy Conservation Code to apply to the particular economy, population distribution, geography, and climate of the State and construction within the State, consistent with the public policy objectives of the EEB Act.

R101.5 Compliance. *Residential buildings* shall meet the provisions of the *Illinois Energy Conservation Code* covered by 71 Ill. Adm. Code 600. Subpart D. The local authority having jurisdiction (AHJ) shall establish its own procedures for enforcement of the Illinois Energy Conservation Code. Minimum compliance shall be demonstrated by submission of:

1. Compliance Certificates generated by the U.S. Department of Energy’s REScheck™ code compliance tool; or
2. Other comparable compliance materials that meet or exceed, as determined by the AHJ, the U.S. Department of Energy’s REScheck™ code compliance tool; or

3. The seal of the architect/engineer as required by Section 14 of the Illinois Architectural Practice Act [225 ILCS 305], Section 12 of the Structural Engineering Licensing Act [225 ILCS 340] and Section 14 of the Illinois Professional Engineering Practice Act [225 ILCS 325]

**SECTION R102
ALTERNATIVE MATERIALS,
DESIGN AND METHODS
OF CONSTRUCTION AND EQUIPMENT**

R102.1.1 Above code programs. No unit of local government, including any home rule unit, may regulate energy efficient building standards for residential building in a manner that is either less or more stringent than the standards established pursuant to this Code. The requirements identified as “mandatory” in Chapter 4 shall be met.

However, the following entities may regulate energy efficient building standards for residential buildings in a manner that is more stringent than the provisions contained in this Code:

- i) A unit of local government, including a home rule unit, that has, on or before May 15, 2009, adopted or incorporated by reference energy efficient building standards for residential buildings that are equivalent to or more stringent than the 2006 International Energy Conservation Code;
- ii) A unit of local government, including a home rule unit that has, on or before May 15, 2009, provided to the Capital Development Board, as required by Section 10.18 of the Capital Development Board Act, an identification of an energy efficient building code or amendment that is equivalent to or more stringent than the 2006 International Energy Conservation Code; and
- iii) A municipality with a population of 1,000,000 or more.

**SECTION R109
BOARD OF APPEALS**

R109.1 General. In order to hear and decide appeals of orders, decisions or determinations made by the *code official* relative to the application and interpretation of this code, there may be created a board of appeals. The *code official* shall be an ex officio member of the board of appeals but shall not have a vote on any matter before the board. The board of appeals shall be appointed by the governing body and shall hold office at its pleasure. The board shall adopt rules of procedure for conducting its business, and shall render all decisions and findings in writing to the appellant with a duplicate copy to the *code official*.

R109.3 Qualifications. The board of appeals shall consist of members who are qualified by experience and training.

CHAPTER 2 [RE] DEFINITIONS

**SECTION R202
GENERAL DEFINITIONS**

ADD THE FOLLOWING Definitions:

AUTHORITY HAVING JURISDICTION or AHJ. The organization, officer or individual responsible for approving equipment, materials, an installation or procedure.

BOARD. The Illinois Capital Development Board.

COUNCIL. The Illinois Energy Conservation Advisory Council whose purpose is to recommend modifications to the *Illinois Energy Conservation Code*.

EEB ACT. The Energy Efficient Building Act [20ILCS 3125].

HIGH-EFFICACY LAMPS. Compact fluorescent lamps, light-emitting diode (LED) lamps, T-8 or smaller diameter linear fluorescent lamps, or other lamps with an efficacy of not less than 65 lumens per watt or light fixtures of not less than 55 lumens per watt.

LOCAL EXHAUST. An exhaust system that uses one or more fans to exhaust air from a specific room or rooms within a dwelling.

RESIDENTIAL BUILDING. Means a detached one-family or two-family dwelling or any building that is three stories or less in height above grade that contains multiple dwelling units, in which the occupants reside on a primarily permanent basis, such as a townhouse, a row house, an apartment house, a convent, a monastery, a rectory, a fraternity or sorority house, a dormitory, and a rooming house; provided, however, that when applied to a building located within the boundaries of a municipality having a population of 1,000,000 or more, the term "RESIDENTIAL BUILDING" means a building containing one or more dwelling units, not exceeding four (4) stories above grade, where occupants are primarily permanent.

ROOF MEMBRANE PEEL AND REPLACEMENT. Where an existing weather resisting roof membrane alone is removed, exposing insulation or sheathing and only a new weather resisting roof membrane is installed.

WHOLE HOUSE MECHANICAL VENTILATION SYSTEM. An exhaust system, supply system, or combination thereof that is designed in accordance with Section R403.6 to mechanically exchange indoor air with outdoor air when operating continuously or through a programmed intermittent schedule to satisfy the whole house ventilation rate. Outdoor air intakes and exhausts shall have automatic or gravity dampers that close when the ventilation system is not operating.

CHAPTER 4 [RE] RESIDENTIAL ENERGY EFFICIENCY

SECTION R402 BUILDING THERMAL ENVELOPE

**TABLE R402.1.2
INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT.**

CLIMATE ZONE	FENESTRATION U-FACTOR ^b	SKYLIGHT ^b U-FACTOR	GLAZED FENESTRATION SHGC ^{b,e}	CEILING R-VALUE	WOOD FRAME WALL R-VALUE	MASS WALL R-VALUE ⁱ	FLOOR R-VALUE	BASEMENT ^c WALL R-VALUE	SLAB ^d R-VALUE & DEPTH	CRAWL SPACE ^c WALL R-
1	NR	0.75	0.25	30	13	3/4	13	0	0	0
2	0.40	0.65	0.25	38	13	4/6	13	0	0	0
3	0.32	0.55	0.25	38	20 or 13+5 ^h	8/13	19	5/13 ^f	0	5/13
4 except Marine	0.32	0.55	0.40	49	20 or 13+5 ^h	8/13	19	10/13	10, 2 ft	10/13
5 and Marine 4	0.30	0.55	NR	49	20 or 13+5 ^h	13/17	30 ^g	10/13	10, 2 ft	15/19
6	0.30	0.55	NR	49	20+5 or 13+10 ^h	15/20	30 ^g	15/19	10, 4 ft	15/19
7 and 8	0.30	0.55	NR	49	20+5 or 13+10 ^h	19/21	38 ^g	15/19	10, 4 ft	15/19

NR = Not Required
For SI: 1 foot = 304.8 mm

- ^a R-values are minimums. U-factors and SHGC are maximums. Where insulation is installed in a cavity that is less than the label or design thickness of the insulation, the installed R-value of the insulation shall not be less than the R-value specified in the table.
- ^b The fenestration U-factor column excludes skylights. The SHGC column applies to all glazed fenestration. **Exception:** In Climate Zones 1 through 3, skylights shall be permitted to be excluded from glazed fenestration SHGC requirements provided that the SHGC for such skylights does not exceed 0.30.
- ^c "10/13" means R-10 continuous insulation on the interior or exterior of the home or R-13 cavity insulation at the interior of the basement wall.
"15/19" means R-15 continuous insulation on the interior or exterior of the home or R-19 cavity insulation at the interior of the basement wall. Alternatively, compliance with "15/19" shall be R-13 cavity insulation on the interior of the basement wall plus R-5 continuous insulation on the interior or exterior of the home.
- ^d R-5 insulation shall be provided under the full slab area of a heated slab in addition to the required slab edge insulation R-value for slabs, as indicated in the table. The slab edge insulation for heated slabs shall not be required to extend below the slab.
- ^e There are no SHGC requirements in the Marine Zone.
- ^f Basement wall insulation is not required in warm-humid locations as defined by Figure R301.1 and Table R301.1.
- ^g Alternatively, insulation sufficient to fill the framing cavity and providing not less than an R-value of R-19.
- ^h The first value is cavity insulation, the second value is continuous insulation. Therefore, as an example, "13+5" means R-13 cavity insulation plus R-5 continuous insulation.
- ⁱ Mass walls shall be in accordance with Section R402.2.5. The second R-value applies when more than half the insulation is on the interior of the mass wall.

**TABLE R402.1.4
EQUIVALENT U-FACTORS^a**

CLIMATE ZONE	FENESTRATION U-FACTOR	SKYLIGHT U-FACTOR	CEILING U-FACTOR	FRAME WALL U-FACTOR	MASS WALL U-FACTOR ^b	FLOOR U-FACTOR	BASEMENT WALL U-FACTOR	CRAWL SPACE WALL U-FACTOR
1	0.50	0.75	0.035	0.084	0.197	0.064	0.360	0.477
2	0.40	0.65	0.030	0.084	0.165	0.064	0.360	0.477
3	0.32	0.55	0.030	0.060	0.098	0.047	0.091 ^c	0.136
4 except Marine	0.32	0.55	0.026	0.060	0.098	0.047	0.059	0.065
5 and Marine 4	0.30	0.55	0.026	0.060	0.082	0.033	0.059	0.055
6	0.30	0.55	0.026	0.045	0.060	0.033	0.050	0.055
7 and 8	0.30	0.55	0.026	0.045	0.057	0.028	0.050	0.055

- ^a Nonfenestration U-factors shall be obtained from measurement, calculation or an approved source.
- ^b Mass walls shall be in accordance with Section R402.2.5. When more than half the insulation is on the interior, the mass wall U-factors shall not exceed 0.17 in Climate Zone 1, 0.14 in Climate Zone 2, 0.12 in Climate Zone 3, 0.87 in Climate Zone 4 except Marine, 0.065 in Climate Zone 5 and Marine 4, and 0.057 in Climate Zones 6 through 8.
- ^c In warm-humid locations as defined by Figure R301.1 and Table R301.1, the basement wall U-factor of 0.360

R402.2.2 Ceilings without attic spaces. Where Section R402.1.2 requires insulation R-values greater than R-30 in the ceiling and the design of the roof/ceiling assembly does not allow sufficient space for the required insulation, the minimum required insulation R-value for such roof/ceiling assemblies shall be R-30. Insulation shall extend over the top of the wall plate to the outer edge of such plate and shall not be compressed. This reduction of insulation from the requirements of Section R402.1.2 shall be limited to 500 square feet (46 m²) or 20 percent of the total insulated ceiling area, whichever is less. This reduction shall not apply to the U-factor alternative approach in Section R402.1.4 and the Total UA alternative in Section R402.1.5.

Exception:

For roofs on existing buildings with slope less than 2 units vertical in 12 units horizontal (2:12), refer to Section R503.1.1.

R402.2.9 Basement walls. Walls associated with conditioned basements shall be insulated from the top of the *basement wall* down to 10 feet (3048 mm) below grade or to within six-inches (152 mm) of the basement floor, whichever is less. Walls associated with unconditioned basements shall comply with this requirement except where the floor overhead is insulated in accordance with Sections R402.1.2 and R402.2.8.

Exception: Walls associated with conditioned basements may be insulated from the top of the *basement wall* down to 4 feet (1219 mm) below

grade when the Basement Wall R-value is at least 15/19, (Basement Wall U-Factor of 0.050).

R402.4.1.2 Testing. The *building or dwelling unit* shall be tested and verified as having an air leakage rate of not exceeding five four air changes per hour (ACH) in *Climate Zones* 4 and 5. The building or dwelling unit shall be provided with a whole – house mechanical ventilation system as designed in accordance with Section R403.6. Testing shall be conducted in accordance with RESNET/ICC 380, ASTM E779 or ASTM E1827 and reported at a pressure of 0.2 inches w.g. (50 Pascals). Where required by the *code official*, testing shall be conducted by an *approved* third party. A written report of the results of the test, indicating the ACH, shall be signed by the party conducting the test and provided to the *code official*. Testing shall be performed at any time after ~~creation~~ of all penetrations of the *building thermal envelope* have been sealed.

Exceptions:

1. For *additions, alterations, renovations or repairs* to existing buildings, building envelope tightness and insulation installation shall be considered acceptable when the items in Table R402.4.1.1, applicable to the method of construction, are field verified. Where required by the *code official*, an *approved* third party independent from the installer, shall inspect both air barrier and insulation installation criteria.

2. For heated attached private garages and heated detached private garages accessory to one- and two-family dwellings and townhouses not more than three stories above grade plane in height, building envelope tightness and insulation installation shall be considered acceptable when the items in Table R402.4.1.1, applicable to the method of construction, are field verified. Where required by the *code official*, an *approved* third party independent from the installer, shall inspect both air barrier and insulation installation criteria. Heated attached private garage space and heated detached private garage space shall be thermally isolated from all other habitable, conditioned spaces.

3. For low-rise multifamily buildings, *dwelling units* shall be tested and verified as having a leakage rate of

not exceeding 0.25 cubic feet per minute (CFM) per square foot of enclosure area (all six sides of the dwelling unit) in *Climate Zones* 1 through 8. Testing shall be conducted with an unguarded blower door at a pressure of 0.2 inches w.g. (50 Pascal). If guarded blower door testing (a test with one or more adjacent units pressurized which should eliminate any leakage between units) is being performed, this exception is not allowed and the standard testing requirements of Section 402.4.1.2 apply. Where required by the *code official*, testing shall be conducted by an *approved* third party. For buildings with more than seven units, a sampling protocol is allowed by an *approved* third party. The sampling protocol requires the first seven units to be tested without any failures. Upon successful testing of those initial seven units, remaining units can be sampled at a rate of 1 in 7. If any sampled unit fails compliance with the maximum allowable air leakage rate, two additional units in the same sample set must be tested. If additional failures occur, all units in the sample set must be tested. In addition, all units in the next sample set must be tested for compliance before sampling of further units can be continued.

During testing:

1. Exterior windows and doors, fireplace and stove doors shall be closed, but not sealed, beyond the intended weatherstripping or other infiltration control measures.
2. Dampers including exhaust, intake, makeup air, backdraft and flue dampers shall be closed, but not sealed beyond intended infiltration control measures.
3. Interior doors, where installed at the time of the test, shall be open.
4. Exterior or interior terminations for continuous ventilation systems shall be sealed.
5. Heating and cooling systems, where installed at the time of the test, shall be turned off.
6. Supply and return registers, where installed at the time of the test, shall be fully open.

R402.4.4 Rooms containing fuel-burning appliances. Removed from the Illinois Energy Conservation Code.

SECTION R403 SYSTEMS

R403.3 Ducts. Ducts and air handlers shall be insulated, sealed, tested and installed in accordance with Sections R403.3.1 through R403.3.7. Where required by the *code official*, duct testing shall be conducted by an *approved* third party. A written report of the results of the test shall be signed by the party conducting the test and provided to the *code official*.

R403.3.3 Duct testing (Mandatory). Ducts shall be pressure tested to determine air leakage by one of the following methods:

1. Rough-in test: Total leakage shall be measured with a pressure differential of 0.1 inch w.g. (25 Pa) across the system, including the manufacturer's air handler enclosure if installed at the time of the test. Registers shall be taped or otherwise sealed during the test.
2. Postconstruction test: Total leakage shall be measured with a pressure differential of 0.1 inch w.g. (25 Pa) across the entire system, including the manufacturer's air handler enclosure. Registers shall be taped or otherwise sealed during the test.

Exceptions:

1. A duct air-leakage test shall not be required where the ducts and air handlers are located entirely within the *building thermal envelope*.
2. A duct air-leakage test shall not be required for ducts serving heat or energy recovery ventilators that are not integrated with ducts serving heating or cooling systems.

R403.6 Mechanical ventilation (Mandatory). The building or *dwelling unit* shall be provided with ventilation that complies with the requirements of this section or the *International Mechanical Code*, as applicable, or with other *approved* means of ventilation. Outdoor air intakes and exhausts shall have automatic or gravity dampers that close when the ventilation system is not operating.

R403.6.2 Recirculation of air. Exhaust air from bathrooms and toilet rooms shall not be recirculated within a residence or circulated to another *dwelling unit* and shall be exhausted directly to the outdoors. Exhaust air from bathrooms, toilet rooms and kitchens shall not discharge into an *attic*, crawl space

or other areas inside the building. (M1505.2, 2018 IRC)

R403.6.3 Exhaust equipment. Exhaust equipment serving single *dwelling units* shall be *listed* and *labeled* as providing the minimum required airflow in accordance with ANSI/AMCA 210-ANSI/ASHRAE 51. (M1505.3, 2018 IRC)

R403.6.4 Whole-house mechanical ventilation system. Whole-house mechanical ventilation systems shall be designed in accordance with Sections R403.6.4.1 through R403.6.4.4. (M1505.4, 2018 IRC)

R403.6.4.1 System design. The whole-house ventilation system shall consist of one or more supply or exhaust fans, or a combination of such, and associated ducts and controls. Local exhaust or supply fans are permitted to serve as such a system. Outdoor air ducts connected to the return side of an air handler shall be considered to provide supply ventilation. (M1505.4.1, 2018 IRC)

R403.6.4.2 System controls. The whole-house mechanical ventilation system shall be provided with controls that enable manual override. (M1505.4.2, 2018 IRC)

R403.6.6 Mechanical ventilation rate. The whole-house mechanical ventilation system shall provide outdoor air at a continuous rate as determined in accordance with Table R403.6.4.3(1) or Equation 4-1. (M1505.4.3, 2018 IRC)

Exceptions:

1. The whole-house mechanical ventilation system is permitted to operate intermittently where the system has controls that enable operation for not less than 25 percent of each 4-hour segment and the ventilation rate prescribed in Table R403.6.4.3(1) is multiplied by the factor determined in accordance with Table R403.6.4.3(2).

2. The total required outdoor air ventilation rate (Q_{tot}) shall be as specified in Table 403.6.4.3(1) or calculated in accordance with Equation 4-1.

$$CFM_{total} = 0.01CFA + 7.5(Nbr + 1) \text{ (Equation 4-1)}$$

Where:

CFM_{total} = total required ventilation rate, (cfm)

CFA = conditioned floor area of residence, (ft²)

Nbr = number of bedrooms (not to be less than 1)

R403.6.4.3.1 Different Occupant Density. Table R403.6.4.3(1) assumes two persons in a dwelling unit and an additional person for each additional bedroom. Where higher occupant densities are known, the airflow rate shall be increased by 7.5 cfm (3.5 L/s) for each additional person. Where *approved* by the *authority having jurisdiction*, lower occupant densities may be used.

R403.6.4.3.2 Airflow Measurement. The airflow rate required is the quantity of outdoor ventilation air supplied and/or indoor air exhausted by the whole-house mechanical ventilation system installed, and shall be measured using a flow hood, flow grid, or other airflow measuring device. Ventilation airflow of systems with multiple operating modes shall be tested in all modes designed to meet Section R403.6.4.3. Where required by the *code official*, testing shall be conducted by an *approved* third party. A written report of the results of the test, indicating the verified airflow rate, shall be signed by the party conducting the test and provided to the *code official*.

R403.6.4.4 Local exhaust rates. Local exhaust systems shall be designed to have the capacity to exhaust the minimum air flow rate determined in accordance with Table R403.6.4.4. (M1505.4.4, 2018 IRC)

TABLE R403.6.4.3(1) (M1505.4.3(1), 2018 IRC)
CONTINUOUS WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM AIRFLOW RATE REQUIREMENTS

DWELLING UNIT FLOOR AREA (square feet)	NUMBER OF BEDROOMS				
	0 – 1	2 – 3	4 – 5	6 – 7	> 7
	Airflow in CFM				
< 1,500	30	45	60	75	90
1,501 – 3,000	45	60	75	90	105
3,001 – 4,500	60	75	90	105	120
4,501 – 6,000	75	90	105	120	135
6,001 – 7,500	90	105	120	135	150
> 7,500	105	120	135	150	165

For SI: 1 square foot = 0.0929 m², 1 cubic foot per minute = 0.0004719 m³/s

TABLE R403.6.4.3(2) (M1505.4.3(2), 2018 IRC)
INTERMITTENT WHOLE-HOUSE MECHANICAL VENTILATION RATE FACTORS^{a, b}

RUN-TIME PERCENTAGE IN EACH 4-HOUR SEGMENT	25%	33%	50%	66%	75%	100%
Factor ^a	4	3	2	1.5	1.3	1.0

- a. For ventilation system run time values between those given, the factors are permitted to be determined by interpolation.
b. Extrapolation beyond the table is prohibited.

TABLE R403.6.4.4 (M1505.4.4, 2018 IRC)
MINIMUM REQUIRED LOCAL EXHAUST RATES FOR ONE- AND TWO-FAMILY DWELLINGS

AREA TO BE EXHAUSTED	EXHAUST RATES
Kitchens	100 cfm intermittent or 25 cfm continuous
Bathrooms-Toilet Rooms	Mechanical exhaust capacity of 50 cfm intermittent or 20 cfm continuous

For SI: 1 cubic foot per minute = 0.0004719 m³/s

**SECTION R405
SIMULATED PERFORMANCE ALTERNATIVE (PERFORMANCE)**

**TABLE R405.5.2(1)
SPECIFICATIONS FOR THE STANDARD REFERENCE AND PROPOSED DESIGNS**

BUILDING COMPONENT	STANDARD REFERENCE DESIGN	PROPOSED DESIGN
Air Exchange Rate	<p>The air leakage rate at a pressure of 0.2 inch w.g. (50 Pa) shall be Climate Zone 4 and 5: 4 air changes per hour.</p> <p>The mechanical ventilation rate shall be in addition to the air leakage rate and shall be the same as in the <i>proposed design</i>, but no greater than $0.01 \times CFA + 7.5 \times (N_{br} + 1)$</p> <p>where:</p> <p style="padding-left: 20px;">CFA = conditioned floor area, ft²</p> <p style="padding-left: 20px;">N_{br} = number of bedrooms</p> <p>Energy recovery shall not be assumed for mechanical ventilation.</p>	<p>The measured air exchange rate^a.</p> <p>The mechanical ventilation rate^b shall be in addition to the air leakage rate and shall be as proposed.</p>

CHAPTER 5 [RE] EXISTING BUILDINGS

SECTION R502 ADDITIONS

R502.1.1.2 Heating and cooling systems. New heating, cooling and duct systems that are part of the addition shall comply with Sections R403.

Exception: Where ducts from an existing heating and cooling system are extended to an addition, the new and existing duct systems shall not be required to be tested in accordance with Section R403.3.3. New duct systems shall be sealed in accordance with Section R403.3.2.

SECTION R503 ALTERATIONS

R503.1.1 Building envelope. *Building* envelope assemblies that are part of the *alteration* shall comply with Section R402.1.3 or R402.1.4, Sections R402.2.1 through R402.2.13, R402.3.1, R402.3.2, R402.4.3 and R402.4.5.

Exceptions: The following *alterations* shall not be required to comply with the requirements for new construction provided the energy use of the *building* is not increased:

1. Storm windows installed over existing fenestration.
2. Existing ceiling, wall or floor cavities exposed during construction provided that these cavities are filled with insulation.
3. Construction where the existing roof, wall or floor cavity is not exposed.
4. *Roof re-cover.*
5. *Roof Membrane Peel and Replacement*
6. Roofs without insulation in the cavity and where the sheathing or insulation is exposed during reroofing shall be insulated either above or below the sheathing.
7. For *roof replacement* on existing buildings with a roof slope of less than 2 units vertical in 12 units horizontal (2:12), and where the roof covering is removed and insulation remains, and where the required R-value cannot be provided due to thickness

limitations presented by existing rooftop conditions, (including heating, ventilating and air-conditioning equipment, low door or glazing heights, parapet heights, weep holes, and roof flashing heights not meeting the manufacturer's specifications), the maximum thickness of insulation compatible with the available space and existing uses shall be installed. Insulation used shall be minimum R-3.5 per inch. In areas where flashing may be terminated a minimum of 8 inches above the roof covering (including required insulation) insulation shall be a minimum of R-20.

8. R-value for roof assemblies with tapered insulation above deck with slope greater than 1/8 units vertical in 12 units horizontal (1/8:12) shall average R-20.
9. Surface-applied window film installed on existing single pane fenestration assemblies to reduce solar heat gain provided the code does not require the glazing or fenestration assembly to be replaced.

R503.1.2 Heating and cooling systems. New heating, cooling and duct systems that are part of the *alteration* shall comply with Sections R403.

Exception: Where ducts from an existing heating and cooling system are extended, the new and existing duct systems shall not be required to be tested in accordance with Section R403.3.3. Altered duct systems shall be sealed in accordance with Section R403.3.2.

SECTION R504 REPAIRS

R504.2 Application. For the purposes of this code, the following shall be considered *repairs*:

1. Glass-only replacements in an existing sash and frame.
2. *Roof repairs.*
3. Insulation with new roof covering for roof slopes less than 2 units vertical in 12 units horizontal (2:12) inches only in areas where the tapered insulation is used above an existing roof covering to create slope between drains or upslope from obstructions to water flow.

4. *Repairs* where only the bulb, ballast or both within the existing luminaires in a space are replaced provided that the replacement does not increase the installed interior lighting power.

Sections M1505.2 (R403.6.2), M1505.3 (R403.6.3), M1505.4 (R403.6.4),
M1505.4.1 (R403.6.4.1), M1505.4.2 (R403.6.4.2), M1505.4.3 (R403.6.4.3), M1505.4.4 (R403.6.4.4)
Tables M1505.4.3(1) (R403.6.4.3(1)), M1505.4.3(2) (R403.6.4.3(2)), M1505.4.4 (R403.6.4.4)
Excerpted from the 2018 International Residential Code; Copyright 2017.
Washington, D.C.: International Code Council.
Reproduced with permission. All rights reserved. www.ICCSAFE.org

**MINUTES
CITY OF DARIEN
MUNICIPAL SERVICES COMMITTEE MEETING
August 26, 2019**

PRESENT: Alderman Thomas Belczak -Chairman, Alderman Joseph Kenny,
Dan Gombac – Director

ABSENT: Alderman Eric Gustafson

ESTABLISH QUORUM

Chairperson Thomas Belczak called the meeting to order at 7:00 p.m. at City Hall Council Chambers, Darien, Illinois and declared a quorum present.

NEW BUSINESS

- a. **Ordinance** - Approval of an ordinance authorizing the disposal of surplus property.

Mr. Dan Gombac, Director reported that this ordinance authorizes the disposal of surplus property.

There was no one in the audience wishing to present public comment.

Alderman Belzak made a motion and it was seconded by Alderman Kenny approval of an ordinance authorizing the disposal of surplus property.

Upon voice vote, THE MOTION CARRIED UNANIMOUSLY 2-0.

- b. **Resolution** – Approval to enter into a contract with Allstate Tower, Inc. for the preparation and painting of the communication tower located at 1041 South Frontage Road in an amount not to exceed \$69,977.

Mr. Dan Gombac, Director reported that this is approval for the repainting of the City's South Communication Tower, located at 1041 South Frontage Road/Public Works Facility for the preparation and painting. He reported that staff had solicited for bids and received three responsive bids in August.

Mr. Gombac reported that in 2018 the project was presented and postponed for this year's budget but at that time Tower Works provided a quote in an amount of \$21,600 and in 2019 an amount of \$25,245. He reported that prior to the opening of the re-bid, the previous vendor, Tower Works, provided a quote after the last bid opening in the amount of \$53,240 at which time staff reached out to Tower Works inquiring to why a bid was not returned and the representative of the company identified that it was overlooked. Mr. Gombac reported that upon receipt of the quote, staff again reached out to Tower Works regarding the price escalation and they responded that the increase was due to the prevailing wage act. He reported that Tower Works did not bid on the re-bid project due to their schedule.

Mr. Gombac reported that Allstate Tower, Inc. provided the lowest bid in the amount of \$69,977 which is over budget by \$44,977.

There was much discussion regarding the over budget amount. Chairperson Belczak stated that he would prefer to hold off on the project until next year due to the over budget amount. Alderman Kenny agreed.

There was no one in the audience wishing to present public comment.

Alderman Kenny made a motion and it was seconded by Alderman Belczak to reject the bids for the preparation and painting of the communication tower located at 1041 South Frontage Road in an amount not to exceed \$69,977.

Upon voice vote, THE MOTION CARRIED UNANIMOUSLY 2-0.

- c. Resolution** – Accepting a proposal from Associated Technical Services Ltd (ATS) for the 2019 Water Leak Survey, in an amount not to exceed \$12,109.50 for the Leak Detection Phase and a per unit cost for the Leak Location Phase in the amount of \$420.00 per mainline or service leak, and \$95.00 per fire hydrant leak or mainline valve.

Mr. Dan Gombac, Director reported that the leak survey program as proposed by Associated Technical Services Ltd (ATS) includes two phases consisting of surveying 473,616 lineal feet (89.7 lineal miles) of water main and the second phase includes the pinpointing of leaks found in the system. He reported that the proposed quote from ATS is structured in a fashion that the vendor is additionally motivated to find as many leaks as possible since the proposal is further driven on unit costs for pinpointing leaks.

Mr. Gombac reported that based on leak detection results from previous years, ATS has located an average of 20 various leaks and that staff does anticipate finding leaks, but the amount will not be known until the leak survey is completed. He reported that ATS has indicated they will not exceed \$12,109.50 should more than 30 various leaks.

Mr. Gombac reported that five competitive quotes were received but based on the detection phase, ATS was the lowest competitive quote.

There was no one in the audience wishing to present public comment.

Alderman Belczak made a motion and it was seconded by Alderman Kenny approval accepting a proposal from Associated Technical Services Ltd (ATS) for the 2019 Water Leak Survey, in an amount not to exceed \$12,109.50 for the Leak Detection Phase and a per unit cost for the Leak Location Phase in the amount of \$420.00 per mainline or service leak, and \$95.00 per fire hydrant leak or mainline valve.

Upon voice vote, THE MOTION CARRIED UNANIMOUSLY 2-0.

- d. Resolution** – Accepting a proposal from Tria Architecture, Inc. for the Professional Design Services for the Public Works Facility located at 1041 South Frontage Road in an amount not to exceed \$23,850.

Mr. Dan Gombac, Director reported that the proposed existing Public Works Garage located at 1041 South Frontage Road is approximately 10,000 square foot building with 2,500 square feet of office space. He reported that the building was built in the mid 1980's as metal building with a brick faced fronting Frontage Road and is currently showing signs of deficiencies.

Mr. Gombac reported that a space allocation study was completed in August of 2001 which was then referred to as the Joint Use Facility. He stated that due to economic factors, the project was tabled.

Mr. Gombac reported that the proposed study will review the existing building conditions, inventory of the fleet, dry goods, and to determine the required renovation/remodeling space needs for the Public Works Street and Water Department. He reported that the proposal includes the existing facility to be updated and expanded, including bringing the building into compliance with the ADA with the expansion concept including up to 10 bays, new roof system, freestanding bay area, locker rooms, HVAC System, plan storage, office reconfiguration, automated truck wash bay, mechanic space reconfiguration, lift systems and general space allocation.

Mr. Gombac reported that staff solicited for competitive proposals and received one non-responsive proposal on August 15, 2019. He reported that Tria Architecture, Inc. submitted all the required documents with the exception of the pricing. He reported that the price schedule was left as, "To Be Determined", thereby submitting no price.

Mr. Gombac reported that since Tria Architecture, Inc. was the only firm that met the qualified requirements for the professional design services, with the exception of the total project cost, staff requested a meeting with their representative at the Public Works Facility to provide a proposal for the requested scope of services.

Chairperson Belczak stated that the proposal has a lot of value and that it is under budget.

There was no one in the audience wishing to present public comment.

Alderman Belczak made a motion and it was seconded by Alderman Kenny approval accepting a proposal from Tria Architecture, Inc. for the Professional Design Services for the Public Works Facility located at 1041 South Frontage Road in an amount not to exceed \$23,850.

Upon voice vote, THE MOTION CARRIED UNANIMOUSLY 2-0.

- e. Resolution** – Approval rejecting all bids, waiving the competitive bid process, and accepting a proposal from Kenny Construction Company in an amount not to exceed \$692,560 for the Seminole 72-inch Storm Sewer Lining Project - Seminole

Dr. and Plainfield Rd. - under McDonald's Parking lot, east to 801 Plainfield Rd and a contingency in the amount of \$125,000 for unforeseen excavations and spot repairs due to potential conflicts. The total expenditure request would be not to exceed \$817,560.

Mr. Dan Gombac, Director reported that approval of this resolution is to rejecting all bids, waiving the competitive bid process, and accepting a proposal from Kenny Construction Company in an amount not to exceed \$692,560 for the Seminole 72-inch Storm Sewer Lining Project, Seminole Drive and Plainfield Road under the McDonald's Parking lot, east to 801 Plainfield Road.

Mr. Gombac reported that on August 15, 2019, 2 bids were received. He reported that typically, the lowest base bid vendor would be the lowest responsive bidder for options but in this case due to irregularities staff is recommending rejecting all bids, waiving the competitive bid process and accepting a proposal from Kenny Construction Company. He stated that staff is requesting a contingency in the amount of \$125,000 due to unforeseen excavations that may be required.

Chairperson Belczak suggested that staff prepare a report for the City Council showing the under budget amount versus a year from now.

Mr. Gombac reported that he would prepare a report to present to the City Council.

There was no one in the audience wishing to present public comment.

Alderman Belczak made a motion and it was seconded by Alderman Kenny approval rejecting all bids, waiving the competitive bid process, and accepting a proposal from Kenny Construction Company in an amount not to exceed \$692,560 for the Seminole 72-inch Storm Sewer Lining Project - Seminole Dr. and Plainfield Rd. - under McDonald's Parking lot, east to 801 Plainfield Rd and a contingency in the amount of \$125,000 for unforeseen excavations and spot repairs due to potential conflicts. The total expenditure request would be not to exceed \$817,560.

Upon voice vote, THE MOTION CARRIED UNANIMOUSLY 2-0.

- f. Resolution** – Authorizing the Mayor to execute a contract with JLJ Contracting, Inc. for the foundation repairs consisting of waterproofing, and restoration of the Old Lace School in an amount not to exceed \$65,800.

Mr. Dan Gombac, Director reported that the City's Municipal Services Department is responsible for certain capital maintenance projects that are in excess of \$5,000, for the Historical Society as they relate to the Old Lace School, located at the North West corner of 75th Street and Cass Avenue. He reported that in 2018, the caretakers of the Old Lace School Museum had identified that the basement of the building has numerous locations of water infiltration through the existing foundation. Mr. Gombac reported that the staff had confirmed the infiltration and contacted waterproofing professionals to forward budgetary numbers for the 2019/20 Budget proposal including waterproofing

the building foundation perimeter but not restoration. He reported that restoration was not included for budgetary purposes, as staff understood the impact to be minimal.

Mr. Gombac reported that upon reviewing the scope of work and preparation of the contract documents, it was identified that a destructive methodology was required to repair the foundation. He reported that staff solicited for competitive bids and received one responsive bid which is over budget by \$35,800.

Chairperson Belczak stated that the Historical Society needs to find a way to fundraise to fix the issues.

Alderman Kenny stated that he wished that the Historical Society was present to talk to them and explain why this is important and meet in the middle.

It was agreed to table the resolution and hold a special meeting on September 9, 2019 at 6:30 pm so that the representatives from the Historical Society can explain the importance.

There was no one in the audience wishing to present public comment.

- g. Resolution** – Approval awarding a contract extension to Homer Tree Care, Inc. in an amount not to exceed \$216,750.00 for the City's 2019/2020 Tree Trimming and Removal Program.

Mr. Gombac reported that the proposed contract is the second of two contract extensions. He reported that the tree trimming and removal contract was awarded to Homer Tree Care on August 7, 2017 with two optional annual contract extensions and that Homer Tree Care, Inc. has acknowledged the extension and accepts the extension as presented.

There was some discussion regarding composting and an email from a resident. Mr. Gombac reported that this request would be forwarded to the Environmental Committee for further discussion.

There was no one in the audience wishing to present public comment.

Alderman Belczak made a motion and it was seconded by Alderman Kenny to approval awarding a contract extension to Homer Tree Care, Inc. in an amount not to exceed \$216,750.00 for the City's 2019/2020 Tree Trimming and Removal Program.

Upon voice vote, THE MOTION CARRIED UNANIMOUSLY 2-0.

- h. Resolution** – Approval of a proposal from Core & Main for the purchase of the commercial water meters and remote readers in an amount not to exceed \$250,162.40.

Mr. Dan Gombac, Director reported that this is Phase 1 of a City-wide meter replacement program. He reported that the existing commercial meters are in excess of 10 years in age and have been identified to be running approximately 5 – 10 % slow and that the existing remote readers are obsolete and the remote guns utilized to read them are failing.

Mr. Gombac reported that over the past several years, the staff has been engaged with the County and several other municipalities to move towards technology as Automated Meter Reading, AMR technology that is supported through dedicated FM frequencies and/or cellular technology. He reported that the joint coop would allow savings for all participating municipalities by utilizing infrastructure such as water towers for antennas and provide on demand readings to municipalities as well as the County of DuPage and that this item will be covered under a separate future IGA agenda. He further reported that the technology is identical to the current automated meter reading standards of Com Ed and Nicor.

Mr. Gombac reported that staff has been exclusively utilizing the Sensus water meter brand for the last 8 years and has the capability to be utilized as part of the future AMR system by replacing the remote (outside) reader and that all meters regardless of the brand are territory protected and there is no further opportunity for competitive bidding. He reported that Core & Main LP is the exclusive authorized distributor of Sensus products in the State of Illinois through 2019 and that staff is recommending that the City maintain one standard and not utilize different meter brand throughout town.

There was no one in the audience wishing to present public comment.

Alderman Belczak made a motion and it was seconded by Alderman Kenny to approval of a proposal from Core & Main for the purchase of the commercial water meters and remote readers in an amount not to exceed \$250,162.40.

Upon voice vote, THE MOTION CARRIED UNANIMOUSLY 2-0.

i. **Minutes** – July 22, 2019 Municipal Services Committee

Alderman Kenny made a motion and it was seconded by Alderman Belczak to approval of the July 22, 2019 Municipal Services Committee Meeting Minutes.

Upon voice vote, THE MOTION CARRIED UNANIMOUSLY 2-0.

DIRECTOR'S REPORT

No report.

NEXT SCHEDULED MEETING

Chairperson Belczak announced that the next meeting is scheduled for Monday, September 23, 2019.

ADJOURNMENT

With no further business before the Committee, Alderman Kenny made a motion and it was seconded by Alderman Belczak to adjourn. Upon voice vote, THE MOTION CARRIED unanimously, and the meeting adjourned at 8:50 p.m.

RESPECTFULLY SUBMITTED:

**Thomas Belczak
Chairman**

**Eric Gustafson
Alderman**

**Joseph Kenny
Alderman**

MINUTES
CITY OF DARIEN
MUNICIPAL SERVICES SPECIAL COMMITTEE MEETING
September 3, 2019

PRESENT: Alderman Thomas Belczak -Chairman, Alderman Joseph Kenny,
Dan Gombac – Director

ABSENT: Alderman Eric Gustafson

ESTABLISH QUORUM

Chairperson Thomas Belczak called the meeting to order at 6:30 p.m. at City Hall Council Chambers, Darien, Illinois and declared a quorum present.

OLD BUSINESS

- a. REMOVE FROM TABLE - RESOLUTION – Authorizing the Mayor to execute a contract with JLJ Contracting, Inc. for the foundation repairs consisting of waterproofing, and restoration of the Old Lace School in an amount not to exceed \$65,800.**

Mr. Dan Gombac, Director reported that representatives from Old Lace School, US Waterproofing Company and the Historical Society were present. He reported that US Waterproofing did not submit a bid due to timing.

Ms. Dean Rodkin, President; Historical Society was present and introduced other members from Old Lace School and the Historical Society. She stated that they have been doing small patch repairs to the building and that everything in Old Lace is susceptible to water damage. She further stated that the building has been there since 1850 and that the building has been impacted by road construction and encroachment on the property. Ms. Rodkin also stated that they have more dealings with mice and that they have tried to address what needs to be done.

Chairperson Belczak stated that the scope and importance of repairs was substantially more than what the City Council budgeted. He questioned if there was any way to save money. He further stated that the Committee did not have detailed information prior to make a decision.

Mr. Gombac stated that Ms. Rodkin reached out to Scott of US Waterproofing to address the questions outlined in the agenda memo.

Scott reported that the project can be done in phases for the internal work and the external work but both would depend on the weather.

Mr. Gombac asked if the inside work could only be done and not to do the outside.

Chairperson Belczak questioned how imperative it is for work to be done in 2019.

Scott reported that the fix includes the inside and outside and that the cinderblocks need repair. He also stated that the current leak is an ongoing leak and the patchwork is only a band aid. He further stated that his quote is only for waterproofing but that he could provide a quote for the entire project.

Alderman Kenny questioned if there were any members in the trades that could do some of the work.

Ms. Rotkin stated that Gary has been doing the patch repairs and they are not aware of anyone in the trades that could help.

Scott stated that everything could be done under \$65,000 not including the air conditioner. He reported that the inside is taking on the most pressure and it needs to be addressed soon. He further reported that the deadline for outside work is November, but winter work can be done with heaters.

Mr. Gombac reported that he will work with the City Attorney regarding legal practice because Scott did not meet the bid deadline. He stated that Scott was more competitive versus the other bid.

At 6:53 pm Attorney John Murphey joined the meeting. He stated that the bids can be rejected and that the City can go back out for bid. Attorney Murphey also stated that because Darien is a Home rule that there is total flexibility and bidding is not necessary.

Scott reported that he can commit to the interior restoration, but he cannot commit to the exterior until it is evaluated.

b. RESOLUTION – Authorizing the Mayor to execute a contract with JLJ Contracting, Inc. for the foundation repairs consisting of waterproofing, and restoration of the Old Lace School in an amount not to exceed \$65,800.

There was no one in the audience wishing to present public comment.

Alderman Belzak made a motion and it was seconded by Alderman Kenny to reject the current bid and reopen the bid for better pricing.

Upon voice vote, THE MOTION CARRIED UNANIMOUSLY 2-0.

ADJOURNMENT

With no further business before the Committee, Alderman Belczak made a motion and it was seconded by Alderman Kenny to adjourn. Upon voice vote,

THE MOTION CARRIED unanimously, and the meeting adjourned at 6:57 p.m.

RESPECTFULLY SUBMITTED:

Thomas Belczak
Chairman

Eric Gustafson
Alderman

Joseph Kenny
Alderman