ORDER OF BUSINESS

(I) Roll Call – Begin with Alderman Wynne

(II) Mayor Public Announcements

(III) City Manager Public Announcements

(IV) Communications: City Clerk

(V) Public Comment
Members of the public are welcome to speak at City Council meetings. As part of the Council agenda, a period for public comments shall be offered at the commencement of each regular Council meeting. Public comments will be noted in the City Council Minutes and become part of the official record. Those wishing to speak should sign their name and the agenda item or non-agenda topic to be addressed on a designated participation sheet. If there are five or fewer speakers, fifteen minutes shall be provided for Public Comment. If there are more than five speakers, a period of forty-five minutes shall be provided for all comment, and no individual shall speak longer than three minutes. The Mayor will allocate time among the speakers to ensure that Public Comment does not exceed forty-five minutes. The business of the City Council shall commence forty-five minutes after the beginning of Public Comment. Aldermen do not respond during Public Comment. Public Comment is intended to foster dialogue in a respectful and civil manner. Public comments are requested to be made with these guidelines in mind.

(VI) Special Orders of Business
SPECIAL ORDERS OF BUSINESS

(SP1) City Council Minutes from February 4, 2019 and February 11, 2019
   For Action

(SP2) 2019-2020 City Council Goals
   Staff recommends City Council to approve dates to schedule special meetings for
discussion of 2019 and 2020 City Council goals.
   For Action

(SP3) Evanston Fire Department’s 2018 Annual Report
   Staff will present City Council with the Evanston Fire Department’s 2018 Annual
   Report.
   For Discussion

(SP4) Evanston Police Department 2018 Annual Report
   Staff will present City Council with the Evanston Police Department’s 2018 Annual
   Report.
   For Discussion

(SP5) Street Light Master Plan
   Staff recommends City Council accept and place on file the Street Light Master
   For Action: Accept and Place on File

(SP6) Tallmadge Street Lights Request for Proposal
   Staff seeks approval to proceed with Request for Proposal from street light
   manufacturer’s to provide proposals to cast a mold for a Tallmadge street light
   pole, supply Tallmadge poles and luminaries for either a 5 year or 10 year contact
   for the following materials: cast iron, ductile iron, steel, aluminum, and fiberglass.
   Funding for casting the Tallmadge street light pole will be provided from the
   Capital Improvement Program 2019 General Obligation Bonds (Account
   415.40.4119.65515-419016), with a budget of $70,000.
   For Action

(SP7) Alley Paving Special Assessment Process
   Staff recommends City Council consider changing the special assessment
   process to a cost split of 75 percent payment by the residents and 25 percent
   payment by the City. Additionally if residents choose to pay 100 percent of the
   alley cost they can move to the top of the wait list.
   For Action

(SP8) Bridge Improvements Project Design
   Staff requests that the City Council provide direction to the City Manager on the
   preferred method of improvement to the Union Pacific Railroad bridge at the
   intersection of Emerson Street, Ridge Avenue and Green Bay Road.
   For Discussion
(SP9) Proposed Projects Funded by Waste Transfer Station Funds
Staff recommends that the City Council authorize the City Manager to: 1) Proceed with the engineering design for the 2019 alley improvements to be funded by the waste transfer station funds; and 2) Authorize staff to begin discussions with ComEd to obtain property adjacent to the alley north of Lyons, east of Darrow, in order to improve this alley in 2020. Funding for the construction of the alleys installed in 2019 would be provided by the Capital Improvement Program Fund (Account 415.40.4219.65515–419017). This account draws funds from the settlement funds awarded to the City in 2016 (in the amount of $1,263,247.90) and the per ton host fee paid to the City which as a current balance of $86,412.00. The estimated cost to improve the three alleys scheduled for 2019 is $560,000.

For Action

(SP10) Additional Street Cleaning Dates
Staff recommends that the City Council authorize the City Manager to provide additional street sweeping at the end of the season if weather conditions permit.

For Action

(SP11) Winter Weather Aftermath
Staff recommends that the City Council authorize the City Manager to prepare City Code modifications to improve the safety for the general public and improve services provided by the City.

For Action

(SP12) Ordinance 15-O-19, Amending Portions of City Code Title 7, “Public Ways,” Chapter 8 “Trees and Shrubs”
Staff recommends that City Council adopt Ordinance 15-O-19, which will amend portions of City Code Title 7, “Public Ways” Chapter 8, “Trees and Shrubs” to correct staff title updates and clarifying public parkway allowed plantings.

For Introduction

(SP13) Ordinance 10-O-19, Amending Portions of City Code Title 7, “Public Ways” to Include Police Powers to the Director of Public Works
Staff recommends that City Council adopt Ordinance 10-O-19, which will amend portions of City Code Title 7, “Public Ways” to include police powers to the Director of Public Works.

For Introduction

(SP14) Ordinance 13-O-19, Amending City Code Section 8-4-6(C) – Private Scavenger Provided Receptacles
Staff recommends that City Council adopt Ordinance 13-O-19, which will amend City Code Section 8-4-6(C) - Private Scavenger Provided Receptacles, requiring trash receptacles be kept locked in the downtown zoning districts.

For Introduction
(VII) Call of the Wards
(Aldermen shall be called upon by the Mayor to announce or provide information about any Ward or City matter which an Alderman desires to bring before the Council.) {Council Rule 2.1(10)}

(VIII) Executive Session

(IX) Adjournment

**MEETINGS SCHEDULED THROUGH FEBRUARY 2019**
Upcoming Aldermanic Committee Meetings

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Committee/Meeting</th>
</tr>
</thead>
<tbody>
<tr>
<td>2/19/2019</td>
<td>7:00 PM</td>
<td>Board of Ethics</td>
</tr>
<tr>
<td>2/20/2019</td>
<td>6:30 PM</td>
<td>M/W/EBE Committee</td>
</tr>
<tr>
<td>2/20/2019</td>
<td>7:00 PM</td>
<td>Mayor Hagerty Town Hall Meeting</td>
</tr>
<tr>
<td>2/25/2019</td>
<td>6:00 PM</td>
<td>Administration &amp; Public Works, Planning &amp; Development, City Council</td>
</tr>
<tr>
<td>2/27/2019</td>
<td>8:00 AM</td>
<td>Alternatives to Arrest</td>
</tr>
<tr>
<td>2/27/2019</td>
<td>6:00 PM</td>
<td>Transportation &amp; Parking Committee</td>
</tr>
<tr>
<td>2/27/2019</td>
<td>7:30 PM</td>
<td>Economic Development Committee</td>
</tr>
</tbody>
</table>

Information is available about Evanston City Council meetings at: [www.cityofevanston.org/citycouncil](http://www.cityofevanston.org/citycouncil). Questions can be directed to the City Manager’s Office at 847-866-2936. The City is committed to ensuring accessibility for all citizens. If an accommodation is needed to participate in this meeting, please contact the City Manager’s Office 48 hours in advance so that arrangements can be made for the accommodation if possible.
REGULAR CITY COUNCIL MEETING

CITY OF EVANSTON, ILLINOIS LORRAINE
H. MORTON CIVIC CENTER
JAMES C. LYTLE COUNCIL CHAMBERS
Monday, February 4th, 2019

Present:
Alderman Fiske
Alderman Braithwaite
Alderman Wynne
Alderman Wilson
Alderman Rue Simmons
Alderman Revelle
Alderman Rainey
Alderman Fleming
Alderman Suffredin

Absent:
(9)

Presiding: Mayor Stephen Hagerty
Mayor’s Public Announcements

Mayor Hagerty announced the passing of Adrian Willoughby. Thanked the Public Works Department for their excellent work during the harsh weather last week.

City Manager’s Public Announcements

City Manager Wally Bobkiewicz thanked staff and community for their cooperation during the snow emergency. Asked Kenneth Cherry, Recreation Manager at Fleetwood Jourdain Center, to talk about city sponsored events happening for Black History Month.

City Clerk’s Communications

City Clerk summarized a statement submitted by Lawrence Crosby. In the letter Mr. Crosby asked that the city move forward with discussions surrounding police conduct. Informed the public about updated information regarding candidates for the upcoming School Board Election.

Public Comment

Dianne Rusinski: Talked about her support for affordable housing. Mentioned other cities affordable housing programs.

Peter Miller: Supported affordable housing and the ADU’s intent to bring affordable housing units in Evanston. Talked about the staff memo presented to City Council.

Ray Friedman: Talked about his research on affordable housing. Talked about Design and Project Review committee. Asked for public commentary feedback from City Council.

Priscilla Giles: Asked City Council and city staff to be mindful of elderly needs. Believes property taxes should be used to fund snow shoveling.

Darlene Cannon speaking for Clare Kelly: Talked about an organized meeting for the Harley Clarke mansion. Informed city council of another meeting on February 28th. Talked about constituent support for the Harley Clarke mansion. Talked on behalf of Clare Kelly.

Watch

Watch

Watch

Watch

Watch
Traci Kurtzer
Voiced her support for the victim services program. Felt more could be done to improve the victim service program. Talked about gun violence remembrance week.  

Tom Swigert
Talked about the need for parking spaces if the city chooses to build the affordable housing unit.  

Rick Sweitzer
Talked about the history of his property in Evanston and in Wilmette. Questioned the approved ADU ordinance.  

Tina Paten
Supported affordable housing in Evanston. Talked about properties that were to be demolished and the displacement of constituents in the properties.  

Sue Loellbach
Talked about her group, Joining Forces for Affordable Housing. Asked City Council to not change the ADU Ordinance. Hopes that restrictions would not be made on ADU units that would prevent applicants from applying to the affordable housing buildings.  

Vince Heneghan
Talked about his non profit organization Impact Behavioral Health Partners. Asked City Council to not limit the amount of affordable housing applicants that could apply for the units  

Dan Fagerstein
Shared his concern for the parking lot that will be demolished for the proposed affordable housing unit. Felt as though there was no neighborhood disclosure for affordable housing plan. Asked to hold off on voting for the affordable housing unit proposal.  

Shirley Adams
Talked about her rented out property in Georgia. Advocated for affordable housing, but questioned parts of the proposal.  

Carlis Sutton
Commented on snow plowing. In support of SB3, SB4 and affordable housing units.  

Dough Sharp
Opposed the Accessory Dwelling unit. Felt it is unnecessary and would segregate members of the community.  

Calvin Lynn
Stated there was no proper notification by the city for parking lot demolition. Fears that affordable housing would do more harm than good in the neighborhood.  

Richard O'Dwyer
In support of affordable housing, but felt as though the city did not communicate with the residents.  

Bruce McLean
Talked about his concerns for parking spaces and affordable housing units. Also spoke on behalf of Doreen Stein.  

Sarah Vanderwicken
Thanked the city for taking steps to making affordable housing units. Voiced her support for the proposals to be talked about in City
Council. Thought the city should be more informative to constituents when it comes to changes in the city.

Concerned about the owner occupancy requirement is exclusive. Asked City Council to not support owner occupancy ordinance.

Brought attention to Black history month. Did not support affordable housing units. Felt as though that sanctuary cities have an impact on black communities in Evanston. Talked about her concerns of policing in the city. Talked about discrimination.

In support of affordable housing units ordinance.

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### Special Order of Business

**SP1 Affordable Housing Work Plan Progress to Date**

Staff prepared a report updating City Council on activities to expand affordable options in Evanston, including: amendments to the Inclusionary Housing Ordinance, identification of sources of revenue for the Affordable Housing Fund, development of new income restricted rental units, creation of new housing opportunities through the rental of accessory dwelling units, and the Affordable Housing Plan Steering Committee.

*For Action: Accept and Place on File*

Passed 9-0

**SP2 Ordinance 1-O-19, Amending Rental Registration to Include Owner Occupancy with Rental of Accessory Dwelling Units in Zoning Districts with Single-Family Residence**

At the request of Alderman Eleanor Revelle and the direction of the Planning and Development Committee on 12/10/2018, staff prepared Ordinance 1-O-19 Amending Title 5, Chapter 8, "Registration of Rental Residential Buildings" to Include Owner Occupancy Requirement With Rental of Accessory Dwelling Units in Single-Family Zoning Districts". The following background information is provided to inform a discussion relating to owner-occupancy requirements as a condition of allowing rental of accessory dwelling units (ADUs)/coach houses to non-family members of
the primary dwelling unit. Staff seeks further direction from City Council relating to the addition of any potential regulations to address this discussion item at future meetings.

For Introduction
Failed 6-3 Ald. Fiske, Braithwaite and Revelle voted “Yes”

(SP3) Resolution 10-R_19, Authorizing City Manager to Initiate a Request for Qualifications and Request for Proposal Process for the Repurposing of City-Owned Real Property Located at 506 South Boulevard

Staff is seeking City Council approval of Resolution 10-R-19 “Authorizing the City Manager to Initiate a Request for Qualifications and Request for Proposal Process for the redevelopment of City-Owned Real Property Located at 506 South Boulevard as a mixed income residential development. The parking lot is commonly known as “Lot 1”. The development will include a mix of public housing units for low income households who would pay 30% of their income toward rent with the remainder subsidized, units restricted for moderate and middle income households with incomes between 50% and 80% of the area median income, and market rate units. Unit sizes would range from studios to three bedrooms to address the need for housing for a range of household sizes, including families with children.

Motion to hold Item until April 8, 2019 City Council meeting
Passed 8-1 Ald. Fleming voted “No”

For Action
Hold until April 8 City Council meeting

(SP4) Approval of Letter of Support to the Illinois Housing Development Authority for a 60-Unit Affordable Senior Housing Development by Evergreen Development/CJE at 1015 Howard Street

Staff recommends approval of a Letter of Support to the Illinois Housing Development Authority (IHDA) for a 60-Unit Affordable Senior Housing Development by Evergreen Real Estate Group/Council for Jewish Elderly at 1015 Howard Street. The letter commits up to $2,000,000 as gap financing for Evergreen’s request of $14,397,120 in Low Income Housing Tax Credit equity (LIHTC), $450,000 in donation tax credits, and $2,000,000 of soft funds from IHDA. Total capital stack includes construction financing of $12,450,000.00 that will convert to a $3,780,000 first mortgage. City funding is contingent on underwriting following receipt of a funding commitment from IHDA, and completion of the City’s full review and approval process of the planned development. Funding will be in the form of loans from the City’s federal HOME Investment Partnerships
grant (Account 240.21.5440.65535) with a 2019 budget of $696,000; and the Affordable Housing Fund (250.21.5465.56111) with a 2019 budget of $2,525,000.

**For Action**

**Passed 9-0**

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### Call of the Wards

<table>
<thead>
<tr>
<th>Ward 1:</th>
<th>Said it was important there be a discussion about Harley Clarke.</th>
<th>Watch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ward 2:</td>
<td>No Report</td>
<td>Watch</td>
</tr>
<tr>
<td>Ward 3:</td>
<td>Office hours on February 7, from 7-10 a.m. at Brothers K.</td>
<td>Watch</td>
</tr>
<tr>
<td>Ward 4:</td>
<td>Meeting to talk about the Robert Crown project on February 13 at 6 p.m.</td>
<td>Watch</td>
</tr>
<tr>
<td>Ward 5:</td>
<td>5th Ward Meeting at the Civic Center in Room G300 beginning at 7 p.m. Art Exhibit will still be available for the next 30 days at the Gibbs-Morris Center. Also briefly talked about Black History Month.</td>
<td>Watch</td>
</tr>
<tr>
<td>Ward 6:</td>
<td>Noted that between Human Services and City Council, the Council got through 9 Agenda Items in four and a half hours.</td>
<td>Watch</td>
</tr>
<tr>
<td>Ward 7:</td>
<td>No Report</td>
<td>Watch</td>
</tr>
<tr>
<td>Ward 8:</td>
<td>On February 5th there will be a meeting between multiple neighborhoods at 7 p.m. at Peckish Pig.</td>
<td>Watch</td>
</tr>
<tr>
<td>Ward 9:</td>
<td>No Report</td>
<td>Watch</td>
</tr>
</tbody>
</table>
Adjournment

Mayor Hagerty called a voice vote to adjourn the City Council meeting, and by unanimous vote the meeting was adjourned.
REGULAR CITY COUNCIL MEETING

CITY OF EVANSTON, ILLINOIS
LORRAINE H. MORTON CIVIC CENTER
JAMES C. LYTLE COUNCIL CHAMBERS
Monday, February 11th, 2019

Present:

Alderman Fiske
Alderman Wynne
Alderman Wilson
Alderman Rue Simmons

Alderman Revelle
Alderman Rainey
Alderman Fleming
Alderman Suffredin

(8)

Absent:

Alderman Braithwaite (1)

Presiding:

Mayor Stephen Hagerty
Mayor’s Public Announcements

Mayor Hagerty first read a statement regarding the City Manager. He proceeded to invite members of Evanston Own It to speak at the podium.

City Manager’s Public Announcements

City Manager Wally Bobkiewicz had no announcement

City Clerk’s Communications

City Clerk had no announcement

Public Comment

Junad Rizki  
Talked about the performance of City Manager Wally Bobkiewicz. Believes Mr. Bobkiewicz is responsible for the financial problems in the city. Said there is not qualified staff working in the CMO.

Ray Friedman  
Wanted to have a balanced budget and better communication with the public from City Council members. Wants to see the public forum to be used to ensure there is dialogue being made.

Doreen Price  
Talked about needing more social workers in Evanston and spoke about her experience working alongside one.

James Angleman  
Asked City Council to provide a special use permit for Spice Restaurant, located at 1905 Church Street. Expressed his appreciation for the staff in the City of Evanston.

Madelyn Ducree  
Asked City Council to make sure there is affordable housing for low income residents. Inquired about the property located at 2102 Darrow Avenue. Talked about sanctuary cities, saying that immigrants are taking jobs away. Wants people who work here to speak English. Stated she was upset during one of her recent trips to the grocery store because the workers were not speaking English. Wants immigrants to assimilate into our society and learn English. Suggested that the police are profiling African-Americans and not people who seem to be illegal.
Consent Agenda

(M1) Approval of Minutes of the Regular City Council Meeting of January 28, 2019.  

For Action
Approved on Consent Agenda

(A1) Payroll – January 07, 2018 through January 20, 2018 $ 2,923,625.63  

For Action
Approved on Consent Agenda

(A2) Bills List – February 12, 2019 FY19 $ 690,623.58  
Bills List – February 12, 2019 FY19 $ 3,393,957.69  
BMO Credit Card Activity – Period Ending November 26, 2019 (without Amazon) $ 154,991.78  

For Action
Approved on Consent Agenda

(A3) BMO Amazon Credit Card Activity  
Period Ending November 26, 2019 $ 6,369.59  

For Action
Passed 7-0-1  
Ald. Suffredin abstained

(A4) Contract for the Environmental Monitoring Study – Waste Transfer Station with RHP Risk Management

City Council authorized the City Manager to execute a contract for the Environmental Monitoring Study – Waste Transfer Station (RFP 18-57) with RHP Risk Management (8745 W. Higgins Rd. Suite 320 Chicago, IL 60631) in the amount of $229,300.00 with a potential additional amount of $40,032.00 to purchase monitoring equipment after the study is complete. Funding for the study will be provided from the Capital Improvement Program (CIP) (Account 415.40.4219.62145-119005). This account draws funds from the settlement funds awarded to the City in 2016 which equal $1,263,247.90 and the per ton host fee paid to the City which had a balance of $86,412.00 as of February 5, 2019.

For Action
Approved on Consent Agenda
(A5) **Pro Support Renewal Agreement with Dell Technologies**

City Council authorized the sole source renewal of Pro Support from Dell Technologies (1 Dell Way, Round Rock, TX, 78682) in the amount of $43,007.16. This renewal purchase enables the city to maintain support plans for critical IT infrastructure. The 2019 costs are the same as last year’s cost with one additional server being added to Pro Support in 2019. Funding is provided by the IT Division’s Computer License and Support Fund (Account 100.19.1932.62340) which has a 2019 budget of $550,000.00 and current balance of $542,405.14.

**For Action**
**Approved on Consent Agenda**

(A6) **Agreement Renewal with Otis Elevator Company for 2019-2021 Elevator Service and Maintenance at Various City Facilities**

City Council approved the renewal of a 3 year sole source service and maintenance agreement with Otis Elevator Company (949 Oak Creek Drive, Lombard, IL) for the 2 elevators at the Civic Center, 1 freight elevator at the Service Center, 5 elevators at the Maple Avenue Parking Garage and 3 elevators at the Church Street Parking Garage in the amount of $60,324.60 for FY 2019, $60,324.60 for FY 2020 and $60,324.60 for FY 2021. The proposed 3-year service agreement is effective from January 1, 2019 to December 31, 2021. A detailed breakdown of the funding can be found on the corresponding transmittal memorandum.

**For Action**
**Approved on Consent Agenda**

(A7) **Agreement with Siemens Industry, Inc. for Building Automation System for the HVAC Systems at the Police Headquarters**

City Council authorized the City Manager to execute a oneyear, sole source service agreement for the Building Automation System (BAS) in the amount of $28,600 with Siemens Industry (585 Slawin Court, Mount Prospect, IL 60056). The agreement cover hardware, software and service visits for the HVAC system in the City of Evanston Police Headquarters. Also included are two additional 1 year optional renewals at $29,200.00 and $29,880.00, respectively. The 2019 cost for this service represents an increase of 0.3% over last years’ cost. Funding will be from Facilities – Service Agreements & Contracts Fund (Account 100.19.1950.62509) with a 2019 budget of $240,031.00

**For Action**
**Approved on Consent Agenda**
(A8) **ParkEvanston Mobile App Wallet Incentive**

City Council approved a parking incentive program. The program would give users who pre-load $20 in the ParkEvanston mobile app wallet a one-time additional $5 free to use towards on-street parking payments in the City of Evanston until May 31, 2019. There is no direct funding required; the cost of this program will be reduced revenue to the Parking Fund. Staff estimates that between 4,000-5,000 users will take advantage of this offer, which at the most would cost $25,000.

**For Action**
Approved on Consent Agenda

(A9) **Change Order No. 1 to the Agreement for the South Standpipe Pump Station Motor Control Center and Building Renovation**

City Council authorized the City Manager to execute Change Order No. 1 to the agreement for the South Standpipe Pump Station Motor Control Center and Building Renovation (Bid 18-17) with MAG Construction Co. (629 Homewood Avenue, Highland Park, IL 60035) to extend the contract time to April 9, 2019. There is no change in contract price.

**For Action**
Approved on Consent Agenda

(A10) **Funding Approval for the Demolition of the Abandoned Building at 2020 Green Bay Road, Evanston**

City Council approved funding for the demolition of a long and neglected property that is located at 2020 Green Bay Road, Evanston. The cost for the demolition is $33,925.00. It will be paid with grants provided by the Abandoned Residential Property Municipality Relief Grant from the Illinois Housing Development Authority. Funds will be provided through the IL Vacant Expense Fund (Account 100.24.2435.62469). The City was awarded $150,000 in grants, and has expended less than $75,000.

**For Action**
Approved on Consent Agenda
(A11) **Collective Bargaining Agreement – Evanston Police Sergeants, Fraternal Order of Police**

City Council authorized the City Manager to execute a collective bargaining agreement with the Illinois Fraternal Order of Police Labor Council for the Evanston Police Sergeants, effective January 1, 2019 through December 31, 2022.

**For Action**
Approved on Consent Agenda

(A12) **Collective Bargaining Agreement – American Federation of State, County and Municipal Employees**

City Council authorized the City Manager to execute a collective bargaining agreement with the American Federation of State, County and Municipal Employees (AFSCME) Labor Council covering 354 City employees, effective January 1, 2019 through December 31, 2022.

**For Action**
Approved on Consent Agenda

(A13) **Resolution 11-R-19, Motor Fuel Tax Funds Use for Roadway Resurfacing Project**

City Council adopted Resolution 11-R-19 authorizing the City Manager to sign an Illinois Department of Transportation Resolution for Improvement by Municipality under the Illinois Highway Code for improvements to various Evanston Streets. This will allow the use of Motor Fuel Tax (MFT) Funds in the amount of $1,206,000 for street resurfacing and surface patching. Funding will be provided from the Motor Fuel Tax Fund (Fund 200), which has a total Budget of $1,508,678. $1,206,000 of this fund is allocated for street improvements in Account 415.40.4219.65515 – 419002.

**For Action**
Approved on Consent Agenda

(A14) **Ordinance 14-O-19, Increasing the Number of Class D Liquor Licenses for Stacked and Folded at 824 Noyes Street**

City Council adopted Ordinance 14- O-19, amending Class D Liquor License from fifty-two to fifty-three for Bad Dog House Evanston, LLC, d/b/a Stacked and Folded, located at 824 Noyes Street.

**For Introduction**
Approved on Consent Agenda
(P1) **Resolution 13-R-19, Approving a Plat of Resubdivision for 2102 Darrow Avenue**

City Council adopted Resolution 13-R-19 approving the proposed re-subdivision of the property located at 2102 Darrow Avenue.

**For Action**
Approved on Consent Agenda

(P2) **Ordinance 12-O-19, Granting a Special Use for a Type 2 Restaurant, Spice, at 1905 Church Street T**

City Council adopted Ordinance 12-O-19 granting special use approval for a Type 2 Restaurant, Spice, at 1905 Church St. in the B2 Business District and the oWE West Evanston Overlay District. The applicant has complied with all zoning requirements and meets all of the standards for a special use for this district.

**For Introduction and Action**
Approved on Consent Agenda

(P3) **Ordinance 11-O-19, Granting a Special Use for a Type 2 Restaurant, Philz Coffee, at 1030 Davis Street**

City Council adopted Ordinance 11-O-19 granting special use approval for a Type 2 Restaurant, Philz Coffee, at 1030 Davis St. in the D2 Downtown Retail Core District. The applicant has complied with all zoning requirements and meets all of the standards for a special use for this district.

**For Introduction and Action**
Approved on Consent Agenda

(P4) **Ordinance 112-O-18 Granting Major Zoning Relief for Building Lot Coverage, Setbacks, and Open Parking at 2626 Reese Avenue**

The Zoning Board of Appeals recommends denial of Ordinance 112-O-18 for major zoning relief for three (3) variations. The Zoning Board of Appeals determined the proposal does not meet all Standards for Major Variation. Staff recommends approval of the proposed variations with modifications.

**For Introduction**
Continued in Committee
(P5) **Ordinance 4-O-19, Granting a Special Use Permit for a Planned Development Located at 1714-1720 Chicago Avenue and Amending the Zoning Map**

City Council denied Ordinance 4-O-19 for approval of a Map Amendment from the R6 General Residential to the D3 Downtown Core Development District and a Planned Development for a 13-story office building with 112 on-site parking spaces. Passage of the Map Amendment shall require a favorable vote of three-fourths (3/4) of all the Aldermen per City Code 6-3-4-7 because a petition signed and acknowledged by 30% of owners of property within 500-feet of the subject property was submitted to the City. This Ordinance was held at the January 28, 2019 City Council meeting until February 11, 2019 for Introduction.

**For Introduction**
Approved on Consent Agenda

(P6) **Ordinance 9-O-19, Granting a Special Use for a Ground-Floor Medical Office and Major Zoning Relief for No Additional Parking at 524 Main Street**

City Council adopted Ordinance 9-O-19 granting special use approval for a ground-floor Medical Office, North Shore University Health System, and major zoning relief for no additional parking spaces where 7 additional parking spaces are required for a Medical Office, in the C1a Commercial Mixed-Use District and the oDM Dempster-Main Overlay District. The applicant has complied with all zoning requirements and meets all of the standards for special use and major variations for this district.

**For Action**
Passed 8-0

(O1) **Resolution 12-R-19, Amending City Council Rules and Organization of the City Council Section 6 “Citizen Participation”**

City Council adopted Resolution 12-R19, amending City Council Rule 6, “Citizen Participation,” to state that ceding time is not permitted.

**For Action**
Approved on Consent Agenda
### Call of the Wards

<table>
<thead>
<tr>
<th>Ward</th>
<th>Report</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:</td>
<td>Made a referral to Human Services Committee to give an update for the dog beach in 2019. Also wants HSC to look at special events that want to use parks but don’t have a connection with an Evanston non-profit and what they’re charged.</td>
</tr>
<tr>
<td>2:</td>
<td>No Report</td>
</tr>
<tr>
<td>3:</td>
<td>No Report</td>
</tr>
<tr>
<td>4:</td>
<td>Robert Crown Community Center meeting on February 13 at 6:00 p.m.</td>
</tr>
<tr>
<td>5:</td>
<td>5th Ward meeting 7pm. Wednesday at Civic Center in room G300. Additionally there will be a street naming unveiling for Nathan Haliburton at 3pm on February 17.</td>
</tr>
<tr>
<td>6:</td>
<td>Thanked Evanston Pointers Group for hosting an event at Westminster Place.</td>
</tr>
<tr>
<td>7:</td>
<td>No Report</td>
</tr>
<tr>
<td>8:</td>
<td>Reported on a neighborhood meeting held at Peckish Pig. Offered members of the community to meet with her and discuss projects on Howard St.</td>
</tr>
<tr>
<td>9:</td>
<td>Gave a great review to the jazz band at ETHS</td>
</tr>
</tbody>
</table>

### Adjournment

Mayor Hagerty called a voice vote to adjourn the City Council meeting, and by unanimous vote the meeting was adjourned. City Council then proceeded into Executive Session.
To: Honorable Mayor and Members of the City Council

From: Wally Bobkiewicz, City Manager
      Kate Lewis-Lakin, Budget Coordinator
      James Hurley, Management Analyst

Subject: 2019 - 2020 City Council Goals

Date: February 13, 2019

Recommended action:
Staff recommends City Council to approve dates to schedule special meetings for discussion of 2019 and 2020 City Council goals.

Summary:
On February 12, 2019, City Council met to discuss goals for 2019 and 2020. The conversation began with the six goals that were adopted in 2018. At the end of this meeting, City Council adopted 4 out of these 6 goals to continue to prioritize for the next two years. These goals are the following:

1. Invest in Infrastructure and Facilities
2. Enhance Community Development and Job Creation
3. Stabilize Long Term City Finances
4. Expand Affordable Housing Options

City Council also agreed that goals of equity and climate resiliency should be considered when forming metrics and objectives for these goals.

City Council requested staff to schedule two special meetings for the Council to discuss the first three of these four goals in March 2019. “Expand Affordable Housing Options” was determined to already have measurable sub-goals, a set course of action and upcoming discussions scheduled.
Staff proposes the Council to select two of the three following dates to schedule special meetings:

- Saturday, March 2, 2019 (9:00 a.m. – 12:00 p.m.)
- Saturday, March 16, 2019 (9:00 a.m. – 12:00 p.m.)
- Monday, March 18, 2019 (6:00 p.m. – 9:00 p.m.)

Prior to these special meetings, City Council will have the opportunity to send to staff further ideas about how these goals could be approached, accomplished, and measured. Council may also request available data and information from staff on existing programs and services. Staff will compile this information along with best practices and additional metrics for City Council to discuss at these upcoming meetings.

Initial ideas on these three goals from the February 12, 2019 discussion are the following:

1. **Invest in Infrastructure and Facilities**
   - Prioritizing long-range needs, planning for how to meet infrastructure and facility needs
   - Funding for long-term maintenance of City assets (e.g. Crown Maintenance Fund, Parking Fund)

2. **Enhance Community Development and Job Creation**
   - Tracking business relocation to Evanston
   - Improving transportation accessibility. Future reports describe the location of transportation projects and impact on surrounding community
   - Identifying metrics and data to evaluate workforce development program
   - Tracking average household income; total number of living wage jobs
   - Tracking post-secondary acceptance rates and comparing with graduation rates
   - Identifying targeted industries for job growth and connecting with community employment training programs, particularly Oakton Community College.

3. **Stabilize Long Term City Finances**
   - Tracking and analyzing historic property tax trends
   - Diversifying and expanding revenue to meet needs into the future
   - Making responsible long-term financing decisions for infrastructure and facilities
   - Preparing for state government budgetary choices under new governor
Memorandum

To: Honorable Mayor and Members of the City Council
From: Brian Scott, Fire Chief
Subject: Evanston Fire Department 2018 Annual Report
Date: February 13, 2019

Recommended Action:
Staff will present City Council with the Evanston Fire Department’s 2018 Annual Report.
Memorandum

To: Honorable Mayor and Members of the City Council

From: Demitrous, Chief of Police

Subject: Evanston Police Department 2018 Annual Report

Date: February 13, 2019

Recommended Action:
Staff will present City Council with the Evanston Fire Department’s 2018 Annual Report.
Memorandum

To: Honorable Mayor and Members of the City Council

From: David Stoneback, Public Works Agency Director
       Lara Biggs, P.E., Bureau Chief – Capital Planning/City Engineer
       Rajeev Dahal, Senior Project Manager - Transportation

Subject: Street Light Master Plan Project (RFP 17-11)

Date: January 2, 2019

Recommended Action:
Staff recommends City Council accept and place in file the Street Light Master Plan dated January 2019.

Livability Benefits:
Built Environment: enhance public spaces and provide complete streets
Health & Safety: improve emergency prevention and response
Reduce Environmental Impact: improve energy efficiency

Background:
The previous street light plan was developed in 1979. With changes in technology and industry standards there is a need to reevaluate and address current and future needs of the community.

The goal of this project was to develop a plan that identified ways to meet future street lighting needs of the community in a manner that reflected the community's values as well as the context of the surrounding built and natural environments.

Community Engagement:
Public and stakeholder engagement was an integral part of the planning process. The engagement process included review and feedback regarding the existing conditions, industry standards and practices, and options for improvements though various meetings/methodologies as noted below:

- Steering Committee: The steering committee consisted of City Council members, representatives of Age Friendly Task Force, Environment Board, Plan Commission, Preservation Commission, Utilities Commission, Public Works Agency, Community Development Department, and the Police Department.
Five Steering Committee meetings were held to review reports, studies, community feedback, and options for improvements including guiding the planning process in finalizing the recommendations.

- **Northwest Municipal Conference Survey:** A survey regarding street light standards and practices was sent to the municipal conference members. Twelve member communities responded to the survey. All twelve communities are moving to LED lamps.

- **Website Comments and Survey:** Over 90 comments were received online and over 700 residents responded to a community street light survey.

- **Public Meetings:** Two public meetings were held to present existing conditions, provide recommendations, and receive input.

- **City Commissions and Committee’s Review:** The plan recommendations were presented before Utilities Commission, Preservation Commission, and the Transportation & Parking Committee.

**Plan Recommendations:**
The recommendations pertaining to the street light design, infrastructure and policy are as follows:

**Recommended Street Light Design Standards**

- The attached spreadsheet shows the Street Lighting Levels Standards that are recommended. These are a blend of the 1979 standards and current Illuminating Engineering Society of North America (IESNA) recommendations.

- All luminaires should be LED, 3,000K color temperature or less and dark-sky-friendly.

- The recommended minimum spacing between trees and lighting units should be 25 feet.

- Along local roadways a staggered configuration is recommended as it is most efficient.

- The recommended spacing between light poles in a residential area using a staggered configuration is generally 75’ to 100’. The recommended spacing along a major roadway is generally 150’ to 200’.
Street Light Infrastructure Recommendations

- Davit arm roadway lighting units should be a 25’ to 30’ tapered aluminum pole with an 8’ arm and a type III optic, less than or equal to 3,000K dark-sky compliant full cutoff cobra head-type LED luminaire.

- Tallmadge lighting units should be a 14’ flute tapered steel, cast iron or aluminum pole with a type III or type V optic, less than or equal to 3,000K dark-sky friendly Tallmadge replica LED luminaire with a frosted acrylic lens.

- Park pathway and site lighting units should be a round aluminum pole with a type III or type V optic, less than or equal to 3,000K dark-sky compliant full cutoff decorative LED luminaire.

- Parking lot lighting units should be a 16’ to 30’ round aluminum pole with a type II, type III or type V optic, less than or equal to 3,000K dark-sky compliant full cutoff shoebox-type LED luminaire.

- Wall pack lighting units should be a type III optic, less than or equal to 3,000K dark-sky friendly full cutoff LED luminaire.

- All lighting units should be powder coated black unless otherwise approved.

- It is recommended that the ComEd’s smart meter technology be adopted to allow the City to access real time data on actual power consumption and basic diagnostics.

Policy Summary

- The existing 0.0 foot candles (no illumination) at residential property lines should remain.

- The existing policy and petition procedure for alley light installation by ComEd is well defined and should remain.

With City Council approval, this plan will help guide future street light infrastructure improvement and operation programs as the City continues to upgrade the system under major construction contracts, private development improvements, and spot locations improvements.

Attachments:
Street Lighting Level Recommendations
Street Light Master Plan
Utilities Commission Memorandum
Environment Board Memorandum
City of Evanston
Street Light Master Plan
Lighting Level Recommendations

<table>
<thead>
<tr>
<th>FOR REFERENCE</th>
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<th>PROPOSED CITY OF EVANSTON (COE) STANDARDS</th>
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<th>PROPOSED FIXTURE(S)</th>
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<tr>
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<td>VIADUCTS</td>
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<td>-</td>
<td>-</td>
<td>2.0</td>
</tr>
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CITY COUNCIL MEMBERS

Stephen Hagerty Mayor
Judy Fiske 1st Ward
Peter Braithwaite 2nd Ward
Melissa Wynne 3rd Ward
Donald Wilson 4th Ward
Robin Simmons 5th Ward
Thomas Suffredin 6th Ward
Eleanor Revelle 7th Ward
Ann Rainey 8th Ward
Cicely Fleming 9th Ward
Devon Reid City Clerk
Wally Bobkiewicz City Manager

STEERING COMMITTEE MEMBERS

Melissa Wynne Alderman, 3rd Ward Committee Chair
Robin Simmons Alderman, 5th Ward Committee Co-Chair
Susan Cherco Member Age Friendly Task Force
Scott Osborne Co-Chair Environment Board
Andrew Pigozzi Member Plan Commission
Ken Itle Vice-Chair Preservation Commission
Elliott Dudnik Member Preservation Commission
Richard Lanyon Chair Utilities Commission
Richard Shure Member Utilities Commission
Johanna Leonard Director Community Development Department
Brian Henry Commander Police Department
David Stoneback Director Public Works Agency
Lara Biggs Bureau Chief + City Engineer Capital Planning + Engineering
Tom Twigg Traffic Operations Supervisor Street Lights
Rajeev Dahal Senior Project Manager Traffic + Transportation

CONSULTANT MEMBERS – CHRISTOPHER B. BURKE ENGINEERING, LTD.

Mike Kerr Project Manager Executive Vice President
John Caruso Project Engineer Vice President + Engineer
Gerry Hennelly Project Engineer Senior Project Manager + Engineer
Doug Kerr Project Engineer Engineer
Delta Engineering Lighting Design Subconsultant
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- Appendix A8.4
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- Appendix A8.6
- Appendix A8.7
- Appendix A8.8
- Appendix A8.9
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BACKGROUND AND PROJECT SUMMARY
In January of 2017, the City of Evanston sought proposals to complete a comprehensive Street Light Master Plan. The last time this type of study was undertaken by the City was in 1979. Since that time, lighting technologies have advanced rapidly. When the original 1979 study was completed, the majority of the City’s existing lighting units were the historic Tallmadge type lighting units and davit arm units which were illuminated using mercury vapor-type lamps. Over the years, due to regulatory concerns and the high levels of mercury in the lamps and ballasts, these lamps were phased out and replaced by induction-type lamps which gave off the same “warm white” light source as the mercury vapor lamps.

The induction luminaires did not have the same life expectancy as the older mercury vapor, incandescent or high pressure sodium (HPS) luminaires, causing increased maintenance costs. Therefore, the City decided to investigate alternatives to the light sources currently installed throughout the City.

The current City street light system has 107 individual lighting systems that control approximately 6,000 lighting units. Those 6,000 lighting units consist of:

- 4,200 Tallmadge as manufactured by Union Metal which typically illuminate local and collector roadways
- 1,600 luminaires mounted on davit arm roadway poles which typically illuminate major roadways
- 200 other luminaires in various locations throughout the City

The purposes and goals of the Street Lighting Master Plan are as follows:

- Maintain the existing Tallmadge look wherever practical throughout the City.
- Establish uniform illumination standards for all new construction.
- Standardize light pole and luminaire types for all applications.
- Increase overall energy efficiency of the City’s lighting systems and reduce related greenhouse gas emissions.
- Provide standards for lighting that are dark-sky compliant/friendly, including methods to minimize/eliminate glare nuisance and light spillage.
- Explore the latest lighting control technologies.
- Identify pilot areas in need of additional lighting levels for pedestrian safety.
- Establish ways to monitor existing lighting control centers by use of Smart Meter technology.
- Establish proposed lighting unit spacing requirements along residential streets for new roadway construction projects.
- Establish Light Pole offset distances from existing Tree canopies to provide maximum Illumination on roadways.

Prior to implementing new technologies, it was necessary to evaluate the existing lighting system. City staff, the Steering Committee (made up of several City elected officials and various Commission members), and Christopher B. Burke Engineering, Ltd. (CBBEL) chose several study areas to investigate what the lighting levels were throughout the City. These studies were performed to see which areas met current City of Evanston standards or the national standard for roadway lighting. The majority of the streets did not meet either standard.

Stakeholders and the public were engaged throughout the Master Planning process. CBBEL worked in conjunction with the City of Evanston to develop a community outreach strategy to engage the stakeholders and the public and provide opportunities to offer input throughout the process in developing the Street Light Master Plan.

The stakeholder and public engagement included the following meetings and surveys:

- Project Kick Off Meeting (Steering Committee Meeting #1) .........................July 18, 2017
- Steering Committee Meeting #2 ......................November 7, 2017
- Public Meeting #1........................................November 28, 2017
- Steering Committee Meeting #3 .........................January 23, 2018
- Northwest Municipal Conference Survey ................February 2018
- Street Light Master Plan Project Lighting Level Survey .........................April 2018
- Steering Committee Meeting #4 .........................May 24, 2018
- Steering Committee Meeting #5 .........................October 3, 2018
- Public Meeting #2........................................November 1, 2018
- Utilities Commission ......................................November 9, 2018
- Preservation Commission .................................November 13, 2018
- Transportation & Parking Committee ............November 28, 2018
2
EXISTING CONDITIONS
REVIEW & ANALYSIS
2.1: EXISTING STREET LIGHTING SYSTEM

The City street light system has 107 individual lighting systems (See Appendix A1) that control approximately 6,000 lighting units. Those 6,000 lighting units generally consist of:

- **4,200** Tallmadge lights as manufactured by Union Metal which typically illuminate local and collector roadways
- **1,600** luminaires mounted on davit arm roadway poles which typically illuminate major roadways
- **200** other luminaires in various locations throughout the City which includes park lights, parking lot lights and viaduct lights
The City’s existing Tallmadge light system was installed in the early 1980’s. It consisted of a six-piece steel pole system with a mercury vapor lamp. In 2007, the City completed the replacement of mercury vapor lamps in the City’s Tallmadge poles, replacing them with brighter, more efficient induction lamps that were designed as a custom retrofit inset into the existing Tallmadge fixture. The davit arm roadway poles, originally with mercury vapor luminaires, were installed in various commercial areas or arterial corridors. They have been upgraded to induction lamps as opportunities have arisen. However, recent infrastructure projects at Emerson/Ridge/Green Bay and Fountain Square included replacement of induction davit arm roadway poles with LED luminaires on davit arm roadway poles with pedestrian-scale LED luminaires to illuminate the sidewalk as shown below. Fountain Square included both the new davit arm lights and refurbished Tallmadge lights.

All street lighting is controlled via a photoelectric cell located at each of the 107 unmetered street light power centers as shown below. The City relies on Com Ed’s system to estimate energy consumption. Most power centers throughout Evanston were replaced in 2010. They are either 100 amp or 150 amp capacity and are generally in very good condition.
The City maintains lighting in City-owned parking lots. Parking lots typically have a variety of fixtures, including Tallmadge, davit arm or a combination of both. Most recently, as parking lots have been reconstructed, LED luminaires have been installed. The parking lot at the Lorraine H. Morton Civic Center was reconstructed in 2013 using Tallmadge fixtures and shoe box type luminaires with metal halide lamps. Parking lots at James Park were reconstructed in 2016 and 2017 using shoebox-type LED luminaires installed on a straight round aluminum pole as seen below. Additionally, ornamental type metal halides (Philips Lumec Domus) are installed throughout the City along bike/pedestrian pathways.

2.2: EXISTING PLANS, POLICIES AND PROGRAMS

Previous Studies and Plans
A previous Street Light Master Plan was developed in 1979 with recommended lighting levels as shown in Table 2.1 (Appendix A2).

For the purposes of the 1979 Street Light Master Plan, roadways were classified as major, collector or local roadways with the definitions as follow:

• **MAJOR ROADWAY** – A roadway which serves as the principal thoroughfare that connects City boundaries and carries the majority of traffic throughout the City (such as Green Bay Road or Chicago Avenue).

• **COLLECTOR ROADWAY** – A roadway that typically services traffic between major roadways and local roadways, used mainly for traffic movements within residential, commercial and industrial areas (such as Central Park Avenue, Simpson Street or Foster Street).

• **LOCAL ROADWAY** – A roadway primarily used for direct access to residential, commercial and industrial areas. These are the majority of the City’s roadway system and carry the smallest volume of traffic.
Table 2.1: Current City of Evanston Recommended Lighting Levels for Roadways

<table>
<thead>
<tr>
<th>Street Category</th>
<th>Commercial and Institutional High Pedestrian Activity (fc)*</th>
<th>High Density Residential Medium Pedestrian Activity (fc)*</th>
<th>Low Density Residential Low Pedestrian Activity (fc)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major</td>
<td>1.0 – 4.0</td>
<td>0.4 – 0.6</td>
<td>0.2 – 0.4</td>
</tr>
<tr>
<td>Collector</td>
<td>0.4 – 1.0</td>
<td>0.2 – 0.4</td>
<td>0.2 – 0.4</td>
</tr>
<tr>
<td>Local</td>
<td>0.4 – 0.6</td>
<td>0.1 – 0.2</td>
<td>0.05 – 0.1</td>
</tr>
</tbody>
</table>

* A footcandle (fc) is the unit of measurement used to calculate lighting level or lighting intensity and is defined as the illuminance on a one-square foot surface from a uniform source of light.

For purposes of comparison, lighting standards for roadways and intersections as dictated by Illuminating Engineers Society of North American (IESNA) are provided below in Table 2.2 and Table 2.3 (National Standards generally consider intersections separately from roadways because the number of potential vehicle and pedestrian conflicts elevates safety and visibility concerns). City of Evanston recommend lighting levels are generally less than IESNA recommended lighting levels.

Table 2.2: Illuminating Engineers Society of North American (IESNA) Recommended Lighting Levels for Roadways

<table>
<thead>
<tr>
<th>Road</th>
<th>Pedestrian Activity Area</th>
<th>Illumination (fc)</th>
<th>Uniformity Ratio $E_{avg}/E_{min}$ **</th>
</tr>
</thead>
<tbody>
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<td>Major</td>
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<td>1.7</td>
<td>3.0</td>
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<td></td>
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<td>3.0</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>0.9</td>
<td>3.0</td>
</tr>
<tr>
<td>Collector</td>
<td>High</td>
<td>1.2</td>
<td>4.0</td>
</tr>
<tr>
<td></td>
<td>Medium</td>
<td>0.9</td>
<td>4.0</td>
</tr>
<tr>
<td></td>
<td>Low</td>
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<tr>
<td>Local</td>
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<td>Medium</td>
<td>0.7</td>
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</tr>
<tr>
<td></td>
<td>Low</td>
<td>0.4</td>
<td>6.0</td>
</tr>
</tbody>
</table>

** Uniformity Ratio = Average Illumination Level / Minimum Illumination Level

Table 2.3: Illuminating Engineers Society of North America (IESNA) Recommended Lighting Levels for Intersections

<table>
<thead>
<tr>
<th>Functional Classification</th>
<th>Average Maintained Illumination at Pavement by Pedestrian Area Activity Level (fc)</th>
<th>Uniformity Ratio $E_{avg}/E_{min}$</th>
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<tbody>
<tr>
<td></td>
<td>Pedestrian</td>
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</tr>
<tr>
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<tr>
<td>Major/Major</td>
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<td>Major/Local</td>
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<td>2.0</td>
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</tr>
<tr>
<td>Local/Local</td>
<td>1.8</td>
<td>1.4</td>
</tr>
</tbody>
</table>
Lighting Policies for Development Projects
The existing City Ordinance’s only requirement for outdoor lighting is that the lighting levels must be uniform.

These uniformity ratios are:

**RESIDENTIAL DISTRICTS:** 6:1 Average/Minimum Maintained Footcandles

**ALL OTHER DISTRICTS:** 3:1 Average/Minimum Maintained Footcandles

(The Ordinance also states that 0.0 footcandles (no Illumination) may exist at residential lot lines and lighting units must have horizontal sharp cut-off lenses.)

Lighting Upgrade Programs
The City currently upgrades street light infrastructure either as part of major street and parking lot reconstruction projects, spot location improvements, major planned unit private developments, or as part of Safer Neighborhood Area Project (SNAP). The function of SNAP is to improve street lighting in the Community Development Block Grant (CDBG) areas. The City believes that adequate lighting and illumination of neighborhoods throughout Evanston, especially pedestrian walkways, is critical to the safety of citizens in the Neighborhood Revitalization Strategy Areas (NRSA) and crime prevention through environmental design standards sets two distinct purposes for lighting; the first is that lighting is used for the illumination of human activity and secondly lighting is used for security.

An initial pilot program was introduced by Evanston Public Works Agency prior to development of this Street Light Master Plan in the area of Seward east of Dodge investigating options to replace the existing deteriorated aging Tallmadge fixtures with LED luminaires in lieu of induction bulbs with more affordable, durable, lightweight fiber glass poles that look similar to the Tallmadge.

Lighting Maintenance Operations
City traffic electricians presently perform routine maintenance, repairs and inspection to keep street lighting equipment in operation. The maintenance work includes: bulb replacement, tree trimming, repairs of light poles, power centers, cable and conduit, fixtures due to damages or aging and installation of darkening panels to prevent uplight. Lights in City parks and those luminaires mounted to City facilities are maintained by the Facilities Division.

Lighting Electricity Cost
Recently, The City has paid the following amounts for electrical energy charges to operate the 107 lighting systems:

- **FY 2016** = $152,832.00
- **FY 2017** = $140,630.00

Additionally, the City currently spends approximately $140,000.00 annually to maintain the City’s lighting systems.

Com Ed Policy for Lighting Alleys
Lighting in City alleys is provided by Com Ed as follows:

Residents complete a petition in support of the installation of the Com Ed supplied luminaire as seen in Appendix A3. Upon request, a petition is sent to the resident or applicant in support of the installation of the Com Ed supplied luminaire. The petition is circulated among residents living adjacent to the alley. The petition must be signed by at least 51% of the residents and/or be approved by the Ward Alderman. The resident or applicant in support of the installation of the Com Ed supplied luminaire is responsible for the electricity usage bill to be paid directly to Com Ed. If the location of installation is within the targeted CDBG program area, the City will reimburse, on a yearly basis, 50% of the electricity cost incurred by the applicant for the first five years after the installation date.
Presently, Com Ed will furnish and install either a 100W or 250W high pressure sodium luminaire. Above is a typical existing alley ComEd luminaire.

2.3: LIGHTING LEVEL STUDY & ANALYSIS

Initial study and analyses were undertaken to determine the levels of existing lighting in different areas of the City. Means and methods of existing conditions lighting level study and analysis can be found in Appendix A4. Nineteen study areas were initially selected throughout the City’s nine wards and included major roadways, collector roadways, local roadways, intersections and parks (bike/pedestrian pathways). An effort was made to select study areas near schools, parks and the other areas of interest. Due to concerns and questions from Public Meeting #1, additional areas were included in the lighting level study. Lastly, several pilot programs that were installed during the Master Plan process were included in the study. A listing of all 31 study areas is as follows:

Major Roadways
1. Green Bay Road (Simpson Street to Payne Street)
2. Main Street (Sherman Avenue to Hinman Avenue)
3. Chicago Avenue (Kedzie Avenue to South Boulevard)
4. Dodge Avenue (Washington Street to Seward Street)
5. Chicago Avenue (Church Street to Grove Street)
6. Ridge Avenue (Lake Street to Dempster Street)
7. Central Street (Walnut Avenue to Broadway Avenue)
8. Oakton Street (Florence Avenue to Asbury Street)
9. McCormick Boulevard (Golf Road to Green Bay Road)

Collector Roadways
10. Simpson Street (Dewey Avenue to Green Bay Road)
11. Foster Street (Maple Avenue to Sherman Avenue)
12. Central Park Avenue (Park Place to North End of Willard School)
13. Grant Street (Bennett Avenue to Pioneer Road)

**Local Roadways**
14. Seward Street Pilot Program (Dodge Avenue to Dewey Avenue)
   a. 55W 4000K Clear Lens LED City Tallmadge Replica
   b. 55W 3000K Clear Lens LED City Tallmadge Replica
15. Seward Street Pilot Program (Dewey Avenue to Florence Avenue)
   a. 55W 4000K Frosted Lens LED City Tallmadge Replica
   b. 55W 3000K Frosted Lens LED City Tallmadge Replica
16. Lyons Street (Dodge Avenue to Com Ed Substation)
17. Brummel Street (Custer Street to East Dead End)
18. Sheridan Square (West Sheridan Road to East Sheridan Road)
19. Hovland Court (Emerson Street to Church Street)
20. Barton Avenue (Hull Terrace to Harvard Terrace)
21. McDaniel Avenue (Crain Street to Greenleaf Street)
22. Ingleside Place (Orrington Avenue to Euclid Avenue)
23. Judson Avenue (Judson Avenue 1100 Block to Judson Avenue 1200 Block)
24. Seward Street Pilot Program (Florence Avenue to Wesley Avenue)
   a. 50W 3000K Acrylic Lens LED Sternberg Tallmadge Replica
   b. 50W 3000K Frosted Lens LED Sternberg Tallmadge Replica
25. Thayer Street Pilot Program (Central Park Avenue to Lawndale Avenue)
   a. 80W 4000K Original Lens LED Everlight Tallmadge Retrofit
26. Forest Avenue Pilot Program (Keeney Street to Kedzie Street)
   a. 40W 4000K Original Lens LED Elcast Tallmadge Retrofit
   b. 80W 4000K Original Lens LED Elcast Tallmadge Retrofit

**Intersections**
27. Chicago Avenue and Keeney Street
28. McCormick Boulevard and Bridge Street
29. Ridge Avenue and Foster Street
30. Sheridan Square and Keeney Street

**Parks (Bike/Pedestrian Pathways)**
31. Lakefront Bike Path (Greenwood Street to Northwestern University)

The lighting level study and analysis included a field survey determining the geometry of the roadway, bike path or intersection being studied; pole layout and spacing; geometry of parkways and sidewalks; location of trees for consideration of tree bloom; and adjacent business and porch ambient illumination that could effect the light studies.
## LIGHTING STUDY LOCATIONS

### MAJOR ROADWAYS
1. Green Bay Road (Simpson Street to Payne Street)
2. Main Street (Sherman Avenue to Hinman Avenue)
3. Chicago Avenue (Kedzie Avenue to South Boulevard)
4. Dodge Avenue (Washington Street to Seward Street)
5. Chicago Avenue (Church Street to Grove Street)
6. Ridge Avenue (Lake Street to Dempster Street)
7. Central Street (Walnut Avenue to Broadway Avenue)
8. Oakton Street (Florence Avenue to Asbury Street)
9. McCormick Boulevard (Golf Road to Green Bay Road)

### COLLECTOR ROADWAYS
10. Simpson Street (Dewey Avenue to Green Bay Road)
11. Foster Street (Maple Avenue to Sherman Avenue)
12. Central Park Avenue (Park Place to North End of Willard School)
13. Grant Street (Bennett Avenue to Pioneer Road)

### LOCAL ROADWAYS
14. Seward Street Pilot Program (Dodge Avenue to Dewey Avenue)
   a. 55W 4000K Clear Lens LED City Tallmadge Replica
   b. 5W 3000K Clear Lens LED City Tallmadge Replica
15. Seward Street Pilot Program (Dewey Avenue to Florence Avenue)
   a. 55W 4000K Frosted Lens LED City Tallmadge Replica
   b. 5W 3000K Frosted Lens LED City Tallmadge Replica
16. Lyons Street (Dodge Avenue to Com Ed Substation)
17. Brummel Street (Custer Street to East Dead End)
18. Sheridan Square (West Sheridan Road to East Sheridan Road)
19. Hovland Court (Emerson Street to Church Street)
20. Barton Avenue (Hull Terrace to Harvard Terrace)
21. McDaniel Avenue (Crain Street to Greenleaf Street)
22. Ingleside Place (Orrington Avenue to Euclid Avenue)
23. Judson Avenue (Judson Avenue 1100 Block to Judson Avenue 1200 Block)
24. Seward Street Pilot Program (Florence Avenue to Wesley Avenue)
   a. 50W 3000K Acrylic Lens LED Sternberg Tallmadge Replica
   b. 50W 3000K Frosted Lens LED Sternberg Tallmadge Replica
25. Thayer Street Pilot Program (Central Park Avenue to Lawndale Avenue)
   a. 80W 4000K Original Lens LED Everlight Tallmadge Retrofit
26. Forest Avenue Pilot Program (Keeney Street to Kedzie Street)
   a. 40W 4000K Original Lens LED Elcast Tallmadge Retrofit
   b. 80W 4000K Original Lens LED Elcast Tallmadge Retrofit

### INTERSECTIONS
27. Chicago Avenue and Keeney Street
28. McCormick Boulevard and Bridge Street
29. Ridge Avenue and Foster Street
30. Sheridan Square and Keeney Street

### PARKS (BIKE/PEDESTRIAN PATHWAYS)
31. Lakefront Bike Path (Greenwood Street to Northwestern University)
Following is a map displaying the original 19 study locations (red) determined by the City and the additional 12 study locations (blue) added after Public Meeting #1 and during pilot project development. The identifiers on the map correspond to the above listed study areas.
Below are findings determined by the existing conditions lighting level study and analysis at all 31 locations ranked in descending order of existing average illumination level classified by major, collector and local roadway or intersections and bike path. The criteria for meeting IESNA or COE standards as shown in the following tables only includes average illuminance, not uniformity ratio.

### Major Roadway Lighting Level Study and Analysis
For major roadway lighting, the types of luminaires varied throughout the study areas. Of the nine locations studied, only one met both the IESNA and City of Evanston (COE) lighting level recommendations and an additional three met the less stringent City of Evanston lighting level recommendations.

<table>
<thead>
<tr>
<th>Study Area</th>
<th>Boundary</th>
<th>Luminaire Type</th>
<th>Wattage (W)</th>
<th>Average (fc)</th>
<th>Uniformity Ratio</th>
<th>Meets IESNA Standard</th>
<th>Meets COE Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green Bay Road</td>
<td>Simpson Street to Payne Street</td>
<td>LED Davit</td>
<td>140</td>
<td>2.28</td>
<td>5.7</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Main Street</td>
<td>Sherman Avenue to Hinman Avenue</td>
<td>High Pressure Sodium Davit</td>
<td>250</td>
<td>1.47</td>
<td>14.7</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Chicago Avenue</td>
<td>Kedzie Avenue to South Boulevard</td>
<td>Induction Tallmadge</td>
<td>165</td>
<td>0.81</td>
<td>8.1</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Dodge Avenue</td>
<td>Washington Street to Seward Street</td>
<td>Induction Davit</td>
<td>200</td>
<td>0.66</td>
<td>66.1</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Chicago Avenue</td>
<td>Church Street to Grove Street</td>
<td>Metal Halide Davit</td>
<td>400</td>
<td>0.51</td>
<td>50.6</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Ridge Avenue</td>
<td>Lake Street to Dempster Street</td>
<td>Induction Tallmadge</td>
<td>85</td>
<td>0.27</td>
<td>26.7</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Central Street</td>
<td>Walnut Avenue to Broadway Avenue</td>
<td>Induction Tallmadge</td>
<td>85</td>
<td>0.06</td>
<td>6.5</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Oakton Street</td>
<td>Florence Avenue to Asbury Street</td>
<td>Induction Tallmadge</td>
<td>85</td>
<td>0.01</td>
<td>1.0</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>McCormick Boulevard</td>
<td>Golf Road to Green Bay Road</td>
<td>Induction Tallmadge</td>
<td>85</td>
<td>0.01</td>
<td>100.0</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>

### Collector Roadway Lighting Level Study and Analysis
For collector roadway lighting, the type of luminaire varied throughout the study areas. The type of poles also varied. Only one location met both IESNA and City of Evanston (COE) lighting level recommendations.

<table>
<thead>
<tr>
<th>Study Area</th>
<th>Boundary</th>
<th>Luminaire Type</th>
<th>Wattage (W)</th>
<th>Average (fc)</th>
<th>Uniformity Ratio</th>
<th>Meets IESNA Standard</th>
<th>Meets COE Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simpson Street</td>
<td>Dewey Avenue to Green Bay Road</td>
<td>Induction Davit</td>
<td>200</td>
<td>1.1</td>
<td>10.7</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Foster Street</td>
<td>Maple Avenue to Sherman Avenue</td>
<td>Induction Tallmadge</td>
<td>165</td>
<td>0.2</td>
<td>16.0</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Central Park Avenue</td>
<td>Park Place to North End of Willard School</td>
<td>Induction Tallmadge</td>
<td>55</td>
<td>0.01</td>
<td>1.0</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Grant Street</td>
<td>Bennett Avenue to Pioneer Road</td>
<td>Induction Tallmadge</td>
<td>85</td>
<td>0.01</td>
<td>1.0</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>
Local Roadway Lighting Level Study and Analysis

The local roadway lighting mainly consisted of induction luminaires on Tallmadge poles. Of the ten locations studied, six met IESNA lighting level recommendations and five additional study areas met the less stringent City of Evanston (COE) lighting level recommendations. The roadways that did not meet any lighting level recommendations were generally the roadways illuminated by the existing induction Tallmadge.

<table>
<thead>
<tr>
<th>Study Area</th>
<th>Boundary</th>
<th>Luminaire Type</th>
<th>Wattage (W)</th>
<th>Average (fc)</th>
<th>Uniformity Ratio</th>
<th>Meets IESNA Standard</th>
<th>Meets COE Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lyons Street</td>
<td>Dodge Avenue to ComEd Substation</td>
<td>Metal Halide Davit</td>
<td>400</td>
<td>1.22</td>
<td>122.3</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Seward Street (Pilot Program)</td>
<td>Dewey Avenue to Florence Avenue</td>
<td>4000K Frosted Lens LED City Tallmadge Replica</td>
<td>55</td>
<td>1.05</td>
<td>-</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Seward Street (Pilot Program)</td>
<td>Dodge Avenue to Dewey Avenue</td>
<td>4000K Clear Lens LED City Tallmadge Replica</td>
<td>55</td>
<td>0.97</td>
<td>-</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Seward Street (Pilot Program)</td>
<td>Dodge Avenue to Dewey Avenue</td>
<td>3000K Clear Lens LED City Tallmadge Replica</td>
<td>55</td>
<td>0.91</td>
<td>-</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Seward Street (Pilot Program)</td>
<td>Dewey Avenue to Florence Avenue</td>
<td>3000K Frosted Lens LED City Tallmadge Replica</td>
<td>55</td>
<td>0.70</td>
<td>-</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Seward Street (Pilot Program)</td>
<td>Florence Avenue to Wesley Avenue</td>
<td>3000K Acrylic Lens LED Sternberg Tallmadge Replica</td>
<td>50</td>
<td>0.71</td>
<td>-</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Seward Street (Pilot Program)</td>
<td>Florence Avenue to Wesley Avenue</td>
<td>3000K Frosted Lens LED Sternberg Tallmadge Replica</td>
<td>50</td>
<td>0.40</td>
<td>-</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Thayer Street (Pilot Program)</td>
<td>Central Park Avenue to Lawndale Avenue</td>
<td>4000K Original Lens LED Everlight Tallmadge Retrofit</td>
<td>80</td>
<td>0.26</td>
<td>-</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Brummel Street</td>
<td>Custer Street to East Dead End</td>
<td>Induction Tallmadge</td>
<td>165</td>
<td>0.15</td>
<td>15.0</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Sheridan Square</td>
<td>Sheridan Road (West) to Sheridan Road (East)</td>
<td>Induction Tallmadge</td>
<td>165</td>
<td>0.11</td>
<td>11.0</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Forest Avenue (Pilot Program)</td>
<td>Keeney Street to Kedzie Street</td>
<td>4000K Original Lens LED Elcast Tallmadge Retrofit</td>
<td>80</td>
<td>0.11</td>
<td>-</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Forest Avenue (Pilot Program)</td>
<td>Keeney Street to Kedzie Street</td>
<td>4000K Original Lens LED Elcast Tallmadge Retrofit</td>
<td>40</td>
<td>0.05</td>
<td>-</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Hovland Court</td>
<td>Emerson Street to Church Street</td>
<td>Induction Tallmadge</td>
<td>165</td>
<td>0.05</td>
<td>4.7</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Barton Avenue</td>
<td>Hull Terrace to Harvard Terrace</td>
<td>Induction Tallmadge</td>
<td>165</td>
<td>0.04</td>
<td>4.5</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>McDaniel Avenue</td>
<td>Crain Street to Greenleaf Street</td>
<td>Induction Tallmadge</td>
<td>85</td>
<td>0.03</td>
<td>3.1</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Ingleside Place</td>
<td>Orrington Avenue to Euclid Avenue</td>
<td>Induction Tallmadge</td>
<td>85</td>
<td>0.01</td>
<td>1.0</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Judson Avenue</td>
<td>Judson Avenue 1100 Block to 1200 Block</td>
<td>Induction Tallmadge</td>
<td>85</td>
<td>0.01</td>
<td>1.0</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>
Intersection Lighting Level Study and Analysis
From the intersection lighting, the luminaires varied as shown. None of the four locations studied met IESNA lighting level recommendations. There are currently no intersection-specific City of Evanston (COE) lighting level recommendations.

<table>
<thead>
<tr>
<th>Intersection Lighting Existing Conditions and Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Intersection</strong></td>
</tr>
<tr>
<td>Chicago Avenue and Keeney Street</td>
</tr>
<tr>
<td>McCormick Boulevard and Bridge Street</td>
</tr>
<tr>
<td>Ridge Avenue and Foster Street</td>
</tr>
<tr>
<td>Sheridan Square/Keeney</td>
</tr>
</tbody>
</table>

Parks (Bike/Pedestrian Pathways) Lighting Level Study and Analysis
Per IESNA, the recommended maintained illuminance levels for pedestrian ways, average illuminance should be greater than 0.5 fc and uniformity ratios should not be greater than 10. The study area met IESNA lighting level recommendations.

<table>
<thead>
<tr>
<th>Pathway Illumination Existing Conditions and Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Study Area</strong></td>
</tr>
<tr>
<td>Lakefront Bikeway (Greenwood Street to Northwestern University Campus)</td>
</tr>
</tbody>
</table>

Parking Lots
Due to the wide variation in lighting levels and lack of consistency in existing design throughout City-owned parking lots, no studies were performed.

Uplight Measurements
Dark Sky Compliant is a designation given to outdoor lighting fixtures that meet the International Dark Sky Association’s (IDA) requirements for reducing waste of ambient light. The inappropriate or excessive use of artificial light – known as light pollution – can have serious environmental consequences for humans, wildlife, and our climate (IDA – International Dark-Sky Association).

Light readings were taken from a City of Evanston utility truck atop the three existing Tallmadge induction luminaires at 55W, 85W and 165W to determine the amount of light illuminating above the luminaire and attributing to light pollution. Below is the measured illuminance five feet above the Tallmadge.

**Central Park Avenue - Park Place to North End of Willard School**
55 W Tallmadge Induction Luminaire
Illuminance = 5.8 fc, 5’-0” Above Fixture

**Central Street – Walnut Street to Broadview Avenue**
85 W Tallmadge Induction Luminaire
Illuminance = 6.2 fc, 5’-0” Above Fixture
Hovland Court - Emerson Street to Church Street

165 W Tallmadge Induction Luminaire
Illuminance = 19.7 fc, 5'-0" Above Fixture

These uplight measurements determined that the existing Tallmadge provides a significant amount of uplight light pollution, and are therefore, not dark sky compliant.

Existing Conditions Report

An Existing Conditions Report was prepared by CBBEL consisting of 206 pages summarizing the existing conditions lighting level study and analysis of the original 19 locations. This was issued to the City of Evanston on October 30, 2017. It was reviewed and accepted by City staff and Steering Committee.

2.4: CONCLUSIONS

- In comparison with IESNA lighting level recommendations, COE lighting level recommendations from the 1979 study are less stringent.
- Of the 31 locations studied throughout the City, lighting levels generally do not meet IESNA or COE recommended lighting levels.
- Tree canopies along local roadways are dense and impede lighting levels.
- Power centers are typically in good condition and a photoelectric cell at each power center is an adequate means for basic light controls.
- All power centers are unmetered and electrical usage bill is based on Com Ed’s system to estimate energy consumption.
- A smart grid or smart lighting does not exist in COE.
- Existing lighting is a significant source of light pollution.

2.5: RECOMMENDATIONS

- The City of Evanston (COE) has too many types of poles and fixtures for davit arm roadway poles and should be standardized to a specific pole and luminaire that varies in height to meet new COE lighting level recommendations.
- LED luminaires should be the only lamp specified in future developments/construction.
- It is recommended for future construction and maintenance that a replica Tallmadge full cutoff LED luminaire that is dark sky friendly be installed on all Tallmadge poles.
- The City’s alley light installation policies and procedures are well defined. The City is cognizant of citizen’s requests for additional lighting. A petition process is taken into consideration as well as the concerns of the adjacent residents. Therefore, there is no need for policy or procedure changes at this time.
- With the existing built environment the City has created, a recommended spacing between trees and poles should be 25’±. This distance would be measured from the tree trunk to the centerline of light pole to allow for growth of tree canopy and root ball without diminishing light output.
- The 0.0 footcandle (fc) requirement at the lot line should not be changed and should remain per Ordinance.
SECTION 3

STREET LIGHT INFRASTRUCTURE OPTIONS & RECOMMENDATIONS
3.1: STREET LIGHT STANDARDIZATION

The objective of this task is to provide equipment standards for various lighting applications. This section provides standard equipment for davit arm roadway lighting units, Tallmadge lighting units, park lighting units, shoe box lighting units and wall pack lighting units.

Davit Arm Roadway Lighting Unit

Presently, the City of Evanston has 1,600 davit arm roadway lighting units which include a variety of poles (typical davit arm and shepherd’s hook) and luminaires (globe-type high pressure sodium, shoebox-type metal halide, cobra head-type metal halide, cobra head-type induction and cobra head-type LED). Below are recommended standards for replacement of existing davit arm roadway lighting units.

Pole

The City of Evanston davit arm roadway lighting unit pole should be a tapered aluminum davit arm pole with a 25 to 30-foot mounting height and an 8-foot arm fabricated from aluminum alloy seamless tube. The assembly pole and arm should be powder coated black. A previously specified pole meeting these requirements is the Hapco Model: SKKP091912A.

In areas where Tallmadge lighting units complement the lighting levels, the davit arm roadway lighting unit pole could have a decorative aluminum clamshell base cover to replicate the base of the Tallmadge lighting unit. A previously specified pole base meeting these requirements is the Stresscrete Model: KSB19.

In areas where holiday lighting will be displayed on the davit arm roadway lighting unit, banner arms and/or 20A 120V NEMA 5-20R duplex GFCI festoon receptacle recessed into the light pole with weatherproof cover rated for in-use and painted black may be specified.

Luminaire

A goal of this project was to standardize the replacement of the City’s many existing luminaires. As such several alternatives were explored.

The current industry wide trend is the conversion of the current high intensity discharge (H.I.D.) lamps to the LED light source. The conversion to LED lighting will increase the City’s energy efficiency, standardize the look of each light source, control glare and uplighting, add to the current life cycle of the light source and reduce greenhouse gas emissions.

Color temperature is a measure of spectral content of light from a source or how much yellow, red, green and blue exists at the source. A higher color temperature means greater blue content, and the whiter light appears as seen in Figure 3.1.

Based on the results of the community survey in Appendix A8.7 and current research, it is suggested that a temperature of 3000K or less be utilized in the City of Evanston. This recommendation will apply to all luminaires in the following discussion.

The City of Evanston davit arm roadway lighting unit luminaire should be:

- A black color
- Full cutoff with a wattage range of 140W - 200W cobra head-type LED luminaire
- 3000K or less color temperature
- Type III optics.

A previously specified luminaire meeting these requirements is the Autobahn Model: ATB2-60LED85-MVOLT-R3-3K.

![Color Temperature Chart](image)
In areas where pedestrian traffic is high, a black full cutoff 20W - 40W cobra head-type LED pedestrian-scale luminaire with 3000K color temperature and type II optics could be installed on the opposite side of the roadway luminaire at a height of 14 feet to increase uniform lighting levels, increase efficiency, eliminate uplighting levels and reduce glare. A previously specified luminaire meeting these requirements is the Autobahn Model: ATB0-20BLED53-MVOLT-R2-3K.

**Location**
The davit arm roadway lighting unit should be installed along all major roadways, select collector roadways and critical intersections where pedestrian traffic and/or vehicular traffic is high.

**Capital Cost**
The cost to replace existing davit arm luminaires with new luminaires is estimated to be as follows:

<table>
<thead>
<tr>
<th>Material</th>
<th>$1,500.00 (Luminaire)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor and Equipment</td>
<td>$200.00</td>
</tr>
<tr>
<td><strong>Total Cost</strong></td>
<td><strong>$1,700.00</strong></td>
</tr>
</tbody>
</table>

The cost to replace existing davit arm lighting units which includes a new pole and luminaire is estimated to be as follows:

<table>
<thead>
<tr>
<th>Material</th>
<th>$1,500.00 (Luminaire)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor and Equipment</td>
<td>$8,300.00 (Pole)</td>
</tr>
<tr>
<td><strong>Total Cost</strong></td>
<td><strong>$10,800.00</strong></td>
</tr>
</tbody>
</table>

**Tallmadge Lighting Unit**
Presently, the City of Evanston has 4,200 Tallmadge lighting units manufactured by Union Metal Corporation. Union Metal Corporation has since gone out of business. The current Tallmadge lighting unit is an assembly of six separate parts making maintenance and inventory a constant hardship. Below are recommended standards for replacement of existing Tallmadge lighting units.

**Pole**
The City of Evanston Tallmadge lighting unit pole should be a flute tapered steel, cast iron, aluminum or fiberglass pole with a 14-foot mounting height complete with decorative luminaire fitter and decorative base to best replicate existing Tallmadge pole, powder coated black. A pole meeting these requirements can be furnished by a custom mold manufactured for the City of Evanston.

In areas where holiday lighting will be displayed on the Tallmadge lighting unit, a 20A 120V NEMA 5-20R duplex GFCI festoon receptacle recessed into the light pole with weatherproof cover rated for in-use (allowing the plug and cord to be completely enclosed with the cover closed when devices are plugged in) and painted black may be specified.

**Luminaire**
Due to inefficiencies with the existing Tallmadge luminaire, several options for replacement were evaluated. Two retrofits manufactured by Everlight and Elcast were tested to replicate the existing Tallmadge lighting unit luminaire. In both cases substantial amount of
up light and glare was observed. The pilot retrofits were inferior and would not be an adequate upgrade to the existing Tallmadge lighting unit luminaire. The LED luminaire will be fully shielded on the top and its lighting component will be installed in the top of the fixture and not be visible. This will allow for the luminaire to be dark sky friendly and allow the energy produced by the LED’s to be directed downward. The Pilot Program explored several lens types including: clear, prismatic acrylic and frosted acrylic. Determined by public opinion, aesthetics, light level readings and the amount of glare, the luminaire lens panels will be a frosted acrylic lens.

Based on the public feedback and stakeholder involvement, a Sternberg luminaire or equal is recommended for future luminaire replacement. See Pilot Program Area Summary in Appendix A5 for additional detail.

The City of Evanston Tallmadge lighting unit luminaire should be:

- Powder coated with a black color
- Full cutoff with a wattage range of 50W to 100W for the light source
- 3000K or less color temperature
- Type III or Type V optics with frosted acrylic lens that best matches the existing Tallmadge luminaire

A previously specified luminaire meeting these requirements is the Sternberg Model: MS805ALED-4AIR30-T3-MDL03-SV1.

The Tallmadge lighting unit luminaire can be installed on a Tallmadge lighting unit pole.

**Location**

The Tallmadge lighting unit may be installed along select collector roadways, all local roadways and intersections where a collector and local roadway meet or where two local roadways meet. It may be necessary to supplement Tallmadge lighting with davit are roadway lights at high pedestrian or traffic areas and intersections. Existing Tallmadge lights will be maintained unless otherwise approved by the City Council.

**Capital Cost**

The cost to replace existing Tallmadge lighting unit luminaire with new replica Tallmadge lighting unit luminaire is estimated as follows:

<table>
<thead>
<tr>
<th>Material</th>
<th>$2,800.00 (Luminaire)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor and Equipment</td>
<td>$200.00</td>
</tr>
<tr>
<td><strong>Total Cost</strong></td>
<td><strong>$3,000.00</strong></td>
</tr>
</tbody>
</table>

The cost to replace existing Tallmadge lighting unit with new replica Tallmadge lighting unit is estimated as follows:

<table>
<thead>
<tr>
<th>Material</th>
<th>$2,800.00 (Luminaire)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor and Equipment</td>
<td>$400.00 (Pole)</td>
</tr>
<tr>
<td><strong>Total Cost</strong></td>
<td><strong>$5,760.00</strong></td>
</tr>
</tbody>
</table>
Park Lighting Units
Presently, the City of Evanston has various lighting units throughout the City; included in those lighting units are park lighting units. These units are generally used to provide security lighting in parks and along bike/pedestrian pathways. A metal halide luminaire is generally implemented within the lighting unit. To save money on energy and maintenance, installation of more-efficient longer-lasting LED lighting units matching the existing style is recommended. Below are recommended standards for park lighting units.

**Pole**
The pole should be a round aluminum pole complete with decorative base and decorative mast arm, powder coated black. A previously specified pole meeting these requirements is the Philips Lumec Domus.

A 20A 120V NEMA 5-20R duplex GFCI festoon receptacle recessed into the light pole with weatherproof cover rated for in-use and painted black may be specified for maintenance staff use.

**Luminaire**
The luminaire should be a black full cutoff decorative LED luminaire with 3000K or less color temperature and type III or type V optics. A previously specified luminaire meeting these requirements is the Philips Lumec Domus or equal.

**Location**
The lighting unit should be installed along bike/pedestrian pathways and in parks.

Athletic field lighting is not included in this study.

Shoe Box Lighting Unit
The shoebox lighting units are generally used in City owned and maintained parking lots. Below are recommended standards for shoe box lighting units.

**Pole**
The shoe box lighting unit pole should be a 16’ – 30’ round aluminum pole, powder coated black.

In parking lots where holiday lighting or advertisement will be displayed on the parking lot lighting unit, banner arms and/or 20A 120V NEMA 5-20R duplex GFCI festoon receptacle recessed into the light pole with weatherproof cover rated for in-use and painted black may be specified.

**Luminaire**
The shoe box lighting unit luminaire should be a black full cutoff shoe box-type LED luminaire with 3000K or less color temperature and type II, type III or type V optics.

**Location**
The shoe box lighting unit should be installed at City-owned parking lots.
Wall Pack Lighting Unit

The wall pack lighting units are generally used in viaducts, tunnels and underpasses. To save money on energy and maintenance, installation of more-efficient longer-lasting LED lighting units throughout the City is recommended. Below are recommended standards for wall pack lighting units.

Luminaire

The City of Evanston wall pack lighting unit luminaire should be:

• 29W to 79W LED luminaire with 3000K color temperature
• Type III optics constructed of die cast aluminum powder coated black

A previously specified luminaire meeting these requirements is the Lithonia Model: KAXW LED-P2-30K-R3-MVOLT.

Location

The wall pack lighting unit should be installed within viaducts throughout the City of Evanston.

Additional Street Light Infrastructure

Conduit

All underground cable shall be installed in conduit or unit duct. When a cable in conduit system is specified, the conduit shall be PVC unless noted otherwise.

• HDPE Unit Duct
  High-density polyethylene (HDPE) conduit, fittings, and accessories shall comply with ASTM standard D 1784, NEMA Publication No. TC2, and NEC Article 347.

• RGS
  Rigid steel conduit shall be galvanized and manufactured according to UL Standard 6 and shall meet Federal Specification WWC-581, ANSI Standard C 80.1, and the requirements of NEC Article 346-15. All couplings and fittings shall meet ANSI Standard C 80.1 and shall be hot-dip galvanized. Elbows and couplings shall conform to the specifications for conduit. All fittings and couplings for rigid conduit shall be of the threaded type.

All unit duct or conduit that passes under and within two feet of streets and driveways shall be encased in galvanized rigid steel conduit with a minimum size of 2” diameter.

Cable

• Conductors
  Conductors shall be coated or uncoated copper. Uncoated conductors shall be according to ASTM B3, ICEA S-95-658/NEMA WC70, and UL Standard 44. Coated conductors shall be according to ASTM B 33, ASTM B 8, ICEA S-95-658/NEMA WC70 and UL Standard 44. All conductors shall be stranded.

All cable shall be rated 600V. The cable shall be rated 105°C dry and 90°C wet, suitable for installation in wet and dry locations, and resistant to oils and chemicals. Any cable for a service entrance shall have a Type USE-2 rating.

All electric cables shall be color coded. Ground conductors shall be bare stranded copper installed within the duct. Neutral wires shall be color coded white. If additional conductors are required, the colors shall be in accordance with the NEC. The UL listing mark, cable voltage, insulation type and ratings, as well as the cable size shall all be clearly printed on the cable in a color contrasting with the insulation color.
• Insulation
  XLP Insulation: Insulation cable designated as XLP shall incorporate cross-linked polyethylene (XLP) insulation and shall meet or exceed the requirements of ICEA S-95-658, NEMA WC70, and U.L. Standard 44.
  Insulation thickness shall be according to Table 310-13 of the NEC. The cable shall be rated 600 volts and shall be UL Listed Type RHH/RHW-2/USE rated for underground service.

• Splices
  All underground cable shall be continuous. Necessary splices shall be made above ground or in handholes. Splices shall be made using 3M Scotch Cast Kits or approved equal.

Fuses
All luminaires and receptacles shall be protected with fuses at the base of the pole, accessible from the pole handhole. When more than one phase conductor is connected to a luminaire, two-pole fuseholders shall be used. All fuses shall be ten amperes with Bussmann in line, type HEB-AW or HEX-AW waterproof fuseholders or equivalent. Neutral conductors to luminaires and receptacles shall have an identical fuseholder to the phase conductors with a ‘slug’.

Foundation
All concrete foundations shall be installed to a depth suitable for soil conditions. The top of the foundation shall be set 1” above finish grade with a ¾” chamfer. The foundations shall have a minimum of two raceways, 2 1/2” PVC long radius elbows for passing cables and duct into the light pole. Steel reinforcement and anchor rods shall be secured to prevent shifting during the placement of concrete. Forms shall remain in place for at least 24 hours after placement of concrete. Pole shall not be installed for a minimum of one week after the placement of concrete. All concrete foundations require a ground rod. Ground rod shall be connected to the light pole foundation reinforcing steel and anchor bolts with a #6 bare copper conductor. Concrete shall be class IDOT Class SI.

Davit Type Light Pole Assemblies
• When formed for light pole foundation shall be 20” diameter with a 4 bolt pattern.
• Anchor bolts shall be 1” diameter and have a 4’-0” minimum embedded depth and a 4” minimum galvanized threaded top.

Tallmadge Light Pole Assemblies
• When formed for the foundation assembly shall be 24” diameter with a 3 bolt or 4 bolt pattern dependent upon light pole base plate.
• Anchor bolts shall be 3/4” diameter and have 3’-0” minimum embedded depth and a 4” minimum galvanized threaded top.
### 3.2: CITY OF EVANSTON DESIGN AND LIGHTING LEVEL RECOMMENDATIONS

Figure 3.7 represents the recommended standards for lighting levels in the City of Evanston.

#### Illuminance

Illuminance is a calculation of the density of incident light on a surface expressed using footcandles (fc). The recommendations for illumination are a range of levels based on prior City of Evanston recommendations, current IESNA recommendations, and stakeholder and public input.

#### Uniformity

Both spacing and setback directly affect the uniformity. Uniform lighting allows us to perceive the environment continuously, a frequent change of contrasting high- and low-illuminated roadway segments cause visual impairment, leading to stress and tiredness jeopardizing road safety.

Uniformity is expressed as a ratio of average illuminance to minimum illuminance.

<table>
<thead>
<tr>
<th><strong>CURRENT CITY OF EVANSTON (COE) STANDARDS</strong></th>
<th><strong>AVERAGE ILLUMINANCE (FC)</strong></th>
<th><strong>UNIFORMITY RATIO</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Major</td>
<td>0.9-1.7</td>
<td>3.0</td>
</tr>
<tr>
<td>Collector</td>
<td>0.6-1.0</td>
<td>4.0</td>
</tr>
<tr>
<td>Local</td>
<td>0.4-0.9</td>
<td>6.0</td>
</tr>
<tr>
<td>Major/Collector</td>
<td>1.8-3.4</td>
<td>3.0</td>
</tr>
<tr>
<td>Local/High level</td>
<td>1.5-2.9</td>
<td>3.0</td>
</tr>
<tr>
<td>Pedestrian designated crossings</td>
<td>1.8-2.4</td>
<td>3.0</td>
</tr>
<tr>
<td>Parking lot</td>
<td>1.0</td>
<td>5.0</td>
</tr>
<tr>
<td>Parking lot - High level</td>
<td>1.5</td>
<td>3.0</td>
</tr>
<tr>
<td>Wall pack</td>
<td>0.5</td>
<td>-</td>
</tr>
</tbody>
</table>

#### Proposed City of Evanston (COE) Standards

<table>
<thead>
<tr>
<th><strong>AVERAGE ILLUMINANCE (FC)</strong></th>
<th><strong>UNIFORMITY RATIO</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>DAVID</td>
<td>0.2-1.0</td>
</tr>
<tr>
<td>TALLMADGE</td>
<td>0.2-1.0</td>
</tr>
<tr>
<td>REPLICA</td>
<td>0.2-1.0</td>
</tr>
<tr>
<td>ORNAMENTAL ALUMINUM POLE</td>
<td>0.5</td>
</tr>
<tr>
<td>PHILIPS LUMEC DOMUS</td>
<td>0.3-0.5</td>
</tr>
<tr>
<td>SHOE BOX LED</td>
<td>1.0</td>
</tr>
<tr>
<td>WALL PACK LED</td>
<td>2.0</td>
</tr>
</tbody>
</table>

Note: Existing Tallmadge light locations will be maintained unless otherwise approved by the City Council.
Street Light Infrastructure Options & Recommendations

Spacing

Spacing is the distance between successive luminaires measured along the centerline of the street.

Three separate scenarios were modeled along a 30-foot cross-section of Seward Street (Dodge Avenue to Wesley Avenue) with the 92W LED replica Tallmadge luminaire mounted at 16 feet in different configurations to determine optimum spacing. The different configurations analyzed were single sided, opposite-sided, and staggered.

These three models were analyzed against IESNA recommended illuminance levels as seen in Figure 3.8 and existing conditions along Seward Street of 13 existing Tallmadge lighting units.

It was determined that along local roadways that staggered configuration is most efficient and provides the most economical means of meeting required lighting levels and uniformity. The typical spacing in a residential area (Tallmadge) using a staggered layout would be 75' to 100'. A typical spacing along a major roadway (Davit) would be 150' to 200'.

Setback

Setback is the lateral offset of the pole center from the face of the curb or edge of the traveled way. It is recommended where a sidewalk does not exist, or a parkway is present, that the proposed lighting unit be installed three feet from face of the curb to center of pole, unless utility conflicts dictate otherwise.

<table>
<thead>
<tr>
<th>LOCAL ROADWAY (30’ CROSS SECTION)</th>
<th>PHOTOMETRIC SUMMARY TABLE</th>
<th>LUMINANCE(L) (CD/M^2) &amp; ILLUMINANCE(E) (fc)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Imax/L(min)</td>
</tr>
<tr>
<td>IES RECOMMENDED*</td>
<td></td>
<td>&gt;0.5</td>
</tr>
<tr>
<td>EXISTING CONDITIONS (55W INDUCTION TALLMADGE)</td>
<td></td>
<td>0.05</td>
</tr>
<tr>
<td>95’ SINGLE SIDED CONFIGURATION</td>
<td></td>
<td>0.55</td>
</tr>
<tr>
<td>175’ OPPOSITE SIDED CONFIGURATION</td>
<td></td>
<td>0.67</td>
</tr>
<tr>
<td>210’ STAGGERED CONFIGURATION</td>
<td></td>
<td>0.50</td>
</tr>
</tbody>
</table>

* RECOMMENDED VALUES PER IESNA ROADWAY LIGHTING RP-8-14, TABLE 3, “LIGHTING DESIGN CRITERIA FOR STREETS” AND TABLE 5, “RECOMMENDED VALUES FOR MEDIUM PEDESTRIAN CONFLICT AREAS”

Figure 3.8: Example Lighting Unit Spacing Results
Figure 3.9: Example Lighting Unit Spacing

- **Staggered ~30' Spacing Pole Cycle**
  - 13 total poles
  - 55W Induction Tallmage Existing Conditions

- **Single Sided 95' Spacing**
  - 21 total poles (8 additional poles)

- **Opposite 175' Spacing**
  - 24 total poles (11 additional poles)

- **Staggered 210' Spacing Pole Cycle**
  - 18 total poles (5 additional poles)

**Sternberg 92W LED (MS805AL0D-4A/R30-T3-MDL03-SVI)**
4
LIGHTING CONTROL TECHNOLOGY
A smart city is defined as “A City that utilizes operational information and communication technology to increase the quality of life of their inhabitants while providing sustainable development”.

A smart city is a municipality that uses information and communication technologies to increase operational efficiency, share information with the public and improve both the quality of government services and citizen welfare.

Energy conservation and efficiency are major focuses of smart cities. Using smart sensors, smart streetlights dim when there aren’t cars or pedestrians on the roadways. Smart grid technology can be used to improve operations, maintenance and planning, and to supply power on demand and monitor energy outages.

This type of system collects information about itself through sensors, communicating and analyzing that data to understand what’s happening now and in the future. Data collection may be obtained using either a wired or wireless network.

These technologies, when incorporated into the existing conditions of all existing City and ComEd owned lighting, will improve how each system operates.

Over the past several years there have been great advances in what capabilities can be provided by the latest control technologies in the lighting industry. Some of these new technologies are listed below and allow the City to pool more beneficial data that can be used to more efficiently operate their lighting systems and collect information. An introduction to these technologies is listed herein. These technologies have been broken out to show advances in utility based technologies provided by the City of Evanston’s utility, ComEd, for the Smart Grid and Smart Meter programs, the interactive lighting unit sensors and control monitoring systems.

**Smart Grid**

The smart grid is the evolution of our current electric grid, using new technology to optimize the conservation and delivery of power. The smart grid promises to increase the efficiency of today’s system. Saving operational costs and saving energy, a smart grid provides three key benefits.

1. Fewer and shorter outages.
2. Tools and services that can help save money.
3. A cleaner, greener planet by reducing electricity usage and greenhouse gas emissions through the use of LED lighting technology that utilizes lower wattage, more efficient lighting units, and through the use of system monitoring paired with dimmable technologies.

**Smart Meter**

Smart meters, a common form of smart technology, are digital meters that replace the old analog meters used in homes, buildings, schools etc. to record electrical usage. Digital meters can transmit energy consumption information back to the utility on a much more frequent schedule than analog meters, which requires a meter reader to transmit information. After a smart meter is installed, alerts and weekly usage reports can be made available to consumers, allowing them to manage usage more efficiently. Smart meters may also notify the utility of power outages or allow the utility to remotely switch electricity service on or off.

This application can also be used for street light systems. Once lighting controllers are retrofitted with smart meters, a City can enroll in an optional pricing program. This allows a City to take control of electric usage and save more in energy costs. This control means much more than turning on-off the street lights at dusk-sunrise, it means being able to program each fixture individually to brighten areas when needed and dim them when it is not. It also will help to detect and correct problems quickly to minimize down time. Additionally:

- There is no cost for the Smart Meter. ComEd supplies meters at NO charge.
- Estimated budgetary installation cost $550 per meter fitting upgrade on cabinet.
- For GE outdoor Wireless Control System, which includes 7 pin receptacle, and one modem for 500 fixtures, is approximately $500 for each fixture.
7 Pin Photocell Type Receptacles
The City of Evanston currently uses one individual photocell at each of the lighting controllers to automatically turn the street lights on and off. Within the last few years, more cities are using computer based access systems to monitor and control individual lighting controllers all the way down to individual lighting unit control, allowing for checking system operation (outages), circuit outages and allowing for dimming of the light source. The backbone of this technology is to install a 7-pin receptacle on each luminaire for individual control.

This type of control is run through a modem and an outdoor wireless control system for street and roadway lights. This technology is used for energy management and conservation. This system allows for remote operation and monitoring of all fixtures with the 7-pin receptacle installation through a web-enabled central management system. This system can be applicable for both street lights and area lights. ANSI C136.41 7-pin dimming receptacles can work with any lamp type or manufacturer with full support of all 7-pins on “plug and play” installation. Each 7-pin receptacle can be programmed to allow for:

- Integrated GPS in Each Node/Fixture for real time asset reporting
- DALI interface for Asset management and dimming
- Inrush current limiting circuit
- Utility grade measurement up to 0.5% accuracy
- Full autonomous photocell functionality
- Real time measurement and storage of Voltage, Current, Wattage, Power factor, and Hours of operation
- ON/OFF switching
- Analog and digital sensor inputs
- Constant status and health monitoring of your lighting fixture

Outdoor Lighting Control Systems
The 7-pin receptacle installed on each luminaire is managed by a wireless cellular signal or Wi-Fi compatible network. Each of the systems can be monitored by a desktop, laptop or smart phone device and are web-based sites. Outdoor control systems consist of three types of components: Field Devices/Controller, Gateway Cellular Modem Wi-Fi, or a Central Management System as follows:

- **Individual Nodes:** The system controller originates a command to execute a lighting change. The controller monitors and controls local luminaires to react and respond to logical and physical inputs from a program on user interface so that each command can make a control decision and communicate via network protocol.

- **Individual Gateways:** A device designed for interface between different protocols, such as DALI. Interface between the controller and a Central Management System.

- **Remote Server:** The Central Management System is a computer environment that functions as the core of the system by providing all shared system devices and consolidating and storing all system data.
**Construction, Operation and Maintenance Costs**

Three (3) individual controller centers were evaluated for use in exploring Smart Meters and Smart Grid technologies. The following controllers and readings taken are noted below. Refer to Appendix A1 for power center location maps.

**Power Center 18N-05W**
- Total Wattage Consumed by Luminaires = 6230
- Load Amps 23.15 @ 240 Volts
- Operating Watts 5556

**Power Center 26N-07W**
- Total Wattage Consumed by Luminaires = 7565
- Load Amps 29 @ 240 Volts
- Operating Watts 6960

**Power Center 23N-08W**
- Total Wattage Consumed by Luminaires = 7395
- Load Amps 27.25 @ 240 Volts
- Operating Watts 6540

Connected load is the total load when all luminaires are functioning, and operating load is the load in its current operational condition (possible luminaire outages). The variance is due to nonfunctional luminaires during testing. By installing Smart Meters at each Power Center, the personnel monitoring the system can see an increase or decrease in how much power is being used.
Capital Costs:
The costs shown below are a scenario for upgrading the entire Tallmadge lighting system to LED and installing smart grid technology.

<table>
<thead>
<tr>
<th>Description of Work</th>
<th>Material and Labor Costs per Unit</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Replace Existing Tallmadge Induction Luminaire with LED</td>
<td>$1,860.00 x 4,200 Units</td>
<td>$7,812,000.00</td>
</tr>
<tr>
<td>Install Smart Grid Control System Hardware</td>
<td>$200.00 x 4,200 Units</td>
<td>$84,000.00</td>
</tr>
<tr>
<td>Install Modems or Wi-Fi Routers</td>
<td>$500.00 x 20 Units</td>
<td>$10,000.00</td>
</tr>
<tr>
<td>Software Start-Up and Computer Equipment</td>
<td>1 Unit</td>
<td>$15,000.00</td>
</tr>
<tr>
<td>Smart Meter Installation</td>
<td>$550.00 x 107 Controllers</td>
<td>$58,850.00</td>
</tr>
</tbody>
</table>

**Total Cost of Upgrading Existing Tallmadge Luminaires and Smart Grid Technology** $7,979,850.00

Note: Cost does not include Tallmadge pole replacement or a new foundation.

Annual Operating Cost:
The City currently spends approximately $140,000 for the electricity to operate all of its street lights. Of that total, there are 4,200 Tallmadge lights.

If the City elects to move forward with the upgrading of the 4,200 existing Tallmadge lighting units to the recommended lower wattage LED Tallmadge luminaire, electric energy usage could be reduced.

**Existing Tallmadge Lighting Energy Costs**
Assuming street lights are on an average of 10 hours per day, energy cost 8 cents per KWH, Yearly Energy Cost = $0.08 x (102\* Watts per Luminaire/1,000 kW) x 4,200 (lights) x 10 (hours per day) x 365 (days per year) = $125,093.00

* Based on an average of the combination of existing 55 watt, 85 watt and 165 watt Tallmadge lighting wattages.

**Proposed Tallmadge Lighting Energy Costs**
Assuming street lights are on an average of 10 hours per day, energy cost 8 cents per KWH, Yearly Energy Cost = $0.08 x (55 Watts per Luminaire/1,000 kW) x 4,200 (lights) x 10 (hours per day) x 365 (days per year) = $67,452

This would realize as 53% cost reduction in the energy charges as paid to ComEd.

Recommendations:
The following topics were discussed throughout the course of the study and the recommendations are as follows:

- **ComEd Smart Meter Technology** is a major improvement the City can benefit from. This new metering technology will allow the City to access real time data on the actual kilowatts (power) being used for each lighting control system, knowledge of when the system is completely out or has reduced power usage, meaning possible lighting outages. This can be facilitated by smart phone or devices without sending labor forces out to patrol problems. Any time there is City infrastructure work or capital improvement projects, the project should include the installation of the Smart Meter at the nearest control center within the project area. The cost is very minimal at $550.00 per controller and ComEd provides the actual meter at no cost.

- **Dimming of parking lot lighting using LED luminaires** can be utilized after the parking lots are secured for the evening. The LED technology will allow the City to add dimming switches to the lighting control and reduce the electrical energy usage.
Chapter 5

Prioritization and Methodology, Implementation and Funding Recommendations
PRIORITIZATION AND METHODOLOGY

The following upgrade costs have been developed to provide the City with a range of cost alternatives for general discussion. These scenarios can be considered on a case by case basis. The scenarios encompass utilizing general maintenance work swapouts as explained in scenario #1. In scenario #2 since a capital improvement plan is not in place solely based on roadway lighting, the City can elect to contract new lighting as part of a roadway reconstruction project. Scenario #3 allows the City to utilize the existing street lighting system in its current condition and replace existing luminaires with new LED luminaires, smart meter at the existing controller, smart controls (7-pin receptacle) and utilize the existing electrical wiring. Scenario #4 identifies the costs associated with taking one of the 107 individual lighting systems and regulated controls and completely removing and rebuilding it to meet recommended lighting levels. Lastly, scenario #5 identifies the costs of implementing a Capital Improvement Plan to replace the existing City-maintained lighting in their current locations with new LED and smart technologies. The second part of scenario #5 identifies the costs associated with completely removing and rebuilding all of the City-maintained lighting to meet the recommended lighting levels.

1. Maintenance and Light Pole Knockdown Case by Case Scenario

Under this scenario, if a mid-block Tallmadge type light pole is knocked down or failed and a new luminaire needs to be purchased and installed, the lighting units at nearest intersections should be replaced with newly purchased LED luminaires and the existing head from the intersection should be relocated to the mid-block location.

<table>
<thead>
<tr>
<th>Materials Required</th>
<th>Material Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Luminaire &amp; Installation</td>
<td>$3,000.00</td>
</tr>
<tr>
<td>Relocate Existing Luminaire to Existing Pole</td>
<td>$200.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$3,200.00/Occurrence</strong></td>
</tr>
</tbody>
</table>

2. Full System Replacement of Tallmadge Light

If a new roadway/capital improvement project is undertaken and existing lighting units are within the project limits, then the Tallmadge lighting units within those limits would be upgraded as part of the capital improvements. For demonstration purposes we will utilize Seward Street from Dodge to Wesley, since this area was part of the City’s pilot program.

The approximate length of the project limit is 1,800 ft. and based on analysis 18 new Tallmadge light standards would be required and all existing Tallmadge light standards would be removed. The cost to install these new lights would be as follows:

<table>
<thead>
<tr>
<th>Materials Required</th>
<th>Cost Per Unit</th>
<th>Total Unit Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Light Standard &amp; Luminaire</td>
<td>$5,760.00/Unit x 18</td>
<td>$103,680.00</td>
</tr>
<tr>
<td>New Foundations</td>
<td>$900.00/Foundation x 18</td>
<td>$16,200.00</td>
</tr>
<tr>
<td>New 1 ¼” HDPE Duct</td>
<td>$8.00/Ft x 3600 Ft</td>
<td>$28,800.00</td>
</tr>
<tr>
<td>New #8 XLP Cables</td>
<td>$1.35/Ft x 5 Cables x 4000 Ft</td>
<td>$27,000.00</td>
</tr>
<tr>
<td>New Controller &amp; Service</td>
<td></td>
<td>$15,000.00</td>
</tr>
<tr>
<td><strong>Total Cost of New System</strong></td>
<td></td>
<td><strong>$190,680.00</strong></td>
</tr>
</tbody>
</table>

Total Cost per One (1) Complete Lighting Unit Installed = $190,680.00/18 Fixtures = $10,600.00/Light Standard
3. Upgrade One Entire Existing Lighting System Using Existing Spacing, Add New LED Luminaires, 7-Pin Receptacles and Add Smart Meter to Controller

For Options 3 and 4, we utilized Power Center 26N-07W located on Central between Sherman and Orrington which has 89 Tallmadge luminaires controlled by one power center.

<table>
<thead>
<tr>
<th>Materials Required</th>
<th>Cost Per Unit</th>
<th>Total Unit Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Luminaire &amp; Installation</td>
<td>($3,000/location) x 89 Luminaires</td>
<td>$267,000.00</td>
</tr>
<tr>
<td>New 7-Pin Receptacles</td>
<td>$50.00 x 89 Luminaires</td>
<td>$4,450.00</td>
</tr>
<tr>
<td>New Smart Meter on Controller</td>
<td>$550.00</td>
<td></td>
</tr>
<tr>
<td><strong>Total Existing Control System Upgrade</strong></td>
<td></td>
<td><strong>$272,000.00</strong></td>
</tr>
</tbody>
</table>

4. Upgrade One Entire Existing System Using New Light Standards and Luminaires, New Wiring, New Foundations, New 7-Pin Receptacles and New Controller

For this scenario CBBEL used the same lighting system as described in scenario #3 above and took the 89 Tallmadge Light Standards and increased that number by approximately 30% to account for the additional poles required to meet proposed lighting levels required

<table>
<thead>
<tr>
<th>Materials Required</th>
<th>Cost Per Unit</th>
<th>Total Unit Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Light Standard &amp; Luminaire</td>
<td>$5,760.00/Unit x 116</td>
<td>$668,160.00</td>
</tr>
<tr>
<td>New Foundations</td>
<td>$900.00/Foundation x 116</td>
<td>$104,400.00</td>
</tr>
<tr>
<td>New 1 ¼” HDPE Duct</td>
<td>$8.00/Ft x 13,020 Ft</td>
<td>$104,160.00</td>
</tr>
<tr>
<td>New #8 XLP Cables</td>
<td>$1.35/Ft x 5 Cables x 15,000 Ft</td>
<td>$101,250.00</td>
</tr>
<tr>
<td>New Controller and Smart Meter</td>
<td>$15,000.00</td>
<td></td>
</tr>
<tr>
<td><strong>Total Entire Lighting System Upgrade</strong></td>
<td></td>
<td><strong>$992,970.00</strong></td>
</tr>
</tbody>
</table>

5. Complete City Wide Capital Improvement Plan

Given the cost of $10,600.00 per lighting unit from the cost derived in scenario #2 above to replace individual lights within the City of Evanston, this cost can be utilized for a roadway light pole as well as the Tallmadge lighting unit since the component costs are similar.

Taking into consideration that some areas are larger and some are smaller, there are approximately 5,800 lighting units within the City powered by 107 control centers. There are on average approximately 54 lighting units on each system. For budgetary purposes it must be put into perspective the cost to replace all of the existing lighting units as is with adding the 30% additional lighting unit, which is based on the photometric studies and the pilot programs in order to meet proposed lighting levels on a 30-year cycle. Accordingly, the City would need to set aside approximately $2,050,000.00 per year for the next 30 years to complete the replacement of the lighting system as shown below.

<table>
<thead>
<tr>
<th>Existing Infrastructure Replacement Costs</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>($10,600.00/Lighting Unit) x (5,800 Lighting Units)</td>
<td>$61,480,000.00</td>
</tr>
<tr>
<td>($61,480,000.00 for all lights)/30-Year CIP</td>
<td>$2,049,333.33/Year</td>
</tr>
</tbody>
</table>

If the city pursues the alternative to add the 30% of additional lighting (5,800 existing lighting units versus 7,540 proposed lighting units) to meet proposed lighting levels then the costs would be increased as shown below:

<table>
<thead>
<tr>
<th>Proposed Infrastructure Replacement Costs to Meet Proposed Lighting Levels</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>($10,600.00/Lighting Unit) x (7,540 Lighting Units)</td>
<td>$79,924,000.00</td>
</tr>
<tr>
<td>Cost to Replace Lighting controllers(107x$15,000.00)</td>
<td>$1,605,000.00</td>
</tr>
<tr>
<td>($81,529,000.00 for all lights and controllers)/30-Year CIP</td>
<td>$2,717,633.33/Year</td>
</tr>
</tbody>
</table>
PILOT PROJECTS

Prioritization

Consideration of high accident locations, uncontrolled intersections near schools and parks, and in and around transit hubs should be considered first when implementing new stand alone pilot programs.

Other areas of concern would follow by need and public input. These places would include public gathering areas, houses of worship, libraries, senior centers and areas identified by COE Police Department.

Lastly, major roadways are illuminated by luminaires with greater mounting heights and wattage; producing more light than those luminaires in residential areas when maintained properly, thus those lighting systems should be prioritized last.

Currently, there is no City funding for the addition or replacement of existing luminaires. Luminaires and poles are replaced as needed due to knock downs, failures and other issues. If a pole is damaged or unrepairable, this location would necessitate a new light standard, complete with new luminaire and pole as shown above in Prioritization and Methodology Scenario No. 1. The new LED light standard, complete with new luminaire and pole would enhance the lighting levels at the intersection and the areas of pedestrian conflict.

Funding Recommendations

The City of Evanston upgrades street light infrastructure as part of reconstruction projects, spot location improvements, major planned unit developments or as part of Safer Neighborhood Area Projects (SNAP). ComEd grant funding for LED lighting is currently available (See Appendix A6). ComEd facilitates rebates for replacing existing luminaires with reduced wattage LED luminaires. Currently the rebates offered by ComEd are $0.70 per watt. For example, if one of the current 400 watt high pressure sodium luminaires is replaced with a new LED equivalent luminaire of 180 watt, the wattage reduction would be 220 watts. \((220 \text{ W} \times 0.70/\text{W}) = $154.00\) rebate from ComEd.

Other Sources, when available, are grants from the Department of Commerce and Economic Opportunity (DCEO) (See Appendix A7). When available, improvements can be reimbursable up to 75% of the total cost for lighting improvements including carbon and materials.
LIVABILITY REVIEW – SUMMARY OF RECOMMENDATIONS
The City of Evanston’s strategic vision is to “Create the Most Livable City”. Evanston is using the STAR Community Rating System to define and measure community livability. Evanston was one of the first 20 communities to achieve STAR Certification, earning a 4-STAR rating. As part of this Street Light Master Plan, the STAR Community rating criteria relevant to street lighting were reviewed to determine recommended actions that the City can take to better align with the STAR community goals.

The detailed review is in Appendix A9. A summary of the recommendations is as follows.

1. Develop a plan to measure ambient light levels throughout the City. This would allow Evanston to have baseline lighting data that could be used to quantitatively measure the effect of the various changes implemented because of this Street Light Master Plan.

2. Work with an existing board, commission or neighborhood group to determine a detailed plan to become dark-sky compliant/friendly. The dark-sky criteria are a third-party measurement system that objectively evaluates Evanston’s sustainability related to night-time light pollution.

3. Work with other agencies (such as schools and hospitals) and neighboring communities to investigate mitigating area light pollution.

4. Set up a 311 request to get lighting complaint data that can be reviewed annually by issue and location.

5. Institute city code or policy requirements that private developments must utilize exterior LED lighting that is no more than 3000K in color temperature and dark-sky compliant/friendly.

6. All capital improvement projects involving exterior lighting and signage will be implemented in a way that minimizes or eliminates light pollution.
## STREET LIGHT POWER CENTERS

<table>
<thead>
<tr>
<th>Locations</th>
<th>No. of</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area 1</td>
<td>24</td>
</tr>
<tr>
<td>Area 2</td>
<td>31 (2 overlap in 3, 1 in 4)</td>
</tr>
<tr>
<td>Area 3</td>
<td>16 (reduced by 2 from 2)</td>
</tr>
<tr>
<td>Area 4</td>
<td>14 (reduced by 1 from 1, And 1 from 2)</td>
</tr>
</tbody>
</table>

- Emerson – Dodge to McCormick (Hartrey) | 1
- Emerson/Elgin – Oak to Orrington (Sherman) | 1
- Triangle (Ridge) | 1
- Research Park (Oak) | 1
- South Sheridan at Cemetery | 1
- Lake – Ashland to Dodge (Dewey) | 1
- Custer – Howard to Oakton (Mulford) | 1
- Dodge – Church to Dempster (Lake) | 1
- Emerson/Asbury – Asbury to Dodge (Wesley) | 1
- North Sheridan @ Campus (Garrett) | 1
- Green Bay – Isabella to Central (Livingston) | 1
- Green Bay – Central to Ashland (Lincoln) | 1
- Green Bay/Ashland – Ashland to Foster (Payne) | 1
- Simpson – Green Bay to McCormick (Dewey) | 1
- Noyes – Ridge to Sherman (Sherman) | 1
- Main – Sherman to Hinman (Hinman) | 1
- Hot Dog Island (Gross Point) | 1
- Downtown | 3
- Howard – Chicago to Ridge (Custer) | 1
- Dempster – Elmwood to alley E Chicago (Chicago) | 1

Total | 107
Luminaires:
02 – 165W Tallm.
06 – 250W Davit
11 – 400W Davit
ITEMS SHOWN IN ENCOMPASSED AREA PREVIOUSLY INSTALLED UNDER CONTRACT NO. 2

POWER CENTER
26N-07W

Luminaires:
89 - 85W Tallm.
Street lighting systems serving the following areas or streets shall be designed to satisfy the specific lighting level requirements set forth below:

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>LIGHTING LEVEL (In Footcandles)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. RIDGE AVE. from Howard Street to Emerson Street</td>
<td>0.6-1.0</td>
</tr>
<tr>
<td>b. FOSTER STREET BUSINESS DISTRICT between Sherman and Maple</td>
<td>0.4-0.6</td>
</tr>
<tr>
<td>CUSTER STREET BUSINESS DISTRICT between Cleveland and Main Streets</td>
<td>0.4-0.6</td>
</tr>
<tr>
<td>To be consistent with Noyes Street and other small local business areas</td>
<td></td>
</tr>
<tr>
<td>c. ELMWOOD from Main to Grove</td>
<td>0.2-0.4</td>
</tr>
<tr>
<td>JUDSON from Kadzie to Lee</td>
<td>0.2-0.4</td>
</tr>
<tr>
<td>HINMAN from Kadzie to Lee</td>
<td>0.2-0.4</td>
</tr>
<tr>
<td>GREENLEAF from Ridge to Dodge</td>
<td>0.2-0.4</td>
</tr>
<tr>
<td>DAVIS from Ridge to Ashland</td>
<td>0.2-0.4</td>
</tr>
<tr>
<td>Local streets thru areas designated by Police Department for higher light levels to assist in crime prevention</td>
<td></td>
</tr>
<tr>
<td>d. MCCORMICK from Brown to Elgin Road for continuity with levels existing south of Elgin Road and to provide some nighttime lighting adjacent to Ladd Arboretum.</td>
<td>1.0-2.0</td>
</tr>
</tbody>
</table>
The recommended lighting level standards shown in Table 5 are to apply to all areas receiving new or rehabilitated street lighting under this plan except as noted below. Appropriate uniformity ratios and other technical requirements are to be established by detailed engineering studies as approved by the City Council.

**RECOMMENDED LIGHTING LEVELS IN FOOTCANDLES**

**Adjacent Land Use:**

<table>
<thead>
<tr>
<th>Street Category</th>
<th>Industrial</th>
<th>Commercial &amp; Institutional</th>
<th>High Density Residential</th>
<th>Low Density Residential</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major</td>
<td>0.4-1.0*</td>
<td>1.0-4.0*</td>
<td>0.4-0.6*</td>
<td>0.2-0.4</td>
<td>* special study required for each use. 4.0 foot-candles to apply only to Central Business District (CBD)</td>
</tr>
<tr>
<td>Collector</td>
<td>0.4-1.0</td>
<td>0.4-1.0</td>
<td>0.2-0.4</td>
<td>0.2-0.4</td>
<td></td>
</tr>
<tr>
<td>Distributor</td>
<td>No such category</td>
<td>1.0-4.0 CBD only</td>
<td>0.2-0.6* East of Hinman &amp; So. of Lake</td>
<td>0.2-0.4</td>
<td>* special study required for each street &amp; block</td>
</tr>
<tr>
<td>Local</td>
<td>0.2-0.4</td>
<td>0.4-0.6</td>
<td>0.1-0.2</td>
<td>.05-0.1</td>
<td></td>
</tr>
</tbody>
</table>
CITY OF EVANSTON
PETITION FOR ALLEY LIGHTING

Date Submitted ___/____/___

I hereby petition the City of Evanston to authorize ComEd to install lighting in the alley behind the property at (ComEd utility pole location):

Address: _________________________________________________________ Ward: ______

I understand that ComEd offers only 100 watt or 250 watt High Pressure Sodium Luminaire/Lamps. (Note: this type of high pressure sodium lamp will emit orange glow and may shed light on to the adjacent properties). I request ComEd to install:

Check one:  _________ 100 Watt Lamp  ________ 250 Watt Lamp

I am aware that I am responsible for the electricity usage bill to be paid directly to ComEd.

Applicant:
Name:___________________________________________________________
Address:_________________________________________________________
Phone Number:________________________Email:_______________________

(Note: This petition must be signed by at least 51% of the residents living adjacent to this alley and/or approved by the Ward Alderman. For condominiums and rental properties, one letter of approval from the condominium association or management firm is sufficient).

I support the installation of an alley light at the address listed above located in my ward.

Signature: __________________________________________
Ward Alderman
<table>
<thead>
<tr>
<th>Name</th>
<th>Address</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

Submit your completed petition to:
Public Works Agency
Room 3700
2100 Ridge Avenue
Evanston, IL 60201
CITY OF EVANSTON
PETITION FOR ALLEY LIGHTING
REIMBURSMENT & PAYMENT AGREEMENT

Date Submitted ___/____/___

I am aware that I am responsible for the electricity usage bill to be paid directly to ComEd.

(Note: If the location is within the targeted CDBG program area, the city will reimburse, on a yearly basis, 50% of the electricity cost incurred by the applicant for the first five (5) years after the installation date. The applicant must submit the utility bills to the Public Works Agency with proof of payment on a yearly basis during the five (5) year period of City reimbursement, if applicable. The mailing address for submitting proof of payment is listed below.)

Applicant: (Person responsible for paying electricity charges)
Name:___________________________________________________________
Address: _________________________________________________________
Phone Number:________________________Email:_______________________
Alternate Phone Number: ____________________________________________

Send Proof of Payment to:  City of Evanston
Public Works Agency
Room 3700
2100 Ridge Avenue
Evanston, IL 60201

Printed Name: ______________________________
Signature: _________________________________
Date: ___/____/___
Means and Methods of Existing Conditions Lighting Level Study and Analysis

The existing conditions were studied with an illumination light meter (Extech SDL400 as shown in Figure 1) collecting illumination readings in a grid format per IESNA Roadway Lighting ANSI/IES RP-8-14. Area and points for the grid are typical as shown in Figure 2, including two tranverse points per lane at each longitudinal point along one luminaire cycle. A luminaire cycle is defined as the distance between two luminaires having the same geometry, mounting height, overhang, tilt and orientation. In the event that the luminaire geometry is not uniform along the length of the roadway, the gridded portion should continue along the length of the roadway until it has reached the point where the luminaire geometry remains constant. Longitudinally, calculation points should be placed so there is at least ten points along the roadway not more than five meters on center. In the event that the roadway varies in number of lanes, the grid should be based on the number of lanes for the majority of the length of the roadway. In the event that the roadway width and number of lanes change, then a revised grid should be used for the new width of the roadway.

Figure 1: Illumination Light Meter (Extech SDL400)
The calculation points for illuminance in the pedestrian area or sidewalk adjacent should match the roadway grid spacing, be positioned in the center and be calculated in assuming a meter aimed along the sidewalk in both walking directions.

Calculation points for intersections should extend from the stop bar at each street across the entire intersection. The grid spacing for the points should be at 2 meters throughout the calculation area as shown in Figure 3.
Figure 3: Typical Intersection Grid Layout
STREET LIGHTING MASTER PLAN

PILOT PROGRAM AREA SUMMARY

NOTE: Due to the limited number of luminaires provide by each manufacturer and differentiating luminaires along the roadway a full pole cycle was unavailable for proper IES recommended testing. Each test was done taking measurements 20' in either direction of the stated pilot luminaire and pole in accordance with IES recommended testing.

The following pages consist of a Pilot Program Area Summary followed by a narrative outlining observations and recommendations at each of the pilot program study areas.
<table>
<thead>
<tr>
<th>STUDY AREA</th>
<th>STUDY AREA LIMITS</th>
<th>MANUFACTURER</th>
<th>WATTAGE</th>
<th>COLOR TEMPERATURE</th>
<th>LENS TYPE</th>
<th>ROADWAY AVERAGE (FC)</th>
<th>AVERAGE AT ROW (FC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SEWARD (DODGE-DEWEY)</td>
<td>FIXTURE PROVIDED BY CITY OF EVANSTON</td>
<td>55</td>
<td>4000 K</td>
<td>CLEAR</td>
<td>0.97</td>
<td>0.56</td>
</tr>
<tr>
<td>1</td>
<td>SEWARD (DODGE-DEWEY)</td>
<td>FIXTURE PROVIDED BY CITY OF EVANSTON</td>
<td>55</td>
<td>3000 K</td>
<td>CLEAR</td>
<td>0.91</td>
<td>0.39</td>
</tr>
<tr>
<td>2</td>
<td>SEWARD (DEWEY-FLORENCE)</td>
<td>FIXTURE PROVIDED BY CITY OF EVANSTON</td>
<td>55</td>
<td>4000 K</td>
<td>FROSTED</td>
<td>1.05</td>
<td>0.46</td>
</tr>
<tr>
<td>2</td>
<td>SEWARD (DEWEY-FLORENCE)</td>
<td>FIXTURE PROVIDED BY CITY OF EVANSTON</td>
<td>55</td>
<td>3000 K</td>
<td>FROSTED</td>
<td>0.70</td>
<td>0.21</td>
</tr>
<tr>
<td>3</td>
<td>SEWARD (FLORENCE-WESLEY)</td>
<td>STERNBERG</td>
<td>50</td>
<td>3000 K</td>
<td>ACRYLIC</td>
<td>0.71</td>
<td>0.22</td>
</tr>
<tr>
<td>3</td>
<td>SEWARD (FLORENCE-WESLEY)</td>
<td>STERNBERG</td>
<td>50</td>
<td>3000 K</td>
<td>FROSTED</td>
<td>0.39</td>
<td>0.43</td>
</tr>
<tr>
<td>4</td>
<td>THAYER (CENTRAL PARK-LAWNDALE)</td>
<td>EVERLIGHT</td>
<td>80</td>
<td>4000 K</td>
<td>ORIGINAL</td>
<td>0.26</td>
<td>0.17</td>
</tr>
<tr>
<td>5</td>
<td>FOREST (KEENEY-KEDZIE)</td>
<td>ELCAST LIGHTING</td>
<td>40</td>
<td>4000 K</td>
<td>ORIGINAL</td>
<td>0.05</td>
<td>0.10</td>
</tr>
<tr>
<td>5</td>
<td>FOREST (KEENEY-KEDZIE)</td>
<td>ELCAST LIGHTING</td>
<td>80</td>
<td>4000 K</td>
<td>ORIGINAL</td>
<td>0.11</td>
<td>0.21</td>
</tr>
</tbody>
</table>
STUDY AREA 1 – SEWARD STREET (DODGE – DEWEY)

FIXTURE PROVIDED BY CITY OF EVANSTON

Two separate fixtures were tested along Seward Street (Dodge – Dewey) that classifies as a local street with medium pedestrian traffic. Illuminating Engineering Society (IES) recommends an average roadway illuminance of 0.7. Both fixtures exceeded the IES recommended illuminance, but provided an excessive amount of light into the neighboring property and R.O.W. It is unclear what optic was installed; with a proper optic, light trespassing into the neighboring property could be minimized. A substantial amount of up light and glare was observed. The pilot luminaire least replicates the existing Tallmadge physical appearance. The clear lens allows the reflector within the luminaire to be obvious and unappealing.

<table>
<thead>
<tr>
<th>WATTAGE</th>
<th>COLOR TEMPERATURE</th>
<th>LENS TYPE</th>
<th>ROADWAY AVERAGE (FC)</th>
<th>AVERAGE AT ROW (FC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>55</td>
<td>4000 K</td>
<td>CLEAR</td>
<td>0.97</td>
<td>0.56</td>
</tr>
<tr>
<td>55</td>
<td>3000 K</td>
<td>CLEAR</td>
<td>0.91</td>
<td>0.39</td>
</tr>
</tbody>
</table>

PILOT PROGRAM AREA SUMMARY (04/19/18)

<table>
<thead>
<tr>
<th>WATTAGE</th>
<th>COLOR TEMPERATURE</th>
<th>LENS TYPE</th>
<th>ROADWAY AVERAGE (FC)</th>
<th>AVERAGE AT ROW (FC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>136</td>
<td>4000 K</td>
<td>CLEAR</td>
<td>1.94</td>
<td>1.58</td>
</tr>
<tr>
<td>136</td>
<td>3000 K</td>
<td>CLEAR</td>
<td>2.71</td>
<td>1.38</td>
</tr>
</tbody>
</table>

PILOT PROGRAM AREA SUMMARY (01/23/18)
STUDY AREA 2 – SEWARD STREET (DEWEY – FLORENCE)

FIXTURE PROVIDED BY CITY OF EVANSTON

Two separate fixtures were tested along Seward Street (Dewey – Florence) that classifies as a local street with medium pedestrian traffic. Illuminating Engineering Society (IES) recommends an average roadway illuminance of 0.7. Both fixtures met or exceeded the IES recommended illuminance, but provided an excessive amount of light into the neighboring property and R.O.W. It is unclear what optic was installed; with a proper optic, light trespassing into the neighboring property could be minimized. A substantial amount of up light and glare was observed. The frosted acrylic lens was more effective in mitigating the amount of glare. The pilot luminaire least replicates the existing Tallmadge physical appearance. Of the four fixtures provided by City of Evanston measured and all factors taken into consideration the 55W 3000K pilot luminaire with a frosted acrylic lens performed the best.

<table>
<thead>
<tr>
<th>PILOT PROGRAM AREA SUMMARY (04/19/18)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WATTAGE</td>
</tr>
<tr>
<td>----------</td>
</tr>
<tr>
<td>55</td>
</tr>
<tr>
<td>55</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PILOT PROGRAM AREA SUMMARY (01/23/18)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WATTAGE</td>
</tr>
<tr>
<td>----------</td>
</tr>
<tr>
<td>136</td>
</tr>
<tr>
<td>136</td>
</tr>
</tbody>
</table>
STUDY AREA 3 – SEWARD STREET (FLORENCE – WESLEY)

STERNBERG

Two separate fixtures were tested along Seward Street (Florence – Wesley) that classifies as a local street with medium pedestrian traffic. Illuminating Engineering Society (IES) recommends an average roadway illuminance of 0.7. The 50W 3000K pilot luminaire with a prismatic acrylic lens exceeded the IES recommended illuminance and provided minimal amount of light into the neighboring property and R.O.W. It is unclear what optic was installed. The pilot luminaires are dark-sky compliant due to the elimination of the top lens and yielded a superior balance of lighting to the roadway while minimizing excess glare. The frosted acrylic lens was more effective in mitigating the amount of glare. The pilot luminaire mocks the existing Tallmadge physical appearance in all aspects except the elimination of the top lens. Of the two fixtures measured and all factors taken into consideration the 50W 3000K pilot luminaire with a prismatic acrylic lens performed the best.

| PILOT PROGRAM AREA SUMMARY (04/19/18) |
|-----------------|-----------------|---------------|
| WATTAGE | COLOR TEMPERATURE | LENS TYPE | ROADWAY AVERAGE (FC) | AVERAGE AT ROW (FC) |
| 50 | 3000 K | ACRYLIC | 0.71 | 0.22 |
| 50 | 3000 K | FROSTED | 0.39 | 0.43 |
STUDY AREA 4 – THAYER STREET (CENTRAL PARK – LAWNDALE)

EVERLIGHT RETROFIT

A single retrofit was tested along Thayer Street (Central Park – Lawndale) that classifies as a local street with medium pedestrian traffic. Illuminating Engineering Society (IES) recommends an average roadway illuminance of 0.7. The pilot luminaire did not meet the IES recommended illuminance, but provided minimal amount of light into the neighboring property and R.O.W. It is unclear what optic was installed. A substantial amount of up light and glare was observed aided by using the existing Tallmadge prismatic acrylic lens.

<table>
<thead>
<tr>
<th>PILOT PROGRAM AREA SUMMARY (04/19/18)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WATTAGE</td>
</tr>
<tr>
<td>---------</td>
</tr>
<tr>
<td>80</td>
</tr>
</tbody>
</table>
STUDY AREA 5 – FOREST STREET (KEENEY – KEDZIE)

ELCAST LIGHTING RETROFIT

Two separate retrofits were tested along Forest Street (Keeney – Kedzie) that classifies as a local street with medium pedestrian traffic. Illuminating Engineering Society (IES) recommends an average roadway illuminance of 0.7. The pilot luminaires did not meet the IES recommended illuminance, but provided minimal amount of light into the neighboring property and R.O.W. It is unclear what optic was installed. A substantial amount of up light and glare was observed aided by using the existing Tallmadge prismatic acrylic lens. The pilot retrofit is inferior to all other pilot fixtures and retrofits tested and would not be an adequate upgrade to the existing Tallmadge luminaire.

<table>
<thead>
<tr>
<th>WATTAGE</th>
<th>COLOR TEMPERATURE</th>
<th>LENS TYPE</th>
<th>ROADWAY AVERAGE (FC)</th>
<th>AVERAGE AT ROW (FC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>4000 K</td>
<td>ORIGINAL</td>
<td>0.05</td>
<td>0.10</td>
</tr>
<tr>
<td>80</td>
<td>4000 K</td>
<td>ORIGINAL</td>
<td>0.11</td>
<td>0.21</td>
</tr>
</tbody>
</table>
RETROFIT LUMINAIRE
LED TALLMADGE REPLICA LUMINAIRE
Municipal Street Lights
Light Your Way to Savings

Upgrading street lights to energy-efficient LED technology is a cost-effective option for municipalities to reduce energy and lighting maintenance costs. ComEd helps its municipal customers realize the cost savings, as well as other benefits, from upgrading to LED street lighting.

The ComEd Energy Efficiency Program provides an incentive of $0.70 per watt reduced, up to 75% of the total cost of the project for upgrading municipally owned street lights to LEDs.* The incentive is available for projects completed between January 1, 2018 and December 31, 2018.

To assist you in taking advantage of the municipal street lights incentive, the ComEd Energy Efficiency Program provides FREE technical and application processing assistance.

CONTACT US AND START SAVING NOW!

Learn more about the ComEd Energy Efficiency Program municipal street light incentive.

VISIT ComEd.com/PublicSectorEE
EMAIL PublicSectorEE@ComEd.com
CALL 773-328-7040

MORE DETAILS ON BACK

*Incentive levels are subject to change at any time.

© Commonwealth Edison Company, 2018
The ComEd Energy Efficiency Program is funded in compliance with state law.
TECHNICAL AND APPLICATION ASSISTANCE
ComEd offers the following free services:

• Help in identifying eligible street lighting projects
• Guidance in collecting and recording required application data
• Aid in street light location mapping
• Help with documenting project implementation and verifying that it meets program requirements
• Assistance in the preparation of pre-approval and final applications

Contact us to learn more or to be connected to a street lighting specialist.

ELIGIBILITY REQUIREMENTS
Municipalities within the ComEd service territory (regardless of electricity supplier) are eligible for this incentive.

Projects must involve the replacement of municipally owned street lights with LED street lights.

Replacement street lights must be certified by the DesignLights Consortium. More information on qualified products can be found at www.designlights.org.

All municipal street light projects require pre-approval.

SAMPLE INCENTIVE

<table>
<thead>
<tr>
<th>Old street light*</th>
<th>250W high pressure sodium (HPS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LED street light</td>
<td>88W LED</td>
</tr>
<tr>
<td>Annual energy savings**</td>
<td>891 kWh per year</td>
</tr>
<tr>
<td>Incentive offered (at $0.70 per watt reduced)</td>
<td>$144.90</td>
</tr>
</tbody>
</table>

* Converts to 295 system watts per ComEd HID input wattage table.
** Assumes 4,303 operating hours per year.
### INDOOR AND OUTDOOR LIGHTING

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>Incentive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixtures</td>
<td>LED</td>
<td>$0.40 per watt reduced</td>
</tr>
<tr>
<td></td>
<td>T8/T5 fluorescent</td>
<td>$0.30 per watt reduced</td>
</tr>
<tr>
<td>Retrofits</td>
<td>LED</td>
<td>$0.40 per watt reduced</td>
</tr>
<tr>
<td></td>
<td>Fluorescent lighting</td>
<td>$0.20 per watt reduced</td>
</tr>
<tr>
<td>Sensors</td>
<td>Occupancy</td>
<td>$0.10 per watt reduced</td>
</tr>
<tr>
<td></td>
<td>Vacancy (indoor only)</td>
<td>$0.10 per watt reduced</td>
</tr>
<tr>
<td></td>
<td>Plug load occupancy</td>
<td>$10 per sensor</td>
</tr>
<tr>
<td>LED Signs</td>
<td>“Open” sign</td>
<td>$40 per sign</td>
</tr>
<tr>
<td></td>
<td>Channel sign &lt; 2 feet</td>
<td>$12 per letter</td>
</tr>
<tr>
<td></td>
<td>Channel sign &gt; 2 feet</td>
<td>$30 per letter</td>
</tr>
<tr>
<td></td>
<td>Daylighting controls (indoor only)</td>
<td>$0.12 per watt controlled</td>
</tr>
<tr>
<td></td>
<td>Occupancy sensor plus daylighting controls (indoor only)</td>
<td>$0.18 per watt controlled</td>
</tr>
<tr>
<td></td>
<td>Time clocks for lighting</td>
<td>$0.03 per watt controlled</td>
</tr>
<tr>
<td></td>
<td>Photocells (outdoor only)</td>
<td>$0.08 per watt controlled</td>
</tr>
<tr>
<td></td>
<td>Photocell plus time clock (outdoor only)</td>
<td>$0.09 per watt controlled</td>
</tr>
<tr>
<td></td>
<td>All other lighting (measure must meet simple payback requirements)</td>
<td>$0.05 per kWh saved</td>
</tr>
</tbody>
</table>

### ADVANCED INDOOR AND OUTDOOR LIGHTING

**OPTION ONE**

- New T8/T5 fluorescent fixture: $0.50 per watt reduced
- New LED fixture: $0.50 per watt reduced
- New lighting control system: $0.18 per watt controlled
- Measurement & verification: $0.10 per kWh saved above target
- Use NALCTP-certified contractor on installation team: $1,000

**OPTION TWO**

- Keep existing fixtures or install new or retrofitted fixtures that don’t meet option one fixture specs but may be eligible for standard lighting incentives: $0.07 per kWh saved above baseline
- New lighting control system
- Measurement & verification
- Use NALCTP-certified contractor on installation team: $1,000

### HVAC

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Incentive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water cooled chiller</td>
<td>Centrifugal</td>
<td>$20 per ton plus $1.60 per ton efficiency bonus</td>
</tr>
<tr>
<td></td>
<td>Scroll or helical-rotary (screw) Reciprocating</td>
<td>$3.50 per ton efficiency bonus</td>
</tr>
<tr>
<td>Air cooled chiller</td>
<td>$30 per ton plus $3.50 per ton efficiency bonus</td>
<td></td>
</tr>
<tr>
<td>Variable speed drive on HVAC chiller</td>
<td>$40 per HP</td>
<td></td>
</tr>
<tr>
<td>Chilled water reset controls</td>
<td>$5 per ton</td>
<td></td>
</tr>
<tr>
<td>SEHA tier 1 room air</td>
<td>$30 per ton</td>
<td></td>
</tr>
<tr>
<td>Package terminal AC/ package terminal heat pump</td>
<td>$30 per ton</td>
<td></td>
</tr>
<tr>
<td>Guest room energy management system</td>
<td>Electric heat/AC</td>
<td>$65 per guest room</td>
</tr>
<tr>
<td></td>
<td>Non-electric heat/AC</td>
<td>$25 per guest room</td>
</tr>
<tr>
<td>Demand controlled ventilation</td>
<td>Conditioned space (interior)</td>
<td>$40 per 1,000 sq. ft.</td>
</tr>
<tr>
<td></td>
<td>Parking garage (enclosed)</td>
<td>$300 per exhaust fan HP</td>
</tr>
<tr>
<td></td>
<td>Commercial kitchen exhaust hoods</td>
<td>$400 per exhaust fan HP</td>
</tr>
<tr>
<td>Restroom exhaust fan occupancy sensor</td>
<td>$10 per fan</td>
<td></td>
</tr>
<tr>
<td>Wireless pneumatic thermostat</td>
<td>$100 per thermostat</td>
<td></td>
</tr>
<tr>
<td>Air-side economizer</td>
<td>$50 per ton</td>
<td></td>
</tr>
<tr>
<td>Electronically commutated motor on fan-powered box</td>
<td>$50 per motor</td>
<td></td>
</tr>
<tr>
<td>High efficiency pumps and pumping efficiency improvements (retrofits)</td>
<td>$15 per HP</td>
<td></td>
</tr>
<tr>
<td>Cogged V-belts for HVAC fans</td>
<td>$5 per nominal motor HP</td>
<td></td>
</tr>
</tbody>
</table>

### VARIABLE SPEED DRIVES

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Incentive</th>
</tr>
</thead>
<tbody>
<tr>
<td>VSD on HVAC chiller</td>
<td>$40 per HP</td>
<td></td>
</tr>
<tr>
<td>on HVAC fan or pump ≤ 200 HP</td>
<td>$60 per HP</td>
<td></td>
</tr>
<tr>
<td>on pool pump</td>
<td>$100 per HP</td>
<td></td>
</tr>
<tr>
<td>on industrial process fan or pump ≤ 200 HP</td>
<td>$60 per HP</td>
<td></td>
</tr>
<tr>
<td>Air compressor with integrated VSD ≤ 150 HP</td>
<td>$75 per HP</td>
<td></td>
</tr>
</tbody>
</table>

### COMPRESSED AIR

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Incentive</th>
</tr>
</thead>
<tbody>
<tr>
<td>High-efficiency air nozzles</td>
<td>$20 per nozzle</td>
<td></td>
</tr>
<tr>
<td>Low pressure drop filter</td>
<td>$3.5 per connected HP</td>
<td></td>
</tr>
<tr>
<td>No-loss condensate drains</td>
<td>$100 per drain</td>
<td></td>
</tr>
<tr>
<td>Refrigerated dryers</td>
<td>Thermal mass dryer</td>
<td>$1 per rated CFM</td>
</tr>
<tr>
<td></td>
<td>Variable speed dryer</td>
<td>$3 per rated CFM</td>
</tr>
<tr>
<td></td>
<td>Digital scroll dryer</td>
<td>$2 per rated CFM</td>
</tr>
<tr>
<td>Heat of compression desiccant compressed air dryer</td>
<td>$4 per CFM</td>
<td></td>
</tr>
<tr>
<td>Heated blower purge desiccant compressed air dryer</td>
<td>$4 per CFM</td>
<td></td>
</tr>
<tr>
<td>Variable displacement screw air compressor</td>
<td>$30 per HP</td>
<td></td>
</tr>
<tr>
<td>Compressed air pressure flow controller</td>
<td>$10 per HP</td>
<td></td>
</tr>
<tr>
<td>VSD on air compressor ≤ 150 HP</td>
<td>$60 per HP</td>
<td></td>
</tr>
<tr>
<td>Air compressor(s) with integrated VSD ≤ 150 HP</td>
<td>$75 per HP</td>
<td></td>
</tr>
<tr>
<td>Added compressor storage on load/no load systems</td>
<td>$1.50 per gallon</td>
<td></td>
</tr>
</tbody>
</table>

### ENERGY MANAGEMENT SYSTEM

<table>
<thead>
<tr>
<th>Component</th>
<th>Specification</th>
<th>Incentive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-programmable</td>
<td>$0.25 per sq. ft. of conditioned space</td>
<td>$0.35 per sq. ft. of conditioned space</td>
</tr>
<tr>
<td>Pneumatic thermostats</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-programmable</td>
<td>$0.25 per sq. ft. of conditioned space</td>
<td>$0.35 per sq. ft. of conditioned space</td>
</tr>
<tr>
<td>Electronic thermostats</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Programmable</td>
<td>$0.15 per sq. ft. of conditioned space</td>
<td>$0.25 per sq. ft. of conditioned space</td>
</tr>
<tr>
<td>Thermostats</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Existing digital EMS</td>
<td>$0.15 per sq. ft. of conditioned space</td>
<td>$0.25 per sq. ft. of conditioned space</td>
</tr>
<tr>
<td>older than 15 years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-programmable</td>
<td>$0.25 per sq. ft. of conditioned space</td>
<td>$0.35 per sq. ft. of conditioned space</td>
</tr>
<tr>
<td>Pneumatic thermostats</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Variable displacement screw air compressor</td>
<td>$30 per HP</td>
<td></td>
</tr>
<tr>
<td>Compressed air pressure flow controller</td>
<td>$10 per HP</td>
<td></td>
</tr>
<tr>
<td>VSD on air compressor ≤ 150 HP</td>
<td>$60 per HP</td>
<td></td>
</tr>
<tr>
<td>Air compressor(s) with integrated VSD ≤ 150 HP</td>
<td>$75 per HP</td>
<td></td>
</tr>
<tr>
<td>Added compressor storage on load/no load systems</td>
<td>$1.50 per gallon</td>
<td></td>
</tr>
</tbody>
</table>
**REFRIGERATION**

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barrel wraps for injection molders and extruders</td>
<td>$40 per sq. ft.</td>
</tr>
<tr>
<td>Insulated pellet dryer duct</td>
<td>Outer diameter 3 in. - 8 in.</td>
</tr>
<tr>
<td>Conversion of DC drives in plastic extruders to AC drives</td>
<td>$40 per HP</td>
</tr>
<tr>
<td>Fiber laser cutting machines</td>
<td>$2,000 per output kW</td>
</tr>
<tr>
<td>All electric injection molding machine</td>
<td>$35 per rated ton</td>
</tr>
<tr>
<td>Hybrid injection molding machine</td>
<td>$30 per rated ton</td>
</tr>
<tr>
<td><strong>LABORATORY</strong></td>
<td></td>
</tr>
<tr>
<td>High performance low fume hood</td>
<td>$400 per linear ft.</td>
</tr>
<tr>
<td>Variable air volume fume hood</td>
<td>$250 per linear ft.</td>
</tr>
<tr>
<td>Fume hood occupancy control</td>
<td>$100 per linear ft.</td>
</tr>
<tr>
<td>Automatic fume hood sash closer</td>
<td>$150 per linear ft.</td>
</tr>
<tr>
<td>Sash stops</td>
<td>$5 per linear ft.</td>
</tr>
<tr>
<td>Low pressure drop HEPA filters</td>
<td>$50 per 1,000 CFM</td>
</tr>
<tr>
<td>Low pressure drop high efficiency (non-HEPA) air filters</td>
<td>$15 per 1,000 CFM</td>
</tr>
<tr>
<td>Reduce/optimize air changes per hour (ACH) in laboratory space</td>
<td>$0.75 per CFM</td>
</tr>
<tr>
<td><strong>AGRICULTURE</strong></td>
<td></td>
</tr>
<tr>
<td>Engine block timer</td>
<td>$20 per timer installed</td>
</tr>
<tr>
<td>Thermally insulated livestock waterer (electrically heated)</td>
<td>$110 per waterer installed</td>
</tr>
<tr>
<td>High-volume low-speed (HVLS) fans</td>
<td>$1,000 per fan installed</td>
</tr>
<tr>
<td><strong>WASTE WATER TREATMENT PLANT</strong></td>
<td></td>
</tr>
<tr>
<td>Custom incentive for high efficiency blowers, aeration diffusers and controls</td>
<td>$0.21 per kWh saved</td>
</tr>
</tbody>
</table>

To view a complete list of incentives, please download current versions at ComEd.com/BusinessSavingsApplications. Specifications are available in the incentive worksheets.

The ComEd® Energy Efficiency Program offers incentives to help businesses and facilities reduce electricity use by improving the efficiency of their equipment. In order to be eligible for an incentive, all projects must be pre-approved. In order to qualify for 2018 incentives, all projects must be pre-approved and completed by December 31, 2018*. ComEd Energy Efficiency Program incentive applications and worksheets can be found at ComEd.com/BizIncentives. For more information, email BusinessEE@ComEd.com or call 855-433-2700.

*To qualify for 2018 incentives, final applications must be submitted no later than 60 days from project completion, or February 28, 2019, whichever date comes first.
Illinois Energy Now (IEN) is a suite of energy efficiency programs administered by the State of Illinois. It provides millions of dollars in rebates to public agencies to make large scale equipment improvements to the electric and natural gas systems in their facilities. This funding supports several programs, including the Public Sector Energy Efficiency Program administered by the Metropolitan Mayors Caucus as part of DCEO’s Energy Efficiency Aggregation Program. For more information about Illinois Energy Now programs, visit www.ilenergynow.org

Request for Proposals

Funding and technical assistance to improve energy efficiency in public buildings is available through a simple proposal process. Project Proposal Forms for the Public Sector Energy Efficiency Program are accepted on a rolling basis throughout the year, and multiple deadlines are offered to optimize rebates to public sector applicants.

- **September 30, 2014** -- Early Bird Deadline for All Energy Efficiency Projects.
- **October 31, 2014** -- Completed Projects are eligible for a 10% bonus.
- **November 1, 2014** -- Standard Deadline for All Energy Efficiency Projects.
- **February 14, 2015** – Completed projects are eligible for a 5% bonus.

Work for all projects must be completed by **May 15, 2015**.

*Please note: Project planning can start anytime by submitting a Project Proposal Form. Funding for grant reimbursements is expected to be available as early as September 2014, pending approval from the Illinois Department of Commerce and Economic Opportunity.*

**WHO IS ELIGIBLE TO PARTICIPATE**

All public sector entities in northeastern Illinois which receive service from Illinois investor-owned utilities (ComEd, Peoples Gas, North Shore Gas and Nicor Gas) are eligible to apply for this program, including municipalities, townships, counties, park districts, libraries, schools, community colleges, and more.

For public sector entities outside of northeastern Illinois, additional programs are available from other organizations throughout the state. Contact us for more information or for a referral. Public sector entities that receive service from municipal or cooperative utilities are not eligible to participate in this program.

**PROGRAM PARTNERS – WHO’S WHO**

The Metropolitan Mayors Caucus (Caucus) is a non-profit organization of mayors in the Northeastern Illinois region. It supports municipalities with programs and aligns resources to achieve common local and regional objectives. Through the Caucus Public Sector Energy Efficiency Program, it receives funding to support local energy efficiency projects in public sector buildings throughout the region projects as a partner to the Illinois Department of Commerce and Economic Opportunity.

http://www.mayorscaucus.org

Public Sector Energy Efficiency Program
Request for Proposal 2014-2015
360 Energy Group (360EG) is a full service energy efficiency consulting firm retained by the Caucus for its technical expertise and experience administering energy efficiency programs.  
http://360eg.com

The Illinois Department of Commerce and Economic Opportunity (DCEO) is the source of funds for projects participating in the Caucus Public Sector Energy Efficiency Program. These funds are collected from all rate payers in Illinois investor-owned utilities as part of the Illinois Energy Now (IEN) Program.  
http://www.ilenergynow.org

The Illinois Clean Energy Community Foundation is an independent foundation endowed by Commonwealth Edison that provides funding and support energy efficiency and environmental programs in Illinois.  
http://www.illinoiscleanenergy.org/

Cook County Department of Environmental Control is collaborating to reach public agencies within Cook County to invite participation in the program (NOTE: Public agencies outside of Cook County are also eligible to participate in this program).  

The Smart Energy Design Assistance Center (SEDAC) is an applied research program at the University of Illinois at Urbana-Champaign that works in partnership with the DCEO to achieve energy efficiency savings by conducting energy assessments in buildings throughout the State of Illinois.  
http://smartenergy.illinois.edu/

RESOURCES AVAILABLE

Technical Assistance to assess building energy use; design effective solutions; and draft specifications for work and materials that will save natural gas and electrical energy is available to public agencies. The types of assistance are:

- **Immediate project design assistance**  
  360EG are experts in building energy efficiency and can assess public buildings for lighting, HVAC and other energy efficiency opportunities that are ready for immediate implementation.

- **Project management and grant program assistance**  
  360EG has expert knowledge of resources to guide public agencies in applications, bidding and timely completion of work. Selected projects will also benefit from bid specifications, evaluation and project oversight, as needed. 360EG staff are knowledgeable about multiple funding sources and can assure all allowable resources are aligned for the most cost-effective projects possible. Once they are approved for assistance, 360EG will assist public agencies with managing deadlines, compliance and reporting.

- **Long-term energy efficiency design assistance**  
  Public agencies wishing to comprehensively plan for long-term energy efficiency may also be eligible for a no-cost energy audit and design assistance through the Smart Energy Design Assistance Center (SEDAC).
Funding is available to pay for labor and materials to upgrade lighting, HVAC and other systems to save energy. There are three types of funding available:

- **Grant Reimbursements**
- **Enhanced HVAC Tune-Ups**
- **Direct Installation of Efficiency Measures**

Public agencies are encouraged to take advantage of as many components as are applicable to their energy efficiency needs. Multiple Program Components may be combined in one building, or across multiple buildings, for a public entity.

- **Grant Reimbursements**
  Grant reimbursements cover up to 75% of costs for lighting, HVAC and mechanical projects that save electricity or natural gas. 360EG will manage the technical and procedural aspects of this program component and the Caucus will administer the funds. The overhead administrative costs of the Caucus and 360EG are paid for directly by the DCEO, resulting in public entities receiving the greatest possible incentive amount.

  Grant reimbursement amounts vary with the scope of the projects and are dependent upon the amount of energy saved, as detailed in the IL DCEO Technical Guidelines for the Illinois Energy Now Program. 360EG will calculate individual grant reimbursement amounts for each project based on energy savings, following DCEO standards. For some projects, prescriptive reimbursement rates will apply; others may be eligible for custom rates of $0.12 per kilowatt hour saved and/or $3.00 per therm saved.

  Early completion of projects is encouraged by the DCEO with additional ‘Sweet Deal’ Bonuses. As listed above, agencies are eligible to receive an additional 10% if work is completed by October 31, 2014 or 5% if completed by February 14, 2015. All projects must be completed by May 15, 2015 to qualify to receive any grant reimbursements.

  Some lighting projects may be eligible for additional supplementary funding through the Illinois Clean Energy Foundation. Combined with Caucus Public Sector Energy Efficiency grant reimbursements, these funds greatly reduce the cost to public agencies and can sometimes lead to 100% project reimbursement.

- **Enhanced HVAC Tune-Ups**
  This program provides enhanced maintenance services on qualifying packaged rooftop units and split systems in public sector buildings at no cost to participating public agencies. Unlike the reimbursement incentives, the Enhanced HVAC Tune-Up Program does not require public agencies to pay up-front for these services. The Tune-Ups are performed by one of our Qualified Service Providers who are contracted and paid directly through the Caucus Public Sector Energy Efficiency Program funding. These services result in an estimated heating savings of 6% and cooling savings of 12% per unit. Public agencies with buildings located in ComEd electric service territory and Nicor Gas natural gas service territory will be eligible to receive these enhanced HVAC Tune-Up services.

- **Direct Installation of Efficiency Measures**
  Some HVAC systems may be eligible for the Direct Installation of Energy Efficiency Measures Program Component that provides materials and labor at no cost to participating public agencies. Energy efficiency measures such as HVAC controllers are simple and inexpensive yet achieve measurable savings. The cost of purchase and labor are covered directly by the Caucus Public Sector Energy Efficiency Program.
PROGRAM PROCESS

Initial Process Steps for All Funding Types

1. Identify public buildings needing energy efficiency improvements. Eligible buildings include office, garage, water and waste water treatment plants, community centers, libraries, schools and more.

2. Align potential projects with sustainability goals. Progress towards energy conservation and greenhouse gas reduction goals can be documented for reporting.

3. Complete a Project Proposal Form and submit either a hard or electronic copy to the Caucus, along with a recent gas and electric bill for each building being considered for assistance. Public agencies may submit multiple buildings on one form. Project Proposal Form deadlines:

   - **July 30, 2014** – Deadline for Indoor and Outdoor Lighting Projects (to be eligible for supplemental ICECF foundation funding)*
   - **September 30, 2014** – Early Deadline for All Energy Efficiency Projects (all projects completed by **October 31, 2014** are eligible for a 10% bonus)
   - **November 1, 2014** – Standard Deadline for All Energy Efficiency Projects (all projects completed by **February 14, 2015** are eligible for a 5% bonus)

   * For eligible interior and exterior lighting projects for municipal buildings only, 360EG can help agencies apply for additional funds from ICECF. It is the public agency’s responsibility to complete the ICECF application directly through their online process. Although 360EG can help with the application, the process and decision to award funds are wholly ICECF’s. The deadline for this application is September 11, 2014. If approved, ICECF will reimburse applicants directly. Funds may also be available in 2015.

4. Assess buildings and design projects. 360EG reviews your proposal, arranges a site visit to assess existing conditions, and assists in the planning of the potential project(s). 360EG works with the public agency to analyze the selected project(s), demonstrate energy and monetary savings, and estimate costs and payback period.

Grant Reimbursements – Specific Program Process Steps

1. Secure approval. Each public agency secures approval of the project and informs the Caucus and 360EG that they want to proceed. The Caucus issues an Award Letter to the public agency, which includes Grant Terms, an Award Acceptance Form, and a preliminary Scope of Work, on which the budget is based. The Award Acceptance Form must be accepted and returned promptly.

2. Perform Scope of Work. The public agency completes the energy efficiency work described in the Scope of Work by performing the work in-house or awarding a contract and/or purchase order to their chosen supplier and contractor and paying them directly. The public agency issues contracts and/or purchase orders directly with their own vendors for the work to be performed.
3. **Complete all work by May 15, 2015.** Necessary changes in the Scope of Work are allowable with documentation and approval. 360EG and the Caucus are available to help agencies to assure successful project completion, as needed.

4. **Complete necessary paperwork.** Throughout the process, 360EG completes and submits any required paperwork to the DCEO, acting for the public agency and the Caucus, including calculating final energy savings and corresponding final grant/incentive amount. The public agency provides all necessary documents to close out the project including certification forms, copies of contractor invoices and any other documents required by DCEO.

5. **Request reimbursement.** The public agency receives a Final Scope of Work from the Caucus, along with reimbursement instructions. The public agency invoices the Caucus for the amount of the DCEO incentive listed in the Final Scope of Work. As this amount is based on actual energy savings from the project, it may be greater or less than estimated in the preliminary Award Letter.

6. **Receive project inspection.** 360EG inspects all approved projects before and after completion and verifies the final scope of work in cooperation with the public agency. The public agency may also receive an audit from a 3rd party verifier.

7. **Receive reimbursement from the Caucus.**

**Enhanced HVAC Tune-Ups – Specific Program Process Steps**

1. The Caucus and 360EG will provide public agencies with details about the Enhanced HVAC Tune-Up Program and help them to determine eligibility. Once eligibility is determined, 360EG will guide the public agency in selecting a Qualified Service Provider from our Pre-Approved Provider List.

2. The Qualified Service Provider assists the public agency to complete an Enhanced HVAC Tune-Up Application and Consent Agreement, and submit to 360EG along with a copy of the public agency’s last month’s electric and natural gas utility bills. Applications are accepted on a rolling basis throughout the program year, pending availability of funds.

3. Once a list of public agency HVAC units has been approved, they are contacted by the Qualified Service Provider to schedule work. HVAC units receive evaluation, service, and inspection from the Qualified Service Provider. **All work must be completed by May 15, 2015.** The Qualified Service Provider will assist the Public Agency to fill out and sign a Proof of Completion, which will then be submitted to 360EG.

4. The Qualified Service Provider is paid directly by the Caucus for work performed, making this a cost-free program for the public agency.
Direct Installation of Efficiency Measures – Specific Program Process Steps

1. If appropriate for public agency buildings, the Caucus and 360EG will provide public agencies with details about the Direct Installation of Efficiency Measures and help them to determine eligibility.

2. The Caucus issues a Direct Installation of Energy Efficient Measures Project Description, Scope of Work, Warranty Information, and Consent Agreement to the public agency. The Consent Agreement must be signed and returned promptly.

3. The public agency is contacted by 360EG or a qualified contractor to schedule work. HVAC units receive installation of equipment to optimize performance. **All work must be completed by May 15, 2015.**

4. 360EG completes and submits any required paperwork to the DCEO, acting for the public agency and the Caucus. 360EG inspects all approved projects before and after completion and verifies the final scope of work in cooperation with the public agency. All equipment and contractors are paid directly by the Caucus, making this a cost-free program for the public agency.

PROGRAM SUMMARY

<table>
<thead>
<tr>
<th>Funding Types</th>
<th>Payment Process</th>
<th>How To Apply</th>
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<tr>
<td><strong>Grant Reimbursements</strong></td>
<td>Public agency pays up front for work performed, and receives a grant reimbursement from the Caucus and/or from ICECF</td>
<td>For all funding types, submit a Project Proposal Form to the Caucus. Project Proposal Forms are accepted on a rolling basis throughout the year, and multiple deadlines are offered to optimize rebates to public sector applicants:</td>
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<tr>
<td><strong>Enhanced HVAC Tune-Ups</strong></td>
<td>All materials and labor are paid directly by the Caucus</td>
<td>• <strong>July 30, 2014</strong> – Deadline for Indoor and Outdoor Lighting Projects (to be eligible for supplemental ICECF funding)</td>
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</table>
| **Direct Installation of Efficiency Measures** | All materials and labor are paid directly by the Caucus | • **September 30, 2014** – Early Deadline for All Energy Efficiency Projects (all projects completed by October 31, 2014 are eligible for a 10% bonus)  
• **November 1, 2014** – Standard Deadline for All Energy Efficiency Projects (all projects completed by February 14, 2015 are eligible for a 5% bonus) |

CONTACT INFORMATION

**Submit Project Proposal Forms to:**  
Jeffrey Walter  
Project Coordinator, Environmental Initiatives  
Metropolitan Mayors Caucus  
312-201-4508  
jwalter@mayorscaucus.org

**For Questions or Project Planning Assistance:**  
Mike Stanch  
Energy Solutions Manager  
360 Energy Group  
312-264-8568  
michael@360eg.com
**Steering Committee Meeting #1**

The Project Kick Off Meeting or Steering Committee Meeting #1 set the scope of work, discussed existing lighting types and quantities, coordinated staff assignments, and set a schedule for the Street Light Master Plan.

The following major topics were discussed at the Project Kick Off Meeting and incorporated into the Street Light Master Plan:

- Consideration of streets with tree cover, tree bloom, and pole spacing when taking existing conditions light studies.
- Lighting unit for residential areas and local roadways should replicate the Tallmadge. The Historic Preservation Commission stated the Tallmadge are not considered historic but a replacement should be “sympathetic” to the existing Tallmadge.
- An initial pilot program was introduced by the City prior to development of Street Light Master Plan in the area of Seward and Dodge.
- Com Ed charges City of Evanston for electricity usage from existing non-metered 107 power centers.
- Determination of 19 individual study areas amongst the City’s nine wards.
- Means and methods of existing conditions light studies.
- New luminaires should be dark sky compliant.
- Existing Tallmadge presents various ongoing maintenance issues due to multi-part composition.
- The last Street Light Master Plan was adopted by the City in 1979.

The Project Kick Off Meeting or Steering Committee Meeting #1 presentation can be found in [Appendix A8.1](#).
Steering Committee Meeting #2

Steering Committee Meeting #2 was held on November 7, 2017. Means and methods of existing conditions light studies, existing conditions light study results, existing lighting systems and infrastructure, current City policies, and initial presentation to the public were discussed.

The following major topics were discussed at the Steering Committee Meeting #2 and incorporated into the Street Light Master Plan:

- Ambient lighting from adjacent house porches, store fronts, businesses and tree canopies were taken into consideration when taking existing conditions light studies.
- Pole spacing varies throughout the City.
- Lighting types include Tallmadge (55W, 85W, 165W induction) and davit arm roadway poles (250W and 400W high pressure sodium, 250W and 400W metal halide and 200W induction).
- From existing conditions light study it was determined local streets and major roadways typically did not meet recommended standards dictated by Illuminating Engineers Society of North America (IESNA). Collector roadways fall minimally short of meeting IESNA recommended standards. All roadway types typically did not meet City of Evanston standard from 1979 Street Light Master Plan.
- There is currently no Capital Improvement Plan exercised. The City of Evanston upgrades street light infrastructure as part of reconstruction projects, spot location improvements, major planned unit developments or as part of safer neighborhood area projects (SNAP).
- City of Evanston energy cost for electrical usage
  - FY 2016 = $152,830.00
  - FY 2017 = $140,630.00
- City of Evanston maintenance cost
  - FY 2017 = $140,000.00

The Steering Committee Meeting #2 presentation can be found in Appendix A8.2.
Public Meeting #1

A public meeting was held on November 28, 2017 where 40 people were in attendance. Findings of existing conditions analysis, existing infrastructure and aesthetics, future standardization, and cost effective, energy efficient alternatives were presented. 17 comments were received at the meeting and 90 comments were received online and addressed in developing the Street Light Master Plan.

The following is a summarization of comments received at the meeting and online that were discussed and taken into consideration when developing the Street Light Master Plan:

- 25 comments in favor of keeping the existing Tallmadge.
- Ten of the “keep Tallmadge” comments suggested upgrades to improve lighting levels, minimize light pollution and reduce maintenance costs.
- 21 comments requested higher lighting levels.
- 20 comments thought the pilot projects instilled in developing the Street Light Master Plan were too bright.
- Two comments questioned how to respond to online posts.
- Two comments stated that no study was necessary.
- Two comments questioned what other Villages or Citys were doing.
- Ten comments suggested that new luminaires shine down, smart lighting systems studied and change traffic laws.

The Public Meeting #1 presentation can be found in Appendix A8.3.
Steering Committee Meeting #3

Steering Committee Meeting #3, held on January 23, 2018, included a review of Public Meeting #1 and addressed concerns and questions to ensure the plan met community objectives, including the addition of nine (28 total) study areas, presentation of draft survey questions to be presented to Northwest Municipal Conference members to establish current street lighting practices and shifting focus of the Street Light Master Plan to explore options for modernizing the existing Tallmadge.

The Steering Committee Meeting #3 presentation can be found in Appendix A8.4.
Northwest Municipal Conference Survey

The Northwest Municipal Conference survey included elemental inquiries in regard to other municipalities street lighting ordinances, infrastructure, lighting levels, dark sky compliance, maintenance, Capital Improvement Plan and standard construction details (See Appendix A8.5). 12 of 45 communities responded including Arlington Heights, Buffalo Grove, Fox Lake, Grayslake, Libertyville, Lincolnshire, Morton Grove, Palatine, Park Ridge, Skokie, Streamwood and Wheeling. The results from this survey were addressed in developing the Street Light Master Plan.

The following is a summarization of Northwest Municipal Conference survey and taken into consideration when developing the Street Light Master Plan:

- Five of 12 municipalities have a lighting ordinance or standards.
- Lighting equipment differs immensely throughout different communities, but all communities are converting to LEDs.
- Four of 12 communities require dark sky compliance.
- Six of 12 communities contract out light maintenance and repair.
- Eight of 12 do not have a Capital Improvement Plan.
- Nine of 12 municipalities have standard construction details.
- None of the communities require pedways, bike paths or intersections to meet an illumination standard.
Street Light Master Plan Project Lighting Level Survey

In addition to The Northwest Municipal Conference Survey, a Street Light Master Plan Project Lighting Level Survey was conducted. The Street Light Master Plan Project Lighting Level Survey can be found in Appendix A8.6. This survey was administered to evaluate options for maintaining the City’s existing street light system and to seek public input on future lighting levels desired for new development and major public works projects. The survey included lighting levels for major roadways, collector roadways, local roadways, Lakefront Path, intersections, and the resident’s respective block. Included in the survey for local roads were pilot programs displaying lighting levels of replica Tallmadge luminaires for future new construction options and unrepairable maintenance of the existing Tallmadge.
Steering Committee Meeting #4

Steering Committee Meeting #4, held on May 24, 2018, included a compilation of results from The Northwest Municipal Conference Survey, Street Light Master Plan Project Lighting Level Survey and new construction options.

Following are the new construction options suggested:

- All new construction should meet IESNA recommended practice (collector roadways, major roadways, local roadways and intersections)
- **Local Roadways** should utilize the Sternberg Lighting replica Tallmadge (MS805 LED), or approved equal, mounted at 16’ on a 24” concrete foundation.
- **Collector and Major Roadways** should be a 30’ davit arm roadway pole with an LED type luminaire (Autobahn Series ATB2 or equal) on a 30” concrete to match those installed at Fountain Square.
  - A replica Tallmadge or a pedestrian-scale LED type luminaire (Autobahn Series ATB0 or equal) mounted at 14’ to the 30’ davit arm roadway pole may be used if necessary to enhance the illumination of the sidewalk if required for pedestrian traffic.
- It is recommended that new construction utilize a staggered configuration to conform with current City of Evanston typical layouts.
- Electrical infrastructure such as wiring, conduit and controls should be per National Electrical Code (NEC) compliance for outdoor lighting installations.

The Steering Committee Meeting #4 presentation can be found in Appendix A8.7.

Various meetings were held throughout the development of the Street Light Master Plan between CBBEL and City staff to discuss project progress and objectives.
Steering Committee Meeting #5

Steering Committee Meeting #5, held on October 3, 2018, included an overview of the final Street Light Master Plan that will be presented to the public and City Council for final acceptance and approval.

The following major topics were discussed at the Steering Committee Meeting #5 and incorporated into the Street Light Master Plan:

- Review of Community Survey
- Existing conditions conclusions and recommendations
- Alternate technology exploration
- City of Evanston (COE) lighting level recommendations
- New construction standards throughout COE
  - Davit arm roadway lighting units
  - Tallmadge lighting units
  - Park and pathway lighting units
  - Parking lot lighting units
  - Wall pack lighting units
- Lighting control technology and recommendations
- Funding examples and prioritization
- Livability

The Steering Committee Meeting #5 presentation can be found in Appendix A8.8.
Public Meeting #2

Very similar to Steering Committee Meeting #5, Public Meeting #2 was held on November 1, 2018, included a concise overview of the final Street Light Master Plan that will be presented to City Council for final acceptance and approval.

The following major topics were discussed at Public Meeting #2:

- Review of Community Survey
- Existing conditions conclusions and recommendations
- Alternate technology exploration
- City of Evanston (COE) lighting level recommendations
- New construction standards throughout COE
  - Davit arm roadway lighting units
  - Tallmadge lighting units
  - Park and pathway lighting units
  - Parking lot lighting units
  - Wall pack lighting units
- Lighting control technology and recommendations
- Funding examples and prioritization
- Livability

The Public Meeting #2 presentation can be found in Appendix A8.9.
INTRODUCTIONS:
PROJECT TEAM

PROJECT MANAGEMENT STAFF
Dave Stoneback
Lara Biggs
Rajeev Dahal

CBBEL
Michael Kerr, PE
John Caruso, PE
Anthony DeRicco, PE, LEED AP, LC
Katrina Ballado, PE, LEED AP
Gerald Hennelly

ALTAMANU, INC.
Josephine Bellalta, ASLA, PLA
Phillip Hutchinson, ASLA, PLA, LEED

ROLE:
Project Management, Lighting
Studies, Photometrics,
Inventory & Master Plan
Preparation, Stakeholder &
Public Engagement

ROLE:
Fixture Selection & Urban
Planning, Stakeholder & Public Engagement
PROJECT BACKGROUND: EXISTING LIGHTING TYPES

Roadway Poles

Ornamental Tallmadge Poles
PROJECT BACKGROUND: EXISTING LIGHTING TYPES

Pedestrian Lighting

Viaduct Lighting
PROJECT BACKGROUND: EXISTING LIGHTING TYPES

Parking Lot Lighting

Park Lighting
**SCOPE OF WORK:**

- **TASK 1** – EXISTING CONDITIONS REVIEW AND ANALYSIS
  - Photometrics at +15 Locations

- **TASK 2** – STREET LIGHT INFRASTRUCTURE OPTIONS AND RECOMMENDATIONS
  - Design and Technology
  - Wiring
  - Circuitry
  - Controls
  - Policy and Program Review

- **TASK 3** – PRIORITIZATION METHODOLOGY, IMPLEMENTATION AND FUNDING RECOMMENDATIONS
  - Fixture Selections
  - Grant Opportunities

- **TASK 4** – FINAL STREET LIGHT MASTER PLAN
  - Final Fixture Selections
  - Illumination Standards

- **TASK 5** – STAKEHOLDER AND PUBLIC ENGAGEMENT
  - Public Outreach
PHOTOMETRIC STUDY LOCATIONS:
### EXISTING CONDITIONS STUDY AREAS:

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<th>AREA</th>
<th>LIMITS</th>
<th>AREA JUSTIFICATION</th>
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<td>CENTRAL ST FROM WALNUT AVE TO BROADWAY AVE.</td>
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FUTURE MEETING SCHEDULE:

❖ QUESTIONS?
STREET LIGHT MASTER PLAN
EXISTING CONDITIONS REPORT
AGENDA

• EDUCATION & METHODOLOGY

• RESULTS

• POLICIES
WHAT WAS STUDIED?

❖ LOCATIONS
18 study areas chosen by Committee and City staff

❖ MEASUREMENTS
Were taken for the various study areas at varying cross-section widths for illumination levels

❖ HOW IT WAS STUDIED
With the light meter every 10’-0” at the pavement level
WHAT IS A FOOTCANDLE?

1 Footcandle (fc) = The measurement of light which equals the power of one candle one foot away (1 Lumen)

1 fc = 1 Lumen/Sq. Ft.
WHERE WERE THE LIGHTING LEVEL READINGS TAKEN?

Intersections

- Reading taken throughout intersection approximately every 10', measured in foot candles
- Typical light pole location at intersections

Roadways

- Readings taken along roadway
- Typical light pole locations on local and collector roadways
**WHAT DOES THE REPORT TELL YOU?**

**TABLE OF ILLUMINANCE MEASUREMENTS**

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<th>POINT</th>
<th>WEST SIDEWALK (12' SETBACK)</th>
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</tr>
</tbody>
</table>

* HIGH VALUES RECORDED ON EAST SIDEWALK DUE TO HIGH AMBIENT LIGHTING FROM PARK

**ILLUMINANCE MEASUREMENT SUMMARY (fc)**

<table>
<thead>
<tr>
<th></th>
<th>AVERAGE</th>
<th>AVE/MIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROADWAY</td>
<td>0.05</td>
<td>4.7</td>
</tr>
<tr>
<td>SOUTH SIDEWALK</td>
<td>0.03</td>
<td>3.1</td>
</tr>
</tbody>
</table>

*Where the measurements were taken*

*Light levels measured in footcandles*

Measurement Summary
VARIOUS SITE CONSIDERATIONS

- Ambient light from store fronts and businesses (glare)
- Front porch lighting
- Tree canopies
## CURRENT CITY OF EVANSTON LIGHTING STANDARDS

<table>
<thead>
<tr>
<th>Street Category</th>
<th>Commercial &amp; Institutional (High Pedestrian Activity)</th>
<th>High Density Residential (Medium Pedestrian Activity)</th>
<th>Low Density Residential (Low Pedestrian Activity)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major</td>
<td>1.0 – 4.0</td>
<td>0.4 – 0.6</td>
<td>0.2 – 0.4</td>
</tr>
<tr>
<td>Collector</td>
<td>0.4 – 1.0</td>
<td>0.2 – 0.4</td>
<td>0.2 – 0.4</td>
</tr>
<tr>
<td>Local</td>
<td>0.4 – 0.6</td>
<td>0.1 – 0.2</td>
<td>.05 – 0.1</td>
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</table>
**ILLUMINATING ENGINEERS SOCIETY OF NORTH AMERICA (IESNA) RECOMMENDED LIGHTING LEVELS FOR ROADWAYS**

<table>
<thead>
<tr>
<th>Road and Pedestrian Activity Area</th>
<th>Pavement Classification (Minimum Maintained Average Values)</th>
<th>Uniformity Ratio $E_{avg}/E_{min}$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>R3 fc</td>
<td>COE Current Standards</td>
</tr>
<tr>
<td><strong>Road</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Major</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>1.7</td>
<td>1.0 – 4.0</td>
</tr>
<tr>
<td>Medium</td>
<td>1.3</td>
<td>0.4 – 0.6</td>
</tr>
<tr>
<td>Low</td>
<td>0.9</td>
<td>0.2 – 0.4</td>
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<tr>
<td>Collector</td>
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<td>0.4 – 1.0</td>
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<tr>
<td>Medium</td>
<td>0.9</td>
<td>0.2 – 0.4</td>
</tr>
<tr>
<td>Low</td>
<td>0.6</td>
<td>0.2 – 0.4</td>
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<tr>
<td>Local</td>
<td></td>
<td></td>
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<tr>
<td>High</td>
<td>0.9</td>
<td>0.4 – 0.6</td>
</tr>
<tr>
<td>Medium</td>
<td>0.7</td>
<td>0.1 – 0.2</td>
</tr>
<tr>
<td>Low</td>
<td>0.4</td>
<td>.05 – 0.1</td>
</tr>
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</table>
# Recommended Lighting Levels for Intersections

<table>
<thead>
<tr>
<th>Functional Classification</th>
<th>Pedestrian Activity Level</th>
<th>City of Evanston Standard</th>
<th>$E_{avg}/E_{min}$ **</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High</td>
<td>Medium</td>
<td>Low</td>
</tr>
<tr>
<td>Major/Major</td>
<td>3.4*</td>
<td>2.6</td>
<td>1.8</td>
</tr>
<tr>
<td>Major/Collector</td>
<td>2.9*</td>
<td>2.2</td>
<td>1.5</td>
</tr>
<tr>
<td>Major/Local</td>
<td>2.6*</td>
<td>2.0</td>
<td>1.3</td>
</tr>
<tr>
<td>Collector/Collector</td>
<td>2.4*</td>
<td>1.8</td>
<td>1.2</td>
</tr>
<tr>
<td>Collector/Local</td>
<td>2.1*</td>
<td>1.6</td>
<td>1.0</td>
</tr>
<tr>
<td>Local/Local</td>
<td>1.8*</td>
<td>1.4</td>
<td>0.8</td>
</tr>
</tbody>
</table>

* No Current City Standard

** Uniformity Ratio Average Illumination Level versus Minimum Illumination Level
### EXISTING CONDITIONS LIGHTING STUDY SUMMARY

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>STREET</th>
<th>LIMITS</th>
<th>TYPE</th>
<th>PEDESTRIAN</th>
<th>RECOMMENDED LEVEL</th>
<th>ACTUAL LEVEL</th>
<th>COE LEVEL*</th>
<th>IESNA GRADE</th>
<th>COE GRADE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1A</td>
<td>Chicago Ave.</td>
<td>Church St. to Grove St.</td>
<td>Major</td>
<td>High</td>
<td>1.7 fc</td>
<td>0.51 fc</td>
<td>1.0 – 4.0</td>
<td>🔴</td>
<td>🔴</td>
</tr>
<tr>
<td>1 – 5B</td>
<td>Foster St.</td>
<td>Maple Ave. to Sherman Ave.</td>
<td>Collector</td>
<td>Medium</td>
<td>0.9 fc</td>
<td>0.16 fc</td>
<td>0.2 – 0.4</td>
<td>🔴</td>
<td>🔴</td>
</tr>
<tr>
<td>2A – 9B</td>
<td>Dodge Ave.</td>
<td>Washington St. to Seward St.</td>
<td>Major</td>
<td>Medium</td>
<td>1.3 fc</td>
<td>0.66 fc</td>
<td>0.4 – 0.6</td>
<td>🔴</td>
<td>🔴</td>
</tr>
<tr>
<td>2B</td>
<td>McDaniel Ave.</td>
<td>Crain St. to Greenleaf St.</td>
<td>Collector</td>
<td>Medium</td>
<td>0.7 fc</td>
<td>0.03 fc</td>
<td>0.2 – 0.4</td>
<td>🔴</td>
<td>🔴</td>
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<tr>
<td>3A</td>
<td>Sheridan Square</td>
<td>Sheridan Rd. (West) to Sheridan Rd. (East)</td>
<td>Local</td>
<td>Medium</td>
<td>0.7 fc</td>
<td>0.11 fc</td>
<td>0.1 – 0.2</td>
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<tr>
<td>3 – 4B</td>
<td>Main St.</td>
<td>Sherman Ave. to Hinman Ave.</td>
<td>Major</td>
<td>High</td>
<td>1.7 fc</td>
<td>1.47 fc</td>
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<tr>
<td>4A</td>
<td>Ridge Ave.</td>
<td>Lake St. to Dempster St.</td>
<td>Major</td>
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<td>1.3 fc</td>
<td>0.27 fc</td>
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<tr>
<td>5A</td>
<td>Green Bay Rd.</td>
<td>Simpson St. to Payne St.</td>
<td>Major</td>
<td>Medium</td>
<td>1.3 fc</td>
<td>2.28 fc</td>
<td>0.4 – 0.6</td>
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<tr>
<td>5B</td>
<td>Holvland Ct.</td>
<td>Emerson St. to Church St.</td>
<td>Local</td>
<td>Medium</td>
<td>0.7 fc</td>
<td>0.05 fc</td>
<td>0.1 – 0.2</td>
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<tr>
<td>6 – 7C</td>
<td>Central St.</td>
<td>Walnut Ave. to Broadway Ave.</td>
<td>Major</td>
<td>Medium</td>
<td>1.7 fc</td>
<td>0.06 fc</td>
<td>1.0 – 4.0</td>
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<td>🔴</td>
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<tr>
<td>6A</td>
<td>Grant St.</td>
<td>Bennett Ave. to Pioneer Rd.</td>
<td>Collector</td>
<td>Medium</td>
<td>0.9 fc</td>
<td>0.01 fc</td>
<td>0.2 – 0.4</td>
<td>🔴</td>
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<tr>
<td>6B</td>
<td>Central Park Ave.</td>
<td>Park Place North to End of Willard Elementary School Property</td>
<td>Collector</td>
<td>Medium</td>
<td>0.9 fc</td>
<td>0.01 fc</td>
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<tr>
<td>7B</td>
<td>Ingleside Place</td>
<td>Orrington Ave. to Euclid Ave.</td>
<td>Local</td>
<td>Medium</td>
<td>0.7 fc</td>
<td>0.01 fc</td>
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<tr>
<td>8A</td>
<td>Barton Ave.</td>
<td>Hill Terrace to Harvard Terrace</td>
<td>Local</td>
<td>Medium</td>
<td>0.7 fc</td>
<td>0.04 fc</td>
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<tr>
<td>8B</td>
<td>Brummel St.</td>
<td>Custer St. to East Dead End</td>
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<td>Medium</td>
<td>0.7 fc</td>
<td>0.15 fc</td>
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<td>9A</td>
<td>Oakton St.</td>
<td>Florence Ave. to Asbury St.</td>
<td>Major</td>
<td>High</td>
<td>1.7 fc</td>
<td>0.01 fc</td>
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<tr>
<td>Judson Ave.</td>
<td>Judson Ave.</td>
<td>1100 Block to 1200 Block</td>
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<td>Medium</td>
<td>0.7 fc</td>
<td>0.01 fc</td>
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<td>🔴</td>
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<td>Lyons St.</td>
<td>Dodge Ave.</td>
<td>To ComEd Substation</td>
<td>Local</td>
<td>Medium</td>
<td>0.7 fc</td>
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<td>Simpson St.</td>
<td>Simpson St.</td>
<td>Dewey Ave. to Green Bay Rd.</td>
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<td>Medium</td>
<td>0.9 fc</td>
<td>1.07 fc</td>
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</tbody>
</table>

- **RED** – Does not meet IESNA recommended standards or City of Evanston standards
- **GREEN** – Meets IESNA recommended standards or City of Evanston standards
- **BLUE** – Falls minimally short of meeting IESNA recommended levels or City of Evanston standards

*City of Evanston Illumination Levels from 1979 Plan for the Future of Evanston’s Street Lighting System*
EXISTING CONDITIONS LIGHTING STUDY AREAS

- RED – Does not meet IESNA recommended standards
- GREEN – Meets IESNA recommended standards
- BLUE – Falls minimally short of meeting IESNA recommended levels
CONCLUSIONS

- Pole spacing varies throughout City
- Lighting types are: 55, 85, 165 and 200 Watt Induction, 250 and 400 Watt Metal Halide, 250 and 400 Watt High Pressure Sodium, 140 Watt LED
- Infrastructure is generally robust and capable of future expansion
- Majority of local streets don’t meet recommended standards
- Majority of collector roadways are close to meeting recommended standards
- Majority of major roadways do not meet IESNA recommended standards
- Majority of all roadway types do not meet COE standards
POLICIES

CURRENT CITY OF EVANSTON POLICIES

- Lighting Levels from 1979 Lighting Study Report
- City Ordinance
  - Uniformity Ratios Only
    - Residential Areas = 6:1
    - All Other Areas = 3:1
  - Area Lighting to be Sharp Cut-Off (Horizontal Lenses)
  - 0.0 fc Measured at Residential Property Lines

CURRENT COM ED POLICIES

- Alley lights put in by resident petition
- Lighting types are in transition with ComEd switching to LED but have not been standardized to wattage and color temperature
- Currently working with ComEd for current rate structure and energy consumption
POLICIES (CONT.)

CITY PROGRAMS

- No Capitol Improvement Plan in place for replacement of lighting. Improvements to existing lighting systems are completed by and during the following methods:
  - Roadway Reconstruction Projects
  - Spot Location Improvements
  - Major Planned Unit Private Developments
  - Safer Neighborhood Area Projects (SNAP)

- Current energy costs for electrical usage
  - FY 2016 Costs = $152,830.00
  - FY 2017 Costs = $140,630.00

- Equipment and Maintenance Costs
  - FY 2017 = $140,000.00

- Cost to Replace One (1) Complete Tallmadge Pole to Davit Arm Light Pole including Conduit and Wiring = $16,000
PUBLIC MEETING
NOVEMBER 28, 2017
7:00 P.M.
PARASOL ROOM
# INTRODUCTIONS

## STEERING COMMITTEE MEMBERS

<table>
<thead>
<tr>
<th>Role</th>
<th>Committee</th>
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<tbody>
<tr>
<td>Alderman, 3rd Ward</td>
<td>Committee Chair</td>
</tr>
<tr>
<td>Alderman, 5th Ward</td>
<td>Committee Co-Chair</td>
</tr>
<tr>
<td>Member</td>
<td>Age Friendly Task Force</td>
</tr>
<tr>
<td>Co-Chair</td>
<td>Environment Board</td>
</tr>
<tr>
<td>Member</td>
<td>Plan Commission</td>
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<tr>
<td>Vice-Chair</td>
<td>Preservation Commission</td>
</tr>
<tr>
<td>Member</td>
<td>Preservation Commission</td>
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<td>Chair</td>
<td>Utilities Commission</td>
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<tr>
<td>Member</td>
<td>Utilities Commission</td>
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<tr>
<td>Director</td>
<td>Community Development Department</td>
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<tr>
<td>Commander</td>
<td>Police Department</td>
</tr>
<tr>
<td>Director</td>
<td>Public Works Agency</td>
</tr>
<tr>
<td>Bureau Chief/City Engineer</td>
<td>Capital Planning &amp; Engineering</td>
</tr>
<tr>
<td>Traffic Operations Supervisor</td>
<td>Street Lights</td>
</tr>
<tr>
<td>Senior Project Manager</td>
<td>Traffic/Transportation</td>
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## CONSULTANT TEAM – CHRISTOPHER B. BURKE ENGINEERING, LTD.

<table>
<thead>
<tr>
<th>Role</th>
<th>Company</th>
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<tbody>
<tr>
<td>Mike Kerr</td>
<td>Project Manager</td>
</tr>
<tr>
<td>John Caruso</td>
<td>Project Engineer</td>
</tr>
<tr>
<td>Gerry Hennelly</td>
<td>Project Engineer</td>
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<tr>
<td>Altamanu, Inc.</td>
<td>Lighting Study/Lighting Design</td>
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<tr>
<td>Delta Engineering</td>
<td>Lighting Design</td>
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<tr>
<td></td>
<td>Executive Vice President</td>
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<td></td>
<td>Vice President/Electrical</td>
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<td></td>
<td>Senior Project Manager/Electrical</td>
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<tr>
<td></td>
<td>Subconsultant</td>
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<tr>
<td></td>
<td>Subconsultant</td>
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</tbody>
</table>
PROJECT GOALS

- DEVELOP A PLAN THAT IDENTIFIES FUTURE NEEDS OF THE COMMUNITY THAT CONSIDERS BUILT AND NATURAL ENVIRONMENTS
- ADDRESS SAFETY NEEDS
- MAINTAIN INFRASTRUCTURE AESTHETICS
- PROVIDE STANDARDIZATION
- COST EFFECTIVE, ENERGY EFFICIENT AND DARK SKY FRIENDLY ALTERNATIVES
AGENDA

• EXISTING LIGHTING INFRASTRUCTURE
• EDUCATION & METHODOLOGY
• RESULTS
• CURRENT NATIONAL LIGHTING STANDARDS AND CITY STANDARDS AND POLICIES
PROJECT TASKS

❖ EXISTING CONDITIONS REVIEW AND ANALYSIS
  ▪ Completed

❖ STAKEHOLDER AND PUBLIC ENGAGEMENT
  ▪ In Progress

❖ STREET LIGHT INFRASTRUCTURE OPTIONS AND RECOMMENDATIONS
  ▪ In Progress, Awaiting Results from Public Engagement

❖ PRIORITIZATION METHODOLOGY
  ▪ Awaiting Input from Stakeholders and Further Public Meetings

❖ FINAL STREET LIGHT MASTER PLAN
  ▪ Project Completion Mid 2018
## CITY OF EVANSTON EXISTING STREET LIGHTING INFRASTRUCTURE

### LIGHTING UNIT TYPES AND QUANTITIES

<table>
<thead>
<tr>
<th>LIGHT POLE TYPES</th>
<th>QUANTITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>• TALLMADGE LIGHTING UNITS (POST TOP)</td>
<td>4,200</td>
</tr>
<tr>
<td>• DAVIT TYPE LIGHTING UNITS (ROADWAY) WITH COBRA HEAD AND GLOBE TYPE LIGHTING UNITS</td>
<td>1,600</td>
</tr>
<tr>
<td>• BOLLARD LIGHTING UNITS</td>
<td>(LIMITED)</td>
</tr>
<tr>
<td>• UNDERPASS TUNNEL (SPECIALTY) LIGHTING UNITS (LIMITED)</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>LIGHTING SYSTEMS</th>
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</tr>
</thead>
<tbody>
<tr>
<td>• CONTROLLERS/CONTROL CENTERS</td>
<td>107</td>
</tr>
</tbody>
</table>
EXISTING CONDITIONS LIGHTING TYPES

INDUCTION TALLMADGE
(POST TOP)

COBRA HEAD INDUCTION
(ROADWAY)

LED
(ROADWAY)
EXISTING CONDITIONS LIGHTING TYPES

GLOBE TYPE METAL HALIDE (ROADWAY)

SHOEBOX TYPE METAL HALIDE (ROADWAY)

COBRA HEAD METAL HALIDE (ROADWAY)
EXISTING SPECIALTY AND AREA LIGHTING TYPES AND CONTROLLER

TUNNEL LIGHTING

UNDERPASS LIGHTING

SPECIALTY LIGHTING

LIGHTING CONTROLLER
WHAT WAS STUDIED?

❖ LOCATIONS

18 study areas chosen by Committee and City staff

❖ MEASUREMENTS

Were taken for the various study areas at varying cross-section widths for illumination levels

❖ HOW IT WAS STUDIED

With the light meter every 10’-0” at the pavement level
WHAT IS A FOOTCANDLE?

1 Footcandle (fc) = The measurement of light which equals the power of one candle one foot away (1 Lumen)

1 fc = 1 Lumen/Sq. Ft.
WHERE WERE THE LIGHTING LEVEL READINGS TAKEN?

- **Intersections**
  - Reading taken throughout intersection approximately every 10', measured in foot candles
  - Typical light pole location at intersections

- **Roadways**
  - Readings taken along roadway
  - Typical light pole locations on local and collector roadways
WHAT DOES THE REPORT TELL YOU?

**TABLE OF ILLUMINANCE MEASUREMENTS**

<table>
<thead>
<tr>
<th>POINT</th>
<th>WEST SIDEWALK (12' SETBACK)</th>
<th>10' M PARKING LANE</th>
<th>10' SB LANE</th>
<th>10' ST Parking</th>
<th>EAST SIDEWALK (12' SETBACK)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.20</td>
<td>0.10</td>
<td>0.10</td>
<td>0.10</td>
<td>0.10</td>
</tr>
<tr>
<td>2</td>
<td>0.01</td>
<td>0.01</td>
<td>0.10</td>
<td>0.10</td>
<td>0.10</td>
</tr>
<tr>
<td>3</td>
<td>0.01</td>
<td>0.01</td>
<td>0.10</td>
<td>0.10</td>
<td>0.10</td>
</tr>
<tr>
<td>4</td>
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*HIGH VALUES RECORDED ON EAST SIDEWALK DUE TO HIGH AMBIENT LIGHTING FROM PARK*

**ILLUMINANCE MEASUREMENT SUMMARY (fc)**

<table>
<thead>
<tr>
<th></th>
<th>AVERAGE</th>
<th>AVE/Min</th>
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<tr>
<td>ROADWAY</td>
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<tr>
<td>SOUTH SIDEWALK</td>
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Where the measurements were taken

Light levels measured in footcandles

Measurement Summary
VARIOUS SITE CONSIDERATIONS

- Ambient light from store fronts and businesses (glare)
- Front porch lighting
- Tree canopies
- Uplighting/Glare

- Most Tallmadge light standards allow light to cast upward, creating glare and lost illumination capability. Glare and illumination readings were taken above the lights. The lost illumination levels for the uplight produced were as follows:

  - 55 Watt Tallmadge = 5.8 fc Above Fixture
  - 85 Watt Tallmadge = 6.2 fc Above Fixture
  - 165 Watt Tallmadge = 19.7 fc Above Fixture
# CURRENT CITY OF EVANSTON LIGHTING STANDARDS

<table>
<thead>
<tr>
<th>Street Category</th>
<th>Commercial &amp; Institutional High Pedestrian Activity (Footcandles)</th>
<th>High Density Residential Medium Pedestrian Activity (Footcandles)</th>
<th>Low Density Residential Low Pedestrian Activity (Footcandles)</th>
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<tbody>
<tr>
<td>Major</td>
<td>1.0 – 4.0</td>
<td>0.4 – 0.6</td>
<td>0.2 – 0.4</td>
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<tr>
<td>Collector</td>
<td>0.4 – 1.0</td>
<td>0.2 – 0.4</td>
<td>0.2 – 0.4</td>
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<tr>
<td>Local</td>
<td>0.4 – 0.6</td>
<td>0.1 – 0.2</td>
<td>.05 – 0.1</td>
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### ILLUMINATING ENGINEERS SOCIETY OF NORTH AMERICA (IESNA)
RECOMMENDED LIGHTING LEVELS FOR ROADWAYS

<table>
<thead>
<tr>
<th>Road and Pedestrian Activity Area</th>
<th>Pavement Classification (Minimum Maintained Average Values)</th>
<th>Uniformity Ratio $E_{avg}/E_{min}$</th>
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<tr>
<td></td>
<td>R3 (fc)</td>
<td>COE Current Standards (fc)</td>
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<tr>
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<td>High</td>
<td>1.7</td>
<td>1.0 – 4.0</td>
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<tr>
<td>Medium</td>
<td>1.3</td>
<td>0.4 – 0.6</td>
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<tr>
<td>Low</td>
<td>0.9</td>
<td>0.2 – 0.4</td>
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<tr>
<td>Collector</td>
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<td></td>
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<tr>
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<td>1.2</td>
<td>0.4 – 1.0</td>
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<tr>
<td>Medium</td>
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<td>0.2 – 0.4</td>
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<tr>
<td>High</td>
<td>0.9</td>
<td>0.4 – 0.6</td>
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<tr>
<td>Medium</td>
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<td>0.1 – 0.2</td>
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<tr>
<td>Low</td>
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<td>0.05 – 0.1</td>
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ILLUMINATING ENGINEERS SOCIETY OF NORTH AMERICA (IESNA) RECOMMENDED LIGHTING LEVELS FOR INTERSECTIONS

<table>
<thead>
<tr>
<th>Functional Classification</th>
<th>Average Maintained Illumination at Pavement by Pedestrian Area Activity Level (fc)</th>
<th>City of Evanston Standard (fc)</th>
<th>E_{avg}/E_{min} **</th>
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<td>Collector/Collector</td>
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<td>Local/Local</td>
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* No Current City Standard

** Uniformity Ratio Average Illumination Level versus Minimum Illumination Level
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<tr>
<th>LOCATION</th>
<th>STREET</th>
<th>LIMITS</th>
<th>TYPE</th>
<th>PEDESTRIAN</th>
<th>RECOMMENDED LEVEL</th>
<th>ACTUAL LEVEL</th>
<th>COE LEVEL*</th>
<th>IESNA GRADE</th>
<th>COE GRADE</th>
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<td>1A</td>
<td>Chicago Ave.</td>
<td>Church St. to Grove St.</td>
<td>Major</td>
<td>High</td>
<td>1.7 fc</td>
<td>0.51 fc</td>
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<td>Foster St.</td>
<td>Maple Ave. to Sherman Ave.</td>
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<td>Medium</td>
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<td>2A – 9B</td>
<td>Dodge Ave.</td>
<td>Washington St. to Seward St.</td>
<td>Major</td>
<td>Medium</td>
<td>1.3 fc</td>
<td>0.66 fc</td>
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<td>2B</td>
<td>McDaniel Ave.</td>
<td>Crain St. to Greenleaf St.</td>
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<td>0.7 fc</td>
<td>0.03 fc</td>
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<td>Sheridan Square</td>
<td>Sheridan Rd. (West) to Sheridan Rd. (East)</td>
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<td>0.7 fc</td>
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<td>Main St.</td>
<td>Sherman Ave. to Hinman Ave.</td>
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<td>Ridge Ave.</td>
<td>Lake St. to Dempster St.</td>
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<td>5A</td>
<td>Green Bay Rd.</td>
<td>Simpson St. to Payne St.</td>
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<td>1.3 fc</td>
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<td>Hovland Ct.</td>
<td>Emerson St. to Church St.</td>
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<td>0.7 fc</td>
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<td>Central St.</td>
<td>Walnut Ave. to Broadway Ave.</td>
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<td>Grant St.</td>
<td>Bennett Ave. to Pioneer Rd.</td>
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<td>Central Park Ave.</td>
<td>Park Place North to End of Willard Elementary School Property</td>
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<td>Medium</td>
<td>0.9 fc</td>
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<td>0.2 – 0.4</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
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<td>Ingleside Place</td>
<td>Orrington Ave. to Euclid Park Place</td>
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<td>0.7 fc</td>
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<tr>
<td>8A</td>
<td>Barton Ave.</td>
<td>Hull Terrace to Harvard Terrace</td>
<td>Local</td>
<td>Medium</td>
<td>0.7 fc</td>
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<td>Brummel St.</td>
<td>Custer Ave. to East Dead End</td>
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<td>Oakton St.</td>
<td>Florence Ave. to Asbury Ave.</td>
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<td>Judson Ave.</td>
<td>Judson Ave.</td>
<td>1100 Block to 1200 Block</td>
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<td>Lyons St.</td>
<td>Dodge Ave.</td>
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<td>Simpson St.</td>
<td>Simpson St.</td>
<td>Dewey Ave. to Green Bay Rd.</td>
<td>Collector</td>
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<td>0.9 fc</td>
<td>1.07 fc</td>
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<td>● ● ● ●</td>
<td>● ● ● ●</td>
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</table>

RED – Does not meet IESNA recommended standards or City of Evanston standards
GREEN – Meets IESNA recommended standards or City of Evanston standards
BLUE – Falls minimally short of meeting IESNA recommended levels or City of Evanston standards

* City of Evanston Illumination Levels from 1979 Plan for the Future of Evanston’s Street Lighting System
EXISTING CONDITIONS LIGHTING STUDY AREAS

- **RED** – Does not meet IESNA recommended standards
- **GREEN** – Meets IESNA recommended standards
- **BLUE** – Falls minimally short of meeting IESNA recommended levels
CONCLUSIONS

- Pole spacing varies throughout City
- Lighting types are: 55, 85, 165 and 200 Watt Induction, 250 and 400 Watt Metal Halide, 250 and 400 Watt High Pressure Sodium, 140 Watt LED
- Infrastructure is generally robust and capable of future expansion
- Majority of local streets don’t meet recommended standards
- Majority of collector roadways are close to meeting recommended standards
- Majority of major roadways do not meet IESNA recommended standards
- Majority of all roadway types do not meet COE standards
POLICIES

CURRENT CITY OF EVANSTON POLICIES

- Lighting Levels from 1979 Lighting Study Report
- City Ordinance
  - Uniformity Ratios Only
    - Residential Areas = 6:1
    - All Other Areas = 3:1
  - Area Lighting to be Sharp Cut-Off (Horizontal Lenses)
  - 0.0 fc Measured at Residential Property Lines

CURRENT COM ED POLICIES

- Alley lights put in by resident petition
- Lighting types are in transition with ComEd switching to LED but have not been standardized to wattage and color temperature
- Currently working with ComEd for current rate structure and energy consumption
Policies (Cont.)

City Programs for Replacement of Lighting

- No Capitol Improvement Plan in place for replacement of lighting. Improvements to existing lighting systems are completed by and during the following methods:
  - Roadway Reconstruction Projects
  - Spot Location Improvements
  - Major Planned Unit Private Developments
  - Safer Neighborhood Area Projects (SNAP)
- Current energy costs for electrical usage
  - FY 2016 Costs = $152,830.00
  - FY 2017 Costs = $140,630.00
- Equipment and Maintenance Costs
  - FY 2017 = $140,000.00
- Cost to Replace One (1) Complete Tallmadge Pole to Davit Arm Light Pole including Conduit and Wiring = $16,000
WHAT’S NEXT:

❖ PROJECT SCHEDULE
  ▪ Completion Mid 2018

❖ NEXT TASK
  ▪ Review and Receive Public Input, Develop Options and Recommendations

❖ NEXT PUBLIC MEETING
  ▪ Tentative Schedule February 2018

❖ QUESTIONS?
REVIEW OF INPUT RECEIVED AT AND AFTER PUBLIC MEETING

PUBLIC MEETING HELD NOVEMBER 28, 2017
❖ 40 people in attendance
❖ Received 17 comments at public meeting

ONLINE COMMENTS
❖ Received 34 comments online
REVIEW OF INPUT RECEIVED AT AND AFTER PUBLIC MEETING

RESULTS

❖ 24 comments in favor of keeping the existing Tallmadge lighting
❖ 7 of the “keep Tallmadge” comments suggested upgrades to improve lighting levels, minimize light pollution and reduce maintenance costs
❖ 5 comments requested higher lighting levels
❖ 4 comments thought the Seward pilot project was too bright
❖ 2 comments questioned how to respond to online posts
❖ 2 comments stated that no study was necessary
❖ 2 comments questioned what other Villages are doing
AS A RESULT OF PUBLIC MEETING #1

- Survey Northwest Municipal Conference for current street lighting practices.
- Analyze additional areas for lighting levels to be used in future community survey.
- Explore options for modernizing Tallmadge lights.
SURVEY OF NORTH SHORE MUNICIPAL CONFERENCE

Prepare list of lighting questions for fact finding in regard to what other municipalities are doing with regards to lighting

Topics for Survey:
- Ordinance/Policy/Guidelines
- Equipment Types
- Lighting Levels
- Dark Sky Compliance
- Technology/Light Sources
- Maintenance
- Capital Improvement Plans
- Standard Construction Details
- Consideration of LED Conversion Alternatives
ADDITIONAL LIGHTING STUDY AREAS

❖ McCormick Avenue – Golf Road to Green Bay Road
❖ McCormick Avenue at Bridge Street
❖ Chicago Avenue – Kedzie Avenue to South Boulevard
❖ Chicago Avenue at Keeney Street (Intersection)
❖ Sheridan Road at Keeney Street (Intersection)
❖ Ridge Avenue at Foster Street (Intersection)
❖ Pathways/Bikeways, Lake Front – Greenwood Street to NU Campus
❖ Seward Street – Dodge Avenue to Dewey Avenue
❖ Seward Street – Dewey Avenue to Florence Avenue
LIGHTING EQUIPMENT OPTIONS

❖ Retrofit existing Tallmadge luminaires with new LED light source, refractors and roof covers
❖ New Tallmadge LED luminaires engineered for appropriate optic with replica fitter and dark sky compliant
❖ New Tallmadge type poles with new LED luminaires
❖ New Tallmadge replica poles with new LED luminaires
FUTURE MEETING SCHEDULE

- Steering Committee Meeting
- Public Meeting
QUESTIONS TO BE SUBMITTED TO THE NORTHWEST MUNICIPAL CONFERENCE FOR INFORMATION ON LIGHTING ORDINANCES AND STANDARDS

As part of the City of Evanston’s ongoing Street Lighting Master Plan Study, we are requesting information from members of the Conference in regards to your municipality’s current standard practices for street lighting. The specific questions are below:

1. Does your municipality currently have a Village Code or Village Ordinance in regard to street lighting within public right of ways? If so, please provide a copy of this code or ordinance section.

2. What types street lighting equipment does your municipality currently maintain?

3. What lighting illumination levels does your municipality require?

4. Are the luminaires that your municipality allows or maintains Dark Sky Compliant?

5. What current lamp technology does your municipality allow for lamp types?

6. Does your municipality maintain your existing roadway lighting systems or is the maintenance of the street lighting contracted out?

7. Does your municipality currently have a Capital Improvement Plan (CIP) for the upgrading of lighting?

8. Does your municipality currently use standard roadway lighting construction details or standards?

9. Does your municipality currently consider the conversion of existing luminaires to LED by either retrofitting of light sources or full luminaire replacement?
The City is evaluating options for maintaining its existing street light system and is seeking public input on future lighting levels desired for new development and major public works projects. The City is committed to keeping the existing Tallmadge Lighting System and has no plans to replace Tallmadge lights with standard roadway-type poles. Additional information regarding the project is available at the City’s website: www.cityofevanston.org/streetlight.

Please provide your feedback on current lighting levels at the locations below. The City recommends taking some time to travel to the locations listed to evaluate current lighting, as some areas have been recently updated. If you are unfamiliar with the lighting at any of the locations, you should not provide a response for that location.

1. For the three major roads listed below, please provide your opinion on the current lighting levels.

<table>
<thead>
<tr>
<th>Too Dark</th>
<th>Too Bright</th>
<th>Just Right</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green Bay Rd from Simpson St to Payne St</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Main St from Sherman Ave to Hinman Ave</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Dodge Ave from Washington St to Seward St</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

2. For the three collector roads listed below, please provide your opinion on the current lighting levels.

<table>
<thead>
<tr>
<th>Too Dark</th>
<th>Too Bright</th>
<th>Just Right</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simpson St from Dewey Ave to Green Bay Rd</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Foster St from Maple Ave to Sherman Ave</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Grant St from Bennett Ave to Pioneer Rd</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

3. For the six local roads listed below, please provide your opinion on the current lighting levels.

<table>
<thead>
<tr>
<th>Too Dark</th>
<th>Too Bright</th>
<th>Just Right</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seward St from Dodge Ave to Dewey Ave</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Seward St from Dewey Ave to Florence Ave</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Seward St from Florence Ave to Wesley Ave</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Central Park from Park Place to Isabella St</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Thayer St from Central Park to Lawndale Ave</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Forest Ave from Keeney St to Kedzie St</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
4. Do you feel that the Lakefront Path between Greenwood Street and NU Campus is:

   Too Dark  
   Too Bright  
   Just Right  

5. For the three intersections listed below, please provide your opinion on the current lighting levels.

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Too Dark</th>
<th>Too Bright</th>
<th>Just Right</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicago Ave and Keeney St</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>McCormick Boulevard and Bridge St</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ridge Ave and Foster St</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6. How would you characterize the lighting levels on your block?

   Too Dark
   Too Bright
   Just Right

7. Please provide the address range for your block (e.g. 2100 block of Ridge Avenue).

   ________________________________________________________________

Please complete the survey by May 6, 2018 and return it to:

City of Evanston Public Works Agency
Lorraine H. Morton Civic Center, Room 3700
2100 Ridge Avenue
UPDATE OF INPUT RECEIVED

ONLINE COMMENTS:
- Received 90 comments online

GENERAL RESULTS:
- 25 comments in favor of keeping the existing Tallmadge lighting
- 10 of the “keep Tallmadge” comments suggested upgrades to improve lighting levels, minimize light pollution and reduce maintenance costs
- 21 comments requested higher lighting levels
- 20 comments thought the pilot projects were too bright
- 2 comments questioned how to respond to online posts
- 2 comments stated that no study was necessary
- 2 comments questioned what other Villages are doing
- 10 comments suggested that lights shine down, smart lighting systems studied, and change traffic laws
REVIEW OF NORTHWEST MUNICIPAL CONFERENCE (NWMC) SURVEY

NWMC SURVEY SENT OUT FEBRUARY 2018

❖ 12 of 45 Communities Responded
❖ Respondents included Arlington Heights, Buffalo Grove, Fox Lake, Grayslake, Libertyville, Lincolnshire, Morton Grove, Palatine, Park Ridge, Skokie, Streamwood and Wheeling.
NORTHWEST MUNICIPAL CONFERENCE SURVEY

**RESULTS:**

- 5 of 12 Have Lighting Ordinance/Standards
- Lighting Equipment Varies Greatly
- 6 of 12 Do Not Require Specific Illumination Levels; Those That Do Vary From 0.2 fc to IES
- 4 of 12 Require Dark Sky Compliance
- **ALL COMMUNITIES ARE MOVING TO LED LAMPS**
- 6 of 12 Contract Out Street Light Maintenance
- 8 of 12 Do Not Have CIP for Lighting
- 9 of 12 have Standard Lighting Drawings/Details
- None of the Communities Have Required Illumination Levels for Pedways, Bikeways or Intersections
REVIEW OF COMMUNITY SURVEY

COMMUNITY STREET LIGHT SURVEY
SENT OUT APRIL 2018
❖ Over **700** Responded to the Survey

SURVEY INCLUDED LIGHTING LEVELS FOR:
❖ Major Streets
❖ Collector Roads
❖ Local Roads
❖ Lakefront Path
❖ Intersections
❖ “Your Block”
### IES & COE Recommended Lighting Levels for Roadways

<table>
<thead>
<tr>
<th>Road and Pedestrian Activity Area</th>
<th>IES fc</th>
<th>COE fc</th>
<th>Uniformity Ratio $E_{avg}/E_{min}$</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Road</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Major</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>1.7</td>
<td>1.0 – 4.0</td>
<td>3.0</td>
</tr>
<tr>
<td>Medium</td>
<td>1.3</td>
<td>0.4 – 0.6</td>
<td>3.0</td>
</tr>
<tr>
<td>Low</td>
<td>0.9</td>
<td>0.2 – 0.4</td>
<td>3.0</td>
</tr>
<tr>
<td>Collector</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>1.2</td>
<td>0.4 – 1.0</td>
<td>4.0</td>
</tr>
<tr>
<td>Medium</td>
<td>0.9</td>
<td>0.2 – 0.4</td>
<td>4.0</td>
</tr>
<tr>
<td>Low</td>
<td>0.6</td>
<td>0.2 – 0.4</td>
<td>4.0</td>
</tr>
<tr>
<td>Local</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>0.9</td>
<td>0.4 – 0.6</td>
<td>6.0</td>
</tr>
<tr>
<td>Medium</td>
<td>0.7</td>
<td>0.1 – 0.2</td>
<td>6.0</td>
</tr>
<tr>
<td>Low</td>
<td>0.4</td>
<td>0.05 – 0.1</td>
<td>6.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IES Intersection Lighting Levels fc</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Intersection Type</strong></td>
</tr>
<tr>
<td>Major-Major</td>
</tr>
<tr>
<td>Major-Collector</td>
</tr>
<tr>
<td>Major-Local</td>
</tr>
<tr>
<td>Collector-Collector</td>
</tr>
<tr>
<td>Collector-Local</td>
</tr>
<tr>
<td>Local-Local</td>
</tr>
</tbody>
</table>
LED COLOR TEMPERATURE SCALE

**Basic LED Reference Example**

- 7000K
- 5700K
- 4000K
- 3500K
- 3000K
- 2700K

**Kelvin Color Temperature Scale Chart**

- 10,000K: Blue Sky
- 9,000K
- 8,000K
- 7,000K
- 6,000K: Cloudy Sky
- 5,000K-6,000K: Day White Seesmart LED
- 4,000K-4,5000K: Natural White Seesmart LED
- 4,000K: Clear Metal Halide
- 3,000K-100W Halogen
- 2,800K: 100W Incandescent
- 2,700K-3,200K: Warm White Seesmart LED
- 2,000K: High Pressure
- 1,500K: Candle

LED Color Temperature Correlation Example
### MAJOR STREETS

#### GREEN BAY ROAD
Davit, 140W, LED, 4000K  
(Simpson St to Payne St)  
2.28 fc

- **Answered (A):** 536  
- **Skipped (S):** 234  
- **IES COE:**  
- **-- Meets Standards:**

#### MAIN STREET
Davit, 250W, HPS  
(Sherman Ave to Hinman Ave)  
1.47 fc

- **Answered (A):** 520  
- **Skipped (S):** 250  
- **IES COE:**  
- **-- Meets Standards:**

#### DODGE AVENUE
Tallmadge, 85W, Induction  
(Washington St to Seward St)  
0.66 fc

- **Answered (A):** 530  
- **Skipped (S):** 180  
- **IES COE:**  
- **-- Meets Standards:**
COLLECTOR ROADS

SIMPSON STREET
Davit, 200W, Induction
(Dewey Ave to Green Bay Rd)
1.07 fc

<table>
<thead>
<tr>
<th></th>
<th>A: 476</th>
<th>S: 294</th>
<th>56.09%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Too Dark</td>
<td>8.61%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Too Bright</td>
<td></td>
<td>35.29%</td>
<td></td>
</tr>
<tr>
<td>Just Right</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

FOSTER STREET
Tallmadge, 165W, Induction
(Maple Ave to Sherman Ave)
0.16 fc

<table>
<thead>
<tr>
<th></th>
<th>A: 496</th>
<th>S: 274</th>
<th>60.69%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Too Dark</td>
<td>7.66%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Too Bright</td>
<td></td>
<td>31.64%</td>
<td></td>
</tr>
<tr>
<td>Just Right</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

GRANT STREET
Tallmadge, 85W, Induction
(Bennett Ave to Pioneer Rd)
0.01 fc

<table>
<thead>
<tr>
<th></th>
<th>A: 458</th>
<th>S: 312</th>
<th>53.49%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Too Dark</td>
<td>10.04%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Too Bright</td>
<td></td>
<td>36.46%</td>
<td></td>
</tr>
<tr>
<td>Just Right</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

-- Meets Standards

IES COE

A: 496    S: 274
A: 476    S: 294
A: 458    S: 312

-- Meets Standards

196 of 293
## LOCAL ROADS

### SEWARD STREET
- **Pilot**, Tallmadge, 55W, 3000K & 4000K, Clear (Dodge Ave to Dewey Ave) 0.91 fc
- **IES COE**
  - A: 469  S: 301  58.21%
  - A: 454  S: 316  56.61%
  - A: 455  S: 315  57.36%

### CENTRAL PARK
- **Tallmadge**, 55W, Induction (Park Place to Isabella St) 0.01 fc
- **IES COE**
  - A: 476  S: 294  50.42%

### SEWARD STREET
- **Pilot**, Tallmadge, 55W, 3000K & 4000K, Frosted (Dewey Ave to Florence Ave) 0.70 fc
- **IES COE**
  - A: 454  S: 316  56.61%

### THAYER STREET
- **Pilot**, Tallmadge, 80W, 4000K (Central Park to Lawndale Ave) 0.26 fc
- **IES COE**
  - A: 482  S: 288  46.27%

### SEWARD STREET
- **Pilot**, Tallmadge, 50W, 3000K (Florence Ave to Wesley Ave) 0.71 fc
- **IES COE**
  - A: 455  S: 315  57.36%

### FOREST AVENUE
- **Pilot**, Tallmadge, 40W & 80W, 4000K (Keeney St to Kedzie St) 0.05 fc
- **IES COE**
  - A: 509  S: 261  55.40%

---

- **-- Meets Standards**
- **Too Dark**
- **Too Bright**
- **Just Right**

---

197 of 293
LAKEFRONT PATH
Shepherds Hook, 150W, Metal Halide
(Between Greenwood Street and NU Campus)
1.30 fc

53.91%  9.91%  36.17%

TOO DARK  TOO BRIGHT  JUST RIGHT

-- Meets Standards

IES | COE
---|---
[✓] | [✓]

Answered (A): 575  Skipped (S): 195

198 of 293
**INTERSECTIONS**

**CHICAGO AVENUE AT KEENEY STREET**
2 Twin Tallmadge, 165W, Induction 0.35 fc

- Too Dark: A: 548 S: 222
  - IES: 8.94% COE: 44.06%
  - Too Bright: 45.07%
  - Just Right: 45.99%

**McCORMICK BLVD AT BRIDGE STREET**
4 Tallmadge, 165W, Induction 0.33 fc

- Too Dark: A: 547 S: 223
  - IES: 8.23% COE: 44.06%
  - Too Bright: 47.71%
  - Just Right: 44.06%

**RIDGE AVENUE AT FOSTER STREET**
3 Tallmadge, 165W, Induction 0.20 fc

- Too Dark: A: 534 S: 236
  - IES: 6.74% COE: 23.0%
  - Too Bright: 34.27%
  - Just Right: 58.99%

---

**Meets Standards**

- **IES**
  - A: 548 S: 222
    - Too Dark: 8.94%
    - Too Bright: 45.07%
    - Just Right: 45.99%

- **COE**
  - A: 547 S: 223
    - Too Dark: 8.23%
    - Too Bright: 47.71%
    - Just Right: 44.06%

- **IES**
  - A: 534 S: 236
    - Too Dark: 6.74%
    - Too Bright: 34.27%
    - Just Right: 58.99%
STERNBERG RETROFIT OF EXISTING CONDITIONS (EXAMPLE)
LOCAL ROADWAY OPTION (EXAMPLE)
NEW CONSTRUCTION OPTIONS

❖ All new construction shall meet IESNA recommended practice (Collectors, Major Roadways, & Intersections)

❖ **Local Roadways** shall utilize the Sternberg Lighting replica Tallmadge luminaire (MS805LED), or approved equal, the luminaire shall be mounted at 16’ concrete foundation or steel helix foundation with a round 24” top plate.

❖ **Collector and Major Roadways** shall be a 30’-0” Roadway Davit Arm pole with and LED type luminaire (Autobahn Series ATB2 or equal) on a concrete foundation or steel helix foundation with a round 30” top plate to match those recently installed in Fountain Square.
  ○ A replica Tallmadge luminaire or a pedestrian-scale LED type luminaire (Autobahn Series ATB0 or equal) mounted at 14’ to the 30’ roadway Davit Arm pole may be used if necessary to enhance the Roadway light standard when higher sidewalk illuminations if required for pedestrian traffic.

❖ It is recommended that new construction utilize a staggered configuration to conform with current City of Evanston typical layouts.

❖ Electrical Infrastructure such as Wiring, Conduit and Controls shall be per National Electrical Code (NEC) compliance for outdoor lighting installations.
NEW CONSTRUCTION OPTIONS (CONT’D)
FUTURE MEETING SCHEDULE

❖ PUBLIC MEETING
REVIEW OF COMMUNITY SURVEY

COMMUNITY STREET LIGHT SURVEY
SENT OUT APRIL 2018

- Over 700 Responded to the Survey

SURVEY INCLUDED LIGHTING LEVELS FOR:

- Major Streets
- Collector Roads
- Local Roads
- Lakefront Path
- Intersections
- “Your Block”
REVIEW OF COMMUNITY SURVEY

MAJOR STREETS
Too Dark – 51.07%
Too Bright – 7.82%
Just Right – 41.11%

COLLECTOR ROADS
Too Dark – 55.73%
Too Bright – 8.74%
Just Right – 35.53%

LOCAL ROADS
Too Dark – 53.98%
Too Bright – 12.16%
Just Right – 33.86%
REVIEW OF COMMUNITY SURVEY

LAKEFRONT PATH
Too Dark – 53.91%
Too Bright – 9.91%
Just Right – 36.17%

INTERSECTIONS
Too Dark – 50.83%
Too Bright – 7.98%
Just Right – 41.19%

YOUR BLOCK
Too Dark – 45.14%
Too Bright – 11.49%
Just Right – 43.37%
EXISTING CONDITIONS CONCLUSIONS

- In comparison with IESNA lighting level recommendations, COE lighting level recommendations from the 1979 study are less stringent.

- Of the 31 locations studied throughout the City, lighting levels generally do not meet IESNA or COE recommended lighting levels.

- Tree canopies along local roadways are dense and impede lighting levels.

- Power centers are typically in good condition and the centrally located photoelectric cell at each power center is an adequate means for basic light controls.

- All power centers are unmetered and electrical usage bill is based on Com Ed’s system to estimate energy consumption.

- A smart grid or smart lighting does not exist in COE.

- Existing lighting is a significant source of light pollution.
EXISTING CONDITIONS RECOMMENDATIONS

- The City of Evanston (COE) has too many types of poles and fixtures for davit arm roadway poles and should be standardized.

- LED luminaires should be the only lamp specified in future developments/construction.

- It is recommended for future construction and maintenance that a replica Tallmadge full cutoff LED luminaire that is dark sky compliant be installed on an existing Tallmadge pole.

- The City’s alley light installation policies and procedures are well defined. A petition process is taken into consideration as well as the concerns of the adjacent residents. Therefore, there is no need for policy or procedure changes at this time.

- With the existing built environment the City has created, a recommended spacing between trees and poles should be 25’±.

- The 0.0 footcandle (fc) requirement at the lot line should not be changed and should remain per Ordinance.

- Smart metering should be explored by City of Evanston.
ALTERNATE TECHNOLOGY EXPLORATION

LUMINAIRES
- A variety of wattages were explored for both the Davit Arm Roadway Lighting Unit and Tallmadge Lighting Unit.
- Pilot projects included retrofits to the existing Tallmadge luminaire and an engineered LED luminaire manufactured by Sternberg or equal.
- Minimal glare and up light (Dark Sky Compliant)

COLOR TEMPERATURE
- 2,000K
- 3,000K
- 4,000K

OPTIC
- Type II
- Type III
- Type V

LENS TYPES
- Clear glass
- Frosted acrylic
- Prismatic acrylic
# CITY OF EVANSTON LIGHTING LEVEL RECOMMENDATIONS

<table>
<thead>
<tr>
<th>FOR REFERENCE</th>
<th>IESNA STANDARDS</th>
<th>CURRENT CITY OF EVANSTON (COE) STANDARDS</th>
<th>PROPOSED CITY OF EVANSTON (COE) STANDARDS</th>
<th>PROPOSED POLE(S)</th>
<th>PROPOSED FIXTURE(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVERAGE ILLUMINANCE (FC)</td>
<td>UNIFORMITY RATIO</td>
<td>AVERAGE ILLUMINANCE (FC)</td>
<td>UNIFORMITY RATIO</td>
<td>PROPOSED POLE(S)</td>
<td>PROPOSED FIXTURE(S)</td>
</tr>
<tr>
<td>MAJOR</td>
<td>0.9-1.7</td>
<td>3.0</td>
<td>0.2-1.0</td>
<td>0.9-1.7</td>
<td>3.0</td>
</tr>
<tr>
<td>COLLECTOR</td>
<td>0.6-1.2</td>
<td>4.0</td>
<td>0.2-1.0</td>
<td>0.6-0.9</td>
<td>4.0</td>
</tr>
<tr>
<td>LOCAL</td>
<td>0.4-0.9</td>
<td>6.0</td>
<td>0.1-0.6</td>
<td>0.4-0.7</td>
<td>6.0</td>
</tr>
<tr>
<td>LOCAL - HIGH LEVEL</td>
<td>0.9</td>
<td>6.0</td>
<td>-</td>
<td>0.7-0.9</td>
<td>6.0</td>
</tr>
<tr>
<td>MAJOR/MAJOR</td>
<td>1.8-3.4</td>
<td>3.0</td>
<td>-</td>
<td>1.8-2.6</td>
<td>3.0</td>
</tr>
<tr>
<td>MAJOR/COLLECTOR</td>
<td>1.5-2.9</td>
<td>3.0</td>
<td>-</td>
<td>1.5-2.2</td>
<td>3.0</td>
</tr>
<tr>
<td>PEDESTRIAN DESIGNATED CROSSINGS</td>
<td>1.8-2.4</td>
<td>6.0</td>
<td>-</td>
<td>0.8-2.1</td>
<td>5.0</td>
</tr>
<tr>
<td>BIKE/PEDESTRIAN PATHWAY</td>
<td>0.5</td>
<td>-</td>
<td>-</td>
<td>0.3-0.5</td>
<td>-</td>
</tr>
<tr>
<td>PARKING LOT</td>
<td>1.0</td>
<td>5.0</td>
<td>-</td>
<td>1.0</td>
<td>5.0</td>
</tr>
<tr>
<td>PARKING LOT - HIGH LEVEL</td>
<td>2.5</td>
<td>5.0</td>
<td>-</td>
<td>1.5-2.5</td>
<td>5.0</td>
</tr>
<tr>
<td>Viaducts</td>
<td>2.0</td>
<td>-</td>
<td>-</td>
<td>2.0</td>
<td>-</td>
</tr>
</tbody>
</table>

Note: Existing Tallmadge light locations will be maintained unless otherwise approved by the City Council.
## CITY OF EVANSTON LIGHTING LEVEL RECOMMENDATIONS

<table>
<thead>
<tr>
<th>ROADWAY TYPE</th>
<th>AVERAGE ILLUMINANCE (FC)</th>
<th>UNIFORMITY RATIO</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAJOR</td>
<td>0.9-1.7</td>
<td>3.0</td>
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Note: Existing Tallmadge light locations will be maintained unless otherwise approved by the City Council.
DAVIT ARM ROADWAY LIGHTING UNIT

POLE
• Tapered aluminum davit arm
• 25’ to 30’ mounting height
• 8’ arm
• Powder coated black
• In areas where the Tallmadge Lighting Units compliment the lighting levels, a decorative aluminum clamshell base cover may be installed to replicate the base of the Tallmadge Lighting Unit

LUMINAIRE
• Black color
• Type III optics
• ≤ 3,000K color temperature
• Full cutoff cobra head-type LED (140W-200W)

OPTIONS
• Banner arms
• GFCI festoon receptacle
• Black full cutoff cobra head-type pedestrian scale LED luminaire in high pedestrian traffic areas (20W-40W, type II optics, ≤ 3,000K color temperature)

LOCATION
• All major roadways, select collector roadways and critical intersections where pedestrian traffic and/or vehicle traffic is high
TALLMADGE LIGHTING UNIT

POLE
- Flute tapered steel, cast iron or aluminum
- 14’ mounting height
- Powder coated black
- Decorative luminaire fitter and base to best replicate existing Tallmadge Pole

LUMINAIRE
- Full cutoff LED (50W – 100W)
- Frosted acrylic lens
- Black color
- \( \leq 3,000K \) color temperature
- Type III or type V optics
- Sternberg MS805 or Equal

OPTIONS
- GFCI festoon receptacle

LOCATION
- All local roadways, select collector roadways, intersections where a local and collector roadway meet or two local roadways meet
- At high pedestrian or traffic areas and intersections may be supplemented by Davit Arm Roadway Lighting Units

Note: Existing Tallmadge light locations will be maintained unless otherwise approved by the City Council
PARK PATHWAY LIGHTING UNIT

POLE
- Round aluminum
- Powder coated black
- Decorative base and arm

LUMINAIRE
- Black color
- ≤ 3,000K color temperature
- Type III or type V optics
- Full cutoff decorative LED (Philips Lumec Domus or equal)

OPTIONS
- GFCI festoon receptacle

LOCATION
- Bike/pedestrian pathways
SHOE BOX (PARKING LOT) LIGHTING UNIT

POLE
• Round aluminum
• Powder coated black
• 16’ to 30’ mounting height

LUMINAIRE
• Black color
• ≤ 3,000K color temperature
• Type II, type III or type V optics
• Full cutoff shoe box-type LED

OPTIONS
• GFCI festoon receptacle

LOCATION
• City-owned parking lots
WALL PACK LIGHTING UNIT

LUMINAIRE
- Wall pack LED (48W – 75W)
- ≤ 3,000K color temperature
- Type III optics
- Die cast aluminum powder coated black
- One-piece polycarbonate cover with optional vandal proof wire guard

LOCATION
- Viaducts
POWER CENTERS & LIGHTING CONTROL TECHNOLOGY

LIGHTING CONTROL TECHNOLOGY
RECOMMENDATIONS

• Com Ed smart meter technology
  o Access to real time data on actual power being used for each lighting control system
  o Knowledge of power outages or reduce power usage
  o $550.00/power center
  o Facilitated by smart phone or devices without use of labor forces
• 7-pin photocell type receptacles or alternative technology
FUNDING EXAMPLES

- Single Tallmadge Lighting Unit LED Luminaire Replacement - $3,200.00

- Full System Replacement of Tallmadge Lighting Units
  (Seward Street, Dodge – Wesley, 18 Tallmadge Lighting Units) - $190,680.00
  - New foundations, new poles, new LED luminaires, cable, conduit, new controller and service

- Upgrade One Entire Lighting System (Power Center 26N-07W, 89 Tallmadge Lighting Units)-$272,000.00
  - Existing spacing, existing poles, new LED luminaires, 7-pin receptacles, smart meter on existing controller

- Upgrade One Entire Lighting System at Optimal Spacing (Power Center 26N-07W, 124 Tallmadge Lighting Units)-$1,046,250.00
  - New foundations, new poles, new LED luminaires, 7-pin receptacles, smart meter on new controller

- Complete City Wide Capital Improvement Plan
  - Existing Infrastructure Replacement Cost - $61,480,000.00
  - Proposed Infrastructure Cost to Meet Proposed Lighting Levels - $81,529,000.00
PRIORITIZATION

• Uncontrolled intersections near schools, where pedestrians cross major roadways should be considered first when implementing new stand alone pilot programs.

• Consideration of schools, parks, public gathering areas, areas in and around transit hubs should be highly considered when implementing new stand alone pilot programs.

• Other areas of concern would follow by need and public input. These places would include high accident locations, houses of worship, libraries and senior centers.
LIVABILITY – “CREATE THE MOST LIVABLE CITY”

1. Develop a plan to measure ambient light levels throughout the City. This would allow Evanston to have baseline lighting data that could be used quantitatively measure the effect of the various changes implemented because of this Street Light Master Plan.

2. Work with an existing board, commission or neighborhood group to determine a detailed plan to become dark-sky compliant. The dark-sky criteria are a third-party measurement system that objectively evaluates Evanston’s sustainability related to night-time light pollution.

3. Work with other agencies (such as schools and hospitals) and neighboring communities to investigate mitigating area light pollution.

4. Set up a 311 request to get lighting complaint data that can be reviewed annually by issue and location.

5. Institute city code or policy requirements that private developments must utilize exterior LED lighting that is no more than 3000K in color temperature and dark-sky compliant.

6. All capital improvement projects involving exterior lighting and signage will be implemented in a way that minimizes or eliminates light pollution.
FUTURE MEETING SCHEDULE

- PUBLIC MEETING
- PRESERVATION COMMISSION MEETING
- UTILITY COMMISSION MEETING
- TRANSPORTATION/PARKING COMMITTEE MEETING
- CITY COUNCIL MEETING
STREET LIGHT MASTER PLAN
PUBLIC MEETING NO. 2
STREET LIGHT MASTER PLAN TIMELINE

• Steering Committee Meetings (Five held between July 2017 and October 2018)
• Existing Conditions Light Level Readings – September 2017
• Existing Conditions Report – October 2017
• Public Meeting #1 – November 2017
• Union Metal Goes Out of Business – December 2017
• Alternate Technology Exploration – January – March 2018
• Additional Existing Conditions Light Level Readings – January 2018
• Northwest Municipal Conference Survey – February 2018
• Community Lighting Level Survey – April 2018
REVIEW OF COMMUNITY SURVEY

COMMUNITY STREET LIGHT SURVEY
SENT OUT APRIL 2018

- Over 700 Responded to the Survey

SURVEY INCLUDED LIGHTING LEVELS FOR:

- Major Streets
- Collector Roads
- Local Roads
- Lakefront Path
- Intersections
- “Your Block”
# REVIEW OF COMMUNITY SURVEY

## MAJOR STREETS
- Too Dark: 51.07%
- Too Bright: 7.82%
- Just Right: 41.11%

## COLLECTOR ROADS
- Too Dark: 55.73%
- Too Bright: 8.74%
- Just Right: 35.53%

## LOCAL ROADS
- Too Dark: 53.98%
- Too Bright: 12.16%
- Just Right: 33.86%

## LAKEFRONT PATH
- Too Dark: 53.91%
- Too Bright: 9.91%
- Just Right: 36.17%

## INTERSECTIONS
- Too Dark: 50.83%
- Too Bright: 7.98%
- Just Right: 41.19%

## YOUR BLOCK
- Too Dark: 45.14%
- Too Bright: 11.49%
- Just Right: 43.37%
EXISTING CONDITIONS CONCLUSIONS

- COE lighting standards are less than IESNA lighting standards.
- Lighting levels generally do not meet IESNA or COE recommended lighting levels (18 of 31).
- Tree canopies impede lighting levels.
- Power centers are typically in good condition.
- Power centers are unmetered.
- Smart lighting does not exist in COE.
- Existing lighting is a significant source of light pollution.
EXISTING CONDITIONS RECOMMENDATIONS

• COE has too many types of lights and equipment should be standardized.
• LED luminaires should be used in future developments/construction.
• A replica Tallmadge full cutoff LED luminaire that is dark sky compliant should be used for future applications.
• The City’s alley light installation policies and procedures are well defined and should remain.
• Recommended spacing between trees and poles should be 25’±.
• The 0.0 footcandle (fc) requirement at the lot line should remain.
• Smart metering should be explored by COE.
ALTERNATE TECHNOLOGY EXPLORATION

LUMINAIRES
• Wattages
• Retrofits to the existing Tallmadge luminaire and an engineered LED luminaire
• Dark Sky Compliance

COLOR TEMPERATURE
• 2,000K
• 3,000K
• 4,000K

OPTIC
• Type II
• Type III
• Type V

LENS TYPES
• Clear glass
• Frosted acrylic
• Prismatic acrylic
# City of Evanston Lighting Level Recommendations

## For Reference

<table>
<thead>
<tr>
<th>IESNA Standards</th>
<th>Current City of Evanston (COE) Standards</th>
<th>Proposed City of Evanston (COE) Standards</th>
<th>Proposed Pole(s)</th>
<th>Proposed Fixture(s)</th>
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Note: Existing Tallmadge light locations will be maintained unless otherwise approved by the City Council.
# CITY OF EVANSTON LIGHTING LEVEL RECOMMENDATIONS

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<thead>
<tr>
<th>ROADWAYS</th>
<th>AVERAGE ILLUMINANCE (FC)</th>
<th>UNIFORMITY RATIO</th>
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<td>PEDESTRIAN DESIGNATED CROSSINGS</td>
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<td>PARKING LOT - HIGH LEVEL</td>
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<tr>
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Note: Existing Tallmadge light locations will be maintained unless otherwise approved by the City Council.
DAVIT ARM ROADWAY LIGHTING UNIT (1,600)

**POLE**
- Tapered aluminum davit arm
- 25' to 30' mounting height
- 8' arm
- Powder coated black
- In areas where the Tallmadge Lighting Units compliment the lighting levels, a decorative aluminum clamshell base cover may be installed to replicate the base of the Tallmadge Lighting Unit

**LUMINAIRE**
- Black color
- Type III optics
- \( \leq 3,000 \text{K color temperature} \)
- Full cutoff cobra head-type LED (140W-200W)

**OPTIONS**
- Banner arms
- GFCI festoon receptacle
- Black full cutoff cobra head-type pedestrian scale LED luminaire in high pedestrian traffic areas (20W-40W, type II optics, \( \leq 3,000 \text{K color temperature} \))

**LOCATION**
- All major roadways, select collector roadways and critical intersections where pedestrian traffic and/or vehicle traffic is high
TALLMADGE LIGHTING UNIT (4,200)

POLE
- Flute tapered steel, cast iron or aluminum
- 14’ mounting height
- Powder coated black
- Decorative luminaire fitter and base to best replicate existing Tallmadge Pole

LUMINAIRE
- Full cutoff LED (50W – 100W)
- Frosted acrylic lens
- Black color
- ≤ 3,000K color temperature
- Type III or type V optics
- Sternberg MS805 or Equal

OPTIONS
- GFCI festoon receptacle

LOCATION
- All local roadways, select collector roadways, intersections where a local and collector roadway meet or two local roadways meet
- At high pedestrian or traffic areas and intersections may be supplemented by Davit Arm Roadway Lighting Units

Note: Existing Tallmadge light locations will be maintained unless otherwise approved by the City Council
PARK PATHWAY LIGHTING UNIT (200)

POLE
- Round aluminum
- Powder coated black
- Decorative base and arm

LUMINAIRE
- Black color
- $\leq 3,000$K color temperature
- Type III or type V optics
- Full cutoff decorative LED (Philips Lumec Domus or equal)

OPTIONS
- GFCI festoon receptacle

LOCATION
- Bike/pedestrian pathways
SHOE BOX (PARKING LOT) LIGHTING UNIT

POLE
- Round aluminum
- Powder coated black
- 16' to 30' mounting height

LUMINAIRE
- Black color
- $\leq 3,000$K color temperature
- Type II, type III or type V optics
- Full cutoff shoe box-type LED

OPTIONS
- GFCI festoon receptacle

LOCATION
- City-owned parking lots
WALL PACK LIGHTING UNIT

LUMINAIRE
- Wall pack LED (48W – 75W)
- $\leq 3,000K$ color temperature
- Type III optics
- Die cast aluminum powder coated black
- One-piece polycarbonate cover with optional vandal proof wire guard

LOCATION
- Viaducts
POWER CENTERS & LIGHTING CONTROL TECHNOLOGY

LIGHTING CONTROL TECHNOLOGY RECOMMENDATIONS

- Com Ed smart meter technology
  - Access to real time data on actual power being used for each lighting control system
  - Knowledge of power outages or reduce power usage
  - $550.00/power center
  - Facilitated by smart phone or devices without use of labor forces
- 7-pin photocell type receptacles or alternative technology
FUNDING EXAMPLES

• Single Tallmadge Lighting Unit LED Luminaire Replacement — $2,500 - $3,200

• Full Replacement of Power Center and Lighting System for Three Blocks (18 lights) — $200,000

• Upgrade One Entire Power Center and Lighting System (89 lights) — $300,000

• Full Replacement of Power Center and Lighting System (124 lights) — $1,000,000

• Upgrade Entire COE Power Centers and Lighting Systems — $60,000,000

• Full Replacement of COE Power Centers and Lighting Systems — $80,000,000
PRIORITIZATION

• High accident locations

• Uncontrolled crossings and sidewalks near schools

• Areas surrounding schools, parks, public gathering areas and transit hubs

• Areas identified by COE Police Department
LIVABILITY –
“CREATE THE MOST LIVABLE CITY”

1. Develop a plan to measure ambient light levels.

2. Develop a plan to become dark sky compliant.

3. Work with other agencies and communities to reduce area light pollution.

4. Set up a 311 request to get lighting complaint data that can be reviewed annually by issue and location.

5. Institute city code or policy that requires 3000K, dark sky compliant luminaires.
FUTURE MEETING SCHEDULE

- PRESERVATION COMMISSION MEETING
- UTILITY COMMISSION MEETING
- TRANSPORTATION/PARKING COMMITTEE MEETING
- CITY COUNCIL MEETING
Livability Review (FOR INSERT INTO STREET LIGHT MASTER PLAN)

The City of Evanston’s strategic vision is to “Create the Most Livable City”. Evanston is using the STAR Community Rating System to define and measure community livability. Evanston was one of the first 20 communities to achieve STAR Certification, earning a 4-STAR rating. In 2018, Evanston became the first community to renew its 4-STAR rating.

The City of Evanston is committed to promoting the highest quality of life for all residents by providing fiscally sound, responsive municipal services and delivering those services equitably, professionally, and with the highest degree of integrity. Since STAR Certification, the City is managing livability by aligning measurement systems and collaborating across departments and with community partners to achieve the livability vision.

In reviewing the Street Light Master Plan, the STAR criteria that is most applicable is classified under Built Environment: BE-1 Ambient Noise and Light. The STAR rating system evaluates municipalities on both “Outcomes” (objective measurements of success) and “Local Action” (plans for improvement). An analysis of the Street Light Master Plan in accordance with specific STAR criteria is shown below. For detailed information on the relevant STAR criteria, see Attachment 1.

Review of STAR Outcomes and Actions

Outcome 2: Light in the Community

Show progress toward locally identified ambient light targets for light glare and/or light trespass [Partial credit available]

In order to achieve this goal, Evanston will need to set guidelines for light glare and/or light trespass. These target levels need to be specific to individual areas, such as setting different goals for commercial vs. residential areas. Target levels should be based on a justification, and should take into account locally-collected data, such as photometric studies. In order to achieve this outcome, Evanston will need to provide a description of local ambient light targets, light measurements, and a completed STAR-provided Excel spreadsheet demonstrating achievement.

Review of Outcome 2:

It is outside the scope of the Street Light Master Plan to directly achieve this outcome, as detailed photometric surveys for the purposes of measuring glare and light cutoffs were not included in the scope of work. In addition, it is also outside the scope of this study to replace existing light fixtures to meet the intended outcome.

However, criteria should be included in the plan to require future lighting installations to be compliant with the goal of eliminating night-time glare and light trespass by requiring shielded lights to be installed and to direct lighting to the appropriate areas. In addition, Evanston should consider conducting photometric studies to get additional baseline data for different areas of the city.
RECOMMENDATION: Develop a plan to measure ambient light levels.

**Outcome 3: Light in the Night Sky**

Option A: Achieve a sky glow at or below 4 in the Bortle Dark-Sky Scale where the Milky Way is still visible in residential areas, or a Sky Quality Meter reading of 21.2 or greater [Partial credit available]

--OR--

Option B: Achieve certification as an International Dark Sky Community [Partial credit applies]

In order to achieve this outcome, Evanston would need to enact a substantial Dark Sky Implementation program. At a minimum, it would require:

a. Adoption of a comprehensive lighting code, including requirements that all lighting be fully shielded against contributing to light pollution and that all lighting have a maximum allowable color temperature of 3000 Kelvin.

b. A demonstrated community commitment to dark sky compliance by providing a fully-funded 5-year implementation plan to convert all municipally-owned lighting to conformance with the adopted lighting code describe above.

c. Demonstrated community-wide commitment to dark sky compliance, such as by holding at least two dark sky public events per year.

d. Measured success in light pollution control, such as through the completion of multiple capital projects to improve lighting compliance.

e. An ongoing annual sky brightness measurement program maintained by Evanston or a community organization.

**Review of Outcome 3:**

Parts of this can be accomplished as a direct outcome of the Street Light Master Plans, such as recommendations for the adoption of a comprehensive lighting code that is dark sky compliant. However, much of it is outside the scope of this study. Aside from developing and funding a capital improvement plan for lighting, it would be necessary for a community organization to partner with Evanston to champion many of the needed accomplishments listed above.

**RECOMMENDATIONS:** Work with existing board, commission or neighborhood group to determine a detailed plan to become dark-sky compliant.

**Local Action 2: Policy and Code Adjustment**

Adopt a community light policy, ordinance, or regulations based upon a local assessment

**Review of Local Action 2:**

Recommendations for an Evanston light policy and/or ordinance will be developed as part of the Street Light Master Plan. Upon approval of these recommendations by the City Council, Evanston will be able to meet this goal.
RECOMMENDATION: Adopt code changes supporting master plan findings and dark sky compliance.

Local Action 3: Education and Outreach

Educate the public about standards, effects of excessive exposure, and mitigation techniques for ambient noise or ambient light

In order to achieve this goal, Evanston will need to develop ongoing community involvement and educational events focused on reducing ambient noise and light pollution. Educational materials should encourage behavior change and explain the process for resolving noise and light complaints.

Review of Local Action 3:

This is outside the scope of the Street Light Master Plan. It may be necessary for a community partner or citizen task force to work with Evanston to develop educational material and host events.

RECOMMENDATION: Investigate partnering with outside group or working with an existing board or commission.

Local Action 4: Partnerships and Collaboration

Create partnerships to address sources of noise and/or light pollution not subject to the local authority

Noise and light pollution may often be generated by industrial, commercial, or other sources (such as educational institutions) outside the direct control of the City of Evanston. Evanston should partner with these outside entities to mitigate pollution.

Review of Local Action 4:

This is outside the scope of the Street Light Master Plan. It may be necessary for a community partner or citizen task force to work with the outside entities to mitigate light pollution.

RECOMMENDATION: Work with other agencies (schools, hospitals) and neighboring communities to investigate mitigating area light pollution.

Local Action 6: Practice Improvements

Develop a database of light issues and neighborhoods targeted for improvements

In order to achieve this goal, it is necessary to tracking complaints for the purpose of identifying and addressing target locations or neighborhoods with recurring light glare, trespass, or pollution issues. A 311 system or similar community hotline can receive credit as long as the information from these calls is being tracked in order to identify areas for improvement.
**Review of Local Action 6:**

Evanston should set up a specific category within the 311 system for tracking lighting complaints. This data should be then collected and analyzed for use in developing future policies and improvements.

**RECOMMENDATION:** Set up a 311 request to get data that can be reviewed annually by issue and location.

**Local Action 9: Enforcement and Incentives**

Enforce light standards during the permitting, design, and construction of new large-scale developments that can significantly increase ambient light levels.

In order to achieve, light standards should be enforced throughout the construction process, including permitting and post-construction. Permitting enforcement ensures light levels are designed to be within acceptable limits and post-construction enforcement verifies that the true level of lighting meets the standards.

**Review of Local Action 9:**

**RECOMMENDATION:** COE already has required lighting standards, and developers must document their intent to comply. However, private exterior lighting will be required to be 3000K and dark-sky compliant.

**Local Action 10: Programs and Services**

Establish programs that eliminate existing sources of light pollution coming from streetlights, parking facilities, and signage

For credit, Evanston must show how it is actively managing light pollution from publicly-owned facilities. Projects installed as demonstrations or more than 5 years ago without a broader, continuing effort will not qualify. Examples of programs that reduce this type of pollution include lighting systems that automatically dim after hours, the installation of light shielding to reduce light trespass, and the replacement of lights that poorly direct light with more directionally appropriate lighting systems.

**Review of Local Action 10:**

Evanston has been implementing lighting projects, and recent projects have generally complied with STAR goals. As lighting projects continue to be implemented, they will be evaluated for compliance. This compliance should be documented.

**RECOMMENDATIONS:** Ongoing CIP projects involving exterior lighting and signage will be implemented in compliance with these lighting standards to minimize or eliminate light pollution.
**GOAL AREA: Built Environment**

*Achieve livability, choice, and access for all where people live, work, and play*

## Introduction

The 7 Objectives in the Built Environment Goal Area evaluate community development patterns, livability, and design characteristics, with emphasis on access and choice for all residents regardless of income. BE-3: Compact & Complete Communities promotes pedestrian-scaled, mixed-use development in high-density areas that support public transit. BE-4: Housing Affordability measures location efficiency through the combined costs of housing and transportation and encourages affordable housing in areas where transportation costs are already low due to public transit accessibility. BE-7: Transportation Choices provides the direct measure of transportation alternatives, affordability, safety, and Vehicle Miles Traveled.

The Built Environment Goal Area addresses other types of infrastructure, such as the provision of clean drinking water, wastewater, and stormwater in BE-2: Community Water Systems. BE-5: Infill & Redevelopment analyzes redevelopment and the condition of public infrastructure to encourage efficient use and reuse of land. BE-6: Public Parkland promotes accessibility to abundant, well-designed parks and greenways. Finally, BE-1: Ambient Noise & Light encourages reducing excessive noise and light trespass that adversely impact residents and local wildlife and protecting views of the night sky.

<table>
<thead>
<tr>
<th>Objective Number</th>
<th>Objective Title and Purpose</th>
<th>Available Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>BE-1</td>
<td>Ambient Noise &amp; Light: Minimize and manage ambient noise and light levels to protect public health and the integrity of ecological systems</td>
<td>10</td>
</tr>
<tr>
<td>BE-2</td>
<td>Community Water Systems: Provide a clean and secure water supply for all local users through the management of potable water, wastewater, stormwater, and other piped infrastructure</td>
<td>15</td>
</tr>
<tr>
<td>BE-3</td>
<td>Compact &amp; Complete Communities: Concentrate development in compact, human-scaled, walkable centers and neighborhoods that connect to public transit, offer diverse uses and services, and provide housing options for families of all income levels</td>
<td>20</td>
</tr>
<tr>
<td>BE-4</td>
<td>Housing Affordability: Construct, preserve, and maintain an adequate and diverse supply of location-efficient and affordable housing options for all residents</td>
<td>15</td>
</tr>
<tr>
<td>BE-5</td>
<td>Infill &amp; Redevelopment: Focus growth and redevelopment in infill areas to reduce sprawl and ensure existing infrastructure that supports the community is in satisfactory working condition</td>
<td>10</td>
</tr>
<tr>
<td>BE-6</td>
<td>Public Parkland: Create a system of well-used and enjoyable public parkland that feature equitable, convenient access for residents throughout the community</td>
<td>15</td>
</tr>
<tr>
<td>BE-7</td>
<td>Transportation Choices: Promote diverse transportation modes, including walking, biking, and public transit, that are safe, low-cost, and reduce vehicle miles traveled</td>
<td>15</td>
</tr>
</tbody>
</table>

**Total Points Available:** 100
PURPOSE

Minimize and manage ambient noise and light levels to protect public health and the integrity of ecological systems

EVALUATION MEASURES

Community Level Outcomes
100% of points available through Outcomes

Preliminary Step:

Part 1: Identify local ambient noise target areas based upon a local assessment
--AND--
Part 2: Identify local ambient light target areas based upon a local assessment

The Preliminary Step is required only if the community is applying for credit in the Community Level Outcomes. If the community is applying for credit through Local Actions only, the Preliminary Step need not be completed.

Outcome 1: Noise
3.4 Points

Part 1: Demonstrate that daytime ambient noise levels do not exceed 60 dBA in target residential areas
--AND--
Part 2: Show progress toward locally identified ambient noise targets in commercial and natural areas
[Partial credit available]

Outcome 2: Light in the Community
3.3 Points

Show progress toward locally identified ambient light targets for light glare and/or light trespass
[Partial credit available]

Outcome 3: Light in the Night Sky
3.3 Points

Option A: Achieve a sky glow at or below 4 in the Bortle Dark-Sky Scale where the Milky Way is still visible in residential areas, or a Sky Quality Meter reading of 21.2 or greater [Partial credit available]
--OR--
Option B: Achieve certification as an International Dark Sky Community [Partial credit applies]
Local Actions
70% of points available through Actions

Action 1:
Policy and Code Adjustment

Adopt a community noise policy, ordinance, or regulations based upon a local assessment

Action 2:
Policy and Code Adjustment

Adopt a community light policy, ordinance, or regulations based upon a local assessment

Action 3:
Education and Outreach

Educate the public about standards, effects of excessive exposure, and mitigation techniques for ambient noise or ambient light

Action 4:
Partnerships and Collaboration

Create partnerships to address sources of noise and/or light pollution not subject to the local authority

Action 5:
Practice Improvements

Develop a database of noise complaints and noise measurements (e.g. roads, industrial, outdoor music venues)

Action 6:
Practice Improvements

Develop a database of light issues and neighborhoods targeted for improvements

Action 7:
Enforcement and Incentives

Establish clear lines of authority for the enforcement of nuisance noise violations relative to different noise sources
**Action 8:**
Enforcement and Incentives

Enforce noise standards during the permitting, design, and construction of new large-scale developments that can significantly increase ambient noise levels

**Action 9:**
Enforcement and Incentives

Enforce light standards during the permitting, design, and construction of new large-scale developments that can significantly increase ambient light levels

**Action 10:**
Programs and Services

Establish programs that eliminate existing sources of light pollution coming from streetlights, parking facilities, and signage
To: Honorable Mayor and Members of the City Council

From: Utilities Commission

Subject: City of Evanston Street Light Master Plan

Date: January 15, 2019

Recommended Action:
The Utilities Commission recommends that the City Council accept Staff’s recommendation to accept and place on file the Street Light Master Plan dated January 2019.

Background:
Two members of the Utilities Commission participated in the Street Light Master Plan Steering Committee and were actively involved during the entire process. Additionally, a draft of the final plan was presented to the entire Commission during our regularly scheduled meeting on November 9, 2018.

Analysis:
The Utilities Commission specifically wants to emphasize the following plan recommendations:

- All luminaires should be LED, 3000K color temperature or less (warmer) and dark-sky-friendly.
- Switching to LED luminaries will result in cost savings and environmental benefits through reduced energy usage
- That Com Ed’s smart meter technology be adopted to allow the City to access real time data on actual power consumption and basic diagnostics of the street light system.
EEB Memo

To: City of Evanston
From: Evanston Environment Board
Date: November 13, 2018
Re: Street Light Steering Committee Results

More than a year ago, the Evanston Environment Board was engaged to discuss the state of city lighting. The city was considering LED lighting in order to meet existing code and help with light pollution, while saving money on energy. But the most pressing need was the state of the poles themselves. The poles were failing due to age and rusting. Pole replacements were very difficult and expensive to procure. Thus began the initiative to add Evanston to the list of cities deploying LED lighting.

Following the recent May 24th meeting of the Street Light Steering Committee meeting, the Evanston Environment Board would like to endorse and support the city’s ongoing efforts on the move to modern LED lighting.

We especially endorse the following:

- Encourage energy efficiency through LED lighting, which consumes far less energy than traditional lighting, and is therefore better for the CO2 emissions and overall fossil fuel consumption.
- Reduce light pollution and support dark sky. The city should deploy lighting that points downward, rather than upward. This ensures better sidewalk lighting, meeting Evanston’s own city code. It also reduces light pollution, and helps our city meet important ‘dark sky’ criteria which is part of the STAR program.
- Replace light poles with high quality replicas, retaining the beauty of the environment. This replacement should result in savings for future replacement of existing rusted poles.
- Dimming – When financially possible, we support the smart meter application in order to achieve energy savings.
- Lighting – we appreciate the amount of detail devoted to the Kelvin temperature levels in order to maintain optimal environmental lighting.

Evanston should join the list of cities who are on an LED street light journey, and continually learn from others. Like other cities, the investments can be made in various ways: through ongoing savings, or perhaps city bonds.

Evanston should show the way in moving to more energy efficiency and light pollution reduction.
Memorandum

To: Honorable Mayor and Members of the City Council

From: David D. Stoneback, Public Works Agency Director
      Tom Twigg, Traffic Operations Supervisor
      Rajeev Dahal, Senior Project Manager - Transportation

Subject: Tallmadge Street Light Request for Proposal

Date: February 7, 2019

Recommended Action:
Staff seeks approval to proceed with Request for Proposal (RFP) from street light manufacturer’s to provide proposals to cast a mold for a Tallmadge street light pole, supply Tallmadge poles and luminaries for either a 5 year or 10 year contact for the following materials: cast iron, ductile iron, steel, aluminum, and fiberglass.

Funding Source:
Funding for casting the Tallmadge street light pole will be provided from the Capital Improvement Program (CIP) 2019 General Obligation Bonds (Account No. 415.40.4119.65515-419016). This line item has an FY 2019 budget of $70,000, all of which is remaining.

Livability Benefits:
Built Environment: enhance public spaces
Health & Safety: improve emergency prevention and response
Reduce Environmental Impact: improve energy efficiency

Background:
With the completion of the Street Light Master Plan, staff seeks approval to request proposals from street light manufacturers to create a mold that incorporates the unique and finite details of the historic Tallmadge light pole and the luminaire which are dark sky friendly. Proposals will only be accepted from manufacturers which can sole source both the light pole and luminaire as a complete unit.
Previously, the City purchased the Tallmadge street lights from Union Metal Industries. Since Union Metal has ceased production, the City needs to retain another manufacturer to supply these light poles and luminaires. As part of the RFP, the City will be requesting the ownership rights to the new mold.

After review of the manufacturer’s proposals, the City will select a manufacturer to prepare a mold and provide the City a sample light pole and luminaire for review and testing purposes. If the sample light pole and luminaire is acceptable, the City will engage with this manufacturer in the creation of new light poles and luminaires for either a 5 year or 10 year contract term based on the responses.

The existing Tallmadge street light poles are made of cast iron. They are assembled from several parts which allow salt and water to seep in and corrode the base. To mitigate this problem in the future, staff recommends purchasing a single piece pole. As part of the RFP, staff will request costs and life cycle estimates of the following materials: cast iron, ductile iron, aluminum, steel, and fiberglass.

For the luminaire, staff will seek proposals for 2,700K & 3,000K color temperature with Type III or Type V full cut-off roof optics which are dark sky friendly. Other information that will be requested in the RFP will include: manufacturer’s plant location, local sales representative, warranty, delivery time frame after purchase order has been issued, and whether the pole can fit a 3 bolt or 4 bolt installation patterns.
Memorandum

To: Honorable Mayor and Members of the City Council

From: David Stoneback, Public Works Agency Director
       Lara Biggs, P.E., Bureau Chief – Capital Planning / City Engineer
       Chris Venatta, P.E., Senior Project Manager

Subject: Alley Paving Special Assessment Process

Date: February 8, 2019

Recommended Action:
Staff recommends City Council consider changing the special assessment process to a cost split of 75 percent payment by the residents and 25 percent payment by the City. Additionally if residents choose to pay 100 percent of the alley cost they can move to the top of the wait list.

Livability Benefits:
Built Environment: Enhance public spaces

Summary:
The City’s special assessment alley paving process currently requires all construction costs plus engineering and legal fees, not exceeding the final estimate presented at the Public Hearing, be split 50/50 by the residents and the City. Under this current format, the $250,000 budget for the City’s portion of the project generally funds one alley per year. Below are the estimated costs for the next five alleys in which a resident is requesting a petition.

<table>
<thead>
<tr>
<th>No.</th>
<th>Address</th>
<th>Estimated Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1800 Grant Street</td>
<td>$235,000.00</td>
</tr>
<tr>
<td>2</td>
<td>3317 Noyes Street</td>
<td>$353,000.00</td>
</tr>
<tr>
<td>3</td>
<td>1732 Main Street</td>
<td>$456,000.00</td>
</tr>
<tr>
<td>4</td>
<td>717 Central Street</td>
<td>$612,000.00</td>
</tr>
<tr>
<td>5</td>
<td>2519 Noyes Street</td>
<td>$400,000.00</td>
</tr>
</tbody>
</table>

The City has not distributed petitions for the special assessment alley paving program since 2015 due to the number of accepted petitions awaiting design and construction.
The current wait list has 35 residents requesting petitions with an average of 11 additional requests per year. The last alley that has been approved by the Board of Local Improvements will be constructed in 2019; therefore, petitions will need to be distributed soon for the 2020 construction season.

In order to accommodate the demand for the special assessment paving program at the current budget, staff recommends two changes to the current policy. The first would be to change the cost split to 75 percent payment by the resident that abut the alley and 25 percent payment by the City. The second change would be if any residents vote to pay 100 percent of construction costs, they will move to the top of the wait list and the City will design and administer the project in the next earliest construction season. All engineering and legal fees normally assessed on the special assessment cost will be waived in this case.
Memorandum

To: Honorable Mayor and Members of the City Council

From: David Stoneback, Public Works Agency Director
       Lara Biggs, P.E., Bureau Chief – Capital Planning / City Engineer
       Chris Venatta, P.E., Senior Project Manager

Subject: Bridge Improvements Project Design

Date: February 18, 2019

Recommended Action:
Staff requests that the City Council provide direction to the City Manager on the preferred method of improvement to the Union Pacific Railroad bridge at the intersection of Emerson Street, Ridge Avenue and Green Bay Road.

Livability Benefits:
Built Environment: Enhance public spaces

Summary:
The City currently has a fabric covering, attached by clamps, on the Union Pacific (UP) bridge at the intersection of Emerson St., Ridge Ave., and Green Bay Rd. UP has expressed that this was supposed to be a temporary configuration and they do not want to continue the practice of hanging coverings from the bridge.

There are options available to the City with regards to improvements of the bridge. The first would be to remove the existing fabric and leave the structure exposed. This would require minor coordination with UP to remove the clamps attached to the bridge. No other remediation work to the bridge would be necessary.

The second option (currently in the City’s 2019 CIP) is to clean and paint the structure. The current budget has $350,000 towards bridge improvements at this intersection. It includes $50,000 for the design of construction staging and traffic signal timing work to be performed by an external consultant and $300,000 for the cleaning and painting work.

If cleaning and painting is the desired option, staff recommends a change order to the existing contract with ESI Consultants, LTD. in order to perform the traffic control and signal timing work. ESI is solely qualified for this work due to their recent work designing
the traffic control and signal timing for the Green Bay Road Project that included the work at this intersection. Any other consultant would require extensive field investigation and background information to effectively put together a traffic control and signal timing plan, and they would not be able to meet our timeline for this project.

Staff will also begin assembling the plans and specifications to bid out the cleaning and painting of the bridge structure. The $300,000 budget should allow for the fascia of the bridge, all lower truss members, and piers to be painted in accordance with the Illinois Department of Transportation’s standard specification for bridge painting. An alternate price will be requested to include the painting of the lower flanges (the visible underside of the bridge) in the project, as the budget will allow.

This budget will include the cleaning, containment, and disposal of existing lead paint on the structure. The cleaning will be followed by three coats of reddish brown paint matching the recommended IDOT standards for bridge structures. The Union Pacific bridge over Central Street matches the proposed color scheme. Also included will be additional railroad insurance requirements for working on a Union Pacific structure. The expected lifespan of this system is 25 years.

The third option would be to study the feasibility of installing a free standing decorative banner in front of the bridge. A structural engineer would need to be engaged to determine the feasibility of installing this type of system, and if feasible, design a post system that would hold the banner in place and provide a cost estimate for the banner support system. This system is similar to one located on Howard Street, but the Howard Street installation has a 50 foot span, whereas one of the spans for this bridge, along Ridge Avenue, is approximately 125 feet. Due to the limited space in the center island, staff has concerns that such a system may not be feasible.

The estimated cost to engage a structural engineer to complete the structural system design is $50,000. The range of magnitude to install the structural system is $150,000 to $250,000. The banner itself is estimated to cost $10,000 to manufacture and has an expected lifespan of 3 years. Other banner materials with longer life spans can be evaluated; however, more permanent materials have limited decorative options outside of color.

Legislative History:
Council elected to defer the painting of this bridge from the FY2018 Capital Improvement Plan on May 21, 2018.
Memorandum

To: Honorable Mayor and Members of the City Council

From: David Stoneback, Public Works Agency Director

Subject: Proposed Projects Funded by Waste Transfer Station Funds

Date: February 11, 2019

Recommended Action:
Staff recommends that the City Council authorize the City Manager to: 1) Proceed with the engineering design for the 2019 alley improvements to be funded by the waste transfer station funds; and 2) Authorize staff to begin discussions with ComEd to obtain property adjacent to the alley north of Lyons, east of Darrow, in order to improve this alley in 2020.

Funding Source:
Funding for the construction of the alleys installed in 2019 would be provided by the Capital Improvement Program Fund (Account 415.40.4219.65515 – 419017). This account draws funds from the settlement funds awarded to the City in 2016 (in the amount of $1,263,247.90) and the per ton host fee paid to the City which as a current balance of $86,412.00. The estimated cost to improve the three alleys scheduled for 2019 is $560,000.

Livability Benefits:
Built Environment: Enhance public spaces

Summary:
On May 14, 2018 the City Council approved using the $1,263,247.90 funds from the settlement of the with Veolia Environmental n/k/a Advanced Disposal Services Solid Waste Midwest, LLC for projects in the vicinity of the waste transfer station. Staff worked with Alderman Rue Simmons and Braithwaite to determine the priority of proposed projects within the area. The aldermen indicated that alley paving was the highest priority.
Attached is a map showing the unimproved alleys in the general vicinity of the Waste Transfer Station (WTS). Staff is proposing to improve alleys labeled 1, 2 & 3 on this map in 2019. Alleys labeled 4, 5 & 6 are proposed to be improved in 2020 and alley labeled 7, estimated to cost $290,000, would be improved in 2021 or 2022 when funding allows.

WTS Funding Summary:

**REVENUES (as of 12/31/18):**
- Settlement amount: $1,263,248
- 2018 Host fees (actual): $86,412
- **TOTAL FUND BALANCE:** $1,349,660

**FUND BALANCE (as of 12/31/19):**
- 2019 Environmental Study Expenses:
  - Environmental study: $229,300
  - Purchase of equipment: $40,032
  - **TOTAL COST:** $269,332
- 2019 Alley Improvement Expenses:
  - 2019 proposed alley improvements: $560,000
- Host Fee Revenues:
  - 2019 estimated host fees: $115,200
- **ESTIMATED FUND BALANCE (12/31/19):** $635,528

**FUND BALANCE (as of 12/31/20):**
- 2020 Alley Improvement Expenses:
  - 2020 proposed alley improvements: $550,000
- Host Fee Revenues:
  - 2020 estimated host fees: $115,200
- **ESTIMATED FUND BALANCE (12/31/20):** $200,728
Proposed 2020 alley improvements:
The alley labeled 4 is only eight foot (8’) wide. In order to improve this alley, staff is proposing to discuss the feasibility of obtaining an additional eight foot wide of property from ComEd. If the alley is improved, staff would request funding in the 2020 budget from the sewer fund to extend the relief sewer to this alley in the amount of $380,000 and from the MFT fund to resurface the streets where the relief sewer is installed in the amount of $190,000.

Attachments:
Waste Transfer Station Area Map
Memorandum

To: Honorable Mayor and Members of the City Council

From: David Stoneback, Public Works Agency Director
      Edgar Cano, Public Services Bureau Chief
      Kevin Johnson, Environmental Services Supervisor

Subject: Additional Street Cleaning Dates

Date: February 10, 2019

**Recommended Action:**
Staff recommends that the City Council authorize the City Manager to provide additional street cleaning.

**Livability Benefits:**
Built Environment: Enhance public spaces

**Summary:**
The signs posted throughout the City indicate that parking restrictions for street cleaning are in affect from March 1 through December 15 annually. However, additional street cleaning performed at the end of the season would provide better service to the residents of Evanston.

The street cleaning schedule in March can only be performed if weather permits. If sweeping does occur, staff will only issue warnings for parking violations, not actual tickets.

Staff is proposing to perform additional street sweeping at the end of the season if weather conditions permit. Between November 1 and December 15, the current street cleaning schedule provides two normally scheduled cleaning dates for zones 1 and 2 (in early November and December), but only one normally scheduled cleaning date for zones 3 and 4 (in late November). The additional street cleaning dates at the end of the season cannot be performed on the normal week of the month as the regular street cleaning, as staff is attempting to add more cleaning days to make sure all areas of the City are cleaned three times, weather permitting, between November 1 and December
15th. Performing this additional street cleaning will remove debris that would otherwise block drainage structures, impede vehicle parking and proper snow plow operations.

The attached City Services Update brochure provides information about the additional street cleaning dates, as well as information on waste services and the new parking fees.

Staff highly encourages all Evanston residents to sign up to receive emails and/or text messages reminding them of the street cleaning dates and associated parking restrictions. This is an easy way to be notified of the cleaning operations and need to park in appropriate locations.

**Attachments:**
City Services Update Brochure
City Services Update

What’s Inside? 2019

Waste Services
- Food and yard waste
- Recycling tips
- Holiday schedule
- Bulk pickups
- Special events

Street Cleaning
- Maps and schedules
- Additional fall dates

Parking and More
- Divvy Bikes
- Parking fee changes
- New pay stations
- Park Evanston app
- Notifications

For information about alley maintenance, sidewalk improvements, snow removal, forestry, and other services, visit cityofevanston.org/publicworks or call 311.

¿QUIERES CONSEGUIR ESTE DOCUMENTO EN ESPAÑOL? Adquiere uno en el Centro Cívico de Evanston, Robert Crown Centro de la Comunidad, o la Biblioteca Pública de Evanston. Para que lo envíen por correo, por favor llame o envíe un mensaje de texto al 847-448-4311. También, puede descargarlo de cityofevanston.org/streetcleaning

Printed on 30% recycled paper.
Waste Services

Food and Yard Waste
Weekly food and yard waste collection takes place on your regular refuse collection day, April 1 through December 12, 2019. There are two collection options:

Food and yard waste cart (food and yard waste)
As part of an expanded composting program, food scraps can “ride along” with grass clippings and leaves in food and yard waste carts. Order a cart at cityofevanston.org/yardwaste or call 311. Cost: $82.50 plus a $25 annual fee.

Yard waste bag with sticker (yard waste only)
Yard waste only can also be disposed of in paper yard waste bags affixed with an Evanston yard waste sticker, available at the Morton Civic Center, Levy Senior Center, and other locations. Cost: $1.75 each.

Food Waste by Collective Resource
Year-round composting is available through the City’s exclusive food scrap hauler, Collective Resource, by visiting www.collectiveresource.us.

Recycling Dos and Don’ts
Recycling reduces the amount of waste sent to the landfill and decreases pollution. More at cityofevanston.org/waste.

Common items accepted in City recycling carts include:
- Plastics (#1-5, 7)
- Aluminum cans
- Cartons (with Tetra-Pack label)
- Cardboard
- Junk mail

Common items NOT accepted in City recycling carts include:
- Plastic bags and packaging
- Food-soiled paper (e.g. greasy pizza boxes)
- Light bulbs
- Batteries and electronics
- Plastic toys

2019 Holiday Collection Schedule
Visit cityofevanston.org/holidayschedule for more information.

May 27, Memorial Day, No collections Monday. Monday through Thursday collections will be delayed one day.

July 4, Independence Day, No collections Thursday. Thursday collections will occur Friday.

September 2, Labor Day, No collections Monday. Monday through Thursday collections will be delayed one day.

November 28, Thanksgiving, No collections Thursday. Thursday collections will occur Friday.

December 24 and 25, Christmas Eve and Christmas Day, No collections Tuesday or Wednesday. Tuesday through Thursday collections will be delayed two days.

Branches
Tree trimming bundles must be affixed with a yard waste sticker. Branches should not exceed four inches in diameter or four feet in length.

Leaf blowers
Gasoline-powered leaf blowers are allowed March 30 to May 15 and September 30 through the first Thursday of December on weekdays, 7am–9pm, and Saturday, Sunday and holidays, 9am-5pm. Raking or blowing leaves into the streets is illegal, and can block sewers and cause flooding.

Save the Date
Earth Day/Arbor Day Clean Up
April 27
Evanston Recycles Event
July 6
It’s the Great Pumpkin Compost
November 2
Visit cityofevanston.org/events for details.

2019 Bulk Trash Pickup
View guidelines at cityofevanston.org/bulktrash.

<table>
<thead>
<tr>
<th>If your normal trash day is:</th>
<th>Your spring bulk trash day is:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wednesday</td>
<td>Friday, April 5</td>
</tr>
<tr>
<td>Thursday</td>
<td>Friday, April 12</td>
</tr>
<tr>
<td>Monday</td>
<td>Friday, April 19</td>
</tr>
<tr>
<td>Tuesday</td>
<td>Friday, April 26</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>If your normal trash day is:</th>
<th>Your fall bulk trash day is:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wednesday</td>
<td>Friday, September 13</td>
</tr>
<tr>
<td>Thursday</td>
<td>Friday, September 20</td>
</tr>
<tr>
<td>Monday</td>
<td>Friday, September 27</td>
</tr>
<tr>
<td>Tuesday</td>
<td>Friday, October 4</td>
</tr>
</tbody>
</table>
Map 1. Two-sided Street Cleaning Schedule  March 1–December 15

NOTE: Map 1 is for streets with parking on both sides. Map 2 is for streets with parking on one side only. Street cleaning signs are posted at the beginning and end of each block. Cars are subject to towing for noncompliance.

Make your life easier! Sign up for street cleaning notifications
Sign up to get notified of street cleaning via text message. Call/text 847-448-4311 or go to cityofevanston.org/streetcleaning

Disclaimer: The City of Evanston offers the text/email notification system as a service to subscribers. By subscribing, you agree and acknowledge that the City does not guarantee successful delivery of messages, and does not guarantee the accuracy of message content. You are reminded to review and follow all rules and regulations as posted on street signs and as published in the Evanston City Code.

Sweeping Details

Primary Routes
Twice a month: 4am-7am

Residential Overnight
Once a month: 4am-7am

Residential Streets
Once a month
“A” areas: Noon-4pm
“B” areas: 9am-1pm

Check street signs for dates, call 311, or visit www.cityofevanston.org/streetcleaning

Note: Streets with one side only parking have their own sweeping schedule, and are swept once each month on Mondays.

Note: Cars on all streets are subject to towing for noncompliance.

City of Evanston

StreetCleaning,etfsnMap.mxd

This map is provided "as is" without warranties of any kind. See cityofevanston.org/maps for disclaimer and more information.
### Residential Streets (4–7am, 9am–1pm or Noon–4pm)

**See map 1**

<table>
<thead>
<tr>
<th>Zone</th>
<th>1ST THURSDAY</th>
<th>1ST FRIDAY</th>
<th>2ND THURSDAY</th>
<th>2ND FRIDAY</th>
<th>3RD THURSDAY</th>
<th>3RD FRIDAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>South &amp; West</td>
<td>North &amp; East</td>
<td>South &amp; West</td>
<td>North &amp; East</td>
<td>South &amp; West</td>
<td>North &amp; East</td>
</tr>
<tr>
<td></td>
<td>Sides of Street</td>
<td>Sides of Street</td>
<td>Sides of Street</td>
<td>Sides of Street</td>
<td>Sides of Street</td>
<td>Sides of Street</td>
</tr>
<tr>
<td></td>
<td>March 7**</td>
<td>March 1**</td>
<td>March 14**</td>
<td>March 8**</td>
<td>March 19**</td>
<td>March 22**</td>
</tr>
<tr>
<td></td>
<td>April 4</td>
<td>April 5</td>
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### Additional Fall Dates
November 5–December 11

To ensure debris is cleared from streets in the late fall months, additional fall street cleaning dates have been added for residential streets. These dates are listed in bold in the provided schedule. Signage will be posted and parking restrictions will be enforced.

** Weather permitting
*** No street cleaning on holidays

cityofevanston.org/streetcleaning

### Schedule Changes
Residential streets with parking on both sides

Schedules are transitioning from a Thursday/Friday to a Tuesday/Wednesday schedule.

Zone 4 signs were updated in 2018
Zone 3 signs were updated in 2019
Zone 2 will follow in 2020
Zone 1 in 2021

### Primary Routes (4–7am)

**See map 1**

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### Downtown

**MONDAYS**

4am–7am

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No Parking Regulations
Information: Call 311

Street Cleaning
March 1–Dec 15
1st Thursday of Month
9am–1pm

Snow Emergency
After 4-inch Snowfall
Odd Dates
8am–6pm

Snow Route
After 2-inch Snowfall
11pm–6am

271 of 293
NOTE: This map is for streets with parking on one side only.
Street cleaning signs are posted at the beginning and end of each block. Cars are subject to towing for noncompliance.

Map 2. One-sided Street Cleaning Schedule (Mondays)  March 1– Dec 15

One-sided Monthly Street Cleaning Schedule 9am–4pm

1ST MONDAY
March 4*
April 1
May 6
June 3
July 1
Aug 5
Sept–HOLIDAY**
Oct 7
Nov 4
Dec 2*

2ND MONDAY
March 11*
April 8
May 13
June 10
July 8
Aug 12
Sept 9
Oct 14
Nov 11
Dec 9*

3RD MONDAY
March 18*
April 15
May 20
June 17
July 15
Aug 19
Sept 16
Oct 21
Nov 18

4TH MONDAY
March 25*
April 22
May–HOLIDAY**
June 24
July 22
Aug 26
Sept 23
Oct 28
Nov 25

Sign up to get notified of street cleaning via text message. Call/text 847-448-4311 or go to cityofevanston.org/streetcleaning

Check your street signs for Tow Away Zone information.
* Weather permitting
** Weather permitting
* Street cleaning on holidays
Divvy Bike Share

Access Divvy at 14 Evanston Locations
Annual memberships are $99 per year, and include unlimited rides of 45 minutes or less. The Divvy for Everyone program provides $5 annual memberships to income-qualified residents. Visit DivvyBikes.com or call/text 847-448-4311.

Pay Stations
The City is transitioning to a pay-by-license-plate model for street parking. Parking meters in downtown Evanston are being replaced by pay stations.
On blocks with pay stations, drivers can pay for parking by entering their license plate number and completing payment at a nearby station. There’s no need to display a payment receipt on a vehicle’s dashboard, as compliance is monitored electronically.

Parking

2019 Changes
Several changes to parking rates, enforcement times, and citations were approved as part of the City’s 2019 Budget.

Street Parking
Beginning March 1, the cost of parking at a two-hour meter or pay station will increase from $1 to $1.50 per hour. 20-minute meters will increase from 25 cents to 50 cents. Payment will also be required on Sundays, from 1pm to 9pm.

Garage Parking
Parking for less than one hour in the City’s three downtown self-park garages remains free; 1–2 hour parking remains $2. The fee structure for parking more than two hours has changed. Garage parking remains free on Sundays.

Commuter Parking
Rates for long-term meters in commuter lots will increase from 25 cents to 50 cents per hour.

Citations
Citations for street cleaning parking violations are now $75. Expired meter citations are $25.

More information and other 2019 fee changes can be found at cityofevanston.org/budget.

Sign Up for Email/Text Notifications
To make parking more convenient, the City offers free text and email reminders for street cleaning and snow parking restrictions.
Sign up at cityofevanston.org/newsletter or call/text 847-448-4311.

311 is your guide to City services!
Have a question or request?
• Call/text 847-448-4311
• Visit cityofevanston.org/311
• Use the Evanston 311 mobile app
Memorandum

To: Honorable Mayor and Members of the City Council

From: David Stoneback, Public Works Agency Director
       Edgar Cano, Public Services Bureau Chief

Subject: Winter Weather Aftermath

Date: February 7, 2019

Recommended Action:
Staff recommends that the City Council authorize the City Manager to prepare City Code modifications to improve the safety for the general public and improve services provided by the City.

Analysis:
Staff will give a presentation on the City’s efforts during the 2018/2019 winter storms and polar vortex. While dealing with these events, staff has encountered challenges that could be improved by modifying the City Code. The proposed Code modifications are:

1) Specifically state in Title 7 “Public Ways”, Chapter 2 “Streets, Sidewalks and Public Ways”, Section 9 “Encumbrances, Encroachments and Obstructions” that placing leaves in the street is prohibited.

2) Specifically state in Title 7 “Public Ways”, Chapter 2 “Streets, Sidewalks and Public Ways”, Section 9 “Encumbrances, Encroachments and Obstructions” that plowing snow from private property onto public property is prohibited and that placing snow in the parkway to a height of 36-inches or greater, within 25 feet of an alley or street intersection is prohibited.

3) Modify Title 7 “Public Ways” Chapter 2 “Streets, Sidewalks and Public Ways”, Section 9 “Encumbrances, Encroachments and Obstructions”, Paragraph 3 “Sidewalks to be Clear of Snow, Ice, Dirt and Weeds” to indicate that at any time this is an accumulation of two inches (2”) or more of snowfall it is the responsibility of the property owner that the sidewalk shall be cleared.

4) Specifically state in Title 8 “Health and Sanitation”, Chapter 4 “Municipal Solid Waste”, Section 8 “Designation of Collection Site; Collection Agent” that the property owner is responsible to clear snow and ice from trash receptacles.
Pending Council approval to proceed with these proposed modifications, staff would work with the Legal Department to prepare the appropriate ordinances to modify the City Code.
Memorandum

To: Honorable Mayor and Members of the City Council

From: David D. Stoneback, Public Works Agency Director
        Paul D’Agostino, Environmental Services Coordinator

Subject: Ordinance 15-O-19, Amending Portions of City Code Title 7, “Public Ways,” Chapter 8 “Trees and Shrubs”

Date: February 7, 2019

Recommended Action:
Staff recommends that City Council adopt Ordinance 15-O-19, which will amend portions of City Code Title 7, “Public Ways” Chapter 8, “Trees and Shrubs” to correct staff title updates and clarifying public Parkway allowed plantings.

Livability Benefits:
Built Environment: Enhance public spaces
Natural Systems: Protect and restore natural ecosystems

Analysis:
The current code contains many references to job titles that no longer exist and/or where code enforcement responsibilities have switched City Departments. The proposed ordinance corrects the enforcement language to allow the Public Works Agency Director or designee to enforce violations of these sections of the City Code.

The proposed amendments to the current code also clarify permit requirements for both contractors and residents to maintain appropriate clearances over public right-of-ways as well as requirements for maintaining or planting on parkways or other public places. The new language simplifies the explanation of what residents can or cannot plant on their parkways and what is required to obtain a permit to do so.

Lastly, the amended Ordinance also specifically prohibits attachments of any kind to City trees or shrubs. Staff has seen a significant increase recently of residents hanging swings or attaching tight ropes to parkway trees. Doing so can not only damage the trees, but in some case may also present a hazard to pedestrians, especially at night.

Attachments:
Ordinance 15-O-19
AN ORDINANCE
Amending Portions of City Code Title 7, “Public Ways,” Chapter 8 “Trees and Shrubs”

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF EVANSTON, COOK COUNTY, ILLINOIS:

SECTION 1: City Code Subsection 7-8-1, “Regulating Removal of Trees and Certain other Vegetation on Private Property,” of the Evanston City Code of 2012, as amended, is hereby further amended to read as follows:

7-8-1. - REGULATING REMOVAL OF TREES AND CERTAIN OTHER VEGETATION LOCATED ON PRIVATE PROPERTY.

SECTION 2: City Code Subsection 7-8-1-1, “Projections over Right-of-Way,” of the Evanston City Code of 2012, as amended, is hereby further amended to read as follows:

7-8-1-1. - PROJECTIONS OVER RIGHT-OF-WAY.

The projections of boughs, limbs and twigs of trees, shrubs and other vegetation over public rights-of-way is hereby declared to be a nuisance, and it shall be the duty of the owner or person in possession or control of any premises upon which trees, shrubbery, bushes or other vegetation is located to keep such boughs, limbs or twigs so that the same shall not project over any public right-of-way; provided that the owner or person in possession or control of any premises upon which a tree, bush or vegetation is located, the boughs or limbs of which project over the public sidewalk right-of-way in any public street, alley or sidewalk in the City, shall keep the boughs or limbs of such tree, bush or vegetation trimmed so that the same shall not block or interfere with any City street light, traffic sign or other City owned infrastructure, or project over such sidewalk right-of-way at a height of less than eight (8) feet above the sidewalk, or fourteen (14) feet above the street or alley.
SECTION 3: City Code Subsection 7-8-1-2, “Removal of Dead Trees and Limbs,” of the Evanston City Code of 2012, as amended, is hereby further amended to read as follows:

7-8-1-2. - REMOVAL OF DEAD TREES AND LIMBS.

Any owner or person in possession or control of any real property shall remove any dead or dying trees or dead or dying limbs dangerous to life, limb or property located upon the premises of such owner within thirty (30) days of notice from the Superintendent of Parks/Forestry and Facilities Management Public Works Agency Director or his/her designee served by mail upon the owner or person in possession or control of such property.

SECTION 4: City Code Subsection 7-8-1-3, “Duty to Maintain Vegetation,” of the Evanston City Code of 2012, as amended, is hereby further amended to read as follows:

7-8-1-3. - DUTY TO MAINTAIN VEGETATION.

The adoption of this Section 7-8-1 shall not affect the provisions of Section 7-2-9 of this Title relative to the duty to keep all trees, shrubs, bushes or plants trimmed, pruned or cut so as not to obstruct the vision of persons using the alleys, streets or highways sidewalks, as provided in said Section.

SECTION 5: City Code Subsection 7-8-1-2, “Licensed Contractors to Plant, Trim,” of the Evanston City Code of 2012, as amended, is hereby further amended to read as follows:

7-8-2. - LICENSED CONTRACTORS TO PLANT, TRIM, ATTACHMENTS.

(A) *License required.* It shall be unlawful for any person to plant, remove, trim, spray or otherwise treat trees for compensation in any parkway or other public place within the City, unless such person shall obtain a license from the City, and be regularly engaged in the business of planting, removing, trimming, spraying or otherwise treating trees. No attachments of any kind are allowed on any City owned tree or shrub. Attachments can include, but are not limited to, swings, hammocks, signs, tight ropes, bird feeders, or brackets.

(B) *Application, information shown; examination.* Applications for the license required herein shall be made directly to the City Manager and shall contain the name and address of the applicant, if an individual; the names and addresses of the principal officers, if a corporation; and the names and addresses of the members, if a
partnership, together with a brief statement of the experience of such person in such business.

The application for a license shall then be submitted for approval to the Superintendent of Parks/Forestry and Facilities Management, whose duty it shall be, before approving such application, to require the applicant to submit evidence that sufficient knowledge of technical tree work is possessed, or that sufficient qualifications and fitness are possessed to perform nontechnical tree work such as

(C) Approval of application; issuance; fee. If the application for a license as required by this Section shall be approved by the Superintendent of Parks/Forestry and Facilities Management, upon the payment of an annual license fee of one hundred dollars ($100.00) per annum by the applicant to the City Collector, the City Collector shall thereupon issue to the applicant a license, attested by the City Clerk, authorizing such applicant to engage in and carry on the business of planting, removing, trimming, spraying or otherwise treating trees in the City and for the period therein stated.

(D) Bond prerequisite to issuance. No license shall be issued under the provisions of this Section unless the applicant therefor shall give bond in the sum of ten thousand dollars ($10,000.00), with sufficient surety to be approved by the Superintendent of Parks/Forestry and Facilities Management, conditioned for the faithful performance of the work under the control and supervision of the Superintendent of Parks/Forestry and Facilities Management, and to hold the City, its officers, agents and employees harmless of any and all damages or injuries to property, or to any person, or for death resulting, directly or indirectly, from planting, removing, trimming, spraying or otherwise treating such trees.

SECTION 6: City Code Subsection 7-8-1-2, "Permit Required for Each Job," of the Evanston City Code of 2012, as amended, is hereby further amended to read as follows:

7-8-3. - PERMIT REQUIRED FOR EACH JOB.

It shall be unlawful for any person, even though he/she shall be licensed as provided in Subsection 7-8-2(A) of this Chapter, to plant, remove, trim, spray or otherwise treat any tree in on any street, parkway or other public place within the City, unless such person shall first apply for and obtain from the Superintendent of Parks/Forestry and Facilities Management Public Works Agency Director or his/her designee a permit for each job of planting, removing, trimming, spraying or otherwise treating trees, to be undertaken by such person. Such permit shall contain a detailed statement of the nature of the work proposed and permitted to be done upon such trees, and it shall be unlawful for such person, acting under such permit, to violate any of the provisions of such permit. Such permit shall be issued free, and only to a person duly licensed as provided in Subsection 7-8-2(A) of this Chapter, a Certified Arborist by the International Society of Arboriculture. Proof of said certification is required.
Application, information shown; examination. Applications for the permit required herein shall be made directly to the Public Works Agency Director or his/her designee and shall contain the name and address of the applicant, if an individual; the names and addresses of the principal officers, if a corporation; and the names and addresses of the members, if a partnership, together with a brief statement of the experience of each such person in such business. No permit shall be issued unless and until the applicant submits a certificate of insurance naming the City as an additional insured.

SECTION 7: City Code Subsection 7-8-4-1, “Planting Trees on Parkways and Public Places,” of the Evanston City Code of 2012, as amended, is hereby further amended to read as follows:

7-8-4-1. - PLANTING TREES ON PARKWAYS AND PUBLIC PLACES.

It shall be unlawful for any person to plant any tree, bush or shrub in the parkways or streets or other public places of the City or where the same will injure the sewer or drains of the City, without a permit from the City.

SECTION 8: City Code Subsection 7-8-4-2, “Restricted Parkway Plantings,” of the Evanston City Code of 2012, as amended, is hereby further amended to read as follows:

7-8-4-2-1. - RESTRICTED PARKWAY PLANTINGS.

(A) Plantings Prohibited In Certain Places. No tree shall be planted in parkways or streets other public places unless it is located at least fifteen feet (15’) from any crosswalk or intersecting street or alley. It shall be unlawful to plant, install or maintain any shrub, perennial, ornamental grass or annual in the parkway of any street that matures at a height over three (3) feet is not on the list of approved shrubs developed by the Superintendent of parks and forestry, and it shall be unlawful to plant or install any shrub, perennial ornamental grass or annual without first obtaining a permit from the Superintendent of parks and forestry Director of the Public Works Agency or his/her designee.

(B) Superintendent To Maintain Approved Shrub List. The Superintendent of Parks/Forestry and Facilities Management is hereby authorized and empowered to develop a list of shrubs approved for planting in the parkways of any street in the City, and for which permits provided for in Subsection (A) of this Section shall be issued. Said list shall be limited to shrubs that do not exceed the maximum overall growth height of three feet (3’) and that, in addition, do not require professional maintenance by the City. Said list shall be published once each week for three (3) consecutive weeks, and permits, once issued, shall not be subject to subsequent
deletions of any species then planted from lists valid at the time of issuance of those permits.

(CB) **Planting Permits Required.** Permits issued under this Section shall contain a description of the proposed location of the planting, type of planting, nature of maintenance required and a statement of intent by applicant to maintain said plantings for a minimum of three (3) years. Permits shall be issued free of charge.

(C) No permits will be issued for any person to plant any tree, bush or shrub in the parkways or other public places of the City or where the same will injure the sewer or drains of the City.

**SECTION 9:** City Code Subsection 7-8-5, “Injuring, Destroying,” of the Evanston City Code of 2012, as amended, is hereby further amended to read as follows:

7-8-5. - INJURING, DESTROYING.

It shall be unlawful for any person to cut down, destroy, break or in any way injure any tree or shrub standing in any street parkway or public place, except by permission of the Superintendent of Parks/Forestry and Facilities Management Public Works Agency Director or his/her designee.

**SECTION 10:** City Code Subsection 7-8-6-4, “Notice to Comply; Failure to Comply,” of the Evanston City Code of 2012, as amended, is hereby further amended to read as follows:

7-8-6-4. - NOTICE TO COMPLY; FAILURE TO COMPLY.

If on laboratory analysis of specimens removed from any elm tree by the City Manager or his/her duly authorized representative, it is determined that such tree is a public nuisance as provided in Section 7-8-6-1 of this Section, or if the City Manager determines that any dead or substantially dead elm or ash trees or dead elmwood or ashwood is a public nuisance, as provided herein, the City Manager shall serve or cause to be served upon the person that is the owner of the lot or parcel of land on which such tree or dead elmwood or ashwood is located, a written notice requiring such owner to comply with the provisions of this Section. If the person upon whom such notice is served fails, neglects or refuses to remove and destroy, and properly dispose of, such elm or ash tree or dead elmwood or ashwood within thirty (30) days after service of such notice, the City Manager or his/her duly authorized representative may proceed to remove and dispose of such tree or dead elmwood or ashwood and assess the cost thereof against the owner of such lot or parcel of land, and the amount of such cost shall be paid by such owner to the City.
If the City removes from any lot or parcel of land in the City, pursuant to the provisions 
of this Section, any infected elm or infested ash tree which is a public nuisance or any 
dead or substantially dead elm or ash tree or dead elmwood or ashwood which is a 
public nuisance, the assessment of the cost of the work done by the City against the 
owner of the lot or parcel of land involved shall be in addition to the penalties imposed 
by this Section for any violation or noncompliance with the provisions of this Section.

Service of notice provided for herein shall be first by certified mail, addressed to said 
owner at his/her last known address. Upon proof of unsuccessful mail delivery, notice 
shall be served personally by duly authorized representatives of the City Manager. 
Upon unsuccessful personal service, there shall be one publication in a newspaper of 
general circulation in the City.

If the City removes from any lot or parcel of land, pursuant to this Section, any infected 
elm tree or infested ash tree which is a public nuisance or any dead or substantially 
dead elm or ash tree or dead elmwood or ashwood which is a public nuisance, the 
assessment of the cost of the work done by the City against the owner of the lot or 
parcel of land involved shall be in addition to the penalties imposed herein for any 
violation of noncompliance with any provision of this Section.

SECTION 11: City Code Subsection 7-8-6-6, “Penalty,” of the Evanston 
City Code of 2012, as amended, is hereby further amended to read as follows:

7-8-6-6. - PENALTY.

Any person violating any provision of Sections 7-8-6-2 through 7-8-6-5 of this 
Section by failing, neglecting, or refusing to comply with the provisions of any notice 
herein provided for, within thirty (30) days after the service thereof, or who shall resist or 
obstruct the City Manager or his or her duly authorized representative in carrying out the 
provisions of this Section, shall be prosecuted through the administrative adjudication 
system of the City and shall be punished by a fine of not less than fifty dollars ($50.00) 
and no more than seven hundred fifty dollars ($750.00) per day per violation.

SECTION 12: City Code Subsection 7-8-8-6, “Permit Requirements,” of 
the Evanston City Code of 2012, as amended, is hereby further amended to read as 
follows:

7-8-8-6. - PERMIT REQUIREMENTS.

A. Permit and compliance required. No person may conduct or will be entitled to any 
permit for any activity associated with a regulated activity unless a valid tree permit 
for the activity is issued in accordance with this Section. No person will be entitled to 
any tree permit unless the subject property, upon the issuance of the tree permit, is 
in strict compliance with the terms and provisions of this Section and the terms and
provisions of all other applicable laws, ordinances, rules, and regulations of the City and of all other governmental agencies having jurisdiction.

B. *Exceptions.*

1. *Pruning.* A tree permit is not required for the pruning of any private tree in compliance with the national pruning standards.

2. *Tree and City emergencies.* In response to notice of an existing tree emergency, the Mayor or the City Manager or his/her designee, are each authorized to waive the requirement for a tree permit or tree permit application. If a tree emergency occurs, the person endangered by the tree emergency may take any reasonable action necessary to avoid or eliminate the immediate danger or hazard. The action taken must be an action that is least likely under the circumstances to cause damage or removal of any trees, and the City assumes no responsibility or liability for any action taken. The person taking the action must report the action taken to any of the above City officials immediately after the action is taken and file an after-the-fact tree application permit within forty-eight (48) hours, which the City Manager or his/her designee will review. If the City Manager or his/her designee determines that a tree emergency existed which justified the damage or removal of the tree(s), an after-the-fact tree permit will be issued with no permit fee charged. If the City Manager or his/her designee determines that no emergency existed to justify the damage or removal of the tree(s), then the action will be deemed a violation of this Section, and the damaged or removed tree(s) must be replaced pursuant to this Section.

3. *City-let projects.* Tree permits will be required for all City-let projects which have been reviewed by the Parks/Forestry Division Public Services Bureau, but all permit fees will be waived.

**SECTION 13:** All ordinances or parts of ordinances in conflict herewith are hereby repealed.

**SECTION 14:** If any provision of this ordinance or application thereof to any person or circumstance is held unconstitutional or otherwise invalid, such invalidity shall not affect other provisions or applications of this ordinance that can be given effect without the invalid application or provision, and each invalid provision or invalid application of this ordinance is severable.

**SECTION 15:** Ordinance 15-O-19 shall be in full force and effect after its passage and approval.
SECTION 16: The findings and recitals contained herein are declared to be prima facie evidence of the law of the City and shall be received in evidence as provided by the Illinois Compiled Statutes and the courts of the State of Illinois.

Introduced: _________________, 2019
Adopted: _________________, 2019

Approved: _________________, 2019

_______________________________
Stephen H. Hagerty, Mayor

Attest:

Devon Reid, City Clerk

Approved as to form:

______________________________
Michelle L. Masoncup, Corporation Counsel
To: Honorable Mayor and Members of the City Council

From: David D. Stoneback, Public Works Agency Director

Subject: Ordinance 10-O-19, Amending Portions of City Code Title 7, “Public Ways” to Include Police Powers to the Director of Public Works

Date: February 4, 2019

Recommended Action:
Staff recommends that City Council adopt Ordinance 10-O-19, which will amend portions of City Code Title 7, “Public Ways” to include police powers to the Director of Public Works.

Livability Benefits:
Built Environment: Manage water resources responsibly
Enhance public spaces

Analysis:
The current code does not give authorization to the Public Works Director, or his/her designees, police powers to issue complaints or citations. The proposed ordinance would allow the Director or their designees to issue citations for violations of several sections of the City Code.

1) Title 7, Chapter 2, “Streets, Sidewalks and Public Ways”
Providing the proposed language in 7-2-14 will allow staff to issue citations related to:
   a. Not properly securing construction sites by protecting excavations in public ways by covering them or placing proper barricades
   b. Occupying the public way without a proper permit
   c. Placing dirt on the street
   d. Obstructing flow of water in the street gutter

2) Title 7, Chapter 8, “Trees and Shrubs”
Providing the proposed language in 7-8-14 will allow staff to issue citations related to:
   a. Not removing limbs or shrubs that obstruct the public way
   b. Not removing dead or dying trees or limbs that are dangerous
   c. Injuring or destroying a public tree
3) Title 7, Chapter 12 “City Waterworks System”
Providing the proposed language in 7-12-18 will allow staff to issue citations related to:
   a. Tampering with the Waterworks system, such as tampering with a fire hydrant, water meter or shut off valve.

Attachments:
Ordinance 10-O-19
AN ORDINANCE

Amending Portions of City Code Title 7, “Public Ways,” to Include Police Powers to the Director of Public Works

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF EVANSTON, COOK COUNTY, ILLINOIS:

SECTION 1: City Code Subsection 7-1-2, “Director of Public Works,” of the Evanston City Code of 2012, as amended, is hereby further amended to read as follows:

(F) Enforcement of Regulations. Enforce all the laws of the State and ordinances of the City relating to public ways and implement other activities and programs related to public ways, as authorized by the City Council.

SECTION 2: City Code Subsection 7-2-14, “Enforcement of Regulations,” of the Evanston City Code of 2012, as amended, is hereby further amended to read as follows:

7-2-14. – ENFORCEMENT OF REGULATIONS.

It shall be the duty of the Police Department and the Department of Public Works to see that the requirements contained in this Chapter and elsewhere in this Code regarding the erection of fencing and placing lights, are in all cases complied with. The Director of Public Works or his/her designees shall have full police powers to issue complaints, citations, notices to appear, and summonses for the violation of any provision this Chapter.

SECTION 3: City Code Title 7, Chapter 8, “Trees and Shrubs,” of the Evanston City Code of 2012, as amended, is hereby further amended to add as follows:

7-8-14. – ENFORCEMENT OF REGULATIONS.
The Director of Public Works or his/her designees shall have full police powers to issue complaints, citations, notices to appear, and summonses for the violation of any provision this Chapter.

SECTION 4: City Code Title 7, Chapter 12, “City Waterworks System,” of the Evanston City Code of 2012, as amended, is hereby further amended to add as follows:

7-12-18. – ENFORCEMENT OF REGULATIONS.

The Director of Public Works or his/her designees shall have full police powers to issue complaints, citations, notices to appear, and summonses for the violation of any provision this Chapter.

SECTION 5: All ordinances or parts of ordinances in conflict herewith are hereby repealed.

SECTION 6: If any provision of this ordinance or application thereof to any person or circumstance is held unconstitutional or otherwise invalid, such invalidity shall not affect other provisions or applications of this ordinance that can be given effect without the invalid application or provision, and each invalid provision or invalid application of this ordinance is severable.

SECTION 7: Ordinance 10-O-19 shall be in full force and effect after its passage and approval.

SECTION 8: The findings and recitals contained herein are declared to be prima facie evidence of the law of the City and shall be received in evidence as provided by the Illinois Compiled Statutes and the courts of the State of Illinois.
Memorandum

To: Honorable Mayor and Members of the City Council
   Administration and Public Works Committee

From: David D. Stoneback, Public Works Agency Director

Subject: Ordinance 13-O-19, Amending City Code Section 8-4-6(C) – Private Scavenger Provided Receptacles

Date: February 7, 2019

Recommended Action:
Staff recommends that City Council adopt Ordinance 13-O-19, which will amend City Code Section 8-4-6(C) - Private Scavenger Provided Receptacles.

Livability Benefits:
Built Environment: Enhance public spaces
Health & Safety: Improve health outcomes

Analysis:
Council adopted Ordinance 128-O-18 on November 19, 2018 modifying the Solid Waste Code. The code modification accidently removed the portion of the original code requiring trash receptacles in the downtown zoning districts to be kept locked except when depositing or removing waste. This proposed ordinance would correct that oversite.

Attachments:
Ordinance 13-O-19
AN ORDINANCE

Amending City Code Section 8-4-6(C) “Private Scavenger Provided Receptacles”

NOW BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF EVANSTON, COOK COUNTY, ILLINOIS, THAT:

SECTION 1: City Code Section 8-4-6(C), “Private Scavenger Provided Receptacles,” of the Evanston City Code of 2012, as amended, is hereby further amended to read as follows:

(C) Private Scavenger Provided Receptacles

1. Receptacles provided by private scavengers shall be leak-resistant, rodent-resistant, lidded, and constructed of impervious material. The receptacles are subject to the inspection of the City of Evanston Health and Human Services Department.

2. Receptacles provided by private scavengers must display the name and address of the premises they serve in conspicuous lettering. Said lettering is to be maintained in a clean and legible condition. Containers shall be situated so that the required lettering is visible from the public way. This provision shall be waived in the event that private scavengers swap out containers during the weekly collection with new cleaned containers each and every week service is in effect.

3. Receptacles provided by private scavengers located in the downtown zoning districts shall be maintained with their lids shut and locked, except when depositing or removing waste.

3-4. Any private scavenger distributing receptacles within the City must, on an annual basis, provide the following information to the Director of Public Works or the City Manager or his/her designee(s).

a. The name, address and telephone number of the scavenger service and their contact person’s name.
b. The name, address and telephone number of the owner and operator of the premises serviced by the private scavenger.

c. The number of receptacles provided, the capacity of each, their specific location and the frequency of pick up.

4. The private scavenger shall update the information provided to the City within ten (10) days of any changes to the service provided.

SECTION 2: All ordinances or parts of ordinances in conflict herewith are hereby repealed.

SECTION 3: If any provision of this Ordinance 13-O-19 or application thereof to any person or circumstance is held unconstitutional or otherwise invalid, such invalidity shall not affect other provisions or applications of this Ordinance that can be given effect without the invalid application or provision, and each invalid application of this Ordinance is severable.

SECTION 4: Ordinance 13-O-19 shall be in full force and effect after its passage and approval.

SECTION 5: The findings and recitals contained herein are declared to be prima facie evidence of the law of the City and shall be received in evidence as provided by the Illinois Compiled Statutes and the courts of the State of Illinois.

Introduced: _________________, 2019

Approved:

Adopted: _________________, 2019

_______________________________, 2019

Stephen H. Hagerty, Mayor
Attest:

Devon Reid, City Clerk

Approved as to form:

Michelle L. Masoncup, Corporation Counsel