Agenda
Village of Glen Ellyn
Regular Workshop Meeting
Tuesday, January 21, 2020
7:00 PM
Glen Ellyn Civic Center, Galligan Board Room

*Village Board Workshop Procedures Statement*

*Visitors are most welcome to attend all meetings of the Village Board and can find copies of the Agenda on their chairs or online at www.glenellyn.org prior to the meeting. Any individual with a disability requiring a reasonable accommodation in order to participate in a meeting should contact the Village of Glen Ellyn ADA Coordinator, 630-469-5000, at least five (5) business days in advance of the next scheduled meeting. All matters on the Agenda may be discussed, amended, and acted upon.*

**A. Call to Order**

**B. Pledge of Allegiance**

**C. Roll Call**

**D. Audience Participation**

1. Open:

   Members of the public are welcome to speak to any item not specifically listed on tonight's agenda for up to (3) three minutes. For those items which are on tonight's agenda, the public will have the opportunity to comment at the time the item is discussed. In either case, please complete the Audience Participation form and turn it in to the Village Clerk. It is requested that, if possible, one spokesman for a group be appointed to present the views of the entire group. Speakers who are recognized are requested to step to a microphone and state their name, their topic and the group, if any, they are representing prior to addressing the Village Board. Individuals wishing to address the Board shall exercise proper decorum and respect for the proceedings and the business of the Village Board, and shall refrain from abusive demeanor and language. The practice of ceding time to other speakers shall be prohibited, except in the discretion of the presiding officer of the meeting. Public officials are not obligated to respond to questions.

**E. Contractor Registration Review (Presented by Community Development Director Springer) (Discussion Only)**

1. Community Development Director Springer will discuss proposed contractor registration modifications.

**F. Taft Avenue Capital Project (Presented by Public Works Director Hansen) (Discussion Only)**

1. Public Works Director Julius Hansen will present a resident request for additional streetlights on the south side of Taft Avenue between Nicoll Way and Park Boulevard.

**G. Water Systems Improvement with Illinois American Water Company (Presented by Public Works Director Hansen) (Discussion Only)**

1. Public Works Director Julius Hansen will present a proposal to construct an shared emergency water connection with Illinois American Water Company and the Village of Glen Ellyn.

**H. McChesney Development Site (Presented by Community Development Director Springer) (Discussion Only)**

1. Community Development Director Springer will present options for the McChesney & Miller development site.

**I. Strategic Plan Quarterly Report (Presented by Village Manager Franz) (Discussion Only)**

1. Village Manager Franz will provide an update to the 2018-2020 Strategic Plan.

**J. Other Items**

**K. Motion to adjourn to Executive Session for discussion concerning setting the price for sale or lease of public property pursuant to 5 ILCS 120/2 (C)(6), discussion regarding the purchase or lease of real property pursuant to 5 ILCS 120/2 (C)(5) and discussion concerning pending litigation matters pursuant to 5 ICLS 120/2 (C)(11) without returning to open session thereafter.**

**Glen Ellyn Village Board**
535 Duane Street
Glen Ellyn, IL 60137

Meeting: 01/21/20 07:00 PM
Department: Glen Ellyn Village Board
Department Head: Lindsey Kaminsky
Category: Discussion Item
Prepared By: Lindsey Kaminsky

**SCHEDULED**

**ORDINANCE (ID # 4324)** DOC ID: 4324

# Community Development Director Springer will discuss proposed contractor registration modifications.

Brief Update Since 1-13-20 Village Board Meeting

In an effort to shorten the permit process and streamline the permit experience for customers, staff brought this discussion item to Village Board workshops on March 18, 2019 and June 24, 2019. Village Board feedback was to maintain some elements of a registration process that would confirm insurance coverage and State licenses, without requiring staff to maintain a detailed database of such information.

The proposed amendments to the contractor registration program are intended to make the program more user-friendly and time efficient for both customers and staff, without reducing the level of protection the current program offers. The main proposed amendments to the contractor registration program are:

1. Certificate of Insurance: Contractors are still required to submit a Certificate of Insurance in favor of the Village. The change is that a certificate must be submitted with each permit application in lieu of on an annual basis. This will avoid unnecessary delays in permit issuance in the event that the certificate on file has expired.
2. Surety Bond: Submission of a Surety Bond to the Village will no longer be required, however, the requirements of the State of Illinois to obtain a State license, which requires Surety Bonds, will not change. We will confirm all State-licensed contractors have a current State license. This will also alleviate the inevitable delay in permit issuance when previously issued bonds have expired. Additionally, it will save permit processing time as staff will no longer need to perform data entry for this document or check the expiration date of the previously issued bond.
3. Fees: Due to the reduced staff workload, the fee for contractor registration is proposed to be eliminated, which is already reflected in the approved 2020 Budget.
4. Tree Contractors: Tree contractors proposing to prune or remove public, significant, or protected trees have always been expected to register with Public Works. However, it was not possible for Public Works to track private property pruning and tree removal which does not require a permit. Therefore, the Public Works tree contractor registration has always been largely voluntary for private property activities. That requirement does not change, only that a formal registration would not be required. The Public Works Department currently does not formally register tree contractors.

For clarity, under the current municipal code, both the Certificate of Insurance and a Surety Bond offer protection to the Village (as an additional insured on the Certificate of Insurance, or as obligee on the Surety Bond), they do not afford direct protection to the general public. The difference between the two documents is that the insurance company does not expect repayment from the

insured in the event a claim is paid on but a surety does expect repayment by the contractor for any payment made under the bond. Both documents afford the same level of protection, only the claim amount would be considered to be paid, so having a Surety Bond and a Certificate of Insurance is duplicative in coverage and a needless additional cost to the contractor, particularly for small projects where the cost of the bond becomes a high percentage of the overall cost of the work.

**Background:**

Prior to November 2009, the Village did not have a contractor registration program. At the November 16, 2009 Village Board Workshop meeting, Director Springer indicated that the Planning & Development Department was seeking Village Board feedback on establishing a contractor registration program. At that time, it was projected that the annual revenue from registering contractors would be about $75,000. Further discussion ensued over the next few months and an ordinance was passed on March 8, 2010 making contractor registration regulations effective on March 15, 2010.

In the years since the ordinance has passed, the number of contractors that were registered annually grew steadily from 355 in 2011, to 646 in 2017. However, the revenue from the registration program fell from $42,565 in 2011 to $35,380 in 2017 (far short of the original projection) as the department recognized that it was not allowed to collect a fee to register contractors that were already registered by the State or by other municipalities (see Attachment C for listing). These contractors register with the Village for free. In 2017, of the 646 contractors that were registered, only 57% paid a fee to register. Nonetheless, staff expended time to process their registration paperwork, including entering their company data, insurance and bonds into our permit tracking software system (MUNIS).

In 2019, there were 2,294 cases of new contractor registrations or existing registrations renewed by the updating of surety bond and/or insurance information. The total number of registration payments was 565, or just 25% of the total number of cases, totaling $42,135 in revenue. 75% of all cases were updated without any payment made.

**Issue:**

It was believed that contractor registration would provide a needed mechanism to control contractors performing work within the Village. Since the inception of the contractor registration program in 2010, not one contractor has been suspended or had its registration revoked due to a violation of a municipal ordinance or provision of the building codes. The issuance of citations has been the alternative method of providing this control. The onset of the Administrative Adjudication system in April, 2017 has provided a quicker and more efficient method of controlling contractor activities than taking cases to Circuit Court where fines are minimally assessed. Fifty-four citations related to building construction have been issued to date, covering eighty-nine separate building code violations, with fines collected totaling $60,393.97, and another $111,150 in process of being collected.

In 2019, the number of contractors registered was 565. It is estimated that staff expends on average about 10 minutes registering a contractor, which converts to 94 man-hours. The number of times that surety bond and insurance information was updated in Munis was 1,729. Staff estimates they spend about one hour per day updating contractor information in Munis. The total annual man-hours spent on contractor registration is then about 345. The cost to manage the program is then about $9,500 and the net income from the contractor registration program in 2019 was then $42,135 - $9,500 = $32,635, not including a reduction to account for staff time spent in the Finance Department to process the registration payments.

The contractor registration program has proven to be extremely customer un-friendly. Registration of contractors must be completed prior to the issuance of a building permit. More often than not, the issuance of permits is delayed (estimated at 1.5 weeks on the average) due to permit applicants not knowing what contractor they are going to use because they did not gets bids on their project prior to applying for a permit, contractors failure to list the contractors they intend to perform the work, the contractor registration(s) are determined to have lapsed causing new applications to be required, the contractor's insurance certificate was determined to have lapsed and must be renewed, the Village was awaiting contractors to complete the required application or submit documentation such as a copy of their license or a surety bond.

There is also a perception that contractor registration serves to protect the general public. To some extent it does, but only in that staff verifies that State-issued registrations are current. The insurance or surety bond currently collected from contractors that are not licensed by the State only serves to ensure repair to any damage in the public right-of-way, they are not written to protect the land owner and the public cannot draw on them. Certainly a side benefit to the public is that the contact information for the contractor's insurance carrier is on record even if the coverage does not extend to the general public.

The contractor registration program was discussed during Village Board workshops held on March 18, 2019 and June 24, 2019. Feedback received included the Board's interest in maintaining contractor information to ensure that the general public can identify a contractor's insurance coverage without requiring staff to maintain a detailed database of such information. Based on that direction, the contractor registration revenue was removed from the 2020 Budget and staff recommends the contractor registration process be as follows:

1. All State/Municipal licensed contractors must submit, with each permit application for building permit, a copy of their current professional license issued by the State of Illinois, Illinois municipality or other entity authorized to issue such license.
2. All contractors (general, independent and subcontractors) must submit, with each permit application for building permit, a copy of a valid certificate of insurance listing the Village as an additional insured.
3. If the license or certificate of insurance expires while the permit is still active, contractors will be required to provide current copies of licenses and certificates of insurance.
4. Staff will review the licenses and certificates to verify the effective dates are valid at the time of application.

5. Copies of licenses and certificates of insurance will be placed in each project file.
6. The fee for contractor registration will be eliminated.

Revision of the contractor registration program will result in:

- Minimal change in Village revenue;
- Expediting the issuance of permits;
- Savings to contractors since they will not have to pay for surety bonds; and
- Affording Community Development Department staff more time to service customers in other areas.

**2020-22 Strategic Plan Alignment**

Strategic Issue II: ECONOMIC DEVELOPMENT. Engage in progressive and proactive economic development to attract and retain key businesses to foster a vibrant business community by strategically increasing the Village's footprint, adding housing variety and increasing downtown commercial growth and residential density. Action Step: Review and modify building codes, and ARC guidelines to create more flexibility for businesses and encourage private investment in our commercial and residential districts by June 2020.

**Recommendation:**

Staff is recommending that Chapters 1 and 8 of Title 4, and Chapter 4 of Title 8 of the Village Code be amended as indicated in Attachment A.

Att: Attachment - A (Clean)
Attachment - B (Blacklined)
Attachment - C - Contractor Registration Requirements
Attachment - D - Changes to Contractor Registration Program

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**Village of Glen Ellyn**

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**Ordinance No. 6750-VC**

**An Ordinance Amending
Chapter 1 (Building Code) and Chapter 8 (Tree Preservation) of
Title 4 (Building Regulations) and
Chapter 4 (Forestry Management) of
Title 8 (Public Ways and Property) of the
Village Code of the
Village of Glen Ellyn, Illinois to
Amend Contractor Registration Requirements**

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**Adopted by the
President and the Board of Trustees
Of the Village of Glen Ellyn
DuPage County, Illinois
This _____ Day of _____, 20__.**

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Published in pamphlet form by the authority
of the President and Board of Trustees of the
Village of Glen Ellyn, DuPage County, Illinois,
this _____ day of _____, 20____.

**PREPARED BY AND MAIL TO:**
VILLAGE OF GLEN ELLYN
ATTN: VILLAGE CLERK
535 DUANE STREET

GLEN ELLYN, IL 60137

**Ordinance No. 6750-VC**

**An Ordinance Amending
Chapter 1 (Building Code) and Chapter 8 (Tree Preservation) of
Title 4 (Building Regulations) and
Chapter 4 (Forestry Management) of
Title 8 (Public Ways and Property) of the
Village Code of the
Village of Glen Ellyn, Illinois to
Amend Contractor Registration Requirements**

**Whereas,** the President and Board of Trustees of the Village of Glen Ellyn, DuPage County, Illinois, pursuant to the provisions of Division 30 of Article 11 of the Illinois Municipal Code (Chapter 65, Section 5/11-30-1 et seq. of the Illinois Compiled Statutes), have the power and authority to prescribe the strength and manner of constructing all buildings, structures, and their accessories, including life and fire safety requirements, to promote the public health and safety of building occupants and the public; and

**Whereas**, the President and Board of Trustees deem it to be in the best interest of the Village of Glen Ellyn to adopt proposed amendments to Chapter 1 (Building Code) and Chapter 8 (Tree Preservation) of Title 4 (Building Regulations), and Chapter 4 (Forestry Management) of Title 8 (Public Ways and Property), which are attached hereto as Exhibit "A" (Clean).

**Now, Therefore, be it Ordained by the President and Board of Trustees of the Village of Glen Ellyn, DuPage County, Illinois,** in the exercise of its home rule powers as follows:

**Section One:** That Chapter 1 (Building Code) and Chapter 8 (Tree Preservation) of Title 4 (Building Regulations), and Chapter 4 (Forestry Management) of Title 8 (Public Ways and Property)

of the Glen Ellyn Village Code, shall be and are hereby amended as set forth in Exhibit "A" (Clean) attached hereto.

**Section Two:** This Ordinance shall be in full force and effect from and after its passage, approval, and publication in pamphlet form.

**Passed** by the President and Board of Trustees of the Village of Glen Ellyn, Illinois, this _____ day of _____, 20___,

| | | | | | | |
|---|---|---|---|---|---|---|
| Ayes | | Diane McGinley | | Steve Thompson | | Mark Senak |
| | | Craig Pryde | | Bill Enright | | Gary Fasules |
| | | Kelli Christiansen | | | | |
| | | | | | | |
| Nays | | Diane McGinley | | Steve Thompson | | Mark Senak |
| | | Craig Pryde | | Bill Enright | | Gary Fasules |
| | | Kelli Christiansen | | | | |
| | | | | | | |
| Absent | | Diane McGinley | | Steve Thompson | | Mark Senak |
| | | Craig Pryde | | Bill Enright | | Gary Fasules |
| | | Kelli Christiansen | | | | |

Approved by the Village President of the Village of Glen Ellyn, Illinois this _____ day of _____.

_____

Village President

Attest:

_____

Village Clerk

AFFIX VILLAGE SEAL

(Published in pamphlet form and posted on the _____ day of _____, 20____.)

**ATTACHMENTS:**

- Attachment - A (Clean) (PDF)
- Attachment - B (Blacklined) (PDF)
- Attachment - C - Contractor Registration Requirements (Current) (PDF)
- Attachment - D - Changes to Contractor Registration Program (PDF)

# ATTACHMENT – A (CLEAN)

4-1-4. – Fee and deposit schedule.

## SCHEDULE OF FEES AND DEPOSITS

The following schedule applies to all new or reconstructed buildings and structures, new additions, alterations or remodeling to existing buildings, structures or accessory structures, and all property development unless noted otherwise in this section of the Glen Ellyn Village Code. Where a project includes multiple work items listed as separate line items in this schedule the fees shall be cumulative in nature to include all work items in the project scope of work.

| | Construction Scope of Work | | Building or Application Fee | Plan Review Fee | Refundable Deposit or Escrow |
|---|---|---|---|---|---|
| **A - New Construction** | | | | | |
| 1 | Non-residential or mixed-use building, principal structure, total square footage of all levels, including all attached or detached structures:<br>a. Fees include connection fee for up to maximum 1" water service line, and 1" water meter. For larger water service line or meter sizes, the building fee shall be increased by the difference in cost between 1-inch and the required size(s) (see chapters 7-11-30 and 7-11-32 of this code). The cost difference between a 1-inch line and the required line size shall be added to the permit fees indicated herein.<br>b. Fees do not includes sewer connection fees (see section (F) of this schedule).<br>c. Fees do not include site development/stormwater fees or deposits (see section (D) of this schedule).<br>d. For food service establishments, add $250.00 to the plan review fee.<br>e. Fees do not include elevator fees (see section (D) of this schedule).<br>f. Fees do not include fire alarm and detection or fire sprinkler systems (see section (D) of this schedule).<br>g. Fees include up to two plan reviews (Additional plan reviews shall be charged per Note 1).<br>h. Fees do not include systems that collect or convert geothermal, solar or wind energy (see section D of this chart). | | | | |
| | • Up to 2,000 square feet | See Note 7 | 6,100 | 1,900 | 5,000 |
| | • 2,001 to 3,500 square feet | See Note 7 | 6,300 | 2,250 | 5,000 |
| | • 3,501 to 5,000 square feet | See Note 7 | 6,550 | 3,000 | 5,000 |
| | • 5,001 to 6,500 square feet | See Note 7 | 6,900 | 3,600 | 5,000 |
| | • 6,501 to 8,000 square feet | See Note 7 | 7,400 | 4,100 | 5,000 |
| | • over 8,000 square feet | See Note 7 | See Note 14 | $0.20/sf | 5,000 |
| 2 | Residential 1- and 2-family dwelling, principal structure, total floor area square footage of all levels:<br>a. Fees include all impervious surfaces, attached structures such as porches and decks, up to three detached accessory structures such as garages or pergolas, as allowed by the zoning code for the applicable zoning district.<br>b. Fees include connection fee for sewer line and up to maximum 1" water service line, and 1" water meter. For larger water service line or meter sizes, the building fee shall be increased by the difference in cost between 1-inch and the required size(s) (see chapter 7-11-30 of this code).<br>c. Fees include site development/stormwater fees and deposits.<br>d. Fees include up to two plan reviews (Additional plan reviews shall be charged per Note 1).<br>e. Fees do not include systems that collect or convert geothermal, solar or wind energy (see section D of this schedule).<br>f. Fees include fire sprinkler plan review and inspection.<br>g. Fees do not include elevator fees (see section (D) of this schedule). | | | | |
| | • Up to 2,000 square feet | | 5,025 | 1,100 | 5,000 |
| | • 2,001 to 6,500 square feet | | 5,300 | 1,700 | 5,000 |
| | • 6,501 to 9,500 square feet | | 5,700 | 2,100 | 5,000 |
| | • 9,501 to 13,500 square feet | | 6,275 | 2,710 | 5,000 |
| | • 13,501 to 18,000 square feet | | 6,975 | 3,410 | 5,000 |
| | • over 18,000 square feet | | 7,950 | 4,220 | 5,000 |
| 3 | Residential multi-family dwelling, principal structure,<br>a. Fees do not include water or sewer connection fee, see chapters 7-11-30 and 7-11-32 of this code.<br>b. Fees do not include site development/stormwater fees or deposits.<br>c. Fees do not include elevator fees (see section (D) of this schedule).<br>d. Fees do not include fire alarm and detection or fire sprinkler systems (see section (D) of this schedule).<br>e. Fees include up to two plan reviews (Additional plan reviews shall be charged per Note 1).<br>f. Fees do not include systems that collect or convert geothermal, solar or wind energy (see section D of this chart). | | | | |
| | • Fee per dwelling unit | *each unit (Building Fee) | 2,000* | See Note 1 | 5,000 |
| | • Fee for associated attached or detached structures other than new dwelling units including, but not limited to attached parking levels | | See Note 14 | $0.20/sf | 5,000 |

**B - Additions - Fees do not include fire sprinkler, fire alarm and detection or elevator work if required/provided.**

| | | | | |
|---|---|---|---|---|
| 1 | New level to existing primary building for 1- and 2-family dwellings | 2,250 | 800 | 4,000 |
| | New level to existing multi-family, mixed-use or non-residential building | See Note 14 | 1,700 | 5,000 |
| 2 | To accessory structures for 1-, 2- and 3-family dwellings | 450 | 200 | 2,000 |
| 3 | To accessory structures for 4-family and larger dwellings | 600 | 300 | 2,000 |
| 4 | To residential primary building for 1-, 2- and 3-family dwellings, total new square footage of all levels, not including water service upgrade if necessary: | | | |
| | • Up to 500 square feet | 1,125 | 500 | 2,000 |
| | • 501 to 1,000 square feet | 2,250 | 600 | 2,000 |
| | • 1,001 to 2,000 square feet | 3,375 | 700 | 2,000 |
| | • over 2,000 square feet | 5,100 | 1,100 | 5,000 |
| 5 | To residential primary building for 4-family and larger dwellings, total square footage of all levels, not including water service upgrade if necessary: | | | |
| | • Up to 500 square feet | 1,125 | 1,300 | 2,000 |
| | • 501 to 1,000 square feet | 2,250 | 1,400 | 2,000 |
| | • 1,001 to 2,000 square feet | 3,375 | 1,700 | 2,000 |
| | • Over 2,000 square feet | See Note 14 | $0.20/sf | 5,000 |
| 6 | To non-residential or mixed-use building, total square footage of all levels, not including water service upgrade if necessary: | | | |
| | • Up to 500 square feet | 1,125 | 500 | 2,000 |
| | • 501 to 1,000 square feet | 2,250 | 600 | 2,000 |
| | • 1,001 to 2,000 square feet | 3,375 | 700 | 2,000 |
| | • 2,001 to 3,500 square feet | 6,300 | 1,800 | 5,000 |
| | • 3,501 to 5,000 square feet | 6,550 | 2,000 | 5,000 |
| | • 5,001 to 6,500 square feet | 6,900 | 2,400 | 5,000 |
| | • 6,501 to 8,000 square feet | 7,400 | 2,700 | 5,000 |
| | • over 8,000 square feet | See Note 14 | $0.20/sf | 5,000 |

**C - Alterations and Remodeling - Fees do not include fire sprinkler, fire alarm and detection, or elevator work if required/provided.**

**1 - Residential**

| | | | | |
|---|---|---|---|---|
| a | Attic buildout | 1,000 | 200 | N/A |
| b | Basement alterations/buildout | 1,000 | 200 | N/A |
| c | Bathroom, new or alteration | 500 | 60 | N/A |
| d | Foundation Underpinning | 250 | 75 | N/A |
| e | Interior alterations, 1- and 2-family dwellings, multiple rooms, one level. Fee does not include plumbing inspections if required. | 750 | 300 | N/A |
| f | Interior alterations, 1- and 2-family dwellings, multiple rooms, two levels. Fee does not include plumbing inspections if required. | 1,000 | 400 | N/A |
| g | Interior alterations, multiple rooms, more than two levels. Fee does not include plumbing inspections if required. | 1,500 | 500 | N/A |
| h | Interior alterations to 2 to 4 multi-family dwelling units, and/or limited common area work. Fee does not include plumbing inspections if required. | 1,100 | 300 | N/A |
| i | Interior alterations to 5 or more multi-family dwelling units, and/or major common area work. Fee does not include plumbing inspections if required. | 2,200 | 400 | N/A |
| j | Kitchen, new or alteration | 900 | 75 | N/A |
| k | Structural modification or repair | 150 | 75 | N/A |
| l | Interior alterations, 1- and 2-family dwellings, up to 300 square feet in area encompassing all work areas, no plumbing work involved. | 225 | 75 | N/A |

**2 - Commercial Buildings**

| | | | | |
|---|---|---|---|---|
| a | Food Service Establishment buildout:<br>Fees do not include the following work items:<br>a. water service upgrade, if required (see section (F) of this schedule).<br>b. fire detection and alarm or fire sprinkler systems (see section (D) of this schedule).<br>c. new grease interceptor, if required (see section (F) of this schedule).<br>d. sewer connection fee, if required (see section (F) of this schedule). | | | |
| | • up to 1,000 square feet | 1,200 | 1,600 | N/A |
| | • 1,001 to 2,000 square feet | 2,400 | 1,700 | N/A |
| | • 2,001 to 3,000 square feet | 3,600 | 1,900 | N/A |
| | • 3,001 to 4,000 square feet | 4,800 | 2,100 | N/A |
| | • Over 4,000 square feet *2% of project cost, minimum | 6000* | 2,500 | N/A |
| b | Kitchen exhaust hood/Ansul system, replacement unit not part of tenant buildout per hood | 130 | 250 | N/A |
| c | Storefront or façade alteration, stand alone alteration project with no interior remodeling | 250 | 60 | N/A |
| d | Structural modification or repair | 150 | 75 | N/A |
| e | Tenant buildout, including all mechanical, electrical and plumbing work. Fire alarm and detection or fire sprinkler work not included. | | | |
| | • up to 1,000 square feet | 1,000 | 1,400 | N/A |
| | • 1,001 to 2,000 square feet | 2,000 | 1,500 | N/A |
| | • 2,001 to 3,000 square feet | 3,000 | 1,700 | N/A |
| | • 3,001 to 4,000 square feet | 4,000 | 1,900 | N/A |
| | • Over 4,000 square feet *2% of project cost, minimum | 5000* | 2,300 | N/A |
| f | Tenant modification of floor plan layout, up to 500 square feet, no mechanical, electric or plumbing modifications | 75 | 75 | N/A |
| g | Tenant modification of floor plan layout, over 500 square feet, no mechanical, electric or plumbing modifications | 175 | 150 | N/A |
| h | Tenant modification of lighting or electric power distribution system | 175 | 75 | N/A |
| i | Tenant modification of mechanical system | 75 | 150 | N/A |
| j | Tenant modification of plumbing system | 450 | 150 | N/A |
| k | Toilet room, new or remodeling | 400 | 75 | N/A |
| l | White Box buildout, including interior demolition of previous tenant space down to demising walls, floor and ceiling system, no new work | 500 | 150 | N/A |

**D - Miscellaneous Permits (see Note 9)**

| | | | | |
|---|---|---|---|---|
| 1 | Accessibility modifications, interior or exterior, not within the public right-of-way | 65 | 60 | N/A |
| 2 | Arbor, trellis, pergola, ornamental gate or other similar structures | 65 | 30 | N/A |
| 3 | Canopy or fixed awning, new or alteration | 65 | 30 | N/A |
| 4 | Commercial filming | 150 | N/A | N/A |
| 5 | Commercial filming, application late fee | 75 | N/A | N/A |
| 6 | Deck or porch construction/replacement, single level | 225 | 60 | N/A |
| 7 | Deck or porch construction/replacement, multiple levels | 350 | 80 | N/A |
| 8 | Demolition (refer to section N of this schedule for applicable demolition tax based on area of demolition): See Note 3 | | | |
| | • Detached garage | 80 | 30 | 2,000 |
| | • Interior only, non-structural | 175 | 30 | N/A |
| | • Primary structure - greater than 300 to 1,000 square feet | 275 | 350 | 3,000 |
| | • Primary structure - 1,001 to 4,000 square feet | 425 | 350 | 3,000 |
| | • Primary structure - greater than 4,000 square feet, not exceeding 45 feet height | 1,000 | 1,100 | See Note 4 |
| | • Primary structure - greater than 4,000 square feet and exceeding 45 feet in height | 1,200 | 1,300 | See Note 4 |
| 9 | Drain tile and sump pit/pump | 65 | 30 | N/A |
| 10 | Driveway, new, replacement or expanded if over 299 square feet in area, add site development fee | 65 | 30 | See Note 13 |
| 11 | Driveway approach only (same size and location) | 65 | 30 | N/A |
| 12 | Elevator or other conveyance, new *per stop | 200* | 120 | N/A |
| 13 | Elevator modifications | 355 | 120 | N/A |
| 14 | Exit stairway, exterior | 225 | 30 | N/A |
| 15 | Fascias, soffits, gutters and/or downspouts, windows or exterior doors | 65 | N/A | N/A |
| 16 | Fence, new | 65 | 15 | N/A |
| 17 | Fence, repair (see note 16) | 65 | N/A | N/A |
| 18 | Fireplace, new interior or exterior | 80 | 30 | N/A |
| 19 | Fire alarm and detection system, new or modified: | | | |
| | • up to 10,000 square feet | 80 | 280 | N/A |
| | • 10,001 to 15,000 square feet | 150 | 420 | N/A |
| | • Over 15,000 square feet | 200 | 550 | N/A |
| 20 | Fire sprinkler system, pipe schedule design: | | | |
| | • 1 to 20 sprinkler heads | 125 | 280 | N/A |
| | • 21 to 100 sprinkler heads | 200 | 300 | N/A |
| | • 101 to 200 sprinkler heads | 275 | 400 | N/A |
| | • 201 to 300 sprinkler heads | 350 | 450 | N/A |
| | • 301 to 500 sprinkler heads | 425 | 700 | N/A |
| | • over 500 sprinkler heads | 500 | See Note 1 | N/A |
| 21 | Fire sprinkler system, hydraulically calculated: | | | |
| | • 1 to 20 sprinkler heads | 125 | 300 | N/A |
| | • 21 to 100 sprinkler heads | 200 | 600 | N/A |
| | • 101 to 200 sprinkler heads | 275 | 810 | N/A |
| | • 201 to 300 sprinkler heads | 350 | 920 | N/A |
| | • 301 to 500 sprinkler heads | 425 | 1,325 | N/A |
| | • over 500 sprinkler heads | 500 | See Note 1 | N/A |
| 22 | Garage - residential, 1-story, detached | 600 | 300 | 2,000 |
| 23 | Garage - residential, 2-story, detached | 650 | 300 | 2,000 |
| 24 | Geothermal systems | 250 | 125 | N/A |
| 25 | Gazebo or Greenhouse (If disturbed area is 300 square feet or larger, then add site development fee) | 65 | 30 | N/A |
| 26 | Key box Village purchase cost plus 10% | cost + 10% | N/A | N/A |
| 27 | Masonry tuckpointing, over 300 square feet | 65 | N/A | N/A |
| 28 | Miscellaneous construction, under $15,000 construction hard cost valuation | 250 | 60 | See Note 4 |
| 29 | Miscellaneous construction, over $15,000 construction hard cost valuation | See Note 9 | 200 | See Note 4 |
| 30 | Other appliances, equipment, structures, or individual work items not listed | 65 | 30 | See Note 4 |
| 31 | Outdoor fire pit, oven or kitchen | 65 | 30 | N/A |
| 32 | Paved or impervious surface (including sport courts) greater than 100 and less than 300 square feet in area | 65 | 30 | N/A |
| 33 | Paved or impervious surface (including sport courts) greater than 299 square feet in area | 260 | 110 | 2,000 |
| 34 | Pavement grinding/resurfacing pavement | 65 | 30 | N/A |
| 35 | Prescribed burn | 80 | N/A | N/A |
| 36 | Radon system, active (power ventilated) | 80 | N/A | N/A |
| 37 | Radon system, passive (natural ventilation) | 65 | N/A | N/A |
| 38 | Restripe parking lot | 65 | 30 | N/A |
| 39 | Retaining wall, over 8 inches in height | 65 | 75 | N/A |
| 40 | Roofing, residential over 300 square feet | 85 | N/A | N/A |
| 41 | Roofing, commercial over 300 square feet | 150 | 30 | N/A |
| 42 | Shed or other accessory structure less than 150 square feet in area | 65 | 30 | N/A |
| 43 | Shoring, raising or moving of any building | 600 | 150 | 5,000 |
| 44 | Sidewalk, new | $20.00/lin ft | N/A | N/A |
| 45 | Siding or stucco over 300 square feet | 80 | N/A | N/A |

| | | | | |
|---|---|---|---|---|
| 46 | Site development fees, new construction: Water, sanitary and sewer fees included within construction fees unless noted otherwise. | | | |
| | • Development from 300 to 1,500 square feet in area | 425 | 250 | 5,000 |
| | • Development located within the principal building side yard setbacks, excluding a driveway approach | 425 | 330 | 5,000 |
| | • Development over 1,500 square feet for single-family home or townhome | 700 | 600 | 5,000 |
| | • Development over 1,500 square feet for commercial and multi-family (see section 4-1-4(I) of this code) | See Note 6 | See Note 7 | 5,000 |
| 47 | Solar panel system, including connection to electric system only | 250 | 75 | N/A |
| 48 | Solar panel system, including connection to electric and plumbing system | 350 | 100 | N/A |
| 49 | Storage tank installation or removal | 125 | 50 | 2,000 |
| 50 | Swimming pool, spa or hot tub, above ground *Deposit of $2,000 required if disturbed area is larger than 300 square feet | 100 | 30 | *N/A |
| 51 | Swimming pool, spa or hot tub, in-ground | 200 | 60 | 2,000 |
| 52 | Telecommunication sites, alterations or co-locate (other than small wireless facility) | 250 | 450 | 2,000 |
| 53 | Telecommunication sites, new construction, not in public right of way (other than small wireless facility) | 500 | 750 | 2,000 |
| 54 | Telecommunication site, single co-located small wireless facility | 200 | 450 | 4,000 |
| 55 | Telecommunication site, additional small wireless facilities, after the first co-located site under the same permit application | 200 each | 150 each | 4000 each |
| 56 | Temporary bleachers, platform, stage or tent (tent greater than 400 square feet) | 75 | 30 | N/A |
| 57 | Wind turbine | 250 | 75 | N/A |

**E - Heating, Ventilation and Air Conditioning**

| | | | | |
|---|---|---|---|---|
| 1 | Air conditioning coil and/or condenser replacement | 65 | N/A | N/A |
| 2 | Air distribution system modification | 65 | N/A | N/A |
| 3 | Boiler | 120 | N/A | N/A |
| 4 | Chimney or vent, replacement or chimney re-liner | 65 | N/A | N/A |
| 5 | Solid fuel-burning equipment or stove | 65 | N/A | N/A |
| 6 | Fuel-gas or fuel-oil piping modification | 120 | N/A | N/A |
| 7 | Heating/cooling equipment: residential furnace or heat pump, new or replacement | 65 | 30 | N/A |
| 8 | Heating/cooling equipment: commercial furnace, heat pump, rooftop unit, new or replacement | 120 | 30 | N/A |

**F - Plumbing**

| | | | | |
|---|---|---|---|---|
| 1 | Cross connection control device, new | 140 | N/A | N/A |
| 2 | Flood/sewer backup control system | 215 | 60 | N/A |
| 3 | Grease interceptor, new or replacement | 140 | 60 | N/A |
| 4 | Hydrant meter | 550 | N/A | N/A |
| 5 | Irrigation systems - lawn | 140 | 30 | See Note 4 |
| 6 | Modified overhead sewer, not part of a remodeling project | 140 | 30 | N/A |
| 7 | Reconfigure interior waste, water or vent system, not part of a remodeling project | 140 | 30 | N/A |
| 8 | Service disconnection, waste or water | 200 | 60 | 4,000 |
| 9 | Sewer connection fee (Village base fee as shown, plus Glenbard Wastewater Authority fee) Base fee, plus $278.00 per PE (population equivalent) | 1,000 | N/A | N/A |
| 10 | Sewer line inspection (Clear Water Program) Note: This fee is not included within new construction, additions, alterations or remodeling fees | 100 | N/A | N/A |
| 11 | Water heater, replacement | 120 | N/A | N/A |
| 12 | Water meter | See Note 12 | 50 | N/A |
| 13 | Water, sewer or storm line, 1-, 2- and 3-family dwellings (add connection fees based on service line size per chapters 7-11-30 and 7-11-32 of this code) | 240 | 60 | 3,000 |
| 14 | Water, sewer or storm line, multi-family, mixed -use or commercial (add connection fees based on service line size per chapters 7-11-30 and 7-11-32 of | 340 | 75 | 3,000 |
| 15 | Water, sewer or storm line repair (private property) | 140 | N/A | N/A |
| 16 | Water, sewer or storm line repair (public property) | 240 | N/A | 5,000 |
| 17 | Miscellaneous inspection or consultation | 140 | N/A | N/A |

**G - Electrical**

| | | | | |
|---|---|---|---|---|
| 1 | Emergency generator | 65 | 30 | N/A |
| 2 | Exit signs | 65 | 30 | N/A |
| 3 | Lighting fixtures | 65 | N/A | N/A |
| 4 | Openings for wiring, each 25 or portion thereof | 65 | N/A | N/A |
| 5 | Re-circuiting | 80 | N/A | N/A |
| 6 | Service feeders | 80 | N/A | N/A |
| 7 | Service upgrade, up to 200 amps | 100 | N/A | N/A |
| 8 | Service upgrade, up to 400 amps | 125 | N/A | N/A |
| 9 | Service upgrade, over 400 amps | 150 | N/A | N/A |
| 10 | Service upgrade, each additional meter | 65 | N/A | N/A |
| 11 | Service panel or subpanel | 65 | N/A | N/A |
| 12 | Temporary electrical service | 80 | N/A | N/A |
| 13 | Transformer | 65 | N/A | N/A |
| 14 | Underground service | 80 | N/A | N/A |
| 15 | Wired connection, appliances or equipment | 65 | N/A | N/A |

**H - Signs**

| | | | | | |
|---|---|---|---|---|---|
| 1 | Banners | each | 50 | N/A | N/A |
| 2 | Comprehensive sign plan | | 500 | N/A | N/A |
| 3 | Freestanding sign | each | 175 | N/A | N/A |
| 4 | Illuminated sign | each | 150 | N/A | N/A |
| 5 | Non-illuminated sign | each | 100 | N/A | N/A |
| 6 | Panel replacement | each | 100 | N/A | N/A |

**I - Plan Reviews**

| | | | | | |
|---|---|---|---|---|---|
| 1 | Additional fees: | | | | |
| | • Plan review completed in-house after the second plan review has been completed | | N/A | 200 | N/A |
| | • Stormwater plan review performed after the third review (see section 4-1-4(I) of this code) | per hour | N/A | 75 | N/A |
| | • Stormwater plan review performed on revised drawings submitted after drawings have been approved (see section 4-1-4(I) o | per hour | N/A | 75 | N/A |
| 2 | Deferred submittal: elevator or other conveyance (cost added to plan review fee indicated elsewhere in this schedule) | | N/A | 100 | N/A |
| 3 | Deferred submittal: fire alarm system or fire suppression system (cost added to plan review fee indicated in section ~~4-1-4~~(D) of this schedule) | | N/A | 250 | N/A |
| 4 | Deferred submittal: truss shop drawings (cost added to base permit fee of project) | | N/A | 100 | N/A |
| 5 | Deferred submittal: other, with approval of the Building and Zoning Official (cost added to applicable plan review fee indicated elsewhere in this sched | | N/A | 250 | N/A |
| 6 | Elevator or other conveyance | each conveyance | N/A | 120 | N/A |
| 7 | Expedited plan reviews, 1- and 2-family dwellings (additional cost for up to 5 business day turnaround time) | | N/A | 500 | N/A |
| 8 | Expedited plan reviews, 1- and 2-family dwellings (additional cost for up to 3 business day turnaround time) | | N/A | 1,000 | N/A |
| 9 | Expedited plan reviews, multi-family, mixed-use or commercial | | N/A | See Note 1 | 2,000 |
| 10 | Plan reviews performed by a consultant (see subsection 4-1-4(C)2(a) of this code) | | N/A | See Note 1 | 2,000 |
| 11 | Plan review necessitated by drawing revisions after issuance of permit | | N/A | 75 | N/A |
| 12 | Miscellaneous assemblies, equipment or structures reviewed by in-house staff | per hour | N/A | 75 | N/A |
| 13 | Tree preservation for single-family lot site improvements, grading or landscaping not associated with other permits | | N/A | 250 | N/A |

**J - Administrative Fees**

| | | | | | |
|---|---|---|---|---|---|
| 1 | Appeal of administrative decision of the Planning and Development Director or the Building & Zoning Official | | 250 | N/A | N/A |
| 2 | Certificate of Occupancy, other than for new construction | | 100 | N/A | N/A |
| 3 | Permit extension (see subsection 4-1-4(G) of this code) | per month | 50 | N/A | N/A |
| 4 | Phased permit, foundation and underground utilities only permit, 1- and 2-family | fees in addition to scheduled building and plan review fees | 250 | 200 | N/A |
| 5 | Phased permit, foundation and underground utilities only permit, other than 1- and 2-family | fees in addition to scheduled building and plan review fees | 500 | 500 | N/A |
| 6 | Phased permit, building shell only | fees in addition to scheduled building and plan review fees | 1,000 | 500 | N/A |
| 7 | Renewal of expired or suspended permit | | See Note 8 | N/A | N/A |
| 8 | Renewal of expired permit application | | 500 | N/A | N/A |
| 9 | Temporary Certificate of Occupancy or renewal thereof (see subsection 4-1-4(E) of this code) | | 450 | N/A | N/A |
| 10 | Waiver of code for special event (in accordance with sections 1-1-6 and 3-39-3 of this Code) | | 50 | N/A | N/A |
| 11 | Work exceeding scope of permitted work | 300% of original permit fee, minimum | 500 | N/A | N/A |
| 12 | Work Started without Permit | 200% of original permit fee, minimum | 250 | N/A | N/A |

**K - Inspections**

| | | | | | |
|---|---|---|---|---|---|
| 1 | Annual Fire Prevention Inspection: | | | | |
| | Group: | Occupancy Use: | | | |
| | A-1 thru 5 | Assembly | 150 | N/A | N/A |
| | A-2 | Assembly - Food/Drink Service Establishment, up to 1,000 square feet | 75 | N/A | N/A |
| | A-2 | Assembly - Food/Drink Service Establishment, over 1,000 square feet | 150 | N/A | N/A |
| | A-2 | Assembly - Food Service Establishment, commercial hood and duct | 50 | N/A | N/A |
| | B | Business, up to 1,000 square feet | 50 | N/A | N/A |
| | B | Business, over 1,000 square feet | 75 | N/A | N/A |
| | E | Educational | 100 | N/A | N/A |
| | E | Educational, day care facility | 75 | N/A | N/A |
| | F | Factory | 125 | N/A | N/A |
| | H-1 thru 5 | High-hazard | 125 | N/A | N/A |
| | I-1 thru 4 | Institutional | 150 | N/A | N/A |
| | M | Mercantile, up to 1,000 square feet | 50 | N/A | N/A |
| | M | Mercantile over 1,000 sf up to 4,000 square feet | 75 | N/A | N/A |
| | M | Mercantile over 4,000 square feet | 150 | N/A | N/A |
| | R-1 | Residential, transient | 150 | N/A | N/A |
| | R-2 | Residential, non-transient and multi-family building common areas | 50 | N/A | N/A |
| | R-3 | Residential, non-transient (refer to Building Code for occupancy uses) | 125 | N/A | N/A |
| | R-4 | Residential, non-transient (refer to Building Code for occupancy uses) | 150 | N/A | N/A |
| | S-1 | Storage, moderate hazard | 75 | N/A | N/A |
| | S-2 | Storage, low hazard | 50 | N/A | N/A |
| | U | Utility and Miscellaneous | 50 | N/A | N/A |
| 2 | Change of occupancy inspection (new use or business) | | 50 | N/A | N/A |
| 3 | Code compliance for 1-, 2- or 3-family dwellings, per request of owner or agent | | 175 | N/A | N/A |
| 4 | Elevator or other conveyance: | | | | |
| | • Annual inspection | | 150 | N/A | N/A |
| | • Annual no- load pressure test | | 150 | N/A | N/A |
| | • Five-year conveyance load test | | 350 | N/A | N/A |
| | • Re-inspection fee | | 75 | N/A | N/A |
| 5 | Re-inspection fee - Plumbing (after second inspection fails) | | 100 | N/A | N/A |
| 6 | Re-inspection fee - Other than Plumbing (after second inspection fails) | | 100 | N/A | N/A |
| 7 | Water pressure test, single family residential | | 200 | N/A | N/A |

**M - Business License/Registration**

| | | | | | |
|---|---|---|---|---|---|
| 1 | New business | annual | 100 | N/A | N/A |
| 2 | Change of address, remaining within Glen Ellyn | annual | 30 | N/A | N/A |
| 3 | Change of business ownership | annual | 30 | N/A | N/A |
| 4 | Change of business name | annual | 30 | N/A | N/A |

**N - Taxes, Demolition**

| | | | | | |
|---|---|---|---|---|---|
| 1 | Tax, demolition (applies to any project when over 50 percent of the exterior roof and wall area is structurally altered or when a building or structure, or part thereof, greater than 1,000 and up to 4,000 square feet is demolished) | | 550 | N/A | N/A |

**O - Developer's Donation/Cash Contribution**

| | | | | | |
|---|---|---|---|---|---|
| 1 | Fire Company: Single-family dwelling (attached or detached), per new dwelling unit | | 1,500 | N/A | N/A |
| 2 | Fire Company: Multi-family dwelling units, per new dwelling unit | | 500 | N/A | N/A |
| 3 | Fire Company: Congregate housing for the elderly, per new unit | | 500 | N/A | N/A |
| 4 | Butterfield Park District: | *Determined by Ordinance | * | N/A | N/A |
| 5 | Glen Ellyn Library: | *Determined by Ordinance | * | N/A | N/A |
| 6 | Glen Ellyn Park District: | *Determined by Ordinance | * | N/A | N/A |
| 7 | Elementary School District 41: | *Determined by Ordinance | * | N/A | N/A |
| 8 | Elementary School District 89: | *Determined by Ordinance | * | N/A | N/A |
| 9 | High School District 87: | *Determined by Ordinance | * | N/A | N/A |

**P - Zoning and Appearance Applications**

| | | | | |
|---|---|---|---|---|
| 1 | Administrative zoning variation | 250 | N/A | N/A |
| 2 | Annual outdoor beautification display | 25 | N/A | N/A |
| 3 | Appeals | 700 | N/A | See Note 5 |
| 4 | Construction necessitated variations (see section 4-1-4(F) of this code) | 1,100 | N/A | 2,000 |
| 5 | Exterior appearance review | 200 | N/A | N/A |
| 6 | Live entertainment | 150 | N/A | N/A |
| 7 | Planned unit development | 2,500 | N/A | See Note 5 |
| 8 | Planned unit development amendment | 2,500 | N/A | See Note 5 |
| 9 | Planned unit development amendment - not requiring a public hearing | 1,000 | N/A | N/A |
| 10 | Planned unit development amendment: | | | |
| | where only previously approved signage is being amended regardless if a public hearing is required or not | 500 | N/A | See Note 5 |
| 11 | Pre-application meeting (see section 4-1-4(D) of this code) | 250 | N/A | See Note 5 |
| 12 | Sign variation | 500 | N/A | See Note 5 |
| 13 | Special use | 750 | N/A | See Note 5 |
| 14 | Special use amendment, not requiring a public hearing | 350 | N/A | N/A |
| 15 | Special use, preexisting - Administrative approval | 350 | N/A | N/A |
| 16 | Stormwater variation | 150 | N/A | See Note 5 |
| 17 | Zoning application plan review (after third review) increasing $50.00 each additional review thereafter | 100 | N/A | N/A |
| 18 | Zoning map amendment | 500 | N/A | See Note 5 |
| 19 | Zoning text amendment | 500 | N/A | See Note 5 |
| 20 | Zoning variation | 660 | N/A | See Note 5 |
| 21 | Zoning verification letter | 100 | N/A | N/A |

**Q - Public Right-of-way**

| | | | | |
|---|---|---|---|---|
| 1 | License agreement, outdoor seating annual | 50 | N/A | N/A |
| 2 | License agreement, vendor cart annual | 150 | N/A | N/A |
| 3 | Obstructions: | | | |
| | • Parking stall base fee, plus $5.00 per stall, each additional day | 25 | N/A | N/A |
| | • Sidewalk base fee, plus $5.00 each additional day | 25 | N/A | N/A |
| | • Street per day | 50 | N/A | N/A |
| 4 | Right-of-way vacation application | 300 | N/A | N/A |

**R - Annexation**

| | | | | |
|---|---|---|---|---|
| **1** | Single-family detached home | 250 | N/A | N/A |
| **2** | Non-Single-family detached home per acre | 1,000 | N/A | N/A |

**S - Subdivision**

| | | | | |
|---|---|---|---|---|
| **1** | Major, 5 or more lots | 3,500 | N/A | N/A |
| **2** | Minor, 3 or 4 lots | 1,400 | N/A | N/A |
| **3** | Two-lot subdivision | 250 | N/A | N/A |
| **4** | Land transfer certificate | 250 | N/A | N/A |
| **5** | Lot consolidation | 250 | N/A | N/A |

**T - Recapture**

| | | | | |
|---|---|---|---|---|
| **1** | Pay to Village - Transfer to builder varies per ordinance | Varies | N/A | N/A |
| **2** | Pay to Village - Processing fee | 100 | N/A | N/A |

4-1-5. - General requirements.

The following general requirements shall apply to all property within the Village of Glen Ellyn Municipal limits in addition to the requirements in all adopted Building Codes and ordinances:

(A) *Building permit required:* No demolition, relocation, site improvements, construction, alteration, addition, remodeling, restoration or repair work to any building or structure or associated site grading or improvements of any kind shall be undertaken until a building permit has been issued, and no change to the permitted work may be completed until revised submittal documents are approved by the Building Official, unless the work is exempt from a permit as specified in this Code.

(B) *Building permit conditions:* No building permit shall be issued until all the following conditions are met:

1. A building permit application is completed, submitted and certified by the permit applicant and the property owner with their dated signatures.
2. All required building permit submittals have been received and reviewed for Code compliance by all applicable Village departments and governmental agencies with jurisdiction.
3. All contractors who are required to comply with the contractor insurance requirements are listed on the permit application or other form as required by the Community Development Department (see section 4-1-11 of this chapter).
4. All applicable permit fees and taxes are paid in full and all required deposits are received.
5. All actual expenses incurred by the Village for legal, engineering, plan review and inspection services required beyond the reasonable and customary permit fees, taxes and deposits assessed at the time a permit is issued are paid in full. This condition applies until such time as a certificate of occupancy has been issued for the subject property.
6. All outstanding debts to the Village, related to the property, incurred by the current property occupant, owner or owner's agent who are individuals, partnerships, corporations, land trusts, or other business entities, are paid in full.
7. The hard costs, as defined in this Code, for all remodeling work improvements are listed on the permit application, and upon request, sworn statements listing the hard cost from all contractors and suppliers is received and approved by the Building and Zoning Official.

(C) *Deposits required:* Deposits shall be required, submitted and released in accordance with the following conditions:

1. *Restoration deposit:* A refundable cash deposit is required for the items listed in subsection 4-1-4(C)1 of this chapter at the time a building permit is obtained for all new principal buildings, additions to existing buildings that increase the floor area over 75 percent, alterations to existing buildings that structurally alter over 50 percent of the exterior wall and roof area, demolition of any building or structure, or part thereof, with a gross floor area over 1,000 square feet or where otherwise required in this Code.
2. *Demolition site restoration deposit:* The demolition site restoration deposit (subsection 4-1-4(C)1 of this chapter) may be credited toward the stormwater facilities/grading deposit if commencement of construction of a new structure is planned to occur within 90 days after completion of the demolition.
3. *Special conditions deposit:* In the event a project is determined to have a significant impact on the public health, safety and welfare of the surrounding property, the Community Development Director may require an additional deposit to be posted by the applicant (subsection 4-1-4(C)1 of this chapter). Said deposit shall be for the purpose of completing any unfinished work or for the cost of any unforeseen expenses associated with the work which require immediate response when the applicant has not completed the work at the

request of the Village, or is unable to be contacted, or to return the site to a safe and clean condition. The special conditions deposit is not included within any deposit indicated in the schedule of fees and deposits.

4. *Deposit refund to depositor:* After all final inspections have been completed and approved, deposits shall be refunded to the depositor, less any fines or costs incurred by the Village for damages to public trees or other public property, in accordance with applicable rules, ordinances and regulations.

5. *Deposit release to Village:* Where the permitted work has not been completed in accordance with applicable rules, ordinances and regulations and the depositor has failed to complete the work, repair damages or obtain final approved inspections after due notice has been served and reasonable opportunity has been given to the depositor and permit applicant, the deposit shall be forfeited by the depositor and released to the Village. The Village may use the deposit, or award all or part of the deposit to others, to complete the work or repair damages. Any remaining deposit balance shall be refunded to the depositor.

6. *Deposit award to owner:* The property owner or any other person or entity with a possessory interest in a property may request the Village award them any released deposits for their use to complete the work, repair damages or restore the site. Such request shall include a written description of the work to be completed, a schedule and contractor proposals that include all applicable costs, submitted for review and approval by the Community Development Director. Upon the owner's scheduled completion of the work, proof of payment for the work, final approved inspections, and execution of an indemnity agreement with the Village, the owner will be awarded an amount of the released deposit up to the approved cost.

(D) *Permit suspension or revocation:*

1. A building permit shall be suspended and no work shall be performed upon receipt of an application request from the property owner or agent for a zoning variation or construction necessitated variation from the Glen Ellyn Zoning Code.

2. A building permit may be suspended or revoked if any one of the conditions required in subsection (B) of this section is not in compliance.

(E) *Professional certification:* The construction documents required for a building permit shall be prepared and certified by an architect or structural engineer licensed in the State of Illinois, or prepared, reviewed and approved under his or her direction, and bear the seal and signature of the architect or engineer and a statement that the construction documents comply with all provisions of the adopted codes and ordinances of the Village of Glen Ellyn and all other applicable laws and regulations governing the design and engineering of the work. Such seal, signature and statement shall be affixed to every page or sheet of the submittal documents or affixed to a table of contents page or sheet indicating the certification applies to each document listed in the table of contents. Professional certification is required for all new buildings, structures and additions, and or all alteration and remodeling of existing buildings and structures that includes changes to the structural, fire protection, and life safety conditions as determined by the Building Official.

*Exception:* Professional certification shall not be required for new residential accessory buildings and structures or for alteration or remodeling of existing residential buildings provided the permit documents or construction plans include a complete description of the work and adequate structural and life safety information to verify Code compliance.

(F) *Stormwater management:* All developments including the construction of new and the alteration of all existing buildings and structures and site improvements shall meet the following stormwater management requirements prior to the issue of a building permit:

1. *Special flood hazard areas:* All development in, or within a designated distance from, a special flood hazard area, including floodplains, wetlands, wetland buffers, and riparian environments, shall meet all requirements specified in chapter 7 of this Title.

2. *Stormwater permit:* All developments that disturb over 1,500 square feet of ground cover, or a drainage easement, shall require the submittal and approval of a stormwater management permit in accordance with the DuPage County Countywide Stormwater and Floodplain Ordinance as amended and adopted by the Village of Glen Ellyn.

3. *Drainage plan:* All developments that disturb between 300 square feet and 1,500 square feet of ground cover shall require the submittal and approval of a drainage plan indicating the direction of existing and proposed stormwater flow on the site and other information as necessary to verify compliance with the DuPage County Countywide Stormwater and Floodplain Ordinance as amended and adopted by the Village of Glen Ellyn.

(G) *Tree preservation:* All work on public and private property must comply with the tree preservation requirements in title 8, chapter 4, "Forestry Management", and title 4, chapter 8, "Tree Preservation", of this Code.

(H) *Construction hours:* Construction, demolition, excavation, grading, deliveries, hauling, loading, staging, operating portable engines and other construction related work activities on the site may only be completed between the hours of 7:00 a.m. to 7:00 p.m. Monday through Saturday and between the hours of 8:00 a.m. to 5:00 p.m. on Sundays, except in case of urgent necessity in the interest of public health and safety.

(I) *Inspections:* All construction being performed pursuant to a building permit under the provisions of this Code may be inspected by the Building Official or his representative at any reasonable time and shall be subject to inspections in accordance with the adopted codes and the following requirements:

1. *Foundation survey:* The applicant shall submit a foundation location survey prepared by a registered surveyor upon completion of the foundation for all new buildings, additions or roofed over accessory structures that are located within two feet of the minimum required zoning setback, and no further work shall be done, other than installing drain tile and waterproofing the foundation, until the location survey and a backfill inspection have been approved.

2. *Height certification:* The applicant shall submit a ridge and eave height certification prepared by a registered surveyor upon completion of the framework for all new principal buildings or additions that are constructed within two feet of the maximum permitted zoning heights, and no further work shall be done, other than rough electrical, mechanical, and plumbing work, until the ridge and eave height certification has been approved.

(J) *Penalty:* Any person, firm or corporation violating any provision of this Code or other provisions of the Building Code of the Village of Glen Ellyn shall be guilty of a business offense punishable by a fine of not less than $50.00 nor more than $750.00 for each offense. Each day that a violation continues shall constitute a separate offense.

(Ord. 5996, 1-30-2012; Ord. 6603, 5-29-2018; Ord. 6674, 2-25-2019)

4-1-11. - Contractor insurance and license requirements.

It shall be unlawful for any contractor to perform construction or demolition work within the Village of Glen Ellyn that requires a building permit unless the contractor has a certificate of insurance or professional license; as required under this chapter, on file with the Community Development Department.

(A) *Contractor classifications:* A "contractor" is any person, partnership, corporation or other business entity engaged in the business of constructing, altering, repairing or demolishing buildings, structures, utilities, site improvements or topography. Contractor classifications are based on the work they perform and the contractual relationships established as follows:

1. A "general contractor" is a contractor who employs or manages the work of one or more independent contractors. A general contractor may also be the developer, builder, construction manager or property owner.
2. An "independent contractor" is a contractor who only manages his own work or the work of his own employees and performs one trade or craft. Independent contractors are generally contracted by a property owner, owner's agent or building occupant or subcontracted by a general contractor.
3. A "public utility contractor" is a contractor completing public improvement work in the rights-of-way under agreements and licenses with the Village of Glen Ellyn and managed by the public works department.
4. A "subcontractor" is any contractor working under a contract agreement with a general contractor.

(B) Contractor insurance exemptions:

1. A property owner who hires contractors to work on their property, or personally works on their property, is exempt from the contractor insurance requirements provided the property owner is not also a general contractor. However, all contractors working on the property must meet the contractor insurance requirements.
2. A public utility contractor is exempt from the contractor insurance requirements of this section for all work completed in the rights-of-way.
3. Any person providing design, engineering or testing services, furnishing materials and equipment, completing cleaning and maintenance work or performing any activity for which a building permit is not required is exempt from the contractor insurance requirements.
4. A licensed contractor is exempt from the requirement to provide a certificate of insurance provided a surety bond and/or certificate of insurance is a licensing requirement under Illinois state statutes.

(C) *Application documents:*

1. Licensed contractors must possess and submit, with each application for building permit, a copy of their current professional license issued by the State of Illinois, Illinois Municipality or other entity authorized to issue such license. This includes contractors performing electrical, plumbing, irrigation, roofing, fire sprinkler, elevator/conveyance equipment work or other construction work that requires a State of Illinois license.
2. Contractors must possess and submit, with each application for building permit, a valid certificate of insurance issued by a company approved and authorized to issue insurance by the State of Illinois. The certificate of insurance shall list the Village of Glen Ellyn as an additional insured and include the following insurance in the minimum amounts indicated:

(a) General contractor:

General liability each occurrence ..... $1,000,000.00

General liability each person ..... 100,000.00

Property damage ..... 10,000.00

Workers' compensation ..... As required by law

(b) Independent contractor:

General liability each occurrence ..... $500,000.00

General liability each person ..... 100,000.00

Property damage ..... 10,000.00

Workers' compensation ..... As required by law

3. Contractors must submit a notarized affidavit stating that they have no employees if the certificate of insurance excludes workers' compensation.

(D) *Processing of information:* Information received by the Director of Community Development shall be examined for complete and accurate information. The Director shall have the authority to require the applicant to submit supplemental evidence to confirm the information.

(E) *Renewal of contractor information:* Contractor insurance and license information shall be renewed for all projects that have not passed final inspections during the term listed on the certificate of insurance or professional license. These documents shall be renewed by submission of same, with active term periods indicated on the documents, to the Community Development Department. Failure to renew expired documents prior to their expiration date may results in the issuance of a Stop Work Order or other enforcement actions.

(F) *Suspension of contractor* activities*:* The contractor is prohibited from performing any work during the period in which the contractor's certificate of insurance or professional license is not valid. A Stop Work Order may be issued, and other enforcement action may be taken, without prior notice, to the contractor on or after the expiration date of a certificate of insurance or professional license.

(G) *Denial of a building permit application, renewal or reinstatement:* Building permit applications, renewals and reinstatements may be granted or denied by the Director by written notice within 30 days of the submittal date. Applications, renewals and reinstatements will be denied for failure to submit the required insurance or license documents or submitting false information.

(H) *Appeal of a denied application, renewal or reinstatement:* All appeals from the decisions of the Director of Community Development must be filed with the Community Development Department within 30 days after the contractor's receipt of the written notice. The appeal must include a petition submitted by the contractor describing the basis upon which the appeal is founded and payment of an administrative appeal fee. The Director of Community Development shall transmit the appeal to the Building Board of Appeals for a public hearing. The board shall review evidence and hear testimony relevant to the appeal and reach a decision. The decision of the board shall be the final administrative decision.

(I) *Enforcement:* No building permit shall be issued for any work if the permit applicant or the contractors listed on the permit application are not in compliance with this section. Contractors shall provide personal identification and identify their employers to the Building Inspector or other authorized Village official on the work site to verify compliance with these contractor insurance or license requirements. A contractor performing work in violation of this section may be served with a citation and a stop work order may be issued and the building permit may be suspended or revoked by the Building Official.

(J) *Penalty:* Any persons violating the provision of this section shall be fined not less than $150.00 nor more than $750.00 for each offense and a separate offense shall be deemed committed each day during or on which a violation occurs or continues.

(Ord. 5854, 3-8-2010, eff. 3-15-2010; Ord. 6674, 2-25-2019)

4-8-3. - General regulations; private property involving development.

(A) *Tree preservation plan required:* Development on private property shall require the filing of a tree preservation plan along with other permit application materials required by this section upon application for a building permit.

Trees which the owner designates on the plan as being susceptible to potential damage due to their location or condition may be designated as impacted trees. After the initial tree protection fencing or other protective methods have been put in place these impacted trees shall not be subject to additional regulation provided the required tree fencing or other protective methods are maintained. The Village forester, or his/her designee, may suggest that trees on the property not shown as impacted or protected trees should be shown as being in those categories, but the final decision shall rest with the applicant.

All work to preserve protected, adjacent, significant, and impacted trees shall be according to the "Arboricultural Specifications Manual". The tree survey shall be drawn to a scale not less than one inch to 20 feet so that the location of each tree required to be shown on the plan can be identified. The tree preservation plan shall include the following:

1. A "tree survey" as defined above. The Village forester, or his/her designee, may exclude the tree survey requirement on those portions of the site which he/she determines will not be affected by the development activity. The survey may be prepared by a registered land surveyor or certified arborist or may be prepared by or under the direction of the owner if it accurately reflects all required tree information. The Village forester or his/her designee shall, if requested, assist without charge in the identification and size of tree species on those properties that do not require an ISA certified arborist review and approval.
2. The name and contact information of the parties responsible for the construction, erection, and maintenance of temporary fencing or other physical barrier around protected trees.
3. The location, shape, and spatial arrangement of all existing and proposed buildings, walls, improvements, and structures and the excavation limits required to construct proposed improvements.
4. The location, shape and spatial arrangement of all permanent driveways and parking areas and temporary material storage sites and accessways.
5. All existing or new utility services including water, sanitary sewer, storm sewer, gas, electric, telephone, and cable TV.
6. The Village forester, or his/her designee, may expand or partially retract the critical root zone depending on the tree species and site specific situations so as to improve the chances that trees will not be damaged during construction and to permit construction to take place. In such cases, the Village forester, or his/her designee, may request additional precautions in order to preserve the health of trees.
7. Existing and proposed grading of the development area showing elevations with contour lines at one foot intervals if a grading plan is required by some other provision of this Code.
8. A tree preservation plan for a new home shall be reviewed and approved by a certified arborist for the purpose of evaluating the protective measures proposed on the plan.

(B) *Building permit required:* No building permit shall be issued for development until the tree preservation plan has been approved by the Village Board (for planned unit developments or subdivisions) or the Village forester or his/her designee. In reviewing the tree preservation plan, the Village forester, or his/her designee, can offer advice and suggest modifications which will better protect existing trees, but the tree preservation plan shall be approved if it otherwise is in conformity with Village ordinances. The Village shall process the tree preservation plan in no more time than shall be needed to process a building permit unless the application does not fulfill the requirements of this chapter. Appeals regarding the tree preservation plan or a decision of the Village forester shall

be first submitted to the Public Works Director. A subsequent appeal shall be submitted to the Village Manager. The following steps shall be followed to assure conformance to the approved tree preservation plan and the tree protection requirements in the "Arboricultural Specifications Manual" prior to the issuance of a building permit.

1. Tree preservation fencing must be installed and inspected for all protected, significant, impacted, border, public, and adjacent property trees prior to the issuance of a building permit. Tree preservation measures must be installed per the approved tree preservation plan and remain in place during the entire construction period. Fencing shall not be removed or relocated unless authorized in writing.

2. For a new principal structure an approved tree preservation plan shall be posted on the building site within five feet of the front property line before a building permit is issued and shall remain in place throughout the entirety of the construction of the project. This sign must be posted as shown in the "Arboricultural Specifications Manual". The permit applicant shall be responsible for notifying all other contractors working on the property of the tree preservation plan.

3. The applicant shall notify all adjacent property owners of the proposed construction project and that a tree preservation plan has been prepared and is available for review at the Community Development Department of the Village of Glen Ellyn. A copy of such notification along with a list of addresses it was delivered to must be submitted to the Community Development Department prior to the issuance of a building permit.

(C) *Precautions during construction:* During construction, all reasonable steps necessary to prevent the destruction or damaging of protected trees shall be taken, including, but not limited to, the following:

1. No construction activity, movement, and/or placement of equipment or material or spoils storage shall be permitted within the critical root zone of any protected tree or significant tree on the tree preservation plan unless shown on the approved tree preservation plan. No excess soil, additional fill, liquids, or construction debris shall be placed within the critical root zone of any protected tree or significant tree.

2. Per the "Arboricultural Specifications Manual", appropriate protective fencing shall be installed and maintained for the protection of protected, adjacent property, significant, and impacted trees.

3. No attachments, fences, or wires, other than those approved for bracing, guying, or wrapping, shall be attached to protected trees or significant trees during the construction period.

4. Branch pruning, root feeding, and root pruning of protected trees, significant trees, and adjacent property trees directly affected by construction shall be conducted by the property owner if suggested by the Village forester, or his/her designee, and must be completed following the "Arboricultural Specifications Manual". On-site inspections must be scheduled with the Village forester or his/her designee to ensure this requirement is met.

5. Unless otherwise shown on the approved tree preservation plan, no soil is to be added to or removed from within the critical root zone of any protected, significant, or adjacent property tree that is to remain, unless shown on the approved tree preservation plan.

6. Regulated public utilities, to the extent permitted by law, shall be responsible for adhering to said tree preservation plan during installation of necessary utility service lines. A property owner or contractor shall not be responsible for damages caused by the action of a public utility unless that person directed the location and manner of work of the utility.

(D) *Fee schedule for tree preservation plan review*:

1. Plan review fee for single-family lots. For projects where more than one of the projects listed below occurs, the higher fee shall apply.

   Unit cost for each:

   a. Garage/pool/other: ..... $250.00

b. Addition: ..... 250.00

c. Demolition/new house: ..... 330.00

d. New house: ..... 330.00

e. Site improvements/grading/landscaping: ..... 250.00

f. Work in public right-of-way: ..... 330.00

2. Plan review fee for subdivisions, special use projects, and planned unit developments or lots with any use other than single-family residences:

a. Cost to review documents submitted in compliance with tree preservation ordinance: ..... $100.00 per hour by consultant.

3. Fees for additional field inspections and violations:

a. Field inspection responding to complaint (verified violation): ..... $100.00

b. Tree fence violation: ..... 100.00

(E) *Work must be according to approved tree preservation plan:* It shall be unlawful for any person, firm, or a corporation to fail to abide by the terms of any tree preservation plan pursuant to which a building permit has been issued, including all regulated public utilities.

(F) *Stop work order authorized for noncompliance with tree preservation plan:* If the Village forester, or his/her designee, or a Building Inspector observes the precautions specified in the tree preservation plan were not undertaken before construction commenced or not maintained during construction, a stop work order may be issued. The stop work order shall remain in place until the permittee complies with the approved tree preservation plan and/or corrects the issues stated in the stop work order.

(G) *Amendment to tree preservation plan and removal of protected trees:* An application can be made to the Village forester to amend a tree preservation plan. No amendment shall be permitted where the provisions of the approved plan have not been followed. An application shall be approved where changed facts and circumstances not within the control of the applicant create an undue hardship in complying with the plan. Where a protected tree has been damaged such that its removal is required, the forester shall approve its removal after adequately documenting any violations of this chapter which have caused or contributed to the removal of a protected tree.

(Ord. 5961, 9-26-2011; Ord. 6075, 9-24-2012; Ord. 6603, 5-29-2018; Ord. 6674, 2-25-2019)

8-4-5. - General regulations; public property.

(A) *Work on public trees:* Work on public trees may only be carried on by a tree contractor selected or approved by the Village Forester, or his/her designee. This provision shall not prohibit owners of property adjacent to Village owned property from watering or fertilizing any tree, shrub, or other plant on Village owned property.

(B) *Damage to trees, shrubs, or other plants prohibited:* It shall be unlawful for any person to injure, prune, remove, destroy, attach any rope, wire, nail, or other contrivance; place any compacted stone, cement, or other impervious matter or substance as may obstruct the free access of air and water to the roots (i.e., landscape fabric), improper mulching techniques (volcano mulching); or remove any device set for the protection of any tree, shrub, or other plants on Village owned property without approval from the Village Forester or his/her designee.

(C) *Care of public property when working on private property:* It shall be unlawful for the person working on private or public property to leave any public tree that may be affected by building, structure, or other work without proper tree preservation methods as stated by the Village Forester or his/her designee per the "Arboricultural Specifications Manual".

(D) *Work standards on public trees must be followed:* Work done on public trees shall follow the standards outlined in the "Arboricultural Specifications Manual". A copy of the "Arboricultural Specifications Manual" is on file and may be reviewed at the office of the Village Forester, viewed on our website, or may be purchased at the Civic Center.

(E) *Damage to public trees causing removal (payment or replacement):* Any person that damages a public tree so severely that the public tree dies or requires removal shall compensate the Village for the loss of the public tree. The amount paid shall be based on the following schedule:

1. If the damaged public tree is less than eight inches in diameter (measured at 12 inches above ground level), the amount paid shall be determined by using the replacement cost method of evaluating trees found in the latest edition of the Council of Tree and Landscape Appraisers guide (CTLA) for plant appraisal, which guide is adopted by reference by the Village as if it were a part of this chapter.

2. For public trees larger than an eight inch trunk diameter, the amount paid shall be determined by using the trunk formula method of evaluating trees found in the latest edition of CTLA's guide.

3. Added to the costs established under subsections (E)1. and (E)2. of this section shall be the cost of the removal and stump grinding of the public tree.

4. In addition to the prosecution for a business offense, in accordance with subsection (F) of this section, the Village may seek to recover the cost of the damaged public tree, in the amount computed under subsections (E)1., (E)2. and (E)3. of this section, through a civil action.

(F) *Damage to public trees causing removal (civil fine):* Any person that damages a public tree so severely that the public tree dies or requires removal shall be guilty of a business offense and, upon a conviction thereof, shall pay a fine which shall not be less than $1,000.00 nor more than that established under the formula set out in subsections (E)1. and (E)2. of this section, and in addition to the cost of the removal of the tree.

(G) *Injury to public trees not requiring removal (payment):* Any person that causes injury to a public tree that requires treatment may avoid a civil fine by paying the actual cost to treat the tree.

(H) *Injury to public trees not requiring removal (civil fine):* Any person that causes injury to a public tree so that the tree requires treatment shall be guilty of a business offense.

The fine upon conviction shall be equal to the actual cost incurred by the Village in treating the tree for the injury.

(I) *Time for bringing an action and damage or injury:* The Village shall not prosecute any person for causing damage or injury to public trees when the action of such person was limited to lawn mowing

using a nonriding lawn mower or a "weed whacker" unless the person was notified of the problem and continued to cause damage to the tree. Nor shall a person be liable for fines or reimbursement when damage is done by regulated public utility unless that person has specifically directed the location and manner of work performed by the utility which caused the damage, however the person that has specifically caused damaged will be liable. Any action by the Village seeking fines or reimbursements for costs relating to damage or injury to public trees must be commenced within three years of the date of the refund of deposit.

(Ord. 5962, 9-26-2011)

8-4-7. - Permits required.

(A) *Permits required to do work on public trees:* Except for work performed by an employee or independent contractor of the Village, none of the following acts relating to public trees may be carried out except by a tree contractor who has first secured a written permit from the Village Forester, or his/her designee. The Village shall determine those tree contractors who shall be allowed to perform work on public trees. No person except the Village Forester, an agent of the Village Forester, or a contractor hired by the Village under the supervision of the Village Forester may do any of the following acts related to public trees without first securing a written permit from the Village Forester, or his/her designee:

1. Plant, transplant, treat, prune, or remove any public tree (excludes watering and fertilization).
2. Place in a public right-of-way, either above or below ground level, a container for trees, shrubs, or other plants.

(B) *Permits required to do tunneling or excavation near public trees:* Except for work performed by an employee or an independent contractor of the Village, none of the following acts relating to public trees may be carried out except by a person, including a regulated public utility, who has first secured a written permit from the Village Forester: dig a tunnel, trench, or other excavation; install a driveway approach; plant within the critical root zone for flower boxes, etc.; or rototill or dig within the critical root zone of any public tree.

(C) *Permit:* Applications for permits must be made at the office of the Building and Zoning Official not less than ten working days before the time the work is to be done. Notice of completion of the work authorized by the permit shall be given within five days to the Village Forester for inspection. The issue of the permit and the inspection shall be accomplished within a reasonable period of time provided, however, that the work may not be performed without the issuance of a permit.

The Village may also require a permit in situations where development will take place in such a manner as to cause stress to public trees even if no removal is contemplated.

This permit shall not be construed to exempt any person from the requirements of obtaining additional permits required by law.

If the request includes removal of a public tree where the Village consents to the removal where another access to the public right-of-way could have been reasonably provided, a fee reflecting the value of the tree, plus the cost of removal of tree and stump, shall be paid to the Village before the issuance of any permit. The fee shall be calculated according to subsection 8-4-5(E) of this chapter. If the request includes removal of a public tree where no other access to the property was available, a fee reflecting the cost of removal of tree and stump and all costs associated with the purchase and planting of a four inch tree and a one year guarantee shall be paid to the Village before the issuance of any permit. Tree removal shall be done by a contractor hired by the Village of Glen Ellyn.

(Ord. 5962, 9-26-2011)

# ATTACHMENT – B (BLACKLINED)

4-1-4. – Fee and deposit schedule.

## SCHEDULE OF FEES AND DEPOSITS

The following schedule applies to all new or reconstructed buildings and structures, new additions, alterations or remodeling to existing buildings, structures or accessory structures, and all property development unless noted otherwise in this section of the Glen Ellyn Village Code. Where a project includes multiple work items listed as separate line items in this schedule the fees shall be cumulative in nature to include all work items in the project scope of work.

| | Construction Scope of Work | | Building or Application Fee | Plan Review Fee | Refundable Deposit or Escrow |
|---|---|---|---|---|---|
| **A - New Construction** | | | | | |
| 1 | Non-residential or mixed-use building, principal structure, total square footage of all levels, including all attached or detached structures:<br>a. Fees include connection fee for up to maximum 1" water service line, and 1" water meter. For larger water service line or meter sizes, the building fee shall be increased by the difference in cost between 1-inch and the required size(s) (see chapters 7-11-30 and 7-11-32 of this code). The cost difference between a 1-inch line and the required line size shall be added to the permit fees indicated herein.<br>b. Fees do not includes sewer connection fees (see section (F) of this schedule).<br>c. Fees do not include site development/stormwater fees or deposits (see section (D) of this schedule).<br>d. For food service establishments, add $250.00 to the plan review fee.<br>e. Fees do not include elevator fees (see section (D) of this schedule).<br>f. Fees do not include fire alarm and detection or fire sprinkler systems (see section (D) of this schedule).<br>g. Fees include up to two plan reviews (Additional plan reviews shall be charged per Note 1).<br>h. Fees do not include systems that collect or convert geothermal, solar or wind energy (see section D of this chart). | | | | |
| | • Up to 2,000 square feet | See Note 7 | 6,100 | 1,900 | 5,000 |
| | • 2,001 to 3,500 square feet | See Note 7 | 6,300 | 2,250 | 5,000 |
| | • 3,501 to 5,000 square feet | See Note 7 | 6,550 | 3,000 | 5,000 |
| | • 5,001 to 6,500 square feet | See Note 7 | 6,900 | 3,600 | 5,000 |
| | • 6,501 to 8,000 square feet | See Note 7 | 7,400 | 4,100 | 5,000 |
| | • over 8,000 square feet | See Note 7 | See Note 14 | $0.20/sf | 5,000 |
| 2 | Residential 1- and 2-family dwelling, principal structure, total floor area square footage of all levels:<br>a. Fees include all impervious surfaces, attached structures such as porches and decks, up to three detached accessory structures such as garages or pergolas, as allowed by the zoning code for the applicable zoning district.<br>b. Fees include connection fee for sewer line and up to maximum 1" water service line, and 1" water meter. For larger water service line or meter sizes, the building fee shall be increased by the difference in cost between 1-inch and the required size(s) (see chapter 7-11-30 of this code).<br>c. Fees include site development/stormwater fees and deposits.<br>d. Fees include up to two plan reviews (Additional plan reviews shall be charged per Note 1).<br>e. Fees do not include systems that collect or convert geothermal, solar or wind energy (see section D of this schedule).<br>f. Fees include fire sprinkler plan review and inspection.<br>g. Fees do not include elevator fees (see section (D) of this schedule). | | | | |
| | • Up to 2,000 square feet | | 5,025 | 1,100 | 5,000 |
| | • 2,001 to 6,500 square feet | | 5,300 | 1,700 | 5,000 |
| | • 6,501 to 9,500 square feet | | 5,700 | 2,100 | 5,000 |
| | • 9,501 to 13,500 square feet | | 6,275 | 2,710 | 5,000 |
| | • 13,501 to 18,000 square feet | | 6,975 | 3,410 | 5,000 |
| | • over 18,000 square feet | | 7,950 | 4,220 | 5,000 |
| 3 | Residential multi-family dwelling, principal structure,<br>a. Fees do not include water or sewer connection fee, see chapters 7-11-30 and 7-11-32 of this code.<br>b. Fees do not include site development/stormwater fees or deposits.<br>c. Fees do not include elevator fees (see section (D) of this schedule).<br>d. Fees do not include fire alarm and detection or fire sprinkler systems (see section (D) of this schedule).<br>e. Fees include up to two plan reviews (Additional plan reviews shall be charged per Note 1).<br>f. Fees do not include systems that collect or convert geothermal, solar or wind energy (see section D of this chart). | | | | |
| | • Fee per dwelling unit | *each unit (Building Fee) | 2,000* | See Note 1 | 5,000 |
| | • Fee for associated attached or detached structures other than new dwelling units including, but not limited to attached parking levels | | See Note 14 | $0.20/sf | 5,000 |

**B - Additions - Fees do not include fire sprinkler, fire alarm and detection or elevator work if required/provided.**

| | | | | |
|---|---|---|---|---|
| 1 | New level to existing primary building for 1- and 2-family dwellings | 2,250 | 800 | 4,000 |
| | New level to existing multi-family, mixed-use or non-residential building | See Note 14 | 1,700 | 5,000 |
| 2 | To accessory structures for 1-, 2- and 3-family dwellings | 450 | 200 | 2,000 |
| 3 | To accessory structures for 4-family and larger dwellings | 600 | 300 | 2,000 |
| 4 | To residential primary building for 1-, 2- and 3-family dwellings, total new square footage of all levels, not including water service upgrade if necessary: | | | |
| | • Up to 500 square feet | 1,125 | 500 | 2,000 |
| | • 501 to 1,000 square feet | 2,250 | 600 | 2,000 |
| | • 1,001 to 2,000 square feet | 3,375 | 700 | 2,000 |
| | • over 2,000 square feet | 5,100 | 1,100 | 5,000 |
| 5 | To residential primary building for 4-family and larger dwellings, total square footage of all levels, not including water service upgrade if necessary: | | | |
| | • Up to 500 square feet | 1,125 | 1,300 | 2,000 |
| | • 501 to 1,000 square feet | 2,250 | 1,400 | 2,000 |
| | • 1,001 to 2,000 square feet | 3,375 | 1,700 | 2,000 |
| | • Over 2,000 square feet | See Note 14 | $0.20/sf | 5,000 |
| 6 | To non-residential or mixed-use building, total square footage of all levels, not including water service upgrade if necessary: | | | |
| | • Up to 500 square feet | 1,125 | 500 | 2,000 |
| | • 501 to 1,000 square feet | 2,250 | 600 | 2,000 |
| | • 1,001 to 2,000 square feet | 3,375 | 700 | 2,000 |
| | • 2,001 to 3,500 square feet | 6,300 | 1,800 | 5,000 |
| | • 3,501 to 5,000 square feet | 6,550 | 2,000 | 5,000 |
| | • 5,001 to 6,500 square feet | 6,900 | 2,400 | 5,000 |
| | • 6,501 to 8,000 square feet | 7,400 | 2,700 | 5,000 |
| | • over 8,000 square feet | See Note 14 | $0.20/sf | 5,000 |

**C - Alterations and Remodeling - Fees do not include fire sprinkler, fire alarm and detection, or elevator work if required/provided.**

**1 - Residential**

| | | | | |
|---|---|---|---|---|
| a | Attic buildout | 1,000 | 200 | N/A |
| b | Basement alterations/buildout | 1,000 | 200 | N/A |
| c | Bathroom, new or alteration | 500 | 60 | N/A |
| d | Foundation Underpinning | 250 | 75 | N/A |
| e | Interior alterations, 1- and 2-family dwellings, multiple rooms, one level. Fee does not include plumbing inspections if required. | 750 | 300 | N/A |
| f | Interior alterations, 1- and 2-family dwellings, multiple rooms, two levels. Fee does not include plumbing inspections if required. | 1,000 | 400 | N/A |
| g | Interior alterations, multiple rooms, more than two levels. Fee does not include plumbing inspections if required. | 1,500 | 500 | N/A |
| h | Interior alterations to 2 to 4 multi-family dwelling units, and/or limited common area work. Fee does not include plumbing inspections if required. | 1,100 | 300 | N/A |
| i | Interior alterations to 5 or more multi-family dwelling units, and/or major common area work. Fee does not include plumbing inspections if required. | 2,200 | 400 | N/A |
| j | Kitchen, new or alteration | 900 | 75 | N/A |
| k | Structural modification or repair | 150 | 75 | N/A |
| l | Interior alterations, 1- and 2-family dwellings, up to 300 square feet in area encompassing all work areas, no plumbing work involved. | 225 | 75 | N/A |

**2 - Commercial Buildings**

| | | | | |
|---|---|---|---|---|
| a | Food Service Establishment buildout:<br>Fees do not include the following work items:<br>a. water service upgrade, if required (see section (F) of this schedule).<br>b. fire detection and alarm or fire sprinkler systems (see section (D) of this schedule).<br>c. new grease interceptor, if required (see section (F) of this schedule).<br>d. sewer connection fee, if required (see section (F) of this schedule). | | | |
| | • up to 1,000 square feet | 1,200 | 1,600 | N/A |
| | • 1,001 to 2,000 square feet | 2,400 | 1,700 | N/A |
| | • 2,001 to 3,000 square feet | 3,600 | 1,900 | N/A |
| | • 3,001 to 4,000 square feet | 4,800 | 2,100 | N/A |
| | • Over 4,000 square feet *2% of project cost, minimum | 6000* | 2,500 | N/A |
| b | Kitchen exhaust hood/Ansul system, replacement unit not part of tenant buildout per hood | 130 | 250 | N/A |
| c | Storefront or façade alteration, stand alone alteration project with no interior remodeling | 250 | 60 | N/A |
| d | Structural modification or repair | 150 | 75 | N/A |
| e | Tenant buildout, including all mechanical, electrical and plumbing work. Fire alarm and detection or fire sprinkler work not included. | | | |
| | • up to 1,000 square feet | 1,000 | 1,400 | N/A |
| | • 1,001 to 2,000 square feet | 2,000 | 1,500 | N/A |
| | • 2,001 to 3,000 square feet | 3,000 | 1,700 | N/A |
| | • 3,001 to 4,000 square feet | 4,000 | 1,900 | N/A |
| | • Over 4,000 square feet *2% of project cost, minimum | 5000* | 2,300 | N/A |
| f | Tenant modification of floor plan layout, up to 500 square feet, no mechanical, electric or plumbing modifications | 75 | 75 | N/A |
| g | Tenant modification of floor plan layout, over 500 square feet, no mechanical, electric or plumbing modifications | 175 | 150 | N/A |
| h | Tenant modification of lighting or electric power distribution system | 175 | 75 | N/A |
| i | Tenant modification of mechanical system | 75 | 150 | N/A |
| j | Tenant modification of plumbing system | 450 | 150 | N/A |
| k | Toilet room, new or remodeling | 400 | 75 | N/A |
| l | White Box buildout, including interior demolition of previous tenant space down to demising walls, floor and ceiling system, no new work | 500 | 150 | N/A |

**D - Miscellaneous Permits (see Note 9)**

| | | | | |
|---|---|---|---|---|
| 1 | Accessibility modifications, interior or exterior, not within the public right-of-way | 65 | 60 | N/A |
| 2 | Arbor, trellis, pergola, ornamental gate or other similar structures | 65 | 30 | N/A |
| 3 | Canopy or fixed awning, new or alteration | 65 | 30 | N/A |
| 4 | Commercial filming | 150 | N/A | N/A |
| 5 | Commercial filming, application late fee | 75 | N/A | N/A |
| 6 | Deck or porch construction/replacement, single level | 225 | 60 | N/A |
| 7 | Deck or porch construction/replacement, multiple levels | 350 | 80 | N/A |
| 8 | Demolition (refer to section N of this schedule for applicable demolition tax based on area of demolition): See Note 3 | | | |
| | • Detached garage | 80 | 30 | 2,000 |
| | • Interior only, non-structural | 175 | 30 | N/A |
| | • Primary structure - greater than 300 to 1,000 square feet | 275 | 350 | 3,000 |
| | • Primary structure - 1,001 to 4,000 square feet | 425 | 350 | 3,000 |
| | • Primary structure - greater than 4,000 square feet, not exceeding 45 feet height | 1,000 | 1,100 | See Note 4 |
| | • Primary structure - greater than 4,000 square feet and exceeding 45 feet in height | 1,200 | 1,300 | See Note 4 |
| 9 | Drain tile and sump pit/pump | 65 | 30 | N/A |
| 10 | Driveway, new, replacement or expanded if over 299 square feet in area, add site development fee | 65 | 30 | See Note 13 |
| 11 | Driveway approach only (same size and location) | 65 | 30 | N/A |
| 12 | Elevator or other conveyance, new *per stop | 200* | 120 | N/A |
| 13 | Elevator modifications | 355 | 120 | N/A |
| 14 | Exit stairway, exterior | 225 | 30 | N/A |
| 15 | Fascias, soffits, gutters and/or downspouts, windows or exterior doors | 65 | N/A | N/A |
| 16 | Fence, new | 65 | 15 | N/A |
| 17 | Fence, repair (see note 16) | 65 | N/A | N/A |
| 18 | Fireplace, new interior or exterior | 80 | 30 | N/A |
| 19 | Fire alarm and detection system, new or modified: | | | |
| | • up to 10,000 square feet | 80 | 280 | N/A |
| | • 10,001 to 15,000 square feet | 150 | 420 | N/A |
| | • Over 15,000 square feet | 200 | 550 | N/A |
| 20 | Fire sprinkler system, pipe schedule design: | | | |
| | • 1 to 20 sprinkler heads | 125 | 280 | N/A |
| | • 21 to 100 sprinkler heads | 200 | 300 | N/A |
| | • 101 to 200 sprinkler heads | 275 | 400 | N/A |
| | • 201 to 300 sprinkler heads | 350 | 450 | N/A |
| | • 301 to 500 sprinkler heads | 425 | 700 | N/A |
| | • over 500 sprinkler heads | 500 | See Note 1 | N/A |
| 21 | Fire sprinkler system, hydraulically calculated: | | | |
| | • 1 to 20 sprinkler heads | 125 | 300 | N/A |
| | • 21 to 100 sprinkler heads | 200 | 600 | N/A |
| | • 101 to 200 sprinkler heads | 275 | 810 | N/A |
| | • 201 to 300 sprinkler heads | 350 | 920 | N/A |
| | • 301 to 500 sprinkler heads | 425 | 1,325 | N/A |
| | • over 500 sprinkler heads | 500 | See Note 1 | N/A |
| 22 | Garage - residential, 1-story, detached | 600 | 300 | 2,000 |
| 23 | Garage - residential, 2-story, detached | 650 | 300 | 2,000 |
| 24 | Geothermal systems | 250 | 125 | N/A |
| 25 | Gazebo or Greenhouse (If disturbed area is 300 square feet or larger, then add site development fee) | 65 | 30 | N/A |
| 26 | Key box Village purchase cost plus 10% | cost + 10% | N/A | N/A |
| 27 | Masonry tuckpointing, over 300 square feet | 65 | N/A | N/A |
| 28 | Miscellaneous construction, under $15,000 construction hard cost valuation | 250 | 60 | See Note 4 |
| 29 | Miscellaneous construction, over $15,000 construction hard cost valuation | See Note 9 | 200 | See Note 4 |
| 30 | Other appliances, equipment, structures, or individual work items not listed | 65 | 30 | See Note 4 |
| 31 | Outdoor fire pit, oven or kitchen | 65 | 30 | N/A |
| 32 | Paved or impervious surface (including sport courts) greater than 100 and less than 300 square feet in area | 65 | 30 | N/A |
| 33 | Paved or impervious surface (including sport courts) greater than 299 square feet in area | 260 | 110 | 2,000 |
| 34 | Pavement grinding/resurfacing pavement | 65 | 30 | N/A |
| 35 | Prescribed burn | 80 | N/A | N/A |
| 36 | Radon system, active (power ventilated) | 80 | N/A | N/A |
| 37 | Radon system, passive (natural ventilation) | 65 | N/A | N/A |
| 38 | Restripe parking lot | 65 | 30 | N/A |
| 39 | Retaining wall, over 8 inches in height | 65 | 75 | N/A |
| 40 | Roofing, residential over 300 square feet | 85 | N/A | N/A |
| 41 | Roofing, commercial over 300 square feet | 150 | 30 | N/A |
| 42 | Shed or other accessory structure less than 150 square feet in area | 65 | 30 | N/A |
| 43 | Shoring, raising or moving of any building | 600 | 150 | 5,000 |
| 44 | Sidewalk, new | $20.00/lin ft | N/A | N/A |
| 45 | Siding or stucco over 300 square feet | 80 | N/A | N/A |

| | | | | |
|---|---|---|---|---|
| 46 | Site development fees, new construction: Water, sanitary and sewer fees included within construction fees unless noted otherwise. | | | |
| | • Development from 300 to 1,500 square feet in area | 425 | 250 | 5,000 |
| | • Development located within the principal building side yard setbacks, excluding a driveway approach | 425 | 330 | 5,000 |
| | • Development over 1,500 square feet for single-family home or townhome | 700 | 600 | 5,000 |
| | • Development over 1,500 square feet for commercial and multi-family (see section 4-1-4(I) of this code) | See Note 6 | See Note 7 | 5,000 |
| 47 | Solar panel system, including connection to electric system only | 250 | 75 | N/A |
| 48 | Solar panel system, including connection to electric and plumbing system | 350 | 100 | N/A |
| 49 | Storage tank installation or removal | 125 | 50 | 2,000 |
| 50 | Swimming pool, spa or hot tub, above ground *Deposit of $2,000 required if disturbed area is larger than 300 square feet | 100 | 30 | *N/A |
| 51 | Swimming pool, spa or hot tub, in-ground | 200 | 60 | 2,000 |
| 52 | Telecommunication sites, alterations or co-locate (other than small wireless facility) | 250 | 450 | 2,000 |
| 53 | Telecommunication sites, new construction, not in public right of way (other than small wireless facility) | 500 | 750 | 2,000 |
| 54 | Telecommunication site, single co-located small wireless facility | 200 | 450 | 4,000 |
| 55 | Telecommunication site, additional small wireless facilities, after the first co-located site under the same permit application | 200 each | 150 each | 4000 each |
| 56 | Temporary bleachers, platform, stage or tent (tent greater than 400 square feet) | 75 | 30 | N/A |
| 57 | Wind turbine | 250 | 75 | N/A |

**E - Heating, Ventilation and Air Conditioning**

| | | | | |
|---|---|---|---|---|
| 1 | Air conditioning coil and/or condenser replacement | 65 | N/A | N/A |
| 2 | Air distribution system modification | 65 | N/A | N/A |
| 3 | Boiler | 120 | N/A | N/A |
| 4 | Chimney or vent, replacement or chimney re-liner | 65 | N/A | N/A |
| 5 | Solid fuel-burning equipment or stove | 65 | N/A | N/A |
| 6 | Fuel-gas or fuel-oil piping modification | 120 | N/A | N/A |
| 7 | Heating/cooling equipment: residential furnace or heat pump, new or replacement | 65 | 30 | N/A |
| 8 | Heating/cooling equipment: commercial furnace, heat pump, rooftop unit, new or replacement | 120 | 30 | N/A |

**F - Plumbing**

| | | | | |
|---|---|---|---|---|
| 1 | Cross connection control device, new | 140 | N/A | N/A |
| 2 | Flood/sewer backup control system | 215 | 60 | N/A |
| 3 | Grease interceptor, new or replacement | 140 | 60 | N/A |
| 4 | Hydrant meter | 550 | N/A | N/A |
| 5 | Irrigation systems - lawn | 140 | 30 | See Note 4 |
| 6 | Modified overhead sewer, not part of a remodeling project | 140 | 30 | N/A |
| 7 | Reconfigure interior waste, water or vent system, not part of a remodeling project | 140 | 30 | N/A |
| 8 | Service disconnection, waste or water | 200 | 60 | 4,000 |
| 9 | Sewer connection fee (Village base fee as shown, plus Glenbard Wastewater Authority fee) Base fee, plus $278.00 per PE (population equivalent) | 1,000 | N/A | N/A |
| 10 | Sewer line inspection (Clear Water Program) Note: This fee is not included within new construction, additions, alterations or remodeling fees | 100 | N/A | N/A |
| 11 | Water heater, replacement | 120 | N/A | N/A |
| 12 | Water meter | See Note 12 | 50 | N/A |
| 13 | Water, sewer or storm line, 1-, 2- and 3-family dwellings (add connection fees based on service line size per chapters 7-11-30 and 7-11-32 of this code) | 240 | 60 | 3,000 |
| 14 | Water, sewer or storm line, multi-family, mixed -use or commercial (add connection fees based on service line size per chapters 7-11-30 and 7-11-32 of | 340 | 75 | 3,000 |
| 15 | Water, sewer or storm line repair (private property) | 140 | N/A | N/A |
| 16 | Water, sewer or storm line repair (public property) | 240 | N/A | 5,000 |
| 17 | Miscellaneous inspection or consultation | 140 | N/A | N/A |

**G - Electrical**

| | | | | |
|---|---|---|---|---|
| 1 | Emergency generator | 65 | 30 | N/A |
| 2 | Exit signs | 65 | 30 | N/A |
| 3 | Lighting fixtures | 65 | N/A | N/A |
| 4 | Openings for wiring, each 25 or portion thereof | 65 | N/A | N/A |
| 5 | Re-circuiting | 80 | N/A | N/A |
| 6 | Service feeders | 80 | N/A | N/A |
| 7 | Service upgrade, up to 200 amps | 100 | N/A | N/A |
| 8 | Service upgrade, up to 400 amps | 125 | N/A | N/A |
| 9 | Service upgrade, over 400 amps | 150 | N/A | N/A |
| 10 | Service upgrade, each additional meter | 65 | N/A | N/A |
| 11 | Service panel or subpanel | 65 | N/A | N/A |
| 12 | Temporary electrical service | 80 | N/A | N/A |
| 13 | Transformer | 65 | N/A | N/A |
| 14 | Underground service | 80 | N/A | N/A |
| 15 | Wired connection, appliances or equipment | 65 | N/A | N/A |

**H - Signs**

| | | | | | |
|---|---|---|---|---|---|
| 1 | Banners | each | 50 | N/A | N/A |
| 2 | Comprehensive sign plan | | 500 | N/A | N/A |
| 3 | Freestanding sign | each | 175 | N/A | N/A |
| 4 | Illuminated sign | each | 150 | N/A | N/A |
| 5 | Non-illuminated sign | each | 100 | N/A | N/A |
| 6 | Panel replacement | each | 100 | N/A | N/A |

**I - Plan Reviews**

| | | | | | |
|---|---|---|---|---|---|
| 1 | Additional fees: | | | | |
| | • Plan review completed in-house after the second plan review has been completed | | N/A | 200 | N/A |
| | • Stormwater plan review performed after the third review (see section 4-1-4(I) of this code) | per hour | N/A | 75 | N/A |
| | • Stormwater plan review performed on revised drawings submitted after drawings have been approved (see section 4-1-4(I) o | per hour | N/A | 75 | N/A |
| 2 | Deferred submittal: elevator or other conveyance (cost added to plan review fee indicated elsewhere in this schedule) | | N/A | 100 | N/A |
| 3 | Deferred submittal: fire alarm system or fire suppression system (cost added to plan review fee indicated in section ~~4-1-4~~(D) of this schedule) | | N/A | 250 | N/A |
| 4 | Deferred submittal: truss shop drawings (cost added to base permit fee of project) | | N/A | 100 | N/A |
| 5 | Deferred submittal: other, with approval of the Building and Zoning Official (cost added to applicable plan review fee indicated elsewhere in this sched | | N/A | 250 | N/A |
| 6 | Elevator or other conveyance | each conveyance | N/A | 120 | N/A |
| 7 | Expedited plan reviews, 1- and 2-family dwellings (additional cost for up to 5 business day turnaround time) | | N/A | 500 | N/A |
| 8 | Expedited plan reviews, 1- and 2-family dwellings (additional cost for up to 3 business day turnaround time) | | N/A | 1,000 | N/A |
| 9 | Expedited plan reviews, multi-family, mixed-use or commercial | | N/A | See Note 1 | 2,000 |
| 10 | Plan reviews performed by a consultant (see subsection 4-1-4(C)2(a) of this code) | | N/A | See Note 1 | 2,000 |
| 11 | Plan review necessitated by drawing revisions after issuance of permit | | N/A | 75 | N/A |
| 12 | Miscellaneous assemblies, equipment or structures reviewed by in-house staff | per hour | N/A | 75 | N/A |
| 13 | Tree preservation for single-family lot site improvements, grading or landscaping not associated with other permits | | N/A | 250 | N/A |

**J - Administrative Fees**

| | | | | | |
|---|---|---|---|---|---|
| 1 | Appeal of administrative decision of the Planning and Development Director or the Building & Zoning Official | | 250 | N/A | N/A |
| 2 | Certificate of Occupancy, other than for new construction | | 100 | N/A | N/A |
| 3 | Permit extension (see subsection 4-1-4(G) of this code) | per month | 50 | N/A | N/A |
| 4 | Phased permit, foundation and underground utilities only permit, 1- and 2-family | fees in addition to scheduled building and plan review fees | 250 | 200 | N/A |
| 5 | Phased permit, foundation and underground utilities only permit, other than 1- and 2-family | fees in addition to scheduled building and plan review fees | 500 | 500 | N/A |
| 6 | Phased permit, building shell only | fees in addition to scheduled building and plan review fees | 1,000 | 500 | N/A |
| 7 | Renewal of expired or suspended permit | | See Note 8 | N/A | N/A |
| 8 | Renewal of expired permit application | | 500 | N/A | N/A |
| 9 | Temporary Certificate of Occupancy or renewal thereof (see subsection 4-1-4(E) of this code) | | 450 | N/A | N/A |
| 10 | Waiver of code for special event (in accordance with sections 1-1-6 and 3-39-3 of this Code) | | 50 | N/A | N/A |
| 11 | Work exceeding scope of permitted work | 300% of original permit fee, minimum | 500 | N/A | N/A |
| 12 | Work Started without Permit | 200% of original permit fee, minimum | 250 | N/A | N/A |

**K - Inspections**

| | | | | | |
|---|---|---|---|---|---|
| 1 | Annual Fire Prevention Inspection: | | | | |
| | Group: | Occupancy Use: | | | |
| | A-1 thru 5 | Assembly | 150 | N/A | N/A |
| | A-2 | Assembly - Food/Drink Service Establishment, up to 1,000 square feet | 75 | N/A | N/A |
| | A-2 | Assembly - Food/Drink Service Establishment, over 1,000 square feet | 150 | N/A | N/A |
| | A-2 | Assembly - Food Service Establishment, commercial hood and duct | 50 | N/A | N/A |
| | B | Business, up to 1,000 square feet | 50 | N/A | N/A |
| | B | Business, over 1,000 square feet | 75 | N/A | N/A |
| | E | Educational | 100 | N/A | N/A |
| | E | Educational, day care facility | 75 | N/A | N/A |
| | F | Factory | 125 | N/A | N/A |
| | H-1 thru 5 | High-hazard | 125 | N/A | N/A |
| | I-1 thru 4 | Institutional | 150 | N/A | N/A |
| | M | Mercantile, up to 1,000 square feet | 50 | N/A | N/A |
| | M | Mercantile over 1,000 sf up to 4,000 square feet | 75 | N/A | N/A |
| | M | Mercantile over 4,000 square feet | 150 | N/A | N/A |
| | R-1 | Residential, transient | 150 | N/A | N/A |
| | R-2 | Residential, non-transient and multi-family building common areas | 50 | N/A | N/A |
| | R-3 | Residential, non-transient (refer to Building Code for occupancy uses) | 125 | N/A | N/A |
| | R-4 | Residential, non-transient (refer to Building Code for occupancy uses) | 150 | N/A | N/A |
| | S-1 | Storage, moderate hazard | 75 | N/A | N/A |
| | S-2 | Storage, low hazard | 50 | N/A | N/A |
| | U | Utility and Miscellaneous | 50 | N/A | N/A |
| 2 | Change of occupancy inspection (new use or business) | | 50 | N/A | N/A |
| 3 | Code compliance for 1-, 2- or 3-family dwellings, per request of owner or agent | | 175 | N/A | N/A |
| 4 | Elevator or other conveyance: | | | | |
| | • Annual inspection | | 150 | N/A | N/A |
| | • Annual no- load pressure test | | 150 | N/A | N/A |
| | • Five-year conveyance load test | | 350 | N/A | N/A |
| | • Re-inspection fee | | 75 | N/A | N/A |
| 5 | Re-inspection fee - Plumbing (after second inspection fails) | | 100 | N/A | N/A |
| 6 | Re-inspection fee - Other than Plumbing (after second inspection fails) | | 100 | N/A | N/A |
| 7 | Water pressure test, single family residential | | 200 | N/A | N/A |

**~~L - Contractor Registration~~ (Section Deleted)**

| | | | | |
|---|---|---|---|---|
| ~~1~~ | ~~General contractor (12-month application or renewal)~~ | ~~100~~ | ~~N/A~~ | ~~N/A~~ |
| ~~2~~ | ~~General contractor (24-month application or renewal)~~ | ~~190~~ | ~~N/A~~ | ~~N/A~~ |
| ~~3~~ | ~~Independent contractor (12-month application or renewal)~~ | ~~50~~ | ~~N/A~~ | ~~N/A~~ |
| ~~4~~ | ~~Independent contractor (24-month application or renewal)~~ | ~~95~~ | ~~N/A~~ | ~~N/A~~ |
| ~~5~~ | ~~Reinstatement, for a suspended registration~~ | ~~125~~ | ~~N/A~~ | ~~N/A~~ |
| ~~6~~ | ~~Appeal, (denied application, renewal or suspended registration) plus reimbursement of fees agreement and escrow fund deposit (see section 4-1-11(J) of this code)~~ | ~~250~~ | ~~N/A~~ | ~~N/A~~ |

**M - Business License/Registration**

| | | | | | |
|---|---|---|---|---|---|
| 1 | New business | annual | 100 | N/A | N/A |
| 2 | Change of address, remaining within Glen Ellyn | annual | 30 | N/A | N/A |
| 3 | Change of business ownership | annual | 30 | N/A | N/A |
| 4 | Change of business name | annual | 30 | N/A | N/A |

**N - Taxes, Demolition**

| | | | | |
|---|---|---|---|---|
| 1 | Tax, demolition (applies to any project when over 50 percent of the exterior roof and wall area is structurally altered or when a building or structure, or part thereof, greater than 1,000 and up to 4,000 square feet is demolished) | 550 | N/A | N/A |

**O - Developer's Donation/Cash Contribution**

| | | | | | |
|---|---|---|---|---|---|
| 1 | Fire Company: Single-family dwelling (attached or detached), per new dwelling unit | | 1,500 | N/A | N/A |
| 2 | Fire Company: Multi-family dwelling units, per new dwelling unit | | 500 | N/A | N/A |
| 3 | Fire Company: Congregate housing for the elderly, per new unit | | 500 | N/A | N/A |
| 4 | Butterfield Park District: | *Determined by Ordinance | * | N/A | N/A |
| 5 | Glen Ellyn Library: | *Determined by Ordinance | * | N/A | N/A |
| 6 | Glen Ellyn Park District: | *Determined by Ordinance | * | N/A | N/A |
| 7 | Elementary School District 41: | *Determined by Ordinance | * | N/A | N/A |
| 8 | Elementary School District 89: | *Determined by Ordinance | * | N/A | N/A |
| 9 | High School District 87: | *Determined by Ordinance | * | N/A | N/A |

**P - Zoning and Appearance Applications**

| | | | | |
|---|---|---|---|---|
| 1 | Administrative zoning variation | 250 | N/A | N/A |
| 2 | Annual outdoor beautification display | 25 | N/A | N/A |
| 3 | Appeals | 700 | N/A | See Note 5 |
| 4 | Construction necessitated variations (see section 4-1-4(F) of this code) | 1,100 | N/A | 2,000 |
| 5 | Exterior appearance review | 200 | N/A | N/A |
| 6 | Live entertainment | 150 | N/A | N/A |
| 7 | Planned unit development | 2,500 | N/A | See Note 5 |
| 8 | Planned unit development amendment | 2,500 | N/A | See Note 5 |
| 9 | Planned unit development amendment - not requiring a public hearing | 1,000 | N/A | N/A |
| 10 | Planned unit development amendment: | | | |
| | where only previously approved signage is being amended regardless if a public hearing is required or not | 500 | N/A | See Note 5 |
| 11 | Pre-application meeting (see section 4-1-4(D) of this code) | 250 | N/A | See Note 5 |
| 12 | Sign variation | 500 | N/A | See Note 5 |
| 13 | Special use | 750 | N/A | See Note 5 |
| 14 | Special use amendment, not requiring a public hearing | 350 | N/A | N/A |
| 15 | Special use, preexisting - Administrative approval | 350 | N/A | N/A |
| 16 | Stormwater variation | 150 | N/A | See Note 5 |
| 17 | Zoning application plan review (after third review) increasing $50.00 each additional review thereafter | 100 | N/A | N/A |
| 18 | Zoning map amendment | 500 | N/A | See Note 5 |
| 19 | Zoning text amendment | 500 | N/A | See Note 5 |
| 20 | Zoning variation | 660 | N/A | See Note 5 |
| 21 | Zoning verification letter | 100 | N/A | N/A |

**Q - Public Right-of-way**

| | | | | |
|---|---|---|---|---|
| 1 | License agreement, outdoor seating annual | 50 | N/A | N/A |
| 2 | License agreement, vendor cart annual | 150 | N/A | N/A |
| 3 | Obstructions: | | | |
| | • Parking stall base fee, plus $5.00 per stall, each additional day | 25 | N/A | N/A |
| | • Sidewalk base fee, plus $5.00 each additional day | 25 | N/A | N/A |
| | • Street per day | 50 | N/A | N/A |
| 4 | Right-of-way vacation application | 300 | N/A | N/A |

**R - Annexation**

| | | | | |
|---|---|---|---|---|
| **1** | Single-family detached home | 250 | N/A | N/A |
| **2** | Non-Single-family detached home per acre | 1,000 | N/A | N/A |

**S - Subdivision**

| | | | | |
|---|---|---|---|---|
| **1** | Major, 5 or more lots | 3,500 | N/A | N/A |
| **2** | Minor, 3 or 4 lots | 1,400 | N/A | N/A |
| **3** | Two-lot subdivision | 250 | N/A | N/A |
| **4** | Land transfer certificate | 250 | N/A | N/A |
| **5** | Lot consolidation | 250 | N/A | N/A |

**T - Recapture**

| | | | | |
|---|---|---|---|---|
| **1** | Pay to Village - Transfer to builder varies per ordinance | Varies | N/A | N/A |
| **2** | Pay to Village - Processing fee | 100 | N/A | N/A |

4-1-5. - General requirements.

The following general requirements shall apply to all property within the Village of Glen Ellyn Municipal limits in addition to the requirements in all adopted Building Codes and ordinances:

(A) *Building permit required:* No demolition, relocation, site improvements, construction, alteration, addition, remodeling, restoration or repair work to any building or structure or associated site grading or improvements of any kind shall be undertaken until a building permit has been issued, and no change to the permitted work may be completed until revised submittal documents are approved by the Building Official, unless the work is exempt from a permit as specified in this Code.

(B) *Building permit conditions:* No building permit shall be issued until all the following conditions are met:

1. A building permit application is completed, submitted and certified by the permit applicant and the property owner with their dated signatures.

2. All required building permit submittals have been received and reviewed for Code compliance by all applicable Village departments and governmental agencies with jurisdiction.

3. All contractors who are required to comply with the contractor ~~registration~~ **insurance** requirements are listed on the permit application ~~and registered~~ **or other form as required by the Community Development Department** (see section 4-1-11 of this chapter).

4. All applicable permit fees and taxes are paid in full and all required deposits are received.

5. All actual expenses incurred by the Village for legal, engineering, plan review and inspection services required beyond the reasonable and customary permit fees, taxes and deposits assessed at the time a permit is issued are paid in full. This condition applies until such time as a certificate of occupancy has been issued for the subject property.

6. All outstanding debts to the Village, related to the property, incurred by the current property occupant, owner or owner's agent who are individuals, partnerships, corporations, land trusts, or other business entities, are paid in full.

7. The hard costs, as defined in this Code, for all remodeling work improvements are listed on the permit application, and upon request, sworn statements listing the hard cost from all contractors and suppliers is received and approved by the Building and Zoning Official.

(C) *Deposits required:* Deposits shall be required, submitted and released in accordance with the following conditions:

1. *Restoration deposit:* A refundable cash deposit is required for the items listed in subsection 4-1-4(C)1 of this chapter at the time a building permit is obtained for all new principal buildings, additions to existing buildings that increase the floor area over 75 percent, alterations to existing buildings that structurally alter over 50 percent of the exterior wall and roof area, demolition of any building or structure, or part thereof, with a gross floor area over 1,000 square feet or where otherwise required in this Code.

2. *Demolition site restoration deposit:* The demolition site restoration deposit (subsection 4-1-4(C)1 of this chapter) may be credited toward the stormwater facilities/grading deposit if commencement of construction of a new structure is planned to occur within 90 days after completion of the demolition.

3. *Special conditions deposit:* In the event a project is determined to have a significant impact on the public health, safety and welfare of the surrounding property, the Community Development Director may require an additional deposit to be posted by the applicant (subsection 4-1-4(C)1 of this chapter). Said deposit shall be for the purpose of completing any unfinished work or for the cost of any unforeseen expenses associated with the work which require immediate response when the applicant has not completed the work at the

request of the Village, or is unable to be contacted, or to return the site to a safe and clean condition. The special conditions deposit is not included within any deposit indicated in the schedule of fees and deposits.

4. *Deposit refund to depositor:* After all final inspections have been completed and approved, deposits shall be refunded to the depositor, less any fines or costs incurred by the Village for damages to public trees or other public property, in accordance with applicable rules, ordinances and regulations.

5. *Deposit release to Village:* Where the permitted work has not been completed in accordance with applicable rules, ordinances and regulations and the depositor has failed to complete the work, repair damages or obtain final approved inspections after due notice has been served and reasonable opportunity has been given to the depositor and permit applicant, the deposit shall be forfeited by the depositor and released to the Village. The Village may use the deposit, or award all or part of the deposit to others, to complete the work or repair damages. Any remaining deposit balance shall be refunded to the depositor.

6. *Deposit award to owner:* The property owner or any other person or entity with a possessory interest in a property may request the Village award them any released deposits for their use to complete the work, repair damages or restore the site. Such request shall include a written description of the work to be completed, a schedule and contractor proposals that include all applicable costs, submitted for review and approval by the Community Development Director. Upon the owner's scheduled completion of the work, proof of payment for the work, final approved inspections, and execution of an indemnity agreement with the Village, the owner will be awarded an amount of the released deposit up to the approved cost.

(D) *Permit suspension or revocation:*

1. A building permit shall be suspended and no work shall be performed upon receipt of an application request from the property owner or agent for a zoning variation or construction necessitated variation from the Glen Ellyn Zoning Code.

2. A building permit may be suspended or revoked if any one of the conditions required in subsection (B) of this section is not in compliance.

(E) *Professional certification:* The construction documents required for a building permit shall be prepared and certified by an architect or structural engineer licensed in the State of Illinois, or prepared, reviewed and approved under his or her direction, and bear the seal and signature of the architect or engineer and a statement that the construction documents comply with all provisions of the adopted codes and ordinances of the Village of Glen Ellyn and all other applicable laws and regulations governing the design and engineering of the work. Such seal, signature and statement shall be affixed to every page or sheet of the submittal documents or affixed to a table of contents page or sheet indicating the certification applies to each document listed in the table of contents. Professional certification is required for all new buildings, structures and additions, and or all alteration and remodeling of existing buildings and structures that includes changes to the structural, fire protection, and life safety conditions as determined by the Building Official.

*Exception:* Professional certification shall not be required for new residential accessory buildings and structures or for alteration or remodeling of existing residential buildings provided the permit documents or construction plans include a complete description of the work and adequate structural and life safety information to verify Code compliance.

(F) *Stormwater management:* All developments including the construction of new and the alteration of all existing buildings and structures and site improvements shall meet the following stormwater management requirements prior to the issue of a building permit:

1. *Special flood hazard areas:* All development in, or within a designated distance from, a special flood hazard area, including floodplains, wetlands, wetland buffers, and riparian environments, shall meet all requirements specified in chapter 7 of this Title.

2. *Stormwater permit:* All developments that disturb over 1,500 square feet of ground cover, or a drainage easement, shall require the submittal and approval of a stormwater management permit in accordance with the DuPage County Countywide Stormwater and Floodplain Ordinance as amended and adopted by the Village of Glen Ellyn.

3. *Drainage plan:* All developments that disturb between 300 square feet and 1,500 square feet of ground cover shall require the submittal and approval of a drainage plan indicating the direction of existing and proposed stormwater flow on the site and other information as necessary to verify compliance with the DuPage County Countywide Stormwater and Floodplain Ordinance as amended and adopted by the Village of Glen Ellyn.

(G) *Tree preservation:* All work on public and private property must comply with the tree preservation requirements in title 8, chapter 4, "Forestry Management", and title 4, chapter 8, "Tree Preservation", of this Code.

(H) *Construction hours:* Construction, demolition, excavation, grading, deliveries, hauling, loading, staging, operating portable engines and other construction related work activities on the site may only be completed between the hours of 7:00 a.m. to 7:00 p.m. Monday through Saturday and between the hours of 8:00 a.m. to 5:00 p.m. on Sundays, except in case of urgent necessity in the interest of public health and safety.

(I) *Inspections:* All construction being performed pursuant to a building permit under the provisions of this Code may be inspected by the Building Official or his representative at any reasonable time and shall be subject to inspections in accordance with the adopted codes and the following requirements:

1. *Foundation survey:* The applicant shall submit a foundation location survey prepared by a registered surveyor upon completion of the foundation for all new buildings, additions or roofed over accessory structures that are located within two feet of the minimum required zoning setback, and no further work shall be done, other than installing drain tile and waterproofing the foundation, until the location survey and a backfill inspection have been approved.

2. *Height certification:* The applicant shall submit a ridge and eave height certification prepared by a registered surveyor upon completion of the framework for all new principal buildings or additions that are constructed within two feet of the maximum permitted zoning heights, and no further work shall be done, other than rough electrical, mechanical, and plumbing work, until the ridge and eave height certification has been approved.

(J) *Penalty:* Any person, firm or corporation violating any provision of this Code or other provisions of the Building Code of the Village of Glen Ellyn shall be guilty of a business offense punishable by a fine of not less than $50.00 nor more than $750.00 for each offense. Each day that a violation continues shall constitute a separate offense.

(Ord. 5996, 1-30-2012; Ord. 6603, 5-29-2018; Ord. 6674, 2-25-2019)

4-1-11. - Contractor ~~registration required~~ **insurance and license requirements**.

It shall be unlawful for any contractor to perform construction or demolition work within the Village of Glen Ellyn that requires a building permit unless the contractor ~~holds a current valid contractor registration~~ **has a certificate of insurance or professional license; as required under this chapter, on file with the Community Development Department**.

~~(A) *Application for contractor registration:* Application for contractor registration shall be made to the Director of Community Development, on such forms that are provided including an application, documents that include all required information, applicant's signature, submittal date and payment of applicable fees.~~

~~(B)~~ **(A)** *Contractor classifications:* A "contractor" is any person, partnership, corporation or other business entity engaged in the business of constructing, altering, repairing or demolishing buildings, structures, utilities, site improvements or topography. Contractor classifications are based on the work they perform and the contractual relationships established as follows:

1. A "general contractor" is a contractor who employs or manages the work of one or more independent contractors. A general contractor may also be the developer, builder, construction manager or property owner.
2. An "independent contractor" is a contractor who only manages his own work or the work of his own employees and performs one trade or craft. Independent contractors are generally contracted by a property owner, owner's agent or building occupant or subcontracted by a general contractor.
3. A "public utility contractor" is a contractor completing public improvement work in the rights-of-way under agreements and licenses with the Village of Glen Ellyn and managed by the public works department.
4. A "subcontractor" is any contractor working under a contract agreement with a general contractor.

~~(C)~~ **(B)** Contractor ~~registration~~ **insurance** exemptions:

~~1. An independent contractor is exempt from the contractor registration requirements of this section when all of the following conditions are met:~~

~~(a) The independent contractor is not required to hold a professional license issued by the State of Illinois or Illinois Municipality to perform their work.~~

~~(b) The independent contractor is subcontracted by the general contractor to perform work under the same building permit for which the general contractor is the building permit applicant.~~

~~(c) The independent contractor has been listed on the building permit application as a contractor working under subcontract to the general contractor.~~

~~2.~~ **1.** A property owner who hires contractors to work on their property, or personally works on their property, is exempt from the contractor ~~registration~~ **insurance** requirements provided the property owner is not also a general contractor. However, all contractors working on the property must meet the contractor ~~registration~~ **insurance** requirements.

~~3.~~ **2.** A public utility contractor is exempt from the contractor ~~registration~~ **insurance** requirements of this section for all work completed in the rights-of-way.

~~4.~~ **3.** Any person providing design, engineering or testing services, furnishing materials and equipment, completing cleaning and maintenance work or performing any activity for which a building permit is not required is exempt from the contractor ~~registration~~ **insurance** requirements.

~~5. A licensed electrical contractor is exempt from the requirement to pay a contractor registration fee as provided under Illinois state statutes.~~

~~6.~~ **4.** A licensed contractor is exempt from the requirement to provide a ~~surety bond and/or~~ certificate of insurance provided a surety bond and/or certificate of insurance is a licensing requirement under Illinois state statutes.

~~(D)~~ **(C)** *Application documents:*

1. **Licensed** ~~C~~**c**ontractors must possess and submit**, with each application for building permit,** a copy of their current professional license issued by the State of Illinois, Illinois Municipality or other entity authorized to issue such license. This includes contractors performing electrical, plumbing, irrigation, roofing, fire sprinkler, elevator/conveyance equipment work or other construction work that requires a State of Illinois license.

~~2. Contractors must possess and submit a surety bond issued by a company approved and authorized to issue bonds by the State of Illinois. The surety bond shall assure that the contractor's work will be completed in accordance with the requirements of the building permit and this Code. The surety bond shall be in the minimum amount of $20,000.00 and list the Village of Glen Ellyn and third party beneficiaries as the obligees. Contractors completing stormwater work under a stormwater permit are exempt from the requirement to provide a security bond under this section.~~

~~3.~~ **2.** Contractors must possess and submit**, with each application for building permit,** a **valid** certificate of insurance issued by a company approved and authorized to issue insurance by the State of Illinois. The certificate of insurance shall list the Village of Glen Ellyn as an additional insured and include the following insurance in the minimum amounts **indicated**:

(a) General contractor:

General liability each occurrence ..... $1,000,000.00

General liability each person ..... 100,000.00

Property damage ..... 10,000.00

Workers' compensation ..... As required by law

(b) Independent contractor:

General liability each occurrence ..... $500,000.00

General liability each person ..... 100,000.00

Property damage ..... 10,000.00

Workers' compensation ..... As required by law

~~4.~~ **3.** Contractors must submit a notarized affidavit stating that they have no employees if the certificate of insurance excludes workers' compensation.

~~(E)~~ **(D)** *Processing of ~~applications~~* ***information****:* ~~Applications~~ **Information** received by the Director of Community Development shall be examined for complete and accurate information. The Director shall have the authority to require the applicant to submit supplemental evidence to confirm the ~~application~~ information**.** ~~or respond to any objection to the issuance, renewal or reinstatement of the contractor's registration. Contractor registration applications shall be granted or denied by the Director by written notice within 30 days of receipt of all required application documents.~~

~~(F) *Term of contractor registration:* Contractor registration shall be valid through a 12 or 24-month registration term as selected by the applicant provided that the required contractor license,~~

~~surety bond and certificate of insurance have not expired or been suspended or terminated by the issuing authority.~~

~~(G)~~ **(E)** *Renewal of contractor ~~registration~~* ***information****:* Contractor ~~registration may~~ **insurance and license information shall** be renewed **for all projects that have not passed final inspections** during the ~~registration~~ term **listed on the certificate of insurance or professional license. These documents shall be renewed by submission of same, with active term periods indicated on the documents, to the Community Development Department.** ~~or after the registration term by submittal of a new application, current application documents and payment of the renewal fee~~. **Failure to renew expired documents prior to their expiration date may results in the issuance of a Stop Work Order or other enforcement actions.**

~~(H)~~ **(F)** *Suspension of contractor ~~registration~~* **activities***:* ~~Contractor registration is immediately suspended upon the expiration, revocation or termination of any required contractor license, surety bond or certificate of insurance during the registration term.~~ The contractor is prohibited from performing any work during the period in which the contractor's ~~registration is suspended~~ **certificate of insurance or professional license is not valid**. ~~No notice shall be issued to the contractor prior to suspension.~~ A ~~written notice of suspension and a~~ **~~s~~S**top **~~w~~W**ork **~~o~~O**rder ~~shall~~ **may** be issued**, and other enforcement action may be taken, without prior notice,** to the contractor on or after the ~~suspension~~ **expiration** date **of a certificate of insurance or professional license**. ~~A suspended registration may be reinstated by the Director upon submittal of a new application, current application documents and payment of the reinstatement fee.~~

~~(I)~~ **(G)** *Denial of a ~~contractor registration~~* ***building permit*** *application, renewal or reinstatement:* ~~Contractor registration~~ **Building permit** applications, renewals and reinstatements may be granted or denied by the Director by written notice within 30 days of the submittal date. Applications, renewals and reinstatements will be denied for failure to submit the required ~~application~~ **insurance or license** documents~~,~~ **or** submitting false information ~~or failure to pay the application, renewal or reinstatement fee~~.

~~(J)~~ **(H)** *Appeal of a denied application, ~~or~~ renewal or ~~a suspended contractor registration~~* ***reinstatement****:* All appeals from the decisions of the Director of Community Development must be filed with the Community Development Department within 30 days after the contractor's receipt of the written notice. The appeal must include a petition submitted by the contractor describing the basis upon which the appeal is founded and payment of an administrative appeal fee. The Director of Community Development shall transmit the appeal to the Building Board of Appeals for a public hearing. The board shall review evidence and hear testimony relevant to the appeal and reach a decision. The decision of the board shall be the final administrative decision.

~~(K)~~ **(I)** *Enforcement:* No building permit shall be issued for any work if the permit applicant or the contractors listed on the permit application are not in compliance with this section. Contractors shall provide personal identification and identify their employers to the Building Inspector or other authorized Village official on the work site to verify compliance with these contractor ~~registration~~ **insurance or license** requirements. A contractor performing work in violation of this section may be served with a citation and a stop work order may be issued and the building permit may be suspended or revoked by the Building Official.

~~(L)~~ **(J)** *Penalty:* Any persons violating the provision of this section shall be fined not less than $150.00 nor more than $750.00 for each offense and a separate offense shall be deemed committed each day during or on which a violation occurs or continues.

(Ord. 5854, 3-8-2010, eff. 3-15-2010; Ord. 6674, 2-25-2019)

4-8-3. - General regulations; private property involving development.

(A) *Tree preservation plan required:* Development on private property shall require the filing of a tree preservation plan along with other permit application materials required by this section upon application for a building permit.

Trees which the owner designates on the plan as being susceptible to potential damage due to their location or condition may be designated as impacted trees. After the initial tree protection fencing or other protective methods have been put in place these impacted trees shall not be subject to additional regulation provided the required tree fencing or other protective methods are maintained. The Village forester, or his/her designee, may suggest that trees on the property not shown as impacted or protected trees should be shown as being in those categories, but the final decision shall rest with the applicant.

All work to preserve protected, adjacent, significant, and impacted trees shall be according to the "Arboricultural Specifications Manual". The tree survey shall be drawn to a scale not less than one inch to 20 feet so that the location of each tree required to be shown on the plan can be identified. The tree preservation plan shall include the following:

1. A "tree survey" as defined above. The Village forester, or his/her designee, may exclude the tree survey requirement on those portions of the site which he/she determines will not be affected by the development activity. The survey may be prepared by a registered land surveyor or certified arborist or may be prepared by or under the direction of the owner if it accurately reflects all required tree information. The Village forester or his/her designee shall, if requested, assist without charge in the identification and size of tree species on those properties that do not require an ISA certified arborist review and approval.
2. The name and contact information of the parties responsible for the construction, erection, and maintenance of temporary fencing or other physical barrier around protected trees.
3. The location, shape, and spatial arrangement of all existing and proposed buildings, walls, improvements, and structures and the excavation limits required to construct proposed improvements.
4. The location, shape and spatial arrangement of all permanent driveways and parking areas and temporary material storage sites and accessways.
5. All existing or new utility services including water, sanitary sewer, storm sewer, gas, electric, telephone, and cable TV.
6. The Village forester, or his/her designee, may expand or partially retract the critical root zone depending on the tree species and site specific situations so as to improve the chances that trees will not be damaged during construction and to permit construction to take place. In such cases, the Village forester, or his/her designee, may request additional precautions in order to preserve the health of trees.
7. Existing and proposed grading of the development area showing elevations with contour lines at one foot intervals if a grading plan is required by some other provision of this Code.
8. A tree preservation plan for a new home shall be reviewed and approved by a certified arborist for the purpose of evaluating the protective measures proposed on the plan.

(B) *Building permit required:* No building permit shall be issued for development until the tree preservation plan has been approved by the Village Board (for planned unit developments or subdivisions) or the Village forester or his/her designee. In reviewing the tree preservation plan, the Village forester, or his/her designee, can offer advice and suggest modifications which will better protect existing trees, but the tree preservation plan shall be approved if it otherwise is in conformity with Village ordinances. The Village shall process the tree preservation plan in no more time than shall be needed to process a building permit unless the application does not fulfill the requirements of this chapter. Appeals regarding the tree preservation plan or a decision of the Village forester shall

be first submitted to the Public Works Director. A subsequent appeal shall be submitted to the Village Manager. The following steps shall be followed to assure conformance to the approved tree preservation plan and the tree protection requirements in the "Arboricultural Specifications Manual" prior to the issuance of a building permit.

1. Tree preservation fencing must be installed and inspected for all protected, significant, impacted, border, public, and adjacent property trees prior to the issuance of a building permit. Tree preservation measures must be installed per the approved tree preservation plan and remain in place during the entire construction period. Fencing shall not be removed or relocated unless authorized in writing.

2. For a new principal structure an approved tree preservation plan shall be posted on the building site within five feet of the front property line before a building permit is issued and shall remain in place throughout the entirety of the construction of the project. This sign must be posted as shown in the "Arboricultural Specifications Manual". The permit applicant shall be responsible for notifying all other contractors working on the property of the tree preservation plan.

3. The applicant shall notify all adjacent property owners of the proposed construction project and that a tree preservation plan has been prepared and is available for review at the Community Development Department of the Village of Glen Ellyn. A copy of such notification along with a list of addresses it was delivered to must be submitted to the Community Development Department prior to the issuance of a building permit.

(C) *Precautions during construction:* During construction, all reasonable steps necessary to prevent the destruction or damaging of protected trees shall be taken, including, but not limited to, the following:

1. No construction activity, movement, and/or placement of equipment or material or spoils storage shall be permitted within the critical root zone of any protected tree or significant tree on the tree preservation plan unless shown on the approved tree preservation plan. No excess soil, additional fill, liquids, or construction debris shall be placed within the critical root zone of any protected tree or significant tree.

2. Per the "Arboricultural Specifications Manual", appropriate protective fencing shall be installed and maintained for the protection of protected, adjacent property, significant, and impacted trees.

3. No attachments, fences, or wires, other than those approved for bracing, guying, or wrapping, shall be attached to protected trees or significant trees during the construction period.

4. Branch pruning, root feeding, and root pruning of protected trees, significant trees, and adjacent property trees directly affected by construction shall be conducted by the property owner if suggested by the Village forester, or his/her designee, and must be completed following the "Arboricultural Specifications Manual". On-site inspections must be scheduled with the Village forester or his/her designee to ensure this requirement is met.

5. Unless otherwise shown on the approved tree preservation plan, no soil is to be added to or removed from within the critical root zone of any protected, significant, or adjacent property tree that is to remain, unless shown on the approved tree preservation plan.

6. Regulated public utilities, to the extent permitted by law, shall be responsible for adhering to said tree preservation plan during installation of necessary utility service lines. A property owner or contractor shall not be responsible for damages caused by the action of a public utility unless that person directed the location and manner of work of the utility.

(D) *Fee schedule for tree preservation plan review*:

1. Plan review fee for single-family lots. For projects where more than one of the projects listed below occurs, the higher fee shall apply.

   Unit cost for each:

   a. Garage/pool/other: ..... $250.00

b. Addition: ..... 250.00

c. Demolition/new house: ..... 330.00

d. New house: ..... 330.00

e. Site improvements/grading/landscaping: ..... 250.00

f. Work in public right-of-way: ..... 330.00

2. Plan review fee for subdivisions, special use projects, and planned unit developments or lots with any use other than single-family residences:

a. Cost to review documents submitted in compliance with tree preservation ordinance: ..... $100.00 per hour by consultant.

3. Fees for additional field inspections and violations:

a. Field inspection responding to complaint (verified violation): ..... $100.00

b. Tree fence violation: ..... 100.00

(E) *Work must be according to approved tree preservation plan:* It shall be unlawful for any person, firm, or a corporation to fail to abide by the terms of any tree preservation plan pursuant to which a building permit has been issued, including all regulated public utilities.

(F) *Stop work order authorized for noncompliance with tree preservation plan:* If the Village forester, or his/her designee, or a Building Inspector observes the precautions specified in the tree preservation plan were not undertaken before construction commenced or not maintained during construction, a stop work order may be issued. The stop work order shall remain in place until the permittee complies with the approved tree preservation plan and/or corrects the issues stated in the stop work order.

(G) *Amendment to tree preservation plan and removal of protected trees:* An application can be made to the Village forester to amend a tree preservation plan. No amendment shall be permitted where the provisions of the approved plan have not been followed. An application shall be approved where changed facts and circumstances not within the control of the applicant create an undue hardship in complying with the plan. Where a protected tree has been damaged such that its removal is required, the forester shall approve its removal after adequately documenting any violations of this chapter which have caused or contributed to the removal of a protected tree.

~~(H) *Tree contractor registration:* Any person, firm, or corporation which is employed to prune or remove any public tree, protected tree, or significant tree shall be required to register with the public works department. There shall be no charge for registration, but the registration form shall include information regarding at least the name, address and telephone number of the contractor, and the number of years the contractor has been in business. Registration forms will be filed on or before May 1 of each year and shall be annually updated if listed information should change. A registered contractor shall report to the Village any tree removed within seven days after the removal. This report shall contain the address of the lot from which the tree was removed, the reason for removal, the species, and dbh.~~

(Ord. 5961, 9-26-2011; Ord. 6075, 9-24-2012; Ord. 6603, 5-29-2018; Ord. 6674, 2-25-2019)

~~8-4-4. Registered tree contractor.~~

~~Any person, firm, or corporation which is employed to prune or remove any public tree, protected tree, or significant tree shall be required to register with the Public Works Department. There shall be no charge for the registration, but the registration form shall include information regarding at least the name, address and telephone number of the contractor, and the number of years the contractor has been in business. Registration forms will be filed on or before May 1 of each year and shall be annually updated if listed information should change.~~

~~A registered contractor shall report to the Village any tree removed within seven days after the removal. This report shall contain the address of the lot from which the tree was removed, the reason for removal, the species, and dbh.~~

~~It shall be a violation of the ordinances of the Village for any person, firm, or corporation to perform the aforesaid work within the Village without having filed a registration form either initially or on an annual basis or having failed to disclose full and accurate information required on that registration form. In addition to instituting an action to seek fines for the failure to register or providing inaccurate information in the registration forms, the Village President may suspend or revoke the registration if a tree contractor fails to comply with the requirements of the Village ordinances.~~

~~A suspension or revocation shall only take place after the Village President has held a hearing upon not less than five days' written notice. The tree contractor shall be provided with a written statement of the provisions of the Village ordinances which the tree contractor is alleged to have violated. At such hearing, the tree contractor shall be entitled to be represented by counsel who shall be permitted to present witnesses and cross examine any other witnesses that appear at the hearing. A suspension may be for a period of up to six months; a revocation shall be for a period of two years. It shall be a violation of this chapter for any registered tree contractor to employ within the Village a person who was employed by a tree contractor whose permit was suspended or revoked during the period of the suspension or revocation.~~

~~(Ord. 5962, 9-26-2011)~~

8-4-5. - General regulations; public property.

(A) *Work on public trees:* Work on public trees may only be carried on by a ~~registered~~ tree contractor ~~with a valid current registration~~ selected or approved by the Village Forester, or his/her designee~~, and issued a permit to carry out such work~~. This provision shall not prohibit owners of property adjacent to Village owned property from watering or fertilizing any tree, shrub, or other plant on Village owned property.

(B) *Damage to trees, shrubs, or other plants prohibited:* It shall be unlawful for any person to injure, prune, remove, destroy, attach any rope, wire, nail, or other contrivance; place any compacted stone, cement, or other impervious matter or substance as may obstruct the free access of air and water to the roots (i.e., landscape fabric), improper mulching techniques (volcano mulching); or remove any device set for the protection of any tree, shrub, or other plants on Village owned property without approval from the Village Forester or his/her designee.

(C) *Care of public property when working on private property:* It shall be unlawful for the person working on private or public property to leave any public tree that may be affected by building, structure, or other work without proper tree preservation methods as stated by the Village Forester or his/her designee per the "Arboricultural Specifications Manual".

(D) *Work standards on public trees must be followed:* Work done on public trees shall follow the standards outlined in the "Arboricultural Specifications Manual". A copy of the "Arboricultural Specifications Manual" is on file and may be reviewed at the office of the Village Forester, viewed on our website, or may be purchased at the Civic Center.

(E) *Damage to public trees causing removal (payment or replacement):* Any person that damages a public tree so severely that the public tree dies or requires removal shall compensate the Village for the loss of the public tree. The amount paid shall be based on the following schedule:

1. If the damaged public tree is less than eight inches in diameter (measured at 12 inches above ground level), the amount paid shall be determined by using the replacement cost method of evaluating trees found in the latest edition of the Council of Tree and Landscape Appraisers guide (CTLA) for plant appraisal, which guide is adopted by reference by the Village as if it were a part of this chapter.

2. For public trees larger than an eight inch trunk diameter, the amount paid shall be determined by using the trunk formula method of evaluating trees found in the latest edition of CTLA's guide.

3. Added to the costs established under subsections (E)1. and (E)2. of this section shall be the cost of the removal and stump grinding of the public tree.

4. In addition to the prosecution for a business offense, in accordance with subsection (F) of this section, the Village may seek to recover the cost of the damaged public tree, in the amount computed under subsections (E)1., (E)2. and (E)3. of this section, through a civil action.

(F) *Damage to public trees causing removal (civil fine):* Any person that damages a public tree so severely that the public tree dies or requires removal shall be guilty of a business offense and, upon a conviction thereof, shall pay a fine which shall not be less than $1,000.00 nor more than that established under the formula set out in subsections (E)1. and (E)2. of this section, and in addition to the cost of the removal of the tree.

(G) *Injury to public trees not requiring removal (payment):* Any person that causes injury to a public tree that requires treatment may avoid a civil fine by paying the actual cost to treat the tree.

(H) *Injury to public trees not requiring removal (civil fine):* Any person that causes injury to a public tree so that the tree requires treatment shall be guilty of a business offense.

The fine upon conviction shall be equal to the actual cost incurred by the Village in treating the tree for the injury.

(l) *Time for bringing an action and damage or injury:* The Village shall not prosecute any person for causing damage or injury to public trees when the action of such person was limited to lawn mowing using a nonriding lawn mower or a "weed whacker" unless the person was notified of the problem and continued to cause damage to the tree. Nor shall a person be liable for fines or reimbursement when damage is done by regulated public utility unless that person has specifically directed the location and manner of work performed by the utility which caused the damage, however the person that has specifically caused damaged will be liable. Any action by the Village seeking fines or reimbursements for costs relating to damage or injury to public trees must be commenced within three years of the date of the refund of deposit.

(Ord. 5962, 9-26-2011)

8-4-7. - Permits required.

(A) *Permits required to do work on public trees:* Except for work performed by an employee or independent contractor of the Village, none of the following acts relating to public trees may be carried out except by a ~~registered~~ tree contractor who has first secured a written permit from the Village Forester, or his/her designee. The Village shall determine those ~~registered~~ tree contractors who shall be allowed to perform work on public trees. No person except the Village Forester, an agent of the Village Forester, or a contractor hired by the Village under the supervision of the Village Forester may do any of the following acts related to public trees without first securing a written permit from the Village Forester, or his/her designee:

1. Plant, transplant, treat, prune, or remove any public tree (excludes watering and fertilization).
2. Place in a public right-of-way, either above or below ground level, a container for trees, shrubs, or other plants.

(B) *Permits required to do tunneling or excavation near public trees:* Except for work performed by an employee or an independent contractor of the Village, none of the following acts relating to public trees may be carried out except by a person, including a regulated public utility, who has first secured a written permit from the Village Forester: dig a tunnel, trench, or other excavation; install a driveway approach; plant within the critical root zone for flower boxes, etc.; or rototill or dig within the critical root zone of any public tree.

(C) *Permit:* Applications for permits must be made at the office of the Building and Zoning Official not less than ten working days before the time the work is to be done. Notice of completion of the work authorized by the permit shall be given within five days to the Village Forester for inspection. The issue of the permit and the inspection shall be accomplished within a reasonable period of time provided, however, that the work may not be performed without the issuance of a permit.

The Village may also require a permit in situations where development will take place in such a manner as to cause stress to public trees even if no removal is contemplated.

This permit shall not be construed to exempt any person from the requirements of obtaining additional permits required by law.

If the request includes removal of a public tree where the Village consents to the removal where another access to the public right-of-way could have been reasonably provided, a fee reflecting the value of the tree, plus the cost of removal of tree and stump, shall be paid to the Village before the issuance of any permit. The fee shall be calculated according to subsection 8-4-5(E) of this chapter. If the request includes removal of a public tree where no other access to the property was available, a fee reflecting the cost of removal of tree and stump and all costs associated with the purchase and planting of a four inch tree and a one year guarantee shall be paid to the Village before the issuance of any permit. Tree removal shall be done by a contractor hired by the Village of Glen Ellyn.

(Ord. 5962, 9-26-2011)

| Village of Glen Ellyn - Contractor Registration Requirements | |
|---|---|
| **Contractor Type and Fee** | **Registration Submittal Requirements** |
| **GENERAL CONTRACTOR**<br><br>**ANNUAL FEE = $100.00** | • VGE Contractor Application<br>• Insurance Certificate – Village named as additional insured<br>o General liability each occurrence $500,000/each person $100,000<br>o Property damage $10,000<br>o Worker's compensation as required by law (If no employees, letter on company letterhead stating no employees)<br>• Surety Bond $20,000 |
| **INDEPENDENT CONTRACTOR**<br><br>**ANNUAL FEE = $50.00** | • VGE Contractor Application<br>• Insurance Certificate – Village named as additional insured<br>o General liability each occurrence $500,000/each person $100,000<br>o Property damage $10,000<br>o Worker's compensation as required by law (If no employees, letter on company letterhead stating no employees)<br>• Surety Bond $20,000 |
| **Boiler and Pressure Vessel**<br>**NO FEE** | • VGE Contractor Application<br>• Illinois License |
| **Electrical contractor**<br>**NO FEE** | • VGE Contractor Application<br>• Illinois Municipal Electrician License<br>• Insurance Certificate – Village named as additional insured<br>o General liability each occurrence $500,000/each person $100,000<br>o Property damage $10,000<br>o Worker's compensation as required by law (If no employees, letter on company letterhead stating no employees)<br>• Surety Bond $20,000 |
| **Elevator Contractor**<br>**NO FEE** | • VGE Contractor Application<br>• Illinois Elevator Contractor License |
| **Fire alarm contractor**<br>**NO FEE** | • VGE Contractor Application<br>• Illinois Fire Alarm License |
| **Fire sprinkler contractor**<br>**NO FEE** | • VGE Contractor Application<br>• Illinois Fire Sprinkler License |
| **Irrigation contractor**<br>**NO FEE** | • VGE Contractor Application<br>• Illinois Irrigation (060) or Illinois Plumbing Contractor (055) License |
| **Plumbing contractor**<br>**NO FEE** | • VGE Contractor Application<br>• Illinois Plumbing Contractor (055) License<br>• Letter of Intent (For individual permits – not required for registration) |
| **Radon contractor**<br>**NO FEE** | • VGE Contractor Application<br>• Illinois Radon Mitigation License |
| **Roofing contractor**<br>**NO FEE** | • VGE Contractor Application<br>• Illinois Roofing License |
| **Underground Storage Tank contractor**<br>**NO FEE** | • VGE Contractor Application<br>• Illinois License (B or AB) |

021218

X:\Plandev\BUILDING\FORMS\COUNTER FORMS\Contractor Registration Application or Renewal Packet\Contractor Registration Requirements Chart 021218 lg.docx

# ATTACHMENT - D

## Changes to Contractor Registration Program

Changes are indicated in bold italic text below

General Contractors:

- ***Will no longer pay a registration fee***
- ***Will no longer be required to submit a surety bond***
- Must submit a Certificate of Insurance in the amounts shown under Municipal Code Section 4-1-11.C ***with each application for building permit; staff will verify policy dates***

Subcontractors:

- ***Will no longer pay a registration fee***
- ***Will no longer be required to submit a surety bond***
- Must submit a Certificate of Insurance in the amounts shown under Municipal Code Section 4-1-11.C ***with each application for building permit; staff will verify policy dates***
- Must be listed on the Contractor Listing sheet

Independent Contractors:

- ***Will no longer pay a registration fee***
- ***Will no longer be required to submit a surety bond***
- Must submit a Certificate of Insurance in the amounts shown under Municipal Code Section 4-1-11.C ***with each application for building permit; staff will verify policy dates***

State/Municipal Licensed Contractors:

- No registration fee required
- No surety bond required if required for State/Municipal licensing
- No Certificate of Insurance required if required for State/Municipal licensing
- ***Must submit a copy of their current State/Municipal License with each application for building permit; staff will review the license for the expiration date***

Public Utility Contractor: (no changes)

- Exempt from the contractor insurance and license requirements for all work performed in the public right-of-way

Property Owners: (no changes)

- No change, they remain exempt from contractor insurance requirements if coordinating the work on their own property
- Must register as a General Contractor if they are also a General Contractor

Notes:

1. Contractors completing stormwater work under a stormwater permit are exempt from the requirement to provide a surety bond.
2. A person providing design, engineering or testing services, furnishing materials and equipment, completing cleaning and maintenances work or performing any activity for which a building permit is not required is exempt from the contractor insurance requirements.
3. Department's maintaining active files on each contractor will be eliminated.
4. No permits shall be issued until such time as all contractor licenses and Certificates of Insurance are submitted.

**Glen Ellyn Village Board**
535 Duane Street
Glen Ellyn, IL 60137

Meeting: 01/21/20 07:00 PM
Department: Public Works
Department Head: Christina Coyle
Category: Discussion Item
Prepared By: Dave Buckley

**SCHEDULED**

**AGENDA ITEM (ID # 4306)** DOC ID: 4306

# Public Works Director Julius Hansen will present a resident request for additional streetlights on the south side of Taft Avenue between Nicoll Way and Park Boulevard.

**Background:**

The Village created Administrative Order (AO) #29 (Attachment #1) to have consistent processes and criteria for resident requests for additional streetlights in public right of way. The AO details the process for the resident to follow and then subsequently for the Village to follow after receiving a valid resident request. Village Staff makes a recommendation to the Village Manager based on the following non-exhaustive list:

a. Reason(s) stated for the streetlight(s)
b. Percentage of residents on the block supporting the streetlight
c. Comparable neighborhood lighting both in the immediate vicinity and in Glen Ellyn as a whole
d. Accident, incident, and crime history on the block and in the surrounding area (1/4 mile)
e. Proposed streetlight location and power feasibility
f. Estimated cost for streetlight(s)

**Subject:**

Resident Norris Eber of 701 Kingsbrook Glen has made a request for additional streetlights on the south side of Taft Ave between Nicoll and Fire Station #2. He has met all of the requirements of the Administrative Order by having all the residents adjacent to this request sign a petition in favor of the additional streetlights. (Attachment #2) This stretch of roadway is unlit and borders the back and/ or side yards of 9 townhomes in Kingsbrook Glen. The residents feel unsafe with continuous sidewalk located only on the south side of the street bordering their property and foot traffic from Roosevelt Rd. using the sidewalk to CVS and Panera. Also of note is that there is no other residential property bordering Taft between Nicoll and Park other than the Kingsbrook Glen townhomes.

As for the street lighting status of other similar roadways (running east/west paralleling Roosevelt Rd. to the south): Pershing Ave between Nicoll and Rt. 53 is unlit, Pershing between Rt. 53 and Roosevelt is lit, and Pershing between Park and Main is lit. Of additional note, Taft Ave between Lambert and the western Village limits was fully lit in conjunction with the development of the commercial property on Roosevelt and the extension of Taft thru to Lorraine (in Wheaton).

The Police Department recommends adding streetlights to this area due to the history of incidents and crime in the surrounding area. According to Deputy Chief Vavra, this area has a number of incidents and the addition of streetlights would aid the Police Department. (Attachment #3)

Public Works has researched this request and determined the feasibility and cost for adding the

necessary streetlights. Engineer Bob Minix has written a memo (Attachment #4) detailing the current connection configuration of streetlights on Kingsbrook Glen Court, the Plat of Subdivision, and the notable items to consider for the feasibility of installing additional streetlights on the south side of Taft Ave. The Street Division obtained quotes for light fixtures and streetlight poles as well as three contractor costs for installation. (Attachment #5). Public Works collectively recommends that if streetlights are approved for this resident request, then streetlights should be added all the way to Park Blvd. This would double the number of streetlights installed from three to six. Public Works structured the quotes to allow the Village flexibility in determining how many street lights to install. The following table shows the breakdown of quoted costs for infrastructure and installation:

| Number of Streetlights | Pole and Fixture Cost ($2,900/pole) | Installation Cost | Total Cost |
|---|---|---|---|
| 3 (original request) | $8,700.00 | $14,352.25 | $23,052.25 |
| 6 (PW recommendation) | $17,400.00 | $28,994.40 | $46,394.40 |

These costs do not include the electricity cost of running the lights, which will be minimal and not a significant factor in the overall cost of the lights (especially with LED). If approved, Public Works will contact ComEd New Business to start the process as these lights will be unmetered and will need to be added to the ComEd account at the appropriate rate.

**Budget Impact:**

The costs associated with this addition of streetlights (three or six) is not budgeted. It is recommended that this project be funded from the Capital Projects Fund. This Fund currently has adequate resources to meet this request.

**Strategic Plan Initiative:**

I-1 - Infrastructure - Evaluate and implement pedestrian and vehicular improvements in and around the community.

**Action Requested:**

If the request is deemed valid and funds are allocated, then either approval from the Village Manager to install three streetlights per the resident request or approval from the Village Board (due to cost in excess of $40,000) to install six street lights per the original request and the additional lights suggested by Public Works. These approvals would include the purchase of infrastructure from Graybar (Glendale Heights, IL) and KSA Lighting and Controls (Hanover Park, IL) and an executed contract for installation with Utility Dynamics Corporation (Oswego, IL).

**List of Attachments:**

#1 - Administrative Order #29
#2 - Resident Request for Streetlights (Cartegraph Request, Signed Petition, Map Kingsbrook Glen Townhomes)
#3 - Police Department Recommendation - email

#4 -Bob Minix Memo detailing feasibility
#5 -Infrastructure quote (Fixture and Pole) and Contractors (3) Installation quotes

**ATTACHMENTS:**

- Attachment #1 - Administrative Order #29 (PDF)
- Attachment #2 - Resident Request (PDF)
- Attachment #3 - Police Department Recommendation (PDF)
- Attachment #4 - Minix Memo (PDF)
- Attachment #5 - Quotes - Infrastructure and Installation (PDF)

# ADMINISTRATIVE ORDER NO. 29

## SUBJECT: Requests for Streetlights in Public Right of Way

**Applicability**

This policy applies to any resident request for streetlights in public right of way, unless the Village determines an obvious public safety issue exists at a particular location.

**Purpose**

The Village street lighting system is not comprehensive in nature and there is no defined level of lighting performance specified for public rights of way. The fundamental system criterion is a streetlight at every roadway intersection, although it is broadened to include multiple light units in new subdivisions as approved by the Engineering Division.

This policy establishes the procedure regarding installing streetlights at the request of a resident. The policy is being put in place to create consistent processes and criteria for providing streetlights in the public right of way.

**Policy**

The following instructions cover the procedure regarding consideration of installing streetlights in the public right of way:

- All requests for streetlights must be accompanied by a neighborhood petition. Neighbors are defined as those residents living on the block where the requested light would be located. Neighbors not signing the petition will be viewed as not in favor of the lights.
- All requests for streetlights are made to the Public Works Department.
- Staff (Public Works and Police) will review each request and evaluate public safety issues. The following is a list of items that will be considered in reviewing each request (this is not an exhaustive list as each request will be reviewed based on the circumstances of the particular location):
    - Reason(s) stated for the streetlight(s)
    - Percentage of residents on the block supporting the streetlight
    - Comparable neighborhood lighting both in the immediate vicinity and in Glen Ellyn as a whole
    - Accident, incident and crime history on the block and in the surrounding area (within ¼ mile)
    - Proposed streetlight location and power feasibility
    - Estimated cost for the streetlight(s)
- Staff will make a recommendation to the Village Manager on the streetlight request

If the streetlight is approved by the Village Manager:

- Staff will work with ComEd and the neighborhood on the streetlight type, location and installation.

- The Village will pay for the cost of installing the streetlight, and all ongoing operation and maintenance expenses.

If the streetlight is denied by the Village Manager:

- Staff will communicate to the resident that the streetlight request is denied and the reasons for the decision.

Mark Franz, Village Manager

3/2/17
Date

# Request Details VOGE

**Priority** None

**Request ID** 8708

## Street Light

**Address** 701 KINGSBROOK GLEN LN

**Department** Street

**Intersection**

**Status** Open

Locator Address Information 701 KINGSBROOK GLEN LN

**Location Description**

**Description** RESIDENT HAS REQUESTED ADDTIONAL STREETLIGHTS ON THE SOUTH SIDE OF TAFT FROM NICOLL TO FIRE STATION #2. RESIDENT HAS FOLLOWED THE REQUEST PROTOCOL OF ADMIN ORDER #29.
PW NEEDS TO DETERMINE THE NUMBER OF LIGHTS NEEDED ALONG THIS CORRIDOR AND PROVIDE QUOTES FOR PURCHASE OF POLES/ FIXTURES/WIRING AND THE INSTALLATION OF THE STREETLIGHTS.

ALL COST ESTIMATES TO BE PROVIDED TO DAVE BUCKLEY TO CONTINUE FOLLOWING THE PROCESS OF AO#29. DB 10/29/19

**Entered By** dbuckley

**Entry Date** 10/29/2019 12:18:38 PM

**Close Date**

## History

| Task ID | Status | Activity | Start | Stop | Notes |
|---|---|---|---|---|---|

| Requesters | Primary Phone | Secondary Phone | Address |
|---|---|---|---|
| NORRIS EBER | 8472261213 | 6304694245 | 701 KINGSBROOK GLEN LN |

**Total Requests** 1

October 28, 2019

Dave Buckley
Assistant Public Works Director
Village of Glen Ellyn
30 S. Lambert Rd
Glen Ellyn, IL 60137

Re: Street Lights on Taft Ave from Nicole Way to Fire House

Dear Dave:

I am the Secretary of the Kingsbrook Townhouse Home Owners Association.

We are concerned about the Public safety after dark on Taft Ave sidewalk behind our homes (south side of street) and are requesting the Village to install street lights from Nicole Way to the fire house with the Village standard street lights to match the ones on Kingsbrook Gln with the new LED light heads.

Attached is a sign off sheet from each resident that has a back yard facing Taft Ave and could be affected by the new street lights.

Please advise what else we have to do so this happens?

Sincerely,

N. R. Eber

Norris R. Eber
Secretary
Kingsbrook Home Owners Association
701 Kingsbrook Gln
Glen Ellyn, IL 60137

Phone: 847-226-1213
E-mail: norriseber@gmail.com

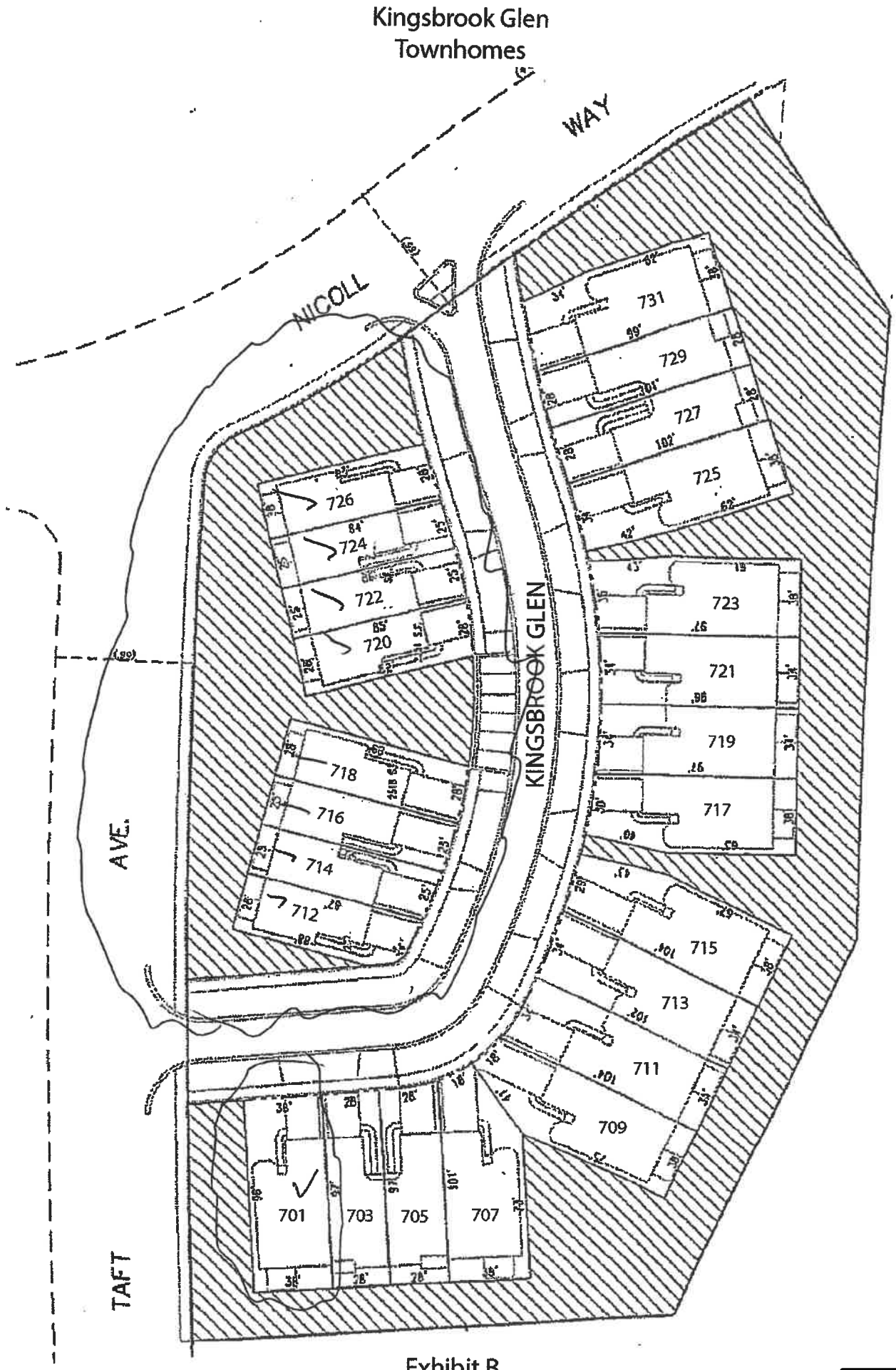
Enclosed: Home Owners sign off sheet + subdivision site plan showing effected units.

**TAFT AVE NEW STREET LIGHTS**
**HOME OWNERS APPROVAL SHEET**

Request new Street Lights be install similar to current one on Kingsbrook Glen.

| ADDRESS | OWNER(S) | PHONE # | APPROVAL |
|---|---|---|---|
| 701 Kingsbrook | Norris & Nanine Eber | 847-226-1213 | N R Eber |
| 712 Kingsbrook | Joe & Linda Daniel | 630-403-2111 | Linda Daniel |
| 714 Kingsbrook | Mark & Emily Nearhring | 309-339-7246 | |
| 716 Kingsbrook | Brendan Porter | 708-704-6465 | |
| 718 Kingsbrook | Christian Exner | 224-539-6002 | |
| 720 Kingsbrook | Dennis & Laura Bergeson | | |
| 722 Kingsbrook | Wendy Anastasia | 630-327-2483 | Wendy Anastasia |
| 724 Kingsbrook | Andre & Raquel Jham | 512-354-5484 | |
| 725 Kingsbrook | Paul McCulloch | 630-433-0695 | |

See attached site plan showing above address are the only one's possibility affected by Taft Ave new street lights.


Kingsbrook Glen
Townhomes
WAY
NICOLL
AVE.
TAFT
KINGSBROOK GLEN
731
729
727
725
726
724
722
720
723
721
719
717
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716
714
712
715
713
711
709
701
703
705
707

Exhibit B

Lindsey Kaminsky

Subject: FW: Taft Ave. Lights

From: Kurt Vavra
Sent: Friday, January 17, 2020 11:04 AM
To: Mark Franz; Lindsey Kaminsky
Cc: Phil Norton
Subject: Taft Ave. Lights

The police department is supportive of adding street lights to Taft Ave. The area has several businesses that experience criminal activity such as burglaries, robberies and drug transactions. Parking spaces were added to the roadway on Taft Ave. years ago east of the fire station. These spaces reduced the width of the roadway and increased pedestrian traffic in the roadway. Taft Ave. is frequently traveled by both the fire and police department vehicles. Additional lighting would make pedestrians more visible as they walk in the roadway. Eastbound Taft Ave. is commonly used by commuters paralleling Roosevelt Rd. in order to get from Wheaton and onto IL 53. This practice increased when Taft. Ave. was connected to Lorraine Rd. years ago. Due to this, there has been a noticeable increase in traffic on Taft Ave. during the morning rush hour.

We have very few accidents on Taft including the intersection of Taft Ave. and Nicoll Way. This would include: domestic disturbances, thefts, fraud cases, citizen assists, etc.

It is the police department's opinion that additional lighting on Taft Ave. would benefit residents and staff.

Please let me know if you have any other questions.

Kurt

Kurt Vavra
Glen Ellyn Police Department
Deputy Chief
65 S. Park Blvd.
Glen Ellyn, IL 60137
630-469-1187 Station Main
630-547-5454 Desk

**Dave Buckley**

**From:** Bob Minix
**Sent:** Monday, December 2, 2019 4:23 PM
**To:** Mike Zitzka
**Cc:** Dave Buckley; Richard Daubert; Jennifer Brown
**Subject:** Kingsbrook Glen Area - New Street Lighting on Taft - Easement Considerations
**Attachments:** SKM_C45819120216000.pdf

**Follow Up Flag:** Follow up
**Flag Status:** Flagged

Mike –

Please note the attached memo containing my observations about utility easements in the Kingsbrook Glen subdivision. Let me know if you have any questions and how I might be able to assist you going forward.

Bob

**Bob Minix**
*Part-Time Professional Engineer*
**Glen Ellyn Public Works Department**
30 South Lambert Road
Glen Ellyn, IL 60137
Telephone (Direct Line): 630-547-5514
FAX - Public Works: 630-469-3128

# MEMORANDUM

**TO:** Mike Zitzka, Street Crew Leader

**FROM:** Bob Minix, Part-Time Professional Engineer

**DATE:** December 3, 2019

**SUBJECT:** Possible Additional Street Lighting Units on Taft between Park and Nicoll Easement Considerations in Kingsbrook Glen Subdivision

In response to Kingsbrook Glen resident inquiries, the Village is considering the installation of street lighting units on the south side of Taft Avenue between Park and Nicoll. As I understand, these units would be connected to the Kingsbrook Glen lighting system, with the actual point of connection to be determined.

If the electrical connection for the new lights was to occur outside the public right-of-way, we typically would need to be in some sort of public utility easement to route the cables. I reviewed the Kingsbrook Glen Final Plat of Subdivision for easements as well as existing utility drawings from our record drawing database. I also reviewed the routing of electric cables for the subdivision street lights; the four lighting units and associated wiring are the responsibility of the Village. I also did an on-site field review. Please note the following:

1. The Kingsbrook Glen Townhomes P. U. D. Final Plat of Subdivision (copy attached) has provisions for both public utility and drainage–buffer conservation easements. Interestingly, the public utility easement is only formally defined along the west and south sides of the subdivision; the area bounded by Taft, Nicoll and Kingsbrook Glen Lane containing Lots 17-24 (712 – 726 Kingsbrook Glen Lane) has no dedicated easements shown on the plat, but there is demarcated common open area surrounding the buildings.
2. Based on my field observations, the common open area surrounding Lots 17-24 has an electric transformer and grouped utility pedestals (for electric, telephone and two cable companies) on the north side of the buildings. I do not know why a utility easement was not formally defined for this section of the development.
3. According to our records, the existing four street lights on Kingsbrook Glen Lane have their power source from the rear of Lots 17-24, likely originating from the two electric pedestals situated in that area. Please see the attached layout of Kingsbrook Glen street lights taken from our files, with my annotations showing the approximate location of utility equipment clusters.
4. I did not observe any disconnection switches at the existing electrical pedestals.
5. Possible connection point(s) for new street lights could be from one of the pedestals located in the common open area on the north side of Lots 17-24. The feasibility of such a connection would have to be confirmed with ComEd and authorized by the Kingsbrook Glen Homeowners Association.

6. I reviewed the Declaration of Party Wall Rights, Covenants, Conditions, Restrictions and Easements for Kingsbrook Glen, recorded as document #R2006-161427. In my opinion, this document – particularly Article IV – grants the Homeowners Association membership quite broad rights to grant access and use rights to the common open area if it serves the needs and interests of the development.
7. If the project moves forward, we should initiate contact with the Kingsbrook Glen Homeowners Association to determine their willingness (very likely I assume) and methodology to obtain access and use rights for a street light electrical connection.

I would be happy to collaborate with the Street Division to work out any design and engineering aspects of the potential project.

Attachments: As noted

cc: Dave Buckley, Assistant Public Works Director
Rich Daubert, Professional Engineer
Jen Brown, Street and Forestry Superintendent

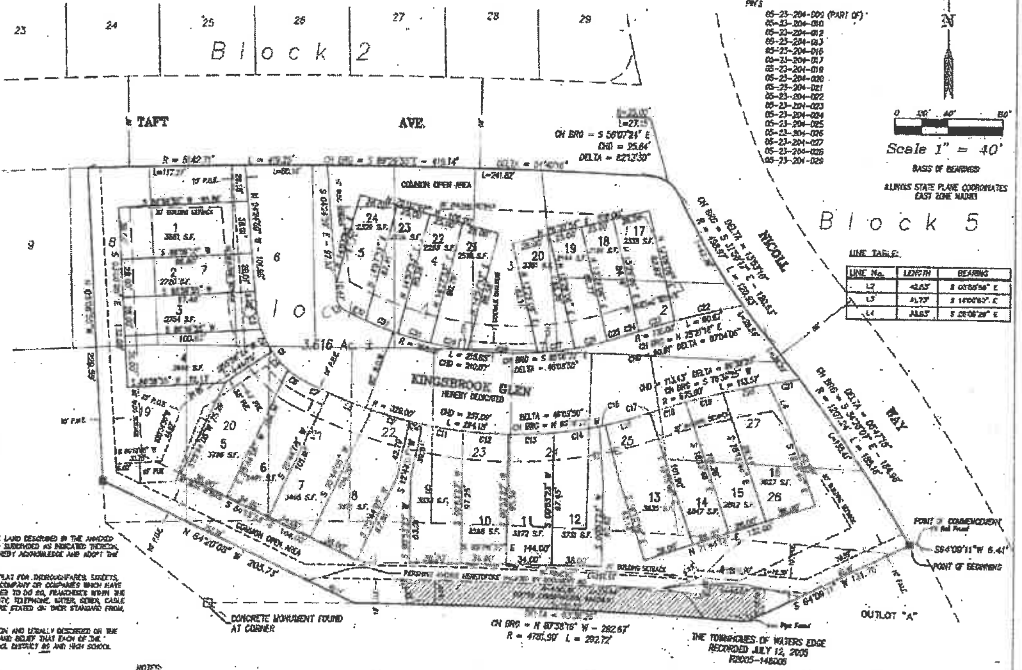
FINAL PLAT OF SUBDIVISION
OF

# KINGSBROOK GLEN TOWNHOMES P.U.D.

PLAT
R2006-159398
AUG. 17, 2006
10:27 AM

A PART OF LOT 8, A PART OF LOT 19, AND ALL OF LOTS 1, 2, 3, 4, 5, 6, 7, 20, 21, 22, 23, 24, 25, 26 AND 27 IN BLOCK 4, AND A PART OF PERSHING AVENUE, ALL AS RECORDED IN ROOSEVELT HILLS, BEING A SUBDIVISION IN THE NORTH HALF OF THE NORTHWEST QUARTER OF SECTION 23, TOWNSHIP 39 NORTH, RANGE 10 EAST, OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF, RECORDED NOVEMBER 2, 1926, AS DOCUMENT NUMBER 228777 IN THE OFFICE OF THE RECORDER, DUPAGE COUNTY, ILLINOIS, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHERN CORNER OF OUTLOT "A" IN THE TOWNHOMES OF WATERS EDGE SUBDIVISION RECORDED JULY 12, 2005, AS DOCUMENT NUMBER R2005-145006; THENCE SOUTH 64 DEGREES 09 MINUTES 11 SECONDS WEST ALONG THE NORTHWESTERN LINE OF SAID OUTLOT "A" A DISTANCE OF 6.41 FEET TO THE POINT OF BEGINNING; THENCE CONTINUING SOUTH 64 DEGREES 09 MINUTES 11 SECONDS WEST ALONG THE NORTHWESTERN LINE OF SAID OUTLOT "A" A DISTANCE OF 131.75 FEET TO A NON-TANGENT CURVE CONCAVE TO THE SOUTH; THENCE WESTERLY 292.72 FEET ALONG THE NORTHERN LINE OF SAID TOWNHOMES OF WATERS EDGE AND ALONG SAID CURVE, HAVING A RADIUS OF 4781.90 FEET, A CHORD LENGTH OF 292.67 FEET AND A CHORD BEARING OF NORTH 87 DEGREES 38 MINUTES 18 SECONDS WEST; THENCE NORTH 64 DEGREES 20 MINUTES 08 SECONDS WEST 203.73 FEET TO THE WESTERN LINE OF SAID LOT 19; THENCE NORTH 03 DEGREES 08 MINUTES 55 SECONDS WEST ALONG THE WESTERN LINE OF SAID LOT 19 AND ITS NORTHERLY EXTENSION, A DISTANCE OF 259.59 FEET TO THE SOUTHERN RIGHT OF WAY LINE OF TAFT AVENUE AND A NON TANGENT CURVE CONCAVE TO THE SOUTH; THENCE EASTERLY 419.25 FEET ALONG SAID CURVE AND ALONG SAID SOUTHERN RIGHT-OF-WAY LINE OF TAFT AVENUE, SAID CURVE HAVING A RADIUS OF 8,142.71 FEET, A CHORD LENGTH OF 419.14 FEET AND A CHORD BEARING OF SOUTH 89 DEGREES 29 MINUTES 55 SECONDS EAST, TO THE TRANSITIONAL RIGHT-OF-WAY LINE BETWEEN TAFT AVENUE AND NICOLL WAY AS SHOWN ON SAID ROOSEVELT HILLS PLAT, SAID POINT ALSO BEING ON A NON-TANGENT CURVE CONCAVE TO THE SOUTHWEST; THENCE EASTERLY AND SOUTHEASTERLY 27.15 FEET ALONG SAID CURVE, HAVING A RADIUS OF 25.00 FEET, A CHORD LENGTH OF 25.84 FEET AND A CHORD BEARING OF SOUTH 58 DEGREES 07 MINUTES 24 SECONDS EAST, TO THE SOUTHWESTERN RIGHT OF WAY LINE OF SAID NICOLL WAY, SAID POINT ALSO BEING ON A CURVE CONCAVE TO THE NORTHEAST; THENCE SOUTHEASTERLY 120.93 FEET ALONG SAID RIGHT OF WAY LINE AND ALONG SAID CURVE, HAVING A RADIUS OF 408.07 FEET, A CHORD LENGTH OF 120.63 FEET AND A CHORD BEARING OF SOUTH 31 DEGREES 56 MINUTES 17 SECONDS EAST, TO A POINT ON A CURVE BEND CONCAVE TO THE SOUTHWEST; THENCE SOUTHEASTERLY 185.18 FEET ALONG SAID RIGHT OF WAY LINE AND ITS SOUTHEASTERLY EXTENSION AND ALONG SAID CURVE TO THE RIGHT, HAVING A RADIUS OF 1,207.24 FEET, A CHORD LENGTH OF 184.98 FEET AND A CHORD BEARING OF SOUTH 34 DEGREES 26 MINUTES 07 SECONDS EAST TO THE POINT OF BEGINNING IN DUPAGE COUNTY, ILLINOIS.




PIN'S
05-23-204-009 (PART OF)
05-23-204-010
05-23-204-012
05-23-204-013
05-23-204-016
05-23-204-017
05-23-204-019
05-23-204-020
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05-23-204-026
05-23-204-027
05-23-204-028
05-23-204-029

N

0 20' 40' 80'
Scale 1" = 40'

BASIS OF BEARINGS:
ILLINOIS STATE PLANE COORDINATES EAST ZONE NAD83

LINE TABLE:

| LINE No. | LENGTH | BEARING |
|---|---|---|
| L2 | 42.53' | S 03°58'56" E |
| L3 | 41.73' | S 14°00'52" E |
| L4 | 33.83' | S 28°08'29" E |

PLAN COMMISSION CERTIFICATE
STATE OF ILLINOIS } SS
COUNTY OF DUPAGE }

APPROVED BY THE PLAN COMMISSION OF THE VILLAGE OF GLEN ELLYN, DUPAGE COUNTY, ILLINOIS, THIS 20TH DAY OF NOVEMBER 2005.

SIGNED [signature] CHAIRMAN
ATTEST [signature] RECORDING SECRETARY

VILLAGE BOARD CERTIFICATION
STATE OF ILLINOIS } SS
COUNTY OF DUPAGE }

APPROVED BY THE PRESIDENT AND VILLAGE BOARD OF THE VILLAGE OF GLEN ELLYN, DUPAGE COUNTY, ILLINOIS, THIS 23 DAY OF January, 2006.

SIGNED Vickie Kase PRESIDENT
ATTEST Andrea Dratths CLERK

I, Andrea Dratths VILLAGE CLERK OF THE VILLAGE OF GLEN ELLYN, ILLINOIS, DO HEREBY CERTIFY THAT THE ANNEXED PLAT WAS PRESENTED TO AND BY ORDINANCE DULY APPROVED BY THE VILLAGE BOARD OF THE VILLAGE OF GLEN ELLYN, AT ITS MEETING HELD ON January 23, A.D. 2006 IN WITNESS WHEREOF I HAVE HEREUNTO SET THE SEAL OF THE VILLAGE OF GLEN ELLYN, ILLINOIS.

Andrea Dratths
VILLAGE CLERK

VILLAGE OF GLEN ELLYN 1854

CERTIFICATE OF OWNER
STATE OF ILLINOIS } SS
COUNTY OF DUPAGE }

THIS IS TO CERTIFY THAT THE UNDERSIGNED IS THE OWNER OF THE LAND DESCRIBED IN THE ANNEXED PLAT AND THAT HE HAS CAUSED THE SAME TO BE SURVEYED AND SUBDIVIDED AS INDICATED THEREON, FOR THE USES AND PURPOSES THEREIN SET FORTH, AND DOES HEREBY ACKNOWLEDGE AND ADOPT THE SAME UNDER THE STYLE AND TITLE THEREON INDICATED.

I HEREBY DEDICATE FOR PUBLIC USE THE LANDS SHOWN ON THIS PLAT FOR THOROUGHFARES, STREETS, ALLEYS, AND FACILITIES; AND I HEREBY ALSO RESERVE FOR THAT COMPANY OR COMPANIES WHICH HAVE BEEN GRANTED BY THE VILLAGE OR OTHER ENTITIES WITH THE POWER TO DO SO, FRANCHISES WITHIN THE VILLAGE FOR UTILITY SERVICES, INCLUDING NATURAL GAS, ELECTRICITY, TELEPHONE, WATER, SEWER, CABLE AND OTHER SIMILAR ENTITIES THE EASEMENT PROVISIONS WHICH ARE STATED ON THEIR STANDARD FORM, WHICH IS ATTACHED HERETO.

THIS IS TO CERTIFY, AS OWNER OF THE PROPERTY DESCRIBED HEREON AND LEGALLY DESCRIBED ON THE PLAT, THAT I HAVE DETERMINED TO THE BEST OF MY KNOWLEDGE AND BELIEF THAT EACH OF THE SUBJECT LOTS LIE WHOLLY WITHIN COMMUNITY CONSOLIDATED SCHOOL DISTRICT 89 AND HIGH SCHOOL DISTRICT 87.

SIGNED: [signature] PRESIDENT
Kingsbrook Glen, LLC
2150 Manchester Rd
Wheaton, IL 60187
(ADDRESS)

DATED THIS 22nd DAY OF May A.D. 2006

CERTIFICATE OF NOTARY
STATE OF ILLINOIS } SS
COUNTY OF DUPAGE }

I, Melanie B. Young A NOTARY PUBLIC IN AND FOR SAID COUNTY, IN THE STATE AFORESAID, DO HEREBY CERTIFY THAT [illegible] PERSONALLY KNOWN TO ME TO BE THE SAME PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT AS SUCH OWNER APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGE THAT THEY SIGNED THE ANNEXED PLAT AS THEIR OWN FREE AND VOLUNTARY ACT FOR THE USES AND PURPOSES THEREIN SET FORTH.

GIVEN UNDER MY HAND AND NOTARIAL SEAL THIS 22nd DAY OF May A.D. 2006.

Melanie B. Young
NOTARY PUBLIC

"OFFICIAL SEAL" MELANIE B. YOUNG COMMISSION EXPIRES [illegible]

MORTGAGEE'S CERTIFICATE
STATE OF ILLINOIS } SS
COUNTY OF DUPAGE }

Wheaton Bank + Trust HEREBY CERTIFIES THAT AS MORTGAGEE'S OF THE PROPERTY DESCRIBED HEREON UNDER MORTGAGE DATED MAY 22, 2006 AND RECORDED IN THE RECORDER'S OFFICE AT DuPage County ILLINOIS AND RECORDED ON [illegible] AS DOCUMENT [illegible], IT CONSENTS TO THE DEDICATION AND SUBDIVISION AS HEREON DRAWN.

DATED THIS 22nd DAY OF MAY 2006.

BY [signature] TITLE Senior Vice President
ATTEST [signature] TITLE Officer

CERTIFICATE OF NOTARY
STATE OF ILLINOIS } SS
COUNTY OF DUPAGE }

I, Josefina F. Tiongco A NOTARY PUBLIC IN AND FOR SAID COUNTY, IN THE STATE AFORESAID, DO HEREBY CERTIFY THAT Scott A. [illegible] PERSONALLY KNOWN TO ME TO BE THE SAME PERSONS WHOSE NAMES ARE SUBSCRIBED TO THE FOREGOING INSTRUMENT AS SUCH MORTGAGEE(S), APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGE THAT THEY SIGNED THE ANNEXED PLAT AS THEIR OWN FREE AND VOLUNTARY ACT FOR THE USES AND PURPOSES THEREIN SET FORTH.

GIVEN UNDER MY HAND AND NOTARIAL SEAL THIS 22 DAY OF MAY A.D. 2006.

Josefina F. Tiongco
NOTARY PUBLIC

OFFICIAL SEAL [illegible]

VILLAGE ENGINEER'S CERTIFICATE AS TO STREETS, DOMESTIC WATER AND SANITARY SEWER SYSTEMS
STATE OF ILLINOIS } SS
COUNTY OF DUPAGE }

I, [signature], VILLAGE ENGINEER OF THE VILLAGE OF GLEN ELLYN, DO HEREBY CERTIFY TO THE BEST OF MY KNOWLEDGE AND BELIEF THAT ALL MATTERS PERTAINING TO PLAT REQUIREMENTS AS PRESCRIBED IN THE REGULATIONS GOVERNING PLATS ADOPTED BY THE VILLAGE BOARD OF THE VILLAGE OF GLEN ELLYN, ILLINOIS, INSOFAR AS THEY PERTAIN TO THE SUBJECT PLAT, HAVE BEEN COMPLIED WITH. I FURTHER CERTIFY, TO THE BEST OF MY KNOWLEDGE AND BELIEF THAT THE REQUIRED PERFORMANCE SECURITY IS POSTED FOR THE COMPLETION OF THE IMPROVEMENTS COVERING SANITARY SEWERAGE SYSTEM AND DOMESTIC WATER SUPPLY AND TRANSMISSION SYSTEM UNDER THE JURISDICTION OF THE VILLAGE OF GLEN ELLYN, BASED ON ENGINEER'S PLANS AND SPECIFICATIONS PREPARED BY A LICENSED ENGINEER AND APPROVED BY ALL PUBLIC AUTHORITIES HAVING JURISDICTION, EXCEPT NONE. I FURTHER CERTIFY THAT THE STREET NAMES HAVE BEEN EXAMINED BY ME AND FOUND TO COMPLY WITH THE VILLAGE OF GLEN ELLYN REGULATIONS.

DATED AT GLEN ELLYN, DUPAGE COUNTY, ILLINOIS, THIS 20th DAY OF July A.D. 2006.

[signature]
VILLAGE ENGINEER

JACOB & HEFNER ASSOCIATES, P.C.
ENGINEERS · SURVEYORS
1901 S. Meyers Road Suite 300
Oakbrook Terrace, IL 60181
(630) 942-0000 FAX (630) 942-1774
ILLINOIS PROFESSIONAL DESIGN FIRM
LICENSE NO. 184-000000 EXP. 4/30/07

OWNER/DEVELOPER
KINGSLAND DEVELOPMENT CORP.
2150 MANCHESTER ROAD, SUITE [illegible]
WHEATON, IL 60187

NOTES:

1/2" IRON RODS WILL BE SET AT ALL CORNERS UNLESS OTHERWISE NOTED

■ INDICATES CONCRETE MONUMENT TO BE SET.

BUILDING SET BACK LINES OF 35 FEET AND PUBLIC UTILITY EASEMENTS OVER THE REAR 5 FEET OF LAND AS RESERVED IN THE CERTIFICATE APPENDED TO AND ON THE PLAT OF ROOSEVELT HILLS RECORDED AS DOCUMENT NUMBER 228777 ARE HEREBY ABROGATED.

CURVE TABLE:

| CURVE No. | RADIUS | ARC | CHORD BEARING | CHORD | DELTA ANGLE |
|---|---|---|---|---|---|
| C1 | 70.00' | 70.32' | N 33°13'24" W | 67.47' | 57°37'07" |
| C2 | 10.00' | 10.06' | S 33°13'24" E | 9.64' | 57°37'07" |
| C3 | 70.00' | 16.62' | N 11°39'38" W | 16.47' | 13°36'50" |
| C4 | 70.00' | 18.04' | N 25°57'21" W | 17.99' | 14°46'02" |
| C5 | 70.00' | 19.91' | N 41°52'33" W | 19.36' | 16°04'22" |
| C6 | 70.00' | 15.47' | N 55°43'20" W | 15.30' | 12°37'15" |
| C7 | 328.00' | 16.79' | N 63°40'24" W | 13.78' | 03°78'24" |
| C8 | 328.00' | 34.10' | N 68°17'33" W | 34.00' | 05°57'24" |
| C9 | 328.00' | 28.84' | N 73°17'24" W | 28.83' | 05°02'17" |
| C10 | 328.00' | 10.00' | N 77°10'37" W | 10.00' | 01°44'49" |
| C11 | 328.00' | 30.17' | N 80°41'27" W | 30.16' | 05°16'12" |
| C12 | 328.00' | 34.05' | N 86°15'06" W | 34.04' | 05°56'56" |
| C13 | 328.00' | 34.07' | S 87°44'09" W | 34.05' | 05°57'03" |
| C14 | 328.00' | 34.05' | S 81°43'36" W | 34.03' | 06°05'15" |
| C15 | 328.00' | 5.00' | S 79°15'01" W | 5.00' | 00°52'23" |
| C16 | 328.00' | 34.31' | S 74°46'01" W | 34.29' | 05°59'36" |
| C17 | 575.00' | 0.85' | S 71°50'54" W | 0.85' | 00°05'23" |
| C18 | 575.00' | 24.01' | S 73°00'45" W | 24.01' | 02°23'36" |
| C19 | 575.00' | 24.06' | S 75°28'42" W | 24.06' | 02°23'54" |
| C20 | 575.00' | 33.88' | S 73°03'40" W | 33.87' | 02°51'00" |
| C21 | 575.00' | 23.26' | S 80°28'33" W | 23.26' | 01°38'27" |
| C22 | 735.00' | 31.42' | N 79°53'04" E | 31.40' | 04°00'28" |
| C23 | 735.00' | 28.03' | N 75°47'34" E | 28.03' | 02°11'07" |
| C24 | 735.00' | 11.22' | N 73°15'28" E | 11.22' | 00°52'30" |
| C25 | 258.00' | 13.83' | N 75°17'58" E | 13.83' | 02°57'25" |
| C26 | 258.00' | 25.01' | N 77°27'03" E | 25.00' | 05°30'41" |
| C27 | 258.00' | 28.20' | N 83°09'21" E | 28.19' | 06°01'45" |
| C28 | 258.00' | 58.94' | S [illegible] E | [illegible] | [illegible] |
| C29 | 258.00' | 25.10' | S 79°[illegible]'42" E | 25.0[illegible]' | [illegible] |
| C30 | 258.00' | 25.03' | S 73°32'02" E | 25.01' | [illegible] |
| C31 | 258.00' | 25.17' | S 68°20'09" E | 25.16 | [illegible] |
| C32 | 248.00' | 17.68' | S 65°35'20" E | 17.67 | [illegible] |
| C33 | 248.00' | 7.20' | N 85°34'18" E | 7.50' | [illegible] |
| C34 | 248.00' | 7.05' | S [illegible]°[illegible]'41" E | 7.05' | [illegible] |

CERTIFICATE OF COUNTY CLERK
STATE OF ILLINOIS } SS
COUNTY OF DUPAGE }

I, Gary A. King COUNTY CLERK OF DUPAGE COUNTY, ILLINOIS, DO HEREBY CERTIFY THAT THERE ARE NO DELINQUENT GENERAL TAXES, NO UNPAID CURRENT GENERAL TAXES, NO UNPAID SPECIAL TAXES, NO UNPAID FORFEITED TAXES AND NO REDEEMABLE TAX SALES AGAINST ANY OF THE PROPERTY DESCRIBED HEREON. I FURTHER CERTIFY THAT I HAVE RECEIVED ALL STATUTORY FEES IN CONNECTION WITH THE PROPERTY DESCRIBED HEREON. GIVEN UNDER MY HAND AND SEAL AT [illegible], DUPAGE COUNTY, ILLINOIS, THIS [illegible] DAY OF [illegible] A.D. 2006

[signature]
COUNTY CLERK

Document No. R2006-159398
Filed For Record in Recorder's Office Of Du Page County, Illinois
On Aug 17, 2006 At 10:27 A.M.
[signature]

"Ord 5430"
See Doc. R2006-159398

CERTIFICATE AS TO SPECIAL ASSESSMENTS
STATE OF ILLINOIS } SS
COUNTY OF DUPAGE }

I, Andrea Dratths VILLAGE COLLECTOR OF THE VILLAGE OF GLEN ELLYN, DO HEREBY CERTIFY THAT THERE ARE NO DELINQUENT OR UNPAID CURRENT OR FORFEITED SPECIAL ASSESSMENTS OR ANY DEFERRED INSTALLMENTS THEREOF THAT HAVE BEEN APPORTIONED AGAINST THE TRACT OF LAND INCLUDED IN THE PLAT.

DATED AT GLEN ELLYN, DUPAGE COUNTY, ILLINOIS, THIS 28 DAY OF April A.D. 2006

Andrea Dratths
VILLAGE COLLECTOR

SUBMITTED BY AND MAIL TO:
VILLAGE CLERK
VILLAGE OF GLEN ELLYN
535 DUANE ST.
GLEN ELLYN, IL 60137

PUBLIC UTILITY EASEMENT PROVISIONS

AN EASEMENT FOR SERVING THE SUBDIVISION AND OTHER PROPERTY WITH UTILITY SERVICE IS HEREBY RESERVED FOR AND GRANTED TO:

NORTHERN ILLINOIS GAS
AND
COMMONWEALTH EDISON COMPANY
AND
AMERITECH ILLINOIS A.K.A. ILLINOIS BELL TELEPHONE COMPANY, GRANTEES

THEIR RESPECTIVE LICENSEES, SUCCESSORS AND ASSIGNS, JOINTLY AND SEVERALLY, TO CONSTRUCT, OPERATE, REPAIR, MAINTAIN, MODIFY, RECONSTRUCT, REPLACE, SUPPLEMENT, RELOCATE AND REMOVE, FROM TIME TO TIME, POLES, GUYS, ANCHORS, WIRES, CABLES, CONDUITS, MANHOLES, TRANSFORMERS, PEDESTALS, EQUIPMENT CABINETS OR OTHER FACILITIES USED IN CONNECTION WITH OVERHEAD AND UNDERGROUND TRANSMISSION AND DISTRIBUTION OF ELECTRICITY, COMMUNICATIONS, SOUNDS AND SIGNALS IN, OVER, UNDER, ACROSS, ALONG AND UPON THE SURFACE OF THE PROPERTY SHOWN WITHIN THE DASHED OR DOTTED LINES (OR SIMILAR DESIGNATION) ON THE PLAT AND MARKED "EASEMENT", "UTILITY EASEMENT", "PUBLIC UTILITY EASEMENT", "P.U.E." (OR SIMILAR DESIGNATION), AND THE PROPERTY DESIGNATED ON THE PLAT FOR STREETS AND ALLEYS, WHETHER PUBLIC OR PRIVATE, TOGETHER WITH THE RIGHT TO INSTALL REQUIRED SERVICE CONNECTIONS OVER OR UNDER THE SURFACE OF EACH LOT AND COMMON AREA OR AREAS TO SERVE IMPROVEMENTS THEREON, OR ON ADJACENT LOTS, AND COMMON AREA OR AREAS, THE RIGHT TO CUT, TRIM OR REMOVE TREES, BUSHES, ROOTS, AND SAPLINGS AND TO CLEAR OBSTRUCTIONS FROM SURFACE AND SUBSURFACE AS MAY BE REASONABLY REQUIRED INCIDENT TO THE RIGHTS HEREIN GIVEN, AND THE RIGHT TO ENTER UPON THE SUBDIVIDED PROPERTY FOR ALL SUCH PURPOSES. OBSTRUCTIONS SHALL NOT BE PLACED OVER GRANTEES' FACILITIES OR IN, UPON OR OVER THE PROPERTY WITHIN THE DASHED OR DOTTED LINES (OR SIMILAR DESIGNATION) MARKED "EASEMENT", "UTILITY EASEMENT", "PUBLIC UTILITY EASEMENT", "P.U.E." (OR SIMILAR DESIGNATION) WITHOUT THE PRIOR WRITTEN CONSENT OF GRANTEES. AFTER INSTALLATION OF ANY SUCH FACILITIES, THE GRADE OF THE SUBDIVIDED PROPERTY SHALL NOT BE ALTERED IN A MANNER SO AS TO INTERFERE WITH THE PROPER OPERATION AND MAINTENANCE THEREOF.

DRAINAGE AND BUFFER CONSERVATION EASEMENT PROVISIONS

A NON-EXCLUSIVE EASEMENT FOR THE PROTECTION OF UNIQUE AREAS SUCH AS, BUT NOT LIMITED TO, WETLANDS, FENS, MARSHES, SWAMPS, STREAMS, CREEKS, PONDS, LAKES, WOODS AND PRAIRIES OVER AND UPON THOSE AREAS OF LAND DESIGNATED "DRAINAGE AND CONSERVATION EASEMENT" ON THE PLAT HEREON DRAWN IS HEREBY GRANTED TO THE HOMEOWNERS ASSOCIATION, ITS SUCCESSORS AND ASSIGNS FOR THE FOLLOWING PURPOSES:

A. TO ACCEPT AND CONDUCT SURFACE WATER DISCHARGES FROM ADJACENT UPSTREAM PROPERTY, INCLUDING ANY NECESSARY STORM SEWER PIPES & APPURTENANCES;

B. TO PRESERVE SAID LAND IN ITS NATURAL, SCENIC AND OPEN CONDITION, AND;

C. THE VILLAGE OF GLEN ELLYN SHALL RETAIN THE RIGHT BUT NOT THE DUTY TO ENTER SAID LAND AT ALL REASONABLE TIMES FOR THE PURPOSE OF INSPECTING SAID LAND TO DETERMINE IF THE GRANTOR, OR HIS HEIRS OR ASSIGNS, IS COMPLYING WITH THE COVENANTS AND PURPOSES OF THE GRANT. THE VILLAGE SHALL ALSO HAVE THE RIGHT TO PERFORM MAINTENANCE OF SAID FACILITY TO INSURE PROPER FUNCTION THEREOF.

IN FURTHERANCE OF THE FOREGOING AFFIRMATIVE RIGHTS, THE GRANTOR MAKES THE FOLLOWING COVENANTS/RESTRICTIONS ON BEHALF OF HIMSELF, HIS HEIRS AND ASSIGNS, WHICH COVENANTS/RESTRICTIONS SHALL RUN WITH SAID LAND IN PERPETUITY:

A. THERE SHALL BE NO DREDGED OR FILL MATERIAL PLACED UPON SAID LAND.

B. THERE SHALL BE NO FENCES, BUILDINGS OR STRUCTURES, INCLUDING SIGNS CONSTRUCTED UPON SAID LAND, EXCEPT FOR UTILITIES AND APPURTENANCES THEREOF WHICH HAVE CERTAIN UNDERLYING EASEMENT RIGHTS WITHIN THE UTILITY EASEMENTS GRANTED HEREIN.

C. THERE SHALL BE NO REMOVAL OR DESTRUCTION OF LIVING TREES AND PLANTS ON SAID LAND, EXCEPT FOR THE INSTALLATION AND MAINTENANCE OF UTILITIES CONSTRUCTED THEREIN.

D. THERE SHALL BE NO FLOWING OF SAID LAND NOR SHALL THERE BE ANY MINING, REMOVAL OF TOPSOIL, SAND, ROCK, GRAVEL, MINERALS OR OTHER MATERIAL FROM SAID LAND, EXCEPT FOR ANY ACTIVITY NECESSARY FOR THE INSTALLATION OR MAINTENANCE OF UTILITIES CONSTRUCTED THEREIN.

E. THERE SHALL BE NO GRAZING OR KEEPING OF LIVESTOCK OR DOMESTIC ANIMALS OF ANY KIND ON SAID LAND, AND;

F. THERE SHALL BE NO OPERATION OF SNOWMOBILES, DUNE BUGGIES, MOTORCYCLES, ALL-TERRAIN VEHICLES OR ANY OTHER TYPES OF MOTORIZED VEHICLES ON SAID LAND, EXCEPT FOR MACHINERY NEEDED FOR INSTALLATION OR MAINTENANCE OF UTILITIES CONSTRUCTED THEREIN.

G. PERSONS ARE PROHIBITED TO DISCARD RUBBISH OF ANY KIND, INCLUDING LAWN CLIPPINGS, IN THE DEDICATED AREA;

H. PERSONS ARE PROHIBITED TO PLANT OR DISPERSE ANY NATIVE OR NON-NATIVE PLANT SPECIES OR THEIR PARTS INTO THE DEDICATED AREA WITHOUT WRITTEN APPROVAL OF THE HOMEOWNERS ASSOCIATION OR AUTHORIZED AGENT;

I. PERSONS ARE PROHIBITED TO SPREAD FERTILIZER OR HERBICIDES WITHIN 25 FEET OF THE WETLAND OTHER THAN FOR ATTAINMENT OF SPECIFIC VEGETATION MANAGEMENT GOALS TO MEET AND MAINTAIN PERFORMANCE STANDARDS. IF USED TO CONTROL NOXIOUS WEEDS AND NON-NATIVE PLANT SPECIES, HERBICIDES WILL BE APPLIED ONLY UPON CONSULTATION WITH A LICENSED HERBICIDE APPLICATOR.

J. MODIFICATIONS ARE PROHIBITED TO THE HYDROLOGY OF THE RESTRICTED PROPERTY THAT WOULD ALLOW MORE WATER ONTO OR THAT WOULD DRAIN WATER AWAY FROM THE RESTRICTED PROPERTY OTHER THAN OUTLINED IN THE PERMITTED ACTION. SUCH MODIFICATIONS INCLUDE, BUT NOT LIMITED TO, DITCHING, CHANGES TO WATER CONTROL STRUCTURES, REPAIRING OF DRAINAGE TILES, OR ALTERATION TO ANY NATURALLY OCCURRING STRUCTURES.

SAID "DRAINAGE AND BUFFER CONSERVATION EASEMENT" MAY BE CHANGED, MODIFIED OR ABROGATED ONLY UPON WRITTEN APPROVAL OF SAID VILLAGE OF GLEN ELLYN. EXCEPT AS EXPRESSLY LIMITED HEREIN, THE GRANTOR RESERVES FOR HIMSELF, HIS HEIRS AND ASSIGNS, ALL RIGHTS AS OWNER OF SAID LAND, INCLUDING THE RIGHT OF USE OF SAID LAND FOR ALL PURPOSES NOT INCONSISTENT WITH THIS GRANT. DRAINAGE AND CONSERVATION EASEMENT SUBJECT TO THE PUBLIC UTILITY AND DRAINAGE EASEMENT PROVISIONS GRANTED AND DEFINED HEREON.

SURVEYOR'S CERTIFICATE
STATE OF ILLINOIS } SS
COUNTY OF DUPAGE }

THIS IS TO CERTIFY THAT I, DOUGLAS R. McCLINTIC, LICENSED ILLINOIS LAND SURVEYOR NO. 35-2892, HAVE SURVEYED AND SUBDIVIDED THE HEREON DESCRIBED PROPERTY AS SHOWN BY THE ANNEXED PLAT WHICH IS A CORRECT REPRESENTATION OF SAID SURVEY AND SUBDIVISION. ALL DISTANCES ARE SHOWN IN FEET AND DECIMALS THEREOF. I FURTHER CERTIFY THAT ALL REGULATIONS ENACTED BY THE VILLAGE BOARD RELATIVE TO PLATS AND SUBDIVISIONS HAVE BEEN COMPLIED WITH IN THE PREPARATION OF THIS PLAT.

I FURTHER CERTIFY THAT THE PROPERTY DESCRIBED AND SHOWN ON THE PLAT HEREON DRAWN IS WITHIN THE CORPORATE LIMITS OF THE VILLAGE OF GLEN ELLYN, ILLINOIS, WHICH HAS ADOPTED A COMPREHENSIVE VILLAGE PLAN AND IS EXERCISING THE SPECIAL POWERS AUTHORIZED BY DIVISION 12 OF ARTICLE 11 OF THE ILLINOIS MUNICIPAL CODE AS HERETOFORE AND HEREAFTER AMENDED.

I FURTHER CERTIFY THAT A PORTION OF THE PROPERTY SHOWN HEREON APPEARS TO BE LOCATED IN ZONE AH (FLOOD DEPTHS OF 1 TO 3 FEET, USUALLY AREAS OF PONDING) ACCORDING TO THE FLOOD INSURANCE RATE MAP COMMUNITY-PANEL NUMBER 17043C0000H WITH AN EFFECTIVE DATE OF DECEMBER 16, 2004.

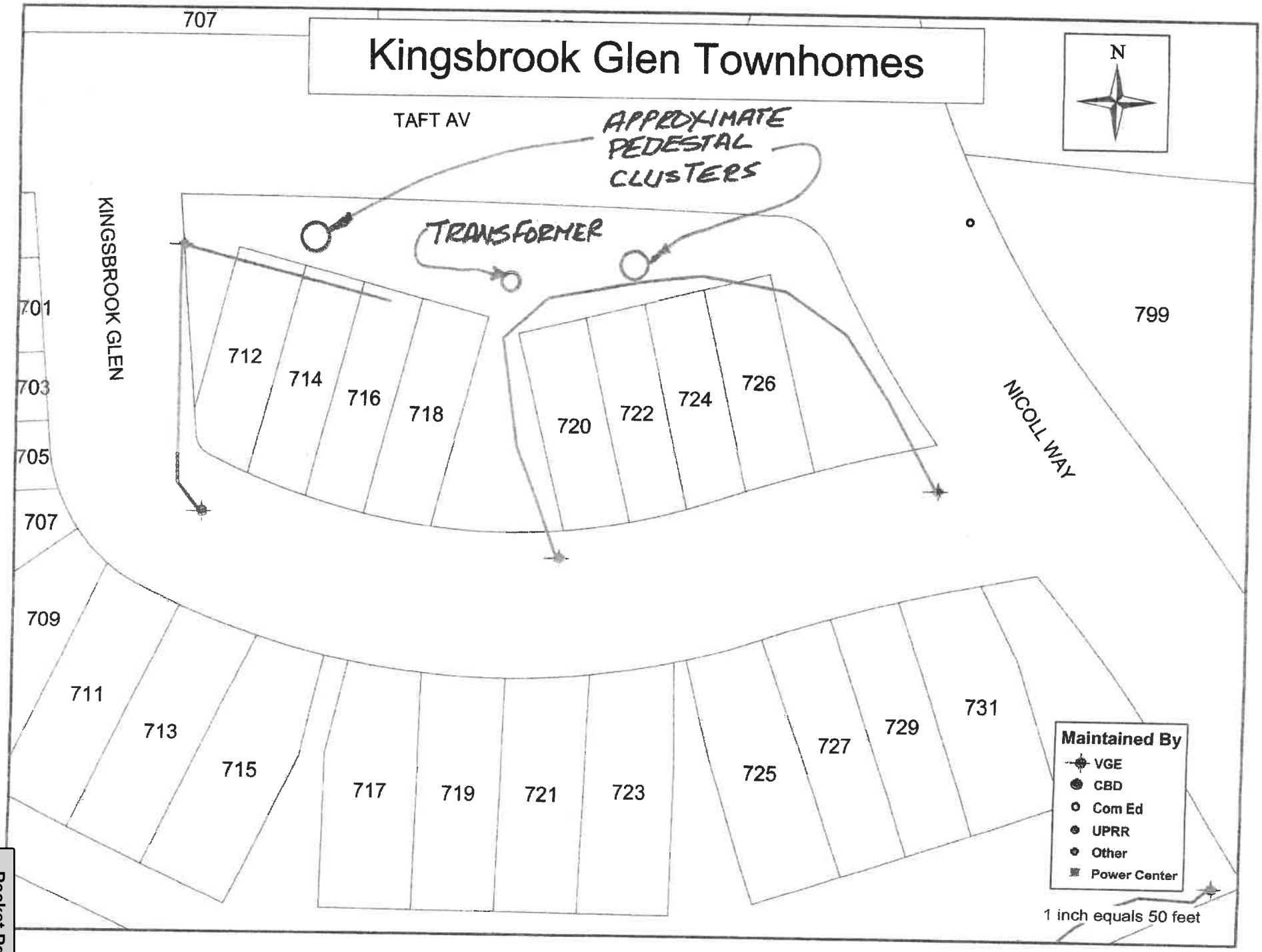
GIVEN UNDER MY HAND AND SEAL THIS 26th DAY OF JANUARY, A.D. 2006.

[signature]
ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 35-2892

DOUGLAS R. McCLINTIC 35-002892 PROFESSIONAL LAND SURVEYOR STATE OF ILLINOIS Expires 11-30-06

REV: 01-26-06 Certification Year Dates
REV: 11-22-05 Widen sidewalk easement from 5 to 7 feet wide
REV: 10-11-05 Location of 10' PUE then Conservation Easement
REV: 10-04-05 Per Village Comments

| SURVEY NUMBER | C980 | | |
|---|---|---|---|
| ORDERED BY | KINGSLAND DEVELOPMENT CORP. | | |
| DESCRIPTION | FINAL PLAT OF SUBDIVISION | | |
| DATE PREPARED | AUGUST 18, 2005 | | |
| SCALE | 1" = 40' | CHECKED BY | TW / JA |
| PREPARED BY | JSB | FIELD CREW | N/A |
| SHEET NUMBER | 01 OF 01 | FIELD WORK COMPLETED | N/A |


Kingsbrook Glen Townhomes
N
TAFT AV
APPROXIMATE PEDESTAL CLUSTERS
TRANSFORMER
KINGSBROOK GLEN
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729
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Maintained By
VGE
CBD
Com Ed
UPRR
Other
Power Center
1 inch equals 50 feet

## Mike Nickels

**From:** Aldo Maldonado Vaca <Aldo.Maldonado@graybar.com>
**Sent:** Monday, November 04, 2019 2:59 PM
**To:** Mike Nickels
**Subject:** AVPL2

Hi Mike,

Just heard back from Holophane, we can keep the $442 price on the fixtures for the new additions to the subdivision - AVPL2 20LEDE10 MVOLT 3K R2 AY PCLL TL. Let me know when you know about the poles and we can get working on it. Let me know if you have any questions.

Thank you sir,
Aldo

**Aldo T Maldonado Vaca** | Outside Sales Representative
Glendale Heights, IL | Office (630) 671-6306 | Mobile (630) 917-8180
www.graybar.com

KSA
LIGHTING & CONTROLS

# Quote

**Job Name:** GLEN ELLYN, IL
**Quote #:** 19-37989-2
**Quote Label:** 11/1
**Issue Date:** 11/1/2019
**Good Through:** 8/8/2019
**Quoted By:** Bach, Kelly

**KSA LIGHTING INC**
1220 CENTRAL AVE
HANOVER PARK, IL 60133-5420
(Phn) 630-307-6955 EXT:
(Fax) 630-307-6965

**Quoted To:** KSA LIGHTING INC
1220 CENTRAL AVE
HANOVER PARK, IL 60133-5420

| Type | Qty | Manufacturer/Brand | Catalog # | Line Comment | Unit $ | Ext $ |
|---|---|---|---|---|---|---|
| | | | **10 - 12 WEEKS** | | | |
| | 1 | Sternberg Lighting | 2114TFP5-LR/BK<br>SIMILAR TO PREV ORDER C47425-2 - ADD LADDER REST<br>14' ALUMINUM POLE ASSEMBLY W/ROUND, FLUTED, TAPERED (5"-3" OD) SHAFT & DECORATIVE BASE<br>LR: LADDER REST * TO MATCH PREV ORDER C16490-2<br>ANCHOR BOLTS & TEMPLATE INCLUDED<br>BK: SMOOTH BLACK FINISH | | $2,436.00 | $2,436.00 |

**Grand Total: $2,436.00**

**Notes**

* Lamps NOT Included Except as Noted
* Manufacturer's Standard Freight Terms and Conditions for Sale Apply
* Any deviation voids this quote.
* Alternate Fixtures are not included in the total.
* Final confirmation of quantities and design intent is the responsibility of the contractor.
* Subject to approval; No plans or specs were provided at bid time.
* Certain assumptions have been made to assemble a functional system from the supplied documents. Final verification that all necessary equipment has been specified and ordered is the responsibility of the specifier/contractor. Please read the accompanying Bill of Materials carefully to verify that all items are correct.
* Please reference KSA quote number on purchase order.
* A set of submittals marked "Approved as Noted", or KSA Release Waiver Form, will be required for all project orders.
* Partial releases are subject to additional freight charges.
* Linear product over eight foot runs will require Factory Drawings approved. Distributor Hold For Release po is required to get factory drawings - which can take 1-2 weeks. Order will not be released to production until factory drawings are approved. Standard catalog cuts/specs will NOT be accepted.
* KSA does not take responsibility for accuracy of submittals unless they are done by KSA or reviewed by KSA prior to submitting.
* All control products will require submittal sets generated by KSA. Full Submittal sets are available upon receipt of HFR Purchase orders and require approximately 2 weeks to produce. Device color, voltage and counts must be verified prior to project release.

KSA
LIGHTING & CONTROLS

# Quote

**Job Name:** GLEN ELLYN, IL
**Quote #:** 19-37989-2
**Quote Label:** 11/1
**Issue Date:** 11/1/2019
**Good Through:** 8/8/2019
**Quoted By:** Bach, Kelly



## Notes

* nLight devices require CAT 5 cable connections between devices. 1500 ft max cable length per zone. The preferred CAT 5 cable pin out for the nLight network is T568B.

## Freight/Order Terms

| | | | | |
|---|---|---|---|---|
| Sternberg Lighting: | All shipments will be FOB origin. Most orders will be shipped common carrier and freight prepaid (freight allowed) by Sternberg. Consult factory quotation for the specific freight terms. $50.00 minimum order.<br>Sternberg Lighting Terms of Sale:<br>1) Freight terms: Full freight allowed for one shipment & quoted quantities.<br>2) All orders $10,000.00 and over require approved drawings prior to release.<br>3) Price good until expiration date. Lamps not included unless noted in part number.<br>4) Sternberg Lighting reserves the right to correct any typographical errors.<br>5) Cancellation of released purchase orders are subject to a 50% cancellation fee. | Freight Minimum: | Always Covered | Qualifies: Yes |
| | | Order Minimum: | $50.00 | Qualifies: Yes |

# UTILITY DYNAMICS CORPORATION

23 COMMERCE DRIVE
OSWEGO, ILLINOIS 60543
e-mail: contact@utilitydynamicscorp.com

PHONE:
(630) 554-1722
FAX (630) 554-1195

ELECTRICAL CONTRACTORS • OVERHEAD LINE CONSTRUCTION • UNDERGROUND DISTRIBUTION SYSTEMS

December 14, 2019 #19-171

Village of Glen Ellyn
Reno Public Works Facility
30 S. Lambert Road
Glen Ellyn, IL 60137

Attn: Mike Zitzka
Fax: 630-469-3128

Subject: Proposal – Taft Ave. Lighting

Mike:

Utility Dynamics Corp. (UDC) is pleased to provide the Village of Glen Ellyn (VOGE) with our proposal for the above referenced project. Our pricing is listed on the enclosed page. Please note that this proposal is based upon our preliminary design and design assumptions, and is subject to revision based upon final design determinations by the VOGE.

The following clarifications are applicable:

1. The VOGE is to supply the new light standards.
2. All work is to be done during our normal straight time hours.
3. We do not include any bonds, permits, license or special fees.
4. We do not include payment or performance bonds.
5. UDC's standard insurance coverage applies.
6. Pricing is valid for acceptance within 15 days from the date of this proposal. UDC reserves the right to extend the acceptance period, with necessary adjustments.
7. Pricing is based upon the work being available for completion prior to the end of summer, 2020.
8. Payment terms are Net 30 days. No retention to be withheld.

Thank you for the opportunity to quote on this project. We look forward to the prospects of working with the VOGE on this project.

Please contact us if you have any questions regarding this proposal.

Sincerely,
Utility Dynamics Corp.

Philip A. Whalen

Encl (1)

Utility Dynamics Corp.
Oswego, IL

12/13/2019
#19-171

Village of Glen Ellyn - Taft Avenue Lighting
Glen Ellyn, IL

**KINGSBROOK**

| Bid Item | Description | Unit | Qty | Unit Price | Total |
|---|---|---|---|---|---|
| 1 | Helix Foundation | EA | 3 | $825.00 | $2,475.00 |
| 2 | 1" HDPE, Via Directional Bore Method | LF | 380 | $11.00 | $4,180.00 |
| 3 | 1/C #6 Cu. XLP-USE | LF | 830 | $1.60 | $1,328.00 |
| 4 | 1/C #8 Cu. XLP-USE | LF | 415 | $1.35 | $560.25 |
| 5 | Composite Handhole, 11 x 18 x 12 | L SUM | 1 | $500.00 | $500.00 |
| 6 | Light Standard, Post Top, LED - Supplied by the VOGE | EA | 3 | $1,300.00 | $3,900.00 |
| 7 | Connect to Ex. Street Light | EA | 1 | $1,100.00 | $1,100.00 |
| 8 | | | | | |
| | TOTAL | | | | $14,043.25 |

**Fire Sta. #2**

| Bid Item | Description | Unit | Qty | Unit Price | Total |
|---|---|---|---|---|---|
| 1 | Helix Foundation | EA | 3 | $825.00 | $2,475.00 |
| 2 | 1" HDPE, Via Directional Bore Method | LF | 503 | $11.00 | $5,533.00 |
| 3 | 1/C #6 Cu. XLP-USE | LF | 1066 | $1.60 | $1,705.60 |
| 4 | 1/C #8 Cu. XLP-USE | LF | 533 | $1.35 | $719.55 |
| 5 | Composite Handhole, 11 x 18 x 12 | L SUM | 0 | $500.00 | $0.00 |
| 6 | Light Standard, Post Top, LED - Supplied by the VOGE | EA | 3 | $1,300.00 | $3,900.00 |
| 7 | Connect to Ex. Street Light | EA | 0 | $1,100.00 | $0.00 |
| 8 | | | | | |
| | TOTAL | | | | $14,333.15 |

**OPTIONAL**

| Bid Item | Description | Unit | Qty | Unit Price | Total |
|---|---|---|---|---|---|
| 1 | 5/8 x 10' Ground Rod Assembly | EA | 1 | $103.00 | $103.00 |

Notes:
1. If the existing lighting circuitry cannot handle the added load, then a new service will need to be installed; at an added cost.
2. Final restoration is not included in the above numbers. Only rough grading of the disturbed areas is included.
3. Labor rates are valid thru May, 2019.
4. Basic Traffic Control and Protection are included (RCA Signs and Cones).
5. Pricing is based upon performing all work under our normal straight time hours.
6. Sales tax is not included.
7. The final qty. and location of the light standards could impact the pricing, bases upon the need to revise the size of the conduit and wire.
8. Payment terms are Net 30 days.
9. This information is for the Village of Glen Ellyn's sole use and is not to be shared with any other parties without prior authorization from UDC.

Proprietary Information
Utility Dynamics Corporation

ELMUND & NELSON CO.
*ELECTRICAL CONTRACTING*
1510 SHELDON DR. · ELGIN, IL 60120-8133
(847) 695-7000 · FAX (847) 695-7002

# PROPOSAL

DECEMBER 18, 2019

MR. MIKE ZITZKA
VILLAGE OF GLEN ELLYN
535 DUANE STREET
GLEN ELLYN, IL 60137

RE: TAFT AVENUE
STREET LIGHTS
GLEN ELLYN

**Dear Sir:**

**The undersigned proposes to furnish all materials and perform all labor necessary to complete the following:**

| ITEM | QUANTITY | UNIT PRICE | EXTENSION |
|---|---|---|---|
| INSTALL ONLY – POST TOP DECORATIVE POLE | 3 | 1,500.00 EA | 4,500.00 |
| PROVIDE & INSTALL HELIX – 6" X 5' | 3 | 1,080.00 EA | 3,240.00 |
| DIRECTIONAL BORE 1" DUCT W/ 3 #10 USE XLP | 500' | 15.00 LF | 7,500.00 |
| PROVIDE & INSTALL DISCONNECT PEDESTAL | 1 | 950.00 EA | 950.00 |
| | | **TOTAL** | **16,190.00** |

**Additional (3) Street lights to the west.**

| ITEM | QUANTITY | UNIT PRICE | EXTENSION |
|---|---|---|---|
| INSTALL ONLY – POST TOP DECORATIVE POLE | 3 | 1,250.00 EA | 3,750.00 |
| PROVIDE & INSTALL HELIX – 6" X 5' | 3 | 950.00 EA | 2,850.00 |
| DIRECTIONAL BORE 1" DUCT W/ 3 #10 USE XLP | 600' | 12.00 LF | 7,200.00 |
| | | **TOTAL** | **13,800.00** |

- *RPRICING FOR THE ADDITIONAL (3) LIGHTS IS BASED ON DOING ALL (6) LIGHTS AT THE SAME TIME
- DOES NOT INCLUDE LANDSCAPE RESTORATION OR PERMIT FEES.

**All of the above work to be completed in a substantial and workmanlike manner for the sum of** _____
**XXXXXXXXXXXXXXXXXXXXXXXXXXX DOLLARS AND XX/100---------- (S XX.XXX.XX ) Dollars.**

**The entire amount of contract to be paid within THIRTY (30) days after completion.**

**Any alteration or deviation from the above specifications involving extra cost of material or labor will only be executed upon written orders for same, and will become an extra charge over the sum mentioned in this contract. All agreements must be made in writing.**

**The Contractor agrees to carry Workmen's Compensation and Public Liability Insurance, also to pay all Sales Taxes, Old Age Benefit and Unemployment Compensation Taxes upon the material and labor furnished under this contract, as required by the United States Government and the State in which this work is performed.**

**Respectfully submitted, ELMUND & NELSON COMPANY**

Ryan A. Nelson — **Contractor**

## ACCEPTANCE

**You are hereby authorized to furnish all materials and labor to complete the work mentioned in the above proposal for which the undersigned agrees to pay the amount mentioned in said proposal, and according to the terms thereof.**

**Date**_____**, 2019** _____

♦ ♦ ♦ Lighting the way thru the 21st century ♦ ♦ ♦

# Thorne Electric, Inc.
## Electrical Contract
# PROPOSAL

December 9, 2019

ATTN: Mike Zitzka
Village of Glen Ellyn – Public Works
30 S. Lambert Rd.
Glen Ellyn, IL 60137

Revised

Job Name: Street Light Installations, Taft Ave. Location: Glen Ellyn, IL

The undersigned, Thorne Electric, Inc., proposes to furnish labor, material, and equipment to install 3 EA Sternberg Lighting assemblies along Taft Avenue between Nicoll Way and Fire Station 62. One pole assembly will be located on the south side of Taft Ave between Nicoll Way and Kingsbrook Glen. 1-1/4" uniduct with 4 #6 XLP conductors will be directionally bored approximately 50 LF south to a new street light disconnect installed adjacent to a Com Ed transformer. The other 2 pole assemblies will be installed on the south side of Taft Ave between Kingsbrook Glen and Fire Station 62. 1-1/4" uniduct with 4 #6 XLP conductors will be directionally bored to a street light disconnect installed adjacent to a Com Ed source at the rear of the residential building numbered 701-703 Kingsbrook Glen. Uniduct will also be directionally bored between the 2 pole assemblies. Pole assemblies will be Sternberg, provided by the Village of Glen Ellyn.

| | |
|---|---|
| Trench, directional bore, 378 LF @ $16.24 | $ 6,138.72 |
| 1-1/4" uniduct w/4 #6 XLP, 438 LF @ $13.52 | $ 5,921.76 |
| 6" X 5' helix foundation, 3 EA @ $1188.68 | $ 3,566.04 |
| Sternberg light pole assembly install, 3 EA @ $2872.42 | $ 8,617.26 |
| Street light disconnect pedestal, 2 EA @ $967.88 | $ 1,935.76 |
| **Total** | **$26,179.54** |

Alternate: Install 3 additional street light assemblies west of Fire Station 62 along the south side of Taft Avenue. The 3 pole assemblies, furnished by the Village, will be "daisy chained" and the circuit will come from the pole just east of the Fire Station.

| | |
|---|---|
| Trench, directional bore, 570 LF @ $12.86 | $ 7,330.20 |
| 1-1/4" uniduct w/4 #6 XLP, 630 LF @ $12.81 | $ 8,070.30 |
| Helix foundation, 3 EA @ $1188.68 | $ 3,566.04 |
| Sternberg light pole assembly install, 3 EA @ $2872.42 | $ 8,617.26 |
| **Total for Alternate** | **$27,583.80** |

Notes:
-No landscaping restoration or sod included in price.
-Spoils removal and hauling to be done by others.
-Soil testing is not included in price.
-Concrete testing is not included in price.
-All engineering and construction layout by others.
-Permits and fees by others.
-Thorne Electric, Inc. reserves the right to correct any clerical errors in the proposal.
-Any required traffic control to be provided by the General Contractor.
-Inspections are not included in price.

Continued Next Page

All of the above work to be completed in a substantial and workmanlike manner. Thorne Electric, Inc. agrees to carry Workmen's Compensation and Public Liability Insurance, also to pay Old Age Benefit and Unemployment Compensation Taxes upon the labor furnished under this contract, as required by the United States Government and the State of Illinois. This proposal is valid for acceptance within 30 days. Payment terms are net 30 days. Customer agrees to pay interest on past due amounts at the rate of 1.5% compounded monthly plus all costs of collection and reasonable attorney's fees.

THORNE ELECTRIC, INC.
P.O. BOX 321
WHEATON, ILLINOIS 60187
PHONE: (630)668-4853
FAX: (630)668-4879

Respectfully submitted,
THORNE ELECTRIC, INC.

David Gaffney, Estimator

You are hereby authorized to furnish all materials and labor required to complete the work described above, for which the undersigned agrees to pay the amount quoted above, and according to the terms thereof.

ACCEPTED BY: _____ DATE: _____

**Glen Ellyn Village Board**
535 Duane Street
Glen Ellyn, IL 60137

Meeting: 01/21/20 07:00 PM
Department: Public Works
Department Head: Julius Hansen
Category: Discussion Item
Prepared By: John Hubsky

**SCHEDULED**

**AGENDA ITEM (ID # 4317)** DOC ID: 4317

# Public Works Director Julius Hansen will present a proposal to construct an shared emergency water connection with Illinois American Water Company and the Village of Glen Ellyn.

## SUMMARY

Construction of a potable water system interconnection between the Village of Glen Ellyn and Illinois American Water Company (ILAWC) along Butterfield Road between Lambert and Park would distinctly upgrade operating reliability for both utilities by providing an alternative supply source to currently single feed pipe networks. Village cost for the interconnection is estimated to be $410,000 for engineering and construction. Based on a proposal review process, a consultant has been selected for design services with ILAWC as the contracting agency. The Village portion of design costs is estimated to be $39,380 (including $5,000 contingency). An inter-agency agreement will be developed to memorialize operating and cost parameters for the project, modeled on ILAWC agreements for other recent interconnections. Engineering would begin in January 2020 with construction slated for the last quarter of this calendar year.

## BACKGROUND

A trademark of a well-designed and reliable potable water distribution system is a continuous supply to most customers, even when parts of the network are under repair due to water main breaks. Typically this is achieved by building looped pipe networks with sufficient valves to minimize the size of outages and providing multiple pathways to feed water to any point in the system. Good practice is to avoid, as much as possible, single feed - or branch - systems.

The Village of Glen Ellyn water distribution system is made up of over 110 miles of pipes, most of which are looped to provide for multiple pathways of water flow. One sizable exception to this is the pipe system on South Park Boulevard beginning at South Ellyn and Buena Vista and running south to Butterfield Road. The attached distribution system excerpt depicts this un-looped system segment, highlighted in blue, totaling over 3.5 miles of water main. Customers along this single 12-inch feeder main, originally built in the early 1970's to serve Glenbard South High School, now include Willowbrook Wildlife Haven, St. James Church and School, Arden Courts and Maple Glen memory care facilities, The Village Theatre, School District 89 Administration building, O'Carroll and Associates Podiatry office (22W654 Butterfield), numerous incorporated properties along South Park and Glen Park, and a majority of residents in the Arboretum Estates East Subdivision. With this current system configuration, a water main break near Willowbrook would result in loss of water to all the locations mentioned above during a shut-down to repair the pipe.

It has been a long-term goal of Public Works to provide a second water feed into this area by creating a connection to the existing pipe terminus on Butterfield Road, now at the west end of the O'Carroll property. It was previously envisioned this likely would be accomplished by constructing a water main, starting at the south end of the College of DuPage system and running south through

Arboretum Estates West (as an integral part of the subdivision pipe network) and then through the Glenbard South property west of the school buildings to Butterfield Road, and then east as necessary. This effort would involve the construction of about 4,400 feet of new main and require easement negotiations with COD, at least two private property owners and District 87 - a very challenging project.

Nearly three years ago, Utilities Superintendent John Hubsky contacted representatives of Illinois American Water Company to discuss the possibility of an emergency interconnection between the two water systems. ILAWC operates the water and sewer facilities in various unincorporated areas of Glen Ellyn, with a number of those areas to the south. Originally, Public Works was interested in an interconnect of the water systems by the entrance to Glenbard South from Park Blvd., as a quick and simple solution. Discussion of this idea showed that this location did not provide any additional benefit to Illinois American, as that area east of Park Blvd. already was served by multiple connections. For Glen Ellyn, this provided a secondary feed to a large portion of this area of concern but would not have provided any redundancy south of the interconnect, leaving the two assisted living facilities, the doctor's office and a few other high profile locations still being fed by a single source.

As the two sides continued to discuss the potential project, Illinois American expressed their desire to have a second connection for the Foxcroft Subdivision on both sides of Lambert Road between COD and Butterfield Road. The Foxcroft water system is fed by a single feed main located on the south side of Butterfield Road and shares the same vulnerabilities as our South Park feeder main. A potential connection on Butterfield, at the west end of the existing water main for the Village was discussed. Such a connection would provide maximum benefits to both parties and potentially provided a project where the costs would also be similar for the work performed. The two parties expressed mutual interest in further exploring the interconnection concept.

In 2019, discussions between the two parties resumed with a feasible plan taking shape. ILAWC has reached an agreement with St. Luke Lutheran Church at 23W080 Butterfield to extend a water main from the east end of the Foxcroft Subdivision through church property and to site a valve and meter control station. The Village would connect to these new facilities as shown in the attached project vicinity map, extending an 8-inch water main across the Butterfield Road frontage of Glenbard South, but within the right-of-way of the roadway which is under the jurisdiction of the Illinois Department of Transportation. Once in operation, the control station would allow metered water to automatically pass in either direction if a sizable pressure drop was experienced by one of the parties - say due a large water main break. The interconnect would also allow segments of the Village's system to be shut down for routine work like a valve or hydrant replacement, minimizing affected customers to those within the valves operated. ILAWC has constructed multiple interconnections over the past few years and would own and operate the station.

## VILLAGE CONSIDERATIONS

- Village technical staff supports the emergency interconnection with ILAWC as a straightforward and timely method to achieve greater system reliability in an area of the Village with significant water customers. This has been a long wished-for system

improvement for the operations and engineering teams at Public Works.

§ The proposed interconnect would provide an effective means of reinforcement for the South Park Boulevard feeder main system and, as envisioned, can be constructed without obtaining a permanent easement on the Glenbard South High School property.

§ There is increasing emphasis by public health officials on maintaining safe water quality in distribution systems, typically as measured by chlorine residual. Dead end portions of un-looped pipe networks are more prone to reduced chlorine concentrations. Improved water quality at the very south end of our system will be a design consideration in the proposed project, with various strategies assessed during design.

§ If the interconnect with ILAWC is constructed, a new second feed pipe connecting to the COD system would only have to extend into the Arboretum Estates West subdivision without extension south of Ahlstrand Road.

§ Estimated cost of the Village portion of the project, consisting of about 950 ft. of new water main in the right-of-way of Butterfield Road, is $410,000 including $350,000 for construction and $60,000 for design and construction engineering services.

§ The proposed project is not included in the FY-20 Water and Sanitary Sewer Budget. Sufficient dollars are available in the fund at this time to support the project.

§ A formal operating agreement will need to be developed and approved by the Village and ILAWC. Based on recent similar agreements between ILAWC and other entities, the basic form for such an agreement is already established and vetted.

## DESIGN ENGINEERING PROPOSALS AND EVALUATION

Both parties wish to pursue this concept and seek joint project engineering. ILAWC developed a Request for Proposal for design services which was reviewed and revised in detail by the Village. The finalized version of the RFP is attached to this memorandum. The RFP was distributed to three engineering firms recommended by ILAWC and acceptable to the Village. Proposals have been received from the three firms and reviewed by the parties. It was agreed Donohue and Associates of Chicago provided the most cost-effective proposal and is the consultant of choice. Please note the following:

§ The three engineering companies receiving the RFP were AECOM, Donohue, and Strand.

§ All three companies are qualified firms, with the proposals of Donohue and Strand the most complete and compelling.

§ Design fees for the work were provided by each firm, broken down between ILAWC and VGE project components:
- AECOM: ILAWC @ $65,732; VGE @ $41,088
- **Donohue: ILAWC @ $45,610; VGE @ $34,380**
- Strand: ILAWC @ $56,500; VGE @ $43,400

§ ILAWC will be the lead agency for the project, with the Village to be billed for their share of the project costs.

§ The Project Schedule calls for design engineering services to be completed by the end of summer 2020, with construction in the latter part of the year.

**Budget Impact**

The proposed project is not budgeted for in FY20 but looping of the system in this area has been a long-term goal for the distribution system. Current levels in the Water & Sewer Fund would support the cost of the entire project. Additionally, this project now would reduce costs in the future if water was to be provided to the Arboretum West subdivision. The section through the Glenbard South property would be ~1,800', to connect to the same end point on Butterfield. This portion could be eliminated, simply bring the water out to S. Park at Ahlstrand, meaning this project reduces the amount of piping by about half to provide the same benefits and in the very near future.

As this project is not budgeted for, there would be an effect on the current 5 year CIP. There is a slight deficit in the current 5 year CIP without this project. Staff is already looking at having a rate study for water and sewer performed that would help addresses some of the capital funding needs, especially with the general downward trend in yearly water usage. There would also be the ability to shift around other future projects to allow for this emergency interconnection to be installed now.

**Strategic Plan Initiative**

This item supports the Village of Glen Ellyn Strategic Initiative Issue:

> Strategic Issue I: INFRASTRUCTURE. Invest in infrastructure to meet key needs, including downtown accessibility, Village facilities, utilities and technology improvement.

**RECOMMENDATIONS / ACTIONS**

§ Village staff requests a discussion with the Village Board regarding the need for this project.
§ If the Village Board is in agreement with the project, Village staff would bring to the Board for their approval at the next available meeting a request to approve the funding for the design engineering of the project:
  - The amount of $34,380 for engineering services with Donohue
  - A contingency amount of $5,000 to cover any needed change orders that may arise from unexpected work while the project is in process
  - Total not to exceed amount would be $39,380 to be expensed from the Water Fund

Attachments:

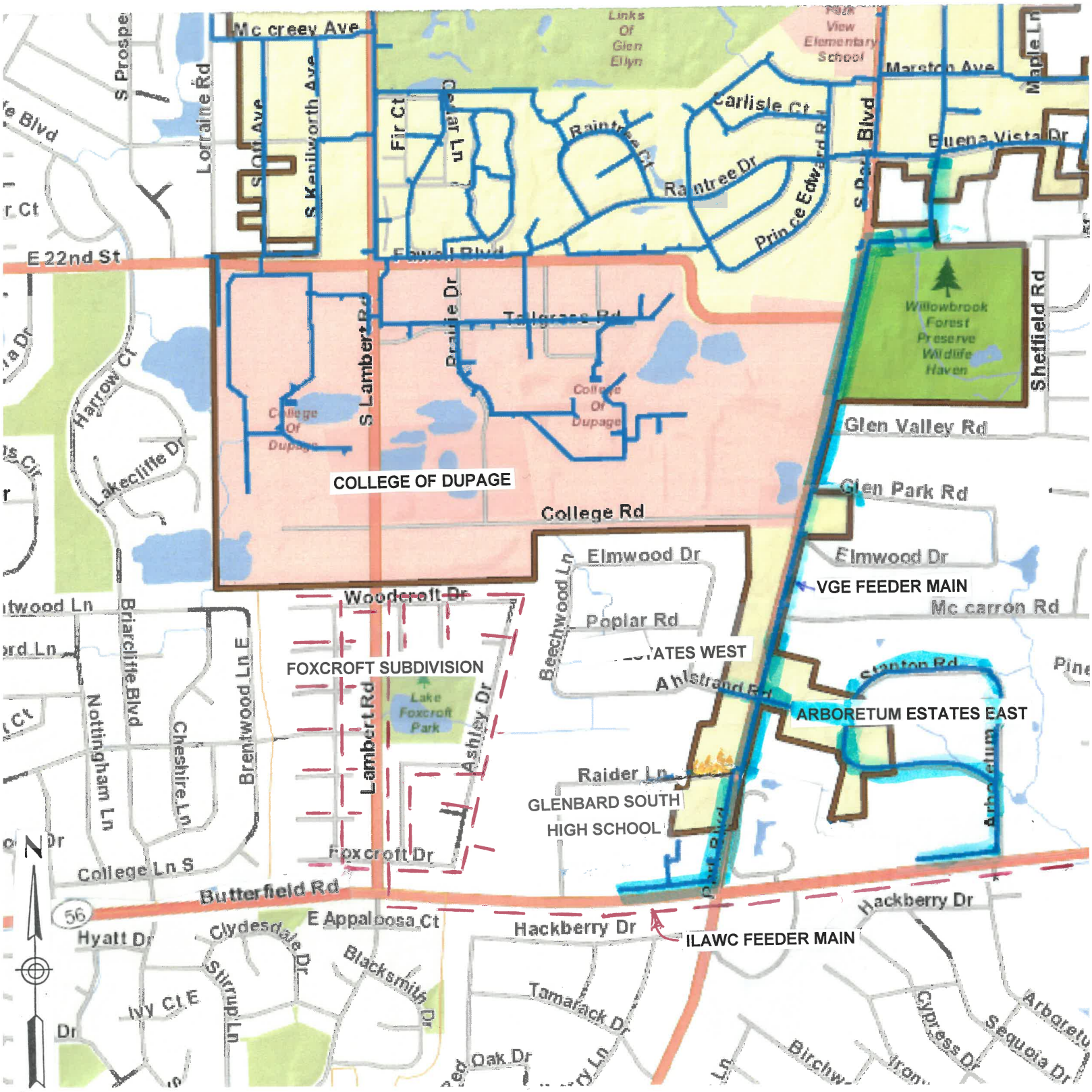
- ILAW - VGE Interconnect System Map Excerpt
- ILAW - VGE Interconnect Vicinity Map
- RFP Glen Ellyn Interconnect Design
- Donohue - ILAW&VGE Interconnect Design Proposal
- ILAWC - VGE Interconnect - Preliminary Construction Cost Estimate for VGE Main Extension

**ATTACHMENTS:**

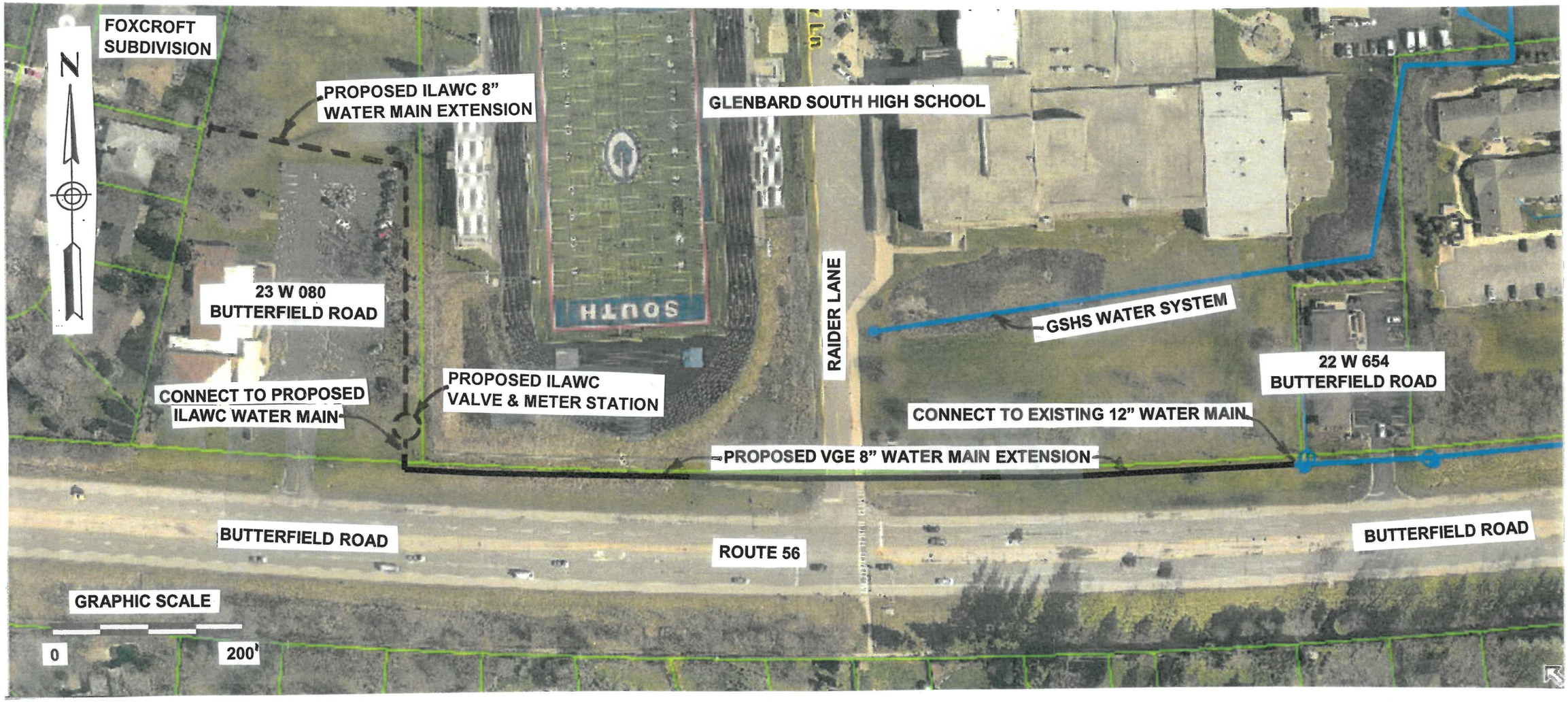
- ILAWC - VGE Interconnect System Map Excerpt (PDF)
- ILAWC - VGE Interconnect Vicinity Map (PDF)
- RFP Glen Ellyn Interconnect Design (PDF)
- Donohue - ILAW&VGE Interconnect Design Proposal (PDF)
- ILAWC-VGE Interconnect - Preliminary Construction Cost Estimate for VGE Main Extension (PDF)

# ILAWC – GLEN ELLYN EMERGENCY INTERCONNECT

## Existing Water Distribution System Configurations
## Near Park and Butterfield



# ILAWC – GLEN ELLYN EMERGENCY INTERCONNECT




## Vicinity Map

ILLINOIS
AMERICAN WATER

**Request for Proposal – Engineering Design Services**

**Project Name: ILAWC – Glen Ellyn Emergency Interconnect**
**ILAWC District: Chicago Metro – Valley View Service Area**
**Location: Glen Ellyn, Illinois**

## PROJECT BACKGROUND

Illinois American Water Company (ILAWC) and the Village of Glen Ellyn (VGE and jointly, Parties) are planning to establish an interconnection between their water systems near 23 W 080 Butterfield Road, Glen Ellyn, Illinois 60137 (Project) for the mutual benefit of the Parties, and wish to share the costs involved in designing the Project as set forth herein. The Parties are requesting a proposal to provide professional engineering services for the design and permitting for the Project, with ILAWC acting as the contracting agency. This request for proposal is for one combined Project with a specific scope of work and individual costs for each agency as generally outlined below.

### ILAWC Project Scope:

The ILAWC portion of the Project consists of the installation of 600 LF of 8-inch water main. This water main will be located on the north and east property lines along the property at 23 W 080 Route 56 Glen Ellyn, IL 60137 (in unincorporated Glen Ellyn). The extent of the water main improvements for ILAW will conclude at the east property line.

Included within this property will be an EFI prefabricated Valve and Meter Station. Coordination, design and submittal review, and scheduling with EFI are to be included in the Engineer's scope of services.

Illinois American Water Engineering assigned Eric LaReau as the project manager. He will be your primary contact for all coordination throughout the design phase of the Project.

### VGE Project Scope:

The Village portion of the Project consists of the installation of approximately 950 LF of 8-inch water main on the north side of the IL Route 56 (Butterfield Road) right-of-way across the frontage of Glenbard South High School. The proposed main will connect to the new ILAWC main near the east property line of 23 W 080 Butterfield Road and connect to an existing Village 12-inch main at the west side of 22 W 654 Butterfield Road. It is anticipated the Village main will be installed exclusively via horizontal directional drilling.

Utilities Superintendent John Hubsky will be the primary Village of Glen Ellyn contact for the Project.

## SCOPE OF SERVICES

A combined lump sum proposal identifying costs specific to each Party for Project design shall include the following services:

**Task 1 – Land Survey and Base Plan Preparation**

Perform a topographic survey of the proposed project site and R.O.W. as necessary to prepare design drawings required for construction, permitting, and bidding of the proposed work. As a minimum, property and R.O.W. lines, topographic information, and locations of existing structures in the Project area are to be included.

- Provide information pertaining to the properties impacted by construction. This should include property owner information (property owner, address, etc.);
- Prepare topographic survey to include all visible surface features inside and within 25' of the anticipated Project limits including significant structures and landscaping;
- Obtain invert elevations on all manholes/vault structures within the survey limits;
- Obtain record drawing and facility location information from all agencies, property owners, utilities and other possible occupants or users in and near the Project area;
- Obtain location of JULIE field marked underground utility locations; ILAWC and VGE shall field mark the location of its water main and sewer facilities within the Project limits prior to conducting the survey.
- See attachment "ILAWC GIS Requirements", which must be followed throughout the design and construction of the Project. Project shall be surveyed as to provide each of the required as-built deliverables at the Project's conclusion.

**Task 2 – Geotechnical Report**

Obtain necessary permits and perform a Geotechnical Study on the Project site including the required Clean Construction and Demolition Debris (CCDD) evaluation and certification for any uncontaminated construction material that will need to be disposed of off-site. Complete the appropriate pre-construction permit application forms for material disposal. This information will be included in the contract documents for bidding purposes. In addition to investigating typical geotechnical parameters, the soil borings are required to assess the feasibility of trenchless boring. Borings are required at roughly 300 LF intervals along the proposed pipe alignments. Provide a boring at the anticipated location of the Valve and Meter Station.

**Task 3 – Permitting**

Determine all local, county, state, or federal permits required for the Project. Prepare all necessary permit applications and provide technical input required in securing the permits. Permit applications and fees will be formally submitted and paid for by ILAWC. Anticipated permits include Illinois EPA Public Water Supply Construction Permit (applications as needed for both ILAWC and VGE), local / county building and Illinois Department of Transportation R.O.W. work permits, and an Illinois EPA NPDES for Construction Activity. Verify if there are any special management areas in proximity to the Project and any associated permits.

**Task 4 – Design**

Develop and/or confirm all hydraulic design and operating parameters for the interconnection and document this information and data in a letter report.

Prepare a complete set of design drawings for all engineering disciplines with an adequate level of detail to allow for construction by a General Contractor and acceptable to all likely permitting agencies. These drawings require the signature and seal of a licensed professional engineer in the State of Illinois.

- Drawings shall ordinarily be drawn at 1"=20' scale plan view and 1"=5' scale profile view.

- Consultant will use most current version of AutoCAD for Windows. Drawings created in an alternative CAD program such as MicroStation, and converted to AutoCAD format will not be accepted.
- Consultant shall prepare technical details utilizing ILAWC standard pipeline details supplemented with VGE details as necessary. The consultant shall include any additional details not included in ILAWC or VGE standards, but required for the Project.
- Available as-built information will be supplied to the selected consultant for use in preparation of the design drawings. This information may not be accurate and should be verified by the consultant.
- At a minimum, Drawings should include:
    - Cover Sheet with area maps
    - Overview of entire Project area (includes only valves, hydrants, main)
    - Schedule of Quantities (ILAWC, VGE and Total Project)
    - General Notes and List of Standards
    - Alignments, Ties and Benchmarks
    - Plan and Profile
    - Removal/Demolition
    - Technical Details
    - Traffic Control
    - Construction Layout / Staging
    - SWPP
- Submit plans to the utility companies and coordinate any design revisions to mitigate conflicts, or work with the utilities to facilitate necessary relocation work.

**Task 5 – Specifications**

Prepare technical specifications utilizing and modifying standard ILAWC and VGE pipeline specifications to include all items applicable to the Project. The selected consultant will be provided with ILAWC template boiler plate and technical specifications sections and appropriate VGE supplemental specifications. These specifications provided are not all-inclusive and may require additional specifications to be written by the consultant if additional specifications are needed.

**Task 6 – Cost Estimate**

Prepare an Engineer's Estimate of Probably Construction Costs with separate Project items, quantities and costs for the ILAWC and VGE portions of the Project. This should include all construction items and be submitted with the 60% and 95% level design drawings. ILAWC and VGE will use these cost estimates to evaluate Project scope, costs and budgets.

**Task 7 – Meetings and Design Review**

Prepare, record, and submit all meeting agendas and minutes. Periodic meetings with the Parties will be held at the ILAWC's Woodridge office. Certain meetings may not be conducted if it is determined a sit-down design review is not needed.

It is anticipated that four meetings will be held:

- Initial project meeting
- Alignment review and letter report establishing hydraulic parameters – 30% design review
- Initial cost estimate and IDOT permit status reviews – 60% design review
- Pre-final -- 95% design review

**Task 8 – Schedule**

Below is the anticipated schedule which notes the milestone events and is subject to change after initial kick-off meeting with the Parties:

| Date | Activity |
|---|---|
| Thursday, October 31, 2019 | Proposals Due |
| January 2020 | Project Kick-off Meeting with Selected Firm |
| January 2020 – July 2020 | Plan and Specification Preparation |
| June 2020 – July 2020 | Permit Review Process |
| August 2020 | Bid and Award Project |
| September 2020 – December 2020 | Construction |

If this schedule cannot be met, please modify and provide justification in your proposal.

**Task 9 – Bidding Assistance**

Provide bidding assistance, which will include preparing the bid notice documents, submitting electronic sets of plans and specifications to contractors, answering contractor questions, preparing bid addenda, reviewing bids and recommending a contractor to the Parties. ILAWC will perform the bid opening privately without the consultant.

- The Parties will select which contractors for the consultant to submit bid packages to. The consultant will also submit two paper copies and one electronic copy of the bid drawings and specifications to ILAWC and VGE.
- Consultant will be required to respond to contractors' or potential material suppliers' questions and prepare addenda as required to document design changes or clarifications. Addenda requiring revisions to the technical specifications shall be prepared by direct revision of the specification and reissuance of the effected pages. Each revised page shall have the following header: "Revised Per Addendum No. __", and the specific additions and/or deletions shall be highlighted using the revision marking capabilities of Microsoft Word and submitted electronically.
- The Parties do not anticipate holding a pre-bid meeting. If one is deemed necessary, consultant's contract can be modified to include one.

**Task 10- Contract Document Creation**

Provide conformed contracts to be sent to the awarded contractor. The consultant will be provided with ILAWC's template contract documents to be modified to the specific project and contractor. The contract will follow the following ILAWC procedures for approval and disbursement:

- Consultant modifies contract
- Consultant forwards electronic version of contract to ILAWC for legal/finance approval
- ILAWC approves contract
- Consultant issues five copies of contract to selected contractor for signature
- Contractor forwards all copies for ILAWC's signature
- ILAWC signs and disburses two copies to VGE, one copy to contractor and one to consultant.

**Task 11 – Construction Administration and Observation**

Construction services for the Project are not being sought at this time. The Parties may elect to amend the successful consultant's design contract or seek these services at a later date.

**DIVERSITY PARTICIPATION OF SUBCONSULTANTS**

Illinois American Water Company has implemented a policy of obtaining at least 25% diversity spending on our purchases of services across the state. On all work, diversity spending is a major criteria when selecting an engineering firm. Consultants should make an honest effort to achieve the **diversity goal amounting to 25% of the Contract Price** with business partners who are certified for this purpose. A diverse/minority supplier is a business which is at least 51% owned, operated and controlled on a daily basis by one or more (in combination) American citizens of ethnic minority classifications, women, veteran, or disabled veteran.

Furthermore, it is ILAWC's desire that a **diversity goal amounting to at least 10% of the contract price** be directed to qualified Minority Business Enterprise (MBE) Subcontractors, including African American, Asian Pacific, Hispanic, or Native American owned businesses. This focused 10% MBE diversity goal shall count toward the overall 25% diversity goal referenced in the previous paragraph.

Consultants shall include in their proposal a list of the diverse participants and their total anticipated project spend on the attached Supplier Diversity Questionnaire.

Questions relating to this initiative can be sent to me or to our purchasing agent Chrystal Schneider at (618) 355-4885 or Chrystal.Schneider@amwater.com.

**PROPOSAL CONTENT**

Proposals shall including the following information separated into tabbed sections as follows:

- Cover Letter – Provide a brief cover letter expressing interest in providing the services in connection with the proposed Project and summarizing the key points of the Proposal.
- Firm Information -- Provide the name, address, and contact information for all firms involved in the Project. Describe the proposed role for each firm in the Project.
- Project Staffing – List personnel who will be directly involved with the project and their experience with similar type and size projects. Include resumes with a maximum of two pages per staff member.
- Project Understanding and Approach – Describe key points, controlling factors, possible issues, observations and recommendations for successful implementation of the Project. Discuss the firm's qualifications and capabilities to achieve Project success.
- Scope of Services/Tasks – Indicate a detailed recommended scope of services and suggested tasks the Parties should consider to meet the goals of this Project. This shall include, but is not limited to, the tasks listed in this RFP. Identify information required from the Parties in order to perform the necessary engineering studies and design for the Project.
- Schedule – Provide a recommended Schedule with Preliminary, 60% Design Review, Pre-Final and Final Deliverable Dates Specified. Discuss any deviations to the Project Schedule shown above.
- References – List at least three references for each consultant and sub-consultant.
- Project Portfolio – Summarize at least five projects of related scope and magnitude completed by the firm within the past 5 years.
- Additional Information – Include any other information pertinent to describing your team's capabilities and qualifications.
- Lump Sum Price – Provide a lump sum price including personnel, direct and sub-consultant expenses, identifying costs specific to each Partner.

**PROPOSAL REQUIREMENTS**

Any other item of work not covered in the RFP, but necessary for the completion of the Project shall be included in the cost proposal for the items to which the work pertains; including cost itemization of deliverables and reimbursable expenses including: prints, mileage, mailings, etc. Except in cases where the Owner exercises the right reserved to reject any or all proposals, the contract(s) will be awarded as soon as practicable after the opening of proposals.

The Illinois American Water Company contracts administration practice requires all proposal submittals to adhere to the following criteria:

- Proposals shall be placed in sealed manila envelope with the words “SEALED PROPOSAL” and “NAME OF PROJECT” clearly marked on both sides of the envelope.
- The manila envelope shall be delivered to the ILAWC by either overnight delivery (UPS, FedEX, DHL or USPS) and arrive on or before **2 pm, (local central standard time), Thursday, October 31, 2019**. Proposals may be delivered in person by the said deadline.
- Facsimile or email delivery of proposals is expressly prohibited and will not be accepted.
- Proposals to include “Engineering Services Proposal Cover Sheet” as first page of proposal.

Any proposal failing to meet the above criteria will not be accepted. Proposals shall be received at ILAWC to be addressed as below:

Attn: Eric LaReau
1000 Internationale Parkway
Woodridge, IL 60517

ILAWC will privately open the proposals.

The selected consultant will be expected to enter into agreement with ILAWC, for performance of the proposed services, through ILAWC Standard Agreement for Professional Services or via an existing Master Services Agreement. If appropriate, a certificate of insurance and W-9 will additionally be required to be supplied by the selected consultant to each of the Parties.

If you have any questions concerning the Project or scope of services, please contact me at (630) 739-8837.

Sincerely,

Illinois - American Water Company

Eric LaReau, PE
Engineering Project Manager

Encl: ILAWC Project Scope Location Map
VGE Project Scope Location Map
Engineering Services Proposal Cover Sheet
ILAWC Engineering Services Agreement, including:
Supplier Diversity Questionnaire
Minimum Insurance Requirements
ILAWC GIS Requirements

Illinois American Water Company Use Only

Date: 11/22/19 Time: 8:20

Signature: _____

DOA Approved

Witness: _____

# Engineering Services Proposal Cover Sheet

| Tasks | Cost ILAW | Cost VGE |
|---|---|---|
| **Task 1 - Survey** | $9,200 | $11,900 |
| **Task 2 - Geotechnical** | $6,500 | $6,500 |
| **Tasks 3-8 - Design Services** | $27,475 | $13,545 |
| **Tasks 9-10 - Bidding Services** | $2,435 | $2,435 |
| **Task 11 - Construction Observation (NOT AT THIS TIME)** | ---------- | ---------- |
| **Other Additional Costs (Specify)** | ---------- | ---------- |
| **Total** | $45,610 | $34,380 |

* Not All Tasks are required. Only enter costs for required tasks per RFP.

Schedule Requirements:

The proposed Schedule is agreeable? (circle one) (Yes) No

If no, please provide proposed revisions:

Signature: _____

Title and Firm Name: Vice President, Donohue & Associates, Inc.

Donohue & Associates, Inc.
125 South Wacker Drive Suite 1850 | Chicago, IL 60606
312.236.9147 | donohue-associates.com

November 21, 2019

Mr. Eric LaReau
Illinois American Water Company
1000 Internationale Parkway
Woodridge, IL 60517

Re: Proposal for ILAWC-VGE Emergency Interconnect

Dear Mr. LaReau:

Effectively preparing a design to provide an emergency interconnection between Illinois American Water Company (ILAWC) and Village of Glenview (VGE) water systems requires considerable forethought and close collaboration with ILAWC and VGE staff, and the proposed Valve and Meter Vault provider, EFI. Donohue has assembled a highly qualified team of senior engineers to address the complexities of this project. Our past experience with ILAWC and EFI provides familiarity with the ILAWC policies and procedures in working with pre-packaged facilities with an eye on the short and long term goals for the project. Our Team brings the following benefits to your project:

- ***Local and Proven Leadership on Illinois American Water Projects.*** Project Manager **Paul Shadrake,** PE, has over three decades of water treatment and distribution experience. Paul is located in Chicago, IL and has managed several recent projects for ILAWC, including the current Sterling East WTP HSPS replacement project, and others in Bolingbrook, IL (107th Street Lift Station), Streator, IL (Streator RWPS), and Homer Glen, IL (Chickasaw Hills WTF). He has managed over $50M worth of capital improvements throughout the Midwest.

  ILAWC will also benefit from the experience of **Mike Stohl,** PE, and his proven project delivery experience with ILAWC. Mike serves as Client Advocate for ILAWC and leads many of our most challenging projects Illinois American Water, St. Louis MSD, and Illinois DOT.

- ***Previous Experience with Pre-Package Facilities Provided by EFI.*** Donohue has worked with EFI on several recent ILAWC projects, including Sterling, Streator, Lincoln, and Peoria, Illinois. We understand the contracting and design approaches preferred by ILAWC and have developed excellent working relationships that expedite design and submittal review and provide for efficient coordination critical to project success.

- ***Unique Solutions.*** The ILAWC-VGE Interconnect has some significant challenges, including constructing in an IDOT ROW with a wetland, an alignment adjacent to a large high school, and place of worship, that will require site specific solutions. Donohue has repeatedly navigated difficult situations successfully with ILAWC projects. As examples Donohue has been working with staff at the Sterling East WTP HSPS project through several site constraints to keep the project on track, expeditiously completed the Streator Water Plant Raw Water Pump Station replacement on an aggressive schedule, incorporated a 35-year-old asset (the 15 mgd High Service Pump 11) into the design at Peoria Main Station, and led efforts to engineer solutions within a tight land-locked site in Homer Glen (Chickasaw Hills).

- ***Diversity Participation.*** The Donohue project team includes The Accurate Group (MBE, Survey), Wang Engineering (MBE, Geotechnical), and Flinn Engineering (WBE/VBE, Permitting). We understand the importance of diversity spending on meaningful roles on projects and have selected leaders within their respective fields. It is our goal to meet or exceed ILAWC goals on this and all projects.

We understand the importance of this project to you, and have developed the ***right team*** with the ***right approach*** for the job. The Donohue Team is available to start immediately and meet your schedule. Please feel free to contact us if you have any questions related to our submittal. Thank you in advance for your consideration.

Sincerely,

Michael Stohl, PE, Client Liaison
312.583.7240 | mstohl@donohue-associates.com

Paul M. Shadrake, PE, Project Manager
312.583.7211 | pshadrake@donohue-associates.com

# Firm Information

DONOHUE

Donohue & Associates, Inc. is an award-winning, employee-owned consulting firm specializing in water and wastewater treatment. We have worked with more than 300 Upper Midwestern communities in the past 20 years, providing planning, design, construction, and startup phase services on over 2,500 water and wastewater projects. We have one goal in mind: to provide client-centered, cost-effective engineering services.

We recognize the difficulties faced by water producers as they strive to meet the challenges of changing regulations, increasing operational costs, aging treatment facilities, and limited funding for improvements. Donohue has earned a reputation for planning and designing facilities that are functional, easily operated and maintained, and cost-effective.

## Our Illinois American Water Experience

Donohue's ILAWC experience spans the past decade and includes the following projects (with year started):

- Champaign District Water Distribution Study (2009)
- Distribution System Modeling (2010)
- Homer Glen Wastewater Master Plan (2011)
- Wastewater Master Plan Update (2012)
- Peoria District Main Station Electrical Study (2012)
- Sterling District - East Plant Facility Assessment (2012)
- Champaign North Side Transmission Main - Phase I (2014)
- Homer Glen/Chickasaw Hills WRF Improvements Design (2014)
- Peoria Main Station Electrical Improvements (2014) | *2018 ACEC Engineering Excellence Merit Award*
- East St. Louis Electrical Value Engineering Study (2014)
- 107th Street Lift Station Improvements (2015)
- Derby Meadows Sewer Replacement (2015)
- Terra Cotta WRF Feasibility Study (2016)
- Streator WTP Raw Water Pump Station Design/CRS (2016)
- Homer Glen Flow Monitoring (2016)
- Lincoln South Water Treatment Plant Study (2018)
- Granite City WTP LT2ESWTR BIN 2 UV Disinfection Design (2018)
- Sterling WTP High Service Pump Station Design (2018)
- Fisher WWTP Headworks Improvements (2018)
- Peoria Grand II Booster Station Electrical Improvements Design (2018)
- Sundale/Washington Estates Study (2019)
- Lincoln South WTP Electrical Improvements (2019)
- Streator LT2ESWTR BIN 2 (2019)
- Lincoln South WTP Design/Bid (2019)

**Address:** Donohue & Associates, Inc.
125 S. Wacker Drive, Suite 1850
Chicago, IL 60606

**Main Contact:** Paul Shadrake, PE
pshadrake@donohue-associates.com
o: 312.583.7211 c: 312.363.9663

## Flinn Engineering, LLC

**Flinn Engineering, LLC** is a civil engineering consulting firm specializing in planning, design, and construction administration for water-related infrastructure. Kelly Simpson and Lori Gallion are the founding members of Flinn Engineering, which began operation in March 2015. Ms. Simpson has worked in the engineering industry since 1993, with most of her experience in the drinking water sector. She spent the first half of her career working for Illinois American Water, where she gained extensive experience in operating water systems of various sizes across Illinois. Ms. Gallion has a GIS background that she gained while serving in the US Army for 20 years. Flinn Engineering is a certified Women Business Enterprise (WBE) and a self-certified Veteran-owned Business (VBE). They will provide permitting services for this project. Donohue is currently working with Flinn Engineering on other ILAWC projects.

**Address:** Flinn Engineering
11216 Neumann Lane
Highland, IL 62249

**Main Contact:** Kelly Simpson
ksimpson@flinnengineering.com
618.550.8427

## Accurate Group, Inc.

**Accurate Group, Inc.** (AGI) has been providing engineering and survey services since 1994 and is certified as a Minority Business Enterprise/Disadvantaged Business Enterprise (MBE/DBE). AGI has built a solid reputation performing these services in Illinois for clients such as the Illinois Department of Transportation (IDOT), Illinois State Toll Highway Authority (ISTHA), City of Chicago, Chicago Public Schools, Cook County Department of Transportation and Highways, Cook County Park District, City of Chicago Park District, as well as other public and private entities.

AGI provides a variety of topographic and boundary/plat survey services for public and private clients. AGI is currently providing topographic survey and CADD drafting tasks in a prime agreement with the Chicago Department of Water Management. Two recent more high profile projects are boundary and plat surveys for the Elgin-O'Hare Expressway and the Chicago-St. Louis high speed rail line.

**Address:** Accurate Group, Inc.
101 Schelter Road, Suite B 200
Lincolnshire, IL 60069

**Main Contact:** Jennifer Tobergte
jent@accgi.com
847.613.1100 ext. 507

## Wang Engineering, Inc.

Established in 1982, **Wang Engineering, Inc. (Wang)** specializes in geotechnical engineering, construction inspection, and materials testing services. Over the past 35 years, Wang has provided these services state and federal governments, and private and public sector clients throughout the U.S. and in several countries overseas. In addition to providing geotechnical services on the Sterling East WTP HSPS replacement project, Wang has worked on numerous other water treatment facilities, wastewater and sewer facilities, interstate, federal, and local highways and streets, rail and rapid transit facilities, airports, public, commercial, and industrial structures. Wang is certified as a Minority Business Enterprise (MBE) by the City of Chicago and numerous other public agencies. They will provide geotechnical services for this project.

**Address:** Wang Engineering, Inc.
1145 North Main Street
Lombard, IL 60148

**Main Contact:** Corina Farez, PE
cfarez@wangeng.com
630.953.9928

# Project Staffing

We have assembled a highly experienced group of engineers to deliver success to ILAWC in all aspects: **performance, quality, schedule,** and **cost.** The team, led by Paul Shadrake, has the right familiarity, expertise and experience to efficiently and cost-effectively design the ILWAC – Glen Ellyn Emergency Interconnect.

ILLINOIS AMERICAN WATER

**Project Manager**
Paul Shadrake, PE ◆

**Client Advocate**
Mike Stohl, PE ◆

**Technical Advisors**
Joe Pisula, PE ◆
Eric Cockerill, PE, BCEE ◆

**Key Personnel**

| Lead Structural | Lead Civil | Lead Electrical | Lead I&C |
|---|---|---|---|
| TJ Bates, PE, SE ◆ | Will Gray, PE ◆ | Mike Stohl, PE ◆ | Aric Bergstrom, PE ◆ |

**Support**

| Geotechnical | Survey | Permitting |
|---|---|---|
| Wang Engineering ❖ | Accurate Group, Inc. ⊙ | Flinn Engineering ▲ |

Project Team Members
◆ Donohue | ⊙ Accurate Group, Inc.
❖ Wang Engineering (MBE) | ▲ Flinn Engineering (WBE/VBE)

## Paul Shadrake, PE
Project Manager – Donohue

31 Years of Experience

Paul is a Senior Project Manager with over 30 years of experience. His involvement in projects has spanned all phases of water engineering activities including project planning, field investigation, systems analysis and computer modeling, conceptual and detailed design, preparation of reports and contract documents, value engineering, and assistance during permitting and construction.

He is currently working with ILAWC in Sterling for the East WTP High Service Pump Station replacement project which involves watermain connections to an EFI-provided package pump station. Similarly, he coordinated with EFI as the Project Manager for the ILAWC Streator LSPS project involving suction and discharge piping from the station.

## Michael Stohl, PE
Client Advocate – Donohue

13 Years of Experience

Mike is one of Donohue's lead electrical engineers whose career has focused on the design and construction of electrical systems for the unique demands of water and wastewater facilities. His experience includes electrical service, power distribution, emergency and standby electrical power systems, motor control and motor control center design, voltage drop calculations, grounding design, lighting design, and code interpretations and applications.

Through his leadership and electrical engineering work with ILAWC on recent projcts for Lincoln, Peoria Main Station, Streator, and Chickasaw Hills, Mike has forged excellent working relationships with ILAWC personnel and thoroughly understands your policies and procedures.

## Joe Pisula, PE
Technical Advisor – Donohue

41 Years of Experience

Joe has experience in all phases of water projects including planning, process sizing and design, plans and specifications, construction cost opinions, grant and loan administration, construction observation and administration, and start-up.

Joe has a thorough understanding of ILAWC policies and procedures based on his active involvement on the following ILAWC projects:

- Sterling District HSPS Replacement
- Champaign District Water Distribution Study
- Peoria District Main Station Electrical Study
- Champaign North Side Transmission Main-Phase 1
- Peoria Main Station Electrical Improvements
- Streator Raw Water Pump Station Design/CRS

# Subconsultants

**Flinn Engineering, LLC** is a civil engineering consulting firm specializing in planning, design, and construction administration for water-related infrastructure. Kelly Simpson and Lori Gallion are the founding members of Flinn Engineering, which began operation in March 2015. Ms. Simpson has worked in the engineering industry in the St. Louis area since 1993 with most of her experience being in the drinking water sector. She spent the first half of her career working for Illinois American Water where she gained extensive experience in several aspects of operating water systems of various sizes across the State of Illinois. Ms. Gallion has a GIS background which she gained while serving in the US Army for 20 years. Flinn Engineering is a certified Women Business Enterprise (WBE) and a self-certified Veteran-owned Business (VBE). **They will provide permitting services for this project.**

Accurate Group, Inc. (AGI) has been providing engineering services for its clients since 1994 and is certified as a Minority Business Enterprise/Disadvantaged Business Enterprise (MBE/DBE). AGI has built a great reputation performing these services in the State of Illinois and has served the Illinois Department of Transportation (IDOT), Illinois State Toll Highway Authority (ISTHA), City of Chicago, Chicago Public Schools, Cook County Department of Transportation and Highways, Cook County Park District, City of Chicago Park District, as well as other public and private entities in the State. AGI has performed in the capacity of the prime consultant or subconsultant for Phase I, Phase II, and Phase III Engineering Service Contracts.

AGI has provided a wide variety of topographic and boundary/plat survey services for a wide variety of public and private clients. On a current project, AGI is providing topographic survey and CADD drafting tasks in a prime agreement with the Chicago Department of Water Management. Two recent more high profile projects for which survey services were provided are boundary and plat surveys for the Elgin-O'Hare Expressway and the Chicago-St. Louis high speed rail line. **They will provide surveying services for this project.**

Established in 1982, **Wang Engineering, Inc. (Wang)** specializes in geotechnical engineering, construction inspection, and materials testing services. Over the past 35 years, Wang has provided these services to a wide range of state and federal governments, private, and public sector clients throughout the United States and in several countries overseas. In addition to providing geotechnical services on the Sterling East WTP HSPS replacement project, Wang has worked on numerous other water treatment facilities, wastewater and sewer facilities, interstate, federal, and local highways and streets, rail and rapid transit facilities, airports, public, commercial, and industrial structures. Wang is certified as a Minority Business Enterprise (MBE) by the City of Chicago and numerous other public agencies. **They will provide geotechnical services for this project.**

Our team has ILAWC-proven Small, Women, Veteran, and Minority Business Enterprise (S/W/V/MBE) participation. The firms that make up the team have worked together on past ILAWC projects. They were chosen for their technical expertise, past working partnerships, ILAWC experience, and their ability to meaningfully contribute to the successful completion of projects. Their participation is expected to far exceed ILAWC diversity participation goals as shown on the following Supplier Diversity Questionnaire.

ILLINOIS AMERICAN WATER

Appendix 1
Diversity 18.12

# SUPPLIER DIVERSITY QUESTIONNAIRE

**Note:** *Required* for submission with all responses to Requests for Proposals, quarterly reports *and with final payment application (with actuals)*

| | | | |
|---|---|---|---|
| **Date** | November 21, 2019 | **Signature** | |
| **Company Name** | Donohue & Associates, Inc. | **Print Name** | Paul Shadrake, PE |
| **Name of Project** | Emergency Interconnect | **Telephone** | 312.583.7211 |
| **Contract #** | NA | **Email** | pshadrake@donohue-associates.com |
| **Task Order #** | NA | **Purchase Order** | NA |
| **Indicate submittal type (RFP, Quarterly or Final)** | RFP | | |

1. Is your business a certified diverse supplier with a Supplier Clearinghouse? **Y or (N)**

   If yes, please provide copy of certification(s) with your bid response

2. Do you have a Supplier Diversity Program for sub contractors? **Y or (N)**

   If, yes, please provide and attach a brief summary of your program including 2nd tier subcontracting reporting and tracking processes. If no, please proceed to question #3.

3. In review of the Scope of Work as presented in this RFP, do you intend to utilize diverse suppliers for sub-contracting on this project? **(Y) or N**

If yes, please complete the information below and submit with your bid response. **Copy of Diversity Certificate required for each Subcontractor.**

| Name of Subcontractor | Scope of Work to be Performed | Amount of Spend Anticipated or Final (Circle one) | Certified Diversity Classification | Principal Male or Female |
|---|---|---|---|---|
| Flinn Engineering | Permitting | $3,000 | WBE/VBE | Female |
| Accurate Group, Inc. | Surveying | $19,200 | MBE-AP | Male |
| Wang Engineering | Geotechnical | $12,000 | MBE-AP | Male |
| | | | | |
| | | | | |
| | | | | |

**PLEASE BE SURE TO RETURN THIS FORM WITH YOUR BID RESPONSE**

# *SUPPLIER CLEARINGHOUSE*

## *CERTIFICATE OF ELIGIBILITY*

CERTIFICATION EXPIRATION DATE: **May 10, 2021**

The Supplier Clearinghouse for the Utility Supplier Diversity Program of the California Public Utilities Commission hereby certifies that it has audited and verified the eligibility of:

***Flinn Engineering, LLC***

***Women Business Enterprise (WBE)***

pursuant to Commission General Order 156, and the terms and conditions stipulated in the Verification Application Package. This Certificate shall be valid only with the Clearinghouse seal affixed hereto.

Eligibility must be maintained at all times, and renewed within 30 days of any changes in ownership or control. Failure to comply may result in a denial of eligibility. The Clearinghouse may reconsider certification if it is determined that such status was obtained by false, misleading or incorrect information. Decertification may occur if any verification criterion under which eligibility was awarded later becomes invalid due to Commission ruling. The Clearinghouse may request additional information or conduct on- site visits during the term of verification to verify eligibility.

This certification is valid only for the period that the above firm remains eligible as determined by the Clearinghouse. Utility companies may direct inquiries concerning this Certificate to the Clearinghouse at (800) 359-7998 in Los Angeles.

***VON: 15010020*** ***DETERMINATION DATE: May 10, 2018***

CERTIFIED NaVOBA VETERAN'S BUSINESS ENTERPRISE

# THE NATIONAL VETERAN-OWNED BUSINESS ASSOCIATION

HEREBY GRANTS

## NATIONAL VETERAN'S BUSINESS ENTERPRISE CERTIFICATION TO:

Flinn Engineering, LLC

This firm has successfully met the standards as a Certified Veteran's Business Enterprise™ (VBE). This certification affirms that this business concern is veteran-owned, operated and controlled. This certification is valid through date herein.

Certification Granted: 2019/1/16
Expiration Date: 2021/1/15
NaVOBA National Certification Number: 2019100129

Authorized by Matthew Pavelek, NaVOBA President & CEO

NAICS: 541330

DEPARTMENT OF PROCUREMENT SERVICES

CITY OF CHICAGO

APR 16 2018

Syed M. Hussaini
Accurate Group, Inc. dba AIBS
101 Schelter Road Suite B200
Lincolnshire, IL 60069

Dear Syed M. Hussaini:

We are pleased to inform you that **Accurate Group, Inc. dba AIBS** has been recertified as a **Minority-Owned Business Enterprise ("MBE")** by the City of Chicago ("City"). This **MBE** certification is valid until **4/1/2023**; however, your firm's certification must be revalidated annually. In the past the City has provided you with an annual letter confirming your certification; such letters will no longer be issued. Therefore, we require you to be even more diligent in filing your **annual No-Change Affidavit 60 days** before your annual anniversary date.

It is now your responsibility to check the City's certification directory and verify your certification status. As a condition of continued certification during the five year period stated above, you must file an annual No-Change Affidavit. Your firm's **annual No-Change Affidavit** is due by **4/1/2019, 4/1/2020, 4/1/2021, and 4/1/2022.** Please remember, you have an affirmative duty to file your **No-Change Affidavit 60 days** prior to the date of expiration. Failure to file your annual No-Change Affidavit may result in the suspension or rescission of your certification.

Your firm's five year certification will expire on **4/1/2023**. You have an affirmative duty to file for recertification **60 days** prior to the date of the five year anniversary date. Therefore, you must file for recertification by **2/1/2023.**

It is important to note that you also have an ongoing affirmative duty to notify the City of any changes in ownership or control of your firm, or any other fact affecting your firm's eligibility for certification **within 10 days** of such change. These changes may include but are not limited to a change of address, change of business structure, change in ownership or ownership structure, change of business operations, gross receipts and or personal net worth that exceed the program threshold. Failure to provide the City with timely notice of such changes may result in the suspension or rescission of your certification. In addition, you may be liable for civil penalties under Chapter 1-22, "False Claims", of the Municipal Code of Chicago.

Please note – you shall be deemed to have had your certification lapse and will be ineligible to participate as a **MBE** if you fail to:

- File your annual No-Change Affidavit within the required time period;
- Provide financial or other records requested pursuant to an audit within the required time period;



Attachment: Donohue - ILAW&VGE Interconnect Design

- Notify the City of any changes affecting your firm's certification **within 10 days** of such change; or
- File your recertification within the required time period.

Please be reminded of your contractual obligation to cooperate with the City with respect to any reviews, audits or investigation of its contracts and affirmative action programs. We strongly encourage you to assist us in maintaining the integrity of our programs by reporting instances or suspicions of fraud or abuse to the **City's Inspector General at chicagoinspectorgeneral.org, or 866-IG-TIPLINE (866-448-4754).**

Be advised that if you or your firm is found to be involved in certification, bidding and/or contractual fraud or abuse, the City will pursue decertification and debarment. In addition to any other penalty imposed by law, any person who knowingly obtains, or knowingly assists another in obtaining a contract with the City by falsely representing the individual or entity, or the individual or entity assisted is guilty of a misdemeanor, punishable by incarceration in the county jail for a period not to exceed six months, or a fine of not less than $5,000 and not more than $10,000 or both.

Your firm's name will be listed in the City's Directory of Minority and Women-Owned Business Enterprises in the specialty area(s) of:

**NAICS Code(s):**

| | |
|---|---|
| 541330 | Civil Engineering Services |
| 541330 | Construction Engineering Services |
| 541330 | Engineering Consulting Services |
| 541330 | Engineering Design Services |
| 541370 | Construction Surveying Services |
| 541370 | Land Surveying Services |
| 541370 | Topographic Surveying Services |
| 541380 | Laboratory Testing (except medical, veterinary) Services |
| 541380 | Soil Testing Laboratories or Services |
| 561320 | Personnel (e.g., industrial, office) Suppliers |

Your firm's participation on City contracts will be credited only toward **Minority-Owned Business Enterprise ("MBE")** goals in your area(s) specialty. While your participation on City contracts is not limited to your area of specialty, credit toward goals will be given only for work that is self-performed and providing a commercially useful function that is done in the approved specialty category.

Thank you for your interest in the City's Minority, Women-Owned Business Enterprise, Veteran-Owned Business Enterprise and Business Enterprise Owned or Operated by People with Disabilities (MBE/WBE/VBE/BEPD) Program.

Sincerely,

Rich Butler
First Deputy Procurement Officer
RB/ag

OFFICE OF CONTRACT COMPLIANCE
**EDWARD H. OLIVIERI**
DIRECTOR
118 N. Clark, County Building, Room 1020 • Chicago, Illinois 60602 • (312) 603-5502



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March 7, 2019

Mr. Paul Wang, President
Wang Engineering, Inc.
1145 N. Main Street
Lombard, IL 60148

**Annual Certification Expires: March 7, 2020**

Dear Mr. Wang:

Congratulations on your continued eligibility for Certification as a **Minority-owned Business Enterprise (MBE)** by Cook County Government. This certification is valid until **March 7, 2020**; however, you must re-validate your firms' certification annually.

As a condition of continued Certification during the five (5) year term, you must file an annual **"Re-Certification Affidavit"** within **sixty (60) business days prior** to the date of the annual expiration. Failure to file this Affidavit may result in the termination of your Certification. You must notify Cook County's Office of Contract Compliance of any change in ownership or control or any other matters or facts affecting your firm's eligibility for Certification within **fifteen (15) business days** of such change.

Cook County Government may commence action to remove your firm as a certified vendor if you fail to notify us of any changes of facts affecting your firm's Certification, or if your firm otherwise fails to cooperate with the County in any inquiry or investigation. Removal of your status may also be commenced if your firm is found to be involved in bidding or contractual irregularities.

Your firm's name will be listed in Cook County's Directory of certified firms in the following area(s) of specialty:

**Licensed Professional Services: Construction Services – Geotechnical Engineering; Construction Management and Inspection; Construction Materials Testing**

Your firm's participation on Cook County contracts will be credited toward **MBE** goals in your area(s) of specialty. While your participation on Cook County contracts is not limited to your specialty, credit toward **MBE** goals will be given only for work done in the specialty category.

Thank you for your continued interest in Cook County Government's Minority, Women and Veteran Business Enterprise Programs.

Sincerely,

Edward H. Olivieri
Contract Compliance Director

EHO/ek



Attachment: Donohue - ILAW&VGE Interconnect Design

DONOHUE

# PAUL M. SHADRAKE, PE

PROFESSIONAL ENGINEER
Illinois: 62047596

YEARS OF EXPERIENCE
31

EDUCATION
Bachelor of Science
Civil Engineering
Cleveland State University
1987

PROFESSIONAL ASSOCIATIONS
American Society of Civil Engineers
American Water Works Association
Water Environment Federation

PUBLICATIONS
"A New Approach to Combined Sewer Areas: Keeping Basements Dry at Half the Cost," WEF Specialty Conference: Collection Systems Wet Weather Pollution Control, Rochester, New York, 2000 (coauthor)

"Case Study: Village of Wilmette, Illinois SSO Abatement in a Multi-Agency Sewer System," USEPA Conference on Sanitary Sewer Overflows, Washington, D.C., 1995 (coauthor)

PRESENTATIONS
"Challenges and Solutions for Selecting and Optimal Water Main Route," ASCE Pipelines 2006 Conference, Chicago, Illinois, 2006

"Retrofitting a 25-mgd Submerged Microfiltration System," IWEA/IAWWA Joint Conference, Springfield, Illinois, 2006

"Inlet Control: City of Chicago's New Rain Management System," FEMA Region V Annual Mitigation Conference, Pere Marquette State Park, Illinois, 2000

Mr. Shadrake has participated as Senior Project Manager and Lead Task Engineer on numerous water and wastewater projects in the United States and internationally. His involvement in these projects has spanned all phases of engineering activities including project planning, field investigation, systems analysis and computer modeling, conceptual and detailed design, preparation of reports and contract documents, value engineering, and assistance during permitting and construction. He has experience with staff development, technical quality of the project work, and managing project and department budgets and schedules.

**West Side Reservoir Pumping Station Improvements, Northbrook, Illinois.** Project Engineer: Study and design of facilities required to provide a new emergency water service connection between the potable water systems of the village and the Mission Brook Sanitary District of Illinois, which included an analysis of alternatives and detailed design of the selected alternative, as well as the preparation of the plans and specifications for improvements at the West Side Reservoir pumping station, an emergency connection point in the distribution system, and office and field engineering services during construction.

**High Service Pump Station, Illinois American Water, Sterling, Illinois.** Project Manager: For the replacement of the existing high service finished water pump station at the ILAWC Sterling District East WTP. Project includes an assessment of pump station alternatives, field investigations including survey, geotechnical borings, and utility location, coordination with package pump station supplier, wet well detailed design, demolition of existing station, and enclosures for four raw water well pumps and meter facilities. Station consists of three 750 gpm pumps, VFDs, wet well, and electrical facilities.

**Raw Water Pump Station Replacement, Illinois American Water Company, Streator Illinois.** Project Manager: Design of a new 6-mgd raw water pump station and new carbon feed facilities. Project included 2 new 24-inch diameter intake pipes, control and metering structure, and wet well design to accept installation of a pre-packaged pump station. A new building for the relocation of existing carbon feed equipment was designed along with new electrical and instrumentation and control feeds for all new facilities on-site. Provided for demolition of the existing pump station and carbon feed facilities located in the floodplain and included provisions for asbestos shingle and lead paint removal.

**Water Supply and Treatment Facilities Expansion, Manitowoc Public Utilities, Wisconsin.** Project Manager: Responsible for the preparation of preliminary and detailed design for an expansion of the water treatment facilities, in order to supply the Central Brown County Water Agency with a firm 25-mgd drinking water capacity. Work included a 4,000-foot, 60-inch-diameter intake pipe with micro screens, a new 28-mgd raw water pumping station, a new 25-mgd finished water pumping station, a 3-million-gallon reservoir, and a submerged membrane treatment system that was retrofitted into the existing conventional granular media filtration basins. Managed all aspects of the project, including technical oversight, schedule, budget, and resource staffing.

**Water Treatment Plant Improvements, Kankakee, Illinois.** Project Manager: Responsible for fast-track design and services during the construction of various water treatment plant improvements, including replacement of three low service and three high service pumps and associated valves, 20-inch- and 24-inch-diameter isolation valves, rehabilitation of the 90-foot and 100-foot-diameter primary clarifiers, filter media replacement, new chlorine scrubber, plant flood protection, installation of a new 2000-kW diesel fuel generator, new dual electrical services and electrical room, and plant security fencing and access improvements. Prepared specifications for prepurchase of major equipment including pumps, generator, transformers, and switchgear and provided resident engineering services during construction.

**Reservoir and Pumping Station Improvements, Oak Park, Illinois.** Responsible for the design and preparation of technical specifications and contract drawings for a new 2.5-million-gallon underground water reservoir and the rehabilitation of two pumping stations, which included an assessment of alternative reservoir locations, the connection to

reservoir and pumping station facilities, and the replacement of all pumps and piping in the North and South pumping stations. Other services included community meetings, permitting assistance, bidding assistance, and engineering services during construction.

**Water Main, Hawthorn Woods, Illinois.** Managed the fast-track design for a water transmission main for the Hawthorn Woods Country Club, which included the preparation of technical specifications and contract drawings for construction of approximately 6,000 feet of 16-inch-diameter pipe and various appurtenances, isolation valves, air relief, fire hydrants, and provisions for expansion; preliminary design including hydraulic analysis, surge analysis, and a master plan for a phased approach in order to immediately serve early phases of the country club that were nearing completion while accommodating future expansion and build-out of the country club and surrounding service area. Project required detailed topographic surveys and geotechnical investigations, assistance with permitting, and engineering services during construction.

**West State Street Water Main Extension, Rockford, Illinois.** Responsible for the design of a water transmission main to serve the western portion of the city's expanding service area, which included the preparation of technical specifications and contract drawings for the construction of over three miles of 16-inch-diameter pipe, and various appurtenances including isolation valves, air relief, fire hydrants, and provisions for expansion. Performed a preliminary design which included a hydraulic analysis to immediately serve the needs of the Pierce Chemical Company at the west end of the transmission main while accommodating potential future expansion and build-out of the surrounding service area. The project required detailed topographic surveys and geotechnical investigations as well as permitting assistance and engineering services during construction.

**Ridge Road Water Transmission Main, Highland Park, Illinois.** Project Manager: Responsible for the design and preparation of technical specifications and contract drawings for the construction of over 6,000 feet of 24-inch-diameter water transmission main and various storm drainage system improvements. This included a hydrologic study to investigate localized drainage problems and determine the required capacity and layout of the new storm drainage outlet system, required detailed topographic surveys and geotechnical investigations, bidding and permitting assistance, and engineering services during construction.

**Green Bay to North Reservoir Water Transmission Main, Highland Park, Illinois.** Responsible for the design and preparation of technical specifications and contract drawings for the construction of over 7,000 feet of 36-inch-diameter water transmission main and over 1,000 feet of 10-inch-diameter water main; improvements to localized drainage problems; and 300 feet of tunneling under a railroad embankment at two locations. Performed the required detailed topographic surveys and geotechnical investigations and provided bidding assistance, permitting assistance, and services during construction.

**Vine Avenue Water Main Phase II, Highland Park, Illinois.** Lead Engineer: Responsible for the design and preparation of technical specifications and contract drawings for the construction of over 2,500 feet of 30-inch-diameter water transmission main and 1,200 feet of 12-inch to 15-inch-diameter storm sewers, as well as a hydrologic study to determine the required capacity and layout of the new storm drainage system, required detailed topographic surveys and geotechnical investigations including ravine embankment erosion and retaining wall stability analyses, bidding assistance, permitting assistance, and office engineering services during construction.

**Rob Roy Country Club Water Service Improvements, Prospect Heights, Illinois.** Lead Engineer: Water system improvements in the Rob Roy Country Club service area. Responsible for the detailed design of more than 2,000 feet of 12-inch-diameter water main, including fire hydrant and connection facilities, performance of a comprehensive utility review, coordination and supervision of geotechnical and surveying subconsultants, and preparation of plans, specifications, permit applications, and assistance during construction.



Attachment: Donohue - ILAW&VGE Interconnect Design

DONOHUE

# MICHAEL B. STOHL, PE

PROFESSIONAL REGISTRATION
Wisconsin: 43845
Illinois: 62063326
Indiana: PE11200403
Iowa: P23026
Missouri: 2014041302
Michigan: 6201065806
Minnesota: 55048
California: 22677

CERTIFICATIONS
2-Hour OSHA, 2017
Confined Space Entry

YEARS OF EXPERIENCE
13

EDUCATION
Bachelor of Science
Electrical Engineering
Illinois Institute of Technology
2006

PROFESSIONAL ASSOCIATIONS
Consulting Electrical Engineers (CEE) – Illinois Division
Illinois Water Environment Association
Electrical, Power, Energy and Controls Committee

AWARDS
2019 ACEC Missouri Engineering Excellence Honor Award, Project Manager/Design Lead: Lemay Pump Station Electrical System Transformation, Metropolitan St. Louis Sewer District, St. Louis, Missouri

2018 ACEC Illinois Engineering Excellence Merit Award, Project Manager/Lead Designer: Electrical Modernization of 20-mgd Water Facility, Illinois American Water Company, Peoria, Illinois

2018 ACEC Indiana Engineering Excellence Merit Award, Electrical Engineer: Cloth-Media for CSO Treatment, Rushville, Indiana

2014 ACEC Illinois Engineering Excellence Grand Conceptor Award, Lead Electrical Engineer: IDOT Pump Station 7 associated with Wacker Drive and Congress Parkway Reconstruction at Chicago, Illinois

2013 ACEC Indiana Engineering Excellence Honor Award, Construction Engineer - Electrical: Overflow Reduction through CSO Abatement Projects at Goshen, Indiana

2013 ACEC Indiana Engineering Excellence Merit Award, Lead Electrical Engineer: Long-Term Control Plan and Plant No. 1 Improvements Project at Auburn, Indiana

2011 ACEC Minnesota Engineering Excellence Honor Award, Electrical Engineer: New Wastewater Treatment Facility at Willmar, Minnesota

2011 ACEC Missouri Engineering Excellence Grand Award, Electrical Engineer: Aeration-Detention System at O'Fallon, Missouri

Mr. Stohl is a senior electrical engineer whose career experience has specialized in the design and construction of water and wastewater facilities including a variety of pump stations. He has been responsible for project management on complex electrical distribution systems; electrical planning and design for water related infrastructure projects; and construction oversight including attendance at factory witness testing and coordinating electric utility outages. His areas of expertise include:

- Electrical Service and Power Distribution (through 34.5kV)
- Commissioning Assistance
- Factory Acceptance Testing
- Emergency and Standby Electrical Power Systems
- Switchgear and Switchboard design
- Motor Control and Motor Control Center Design
- Voltage Drop Design/Calculations
- Grounding and Lightning Protection Design
- Lighting and Lighting Control Design
- Fire Alarm System Design
- Intrusion and Security System Design
- Code Interpretations and Applications

**High Service Pump Station, Illinois American Water, Sterling, Illinois.** Lead Electrical Engineer: For the replacement of the existing high service finished water pump station at the ILAWC Sterling District East WTP. Project includes an assessment of pump station alternatives, field investigations including survey, geotechnical borings, and utility location, coordination with package pump station supplier, wet well detailed design, demolition of existing station, and enclosures for four raw water well pumps and meter facilities. Station consists of three 750 gpm pumps, VFDs, wet well, and electrical facilities.

**Main Station Electrical Upgrade, Illinois American Water, Peoria, Illinois.** Project Manager, Lead Design and Resident Engineer: This project included the replacement of the existing electrical distribution system for the 21-mgd facility, the de-commissioning of Pump Station No. 1, automation of the High Service Pumping system, and the hydraulic expansion of Pump Station No. 2. Electrical design consisted of three aerial reclosers in a main-tie-main arrangement to accept the dual 13.2kV utility sources and control the flow of power over the aerial loop so each half of the loop is normally connected to a separate utility source. The aerial distribution consisted of bare conductors supported on poles with cross-arms with select poles have fused cutouts, single phase transformers, and LED lighting. To provide redundancy throughout the 480V distribution, each half of the aerial loop fed split bus switchgear and switchboard equipment equipped with SEL-751 relaying via 13.2kV – 480V padmount transformers. A 2.0 MW engine-generator was designed with 13.2kV metal clad, circuit breaker switchgear to back-up the utility sources equipped with SEL-751 and 700G relaying. The electrical equipment for the Pump Station included 3,200-amp switchgear, variable frequency drives, harmonic filters, and induction motors for 400-hp, 700-hp, and 1,000-hp High Service Pumps. Special project challenges included designing an electrical distribution system with equipment located out of the floodway (site located on Illinois River) which required foundations several feet high for the new exterior equipment, installing equipment in structures that are listed to the Illinois Historical Society meaning that structure façades could not be altered, keeping the plant operational while it is transitioned from a 2.4kV to 13.2kV distribution system, and automating a pump system that has several ancillary systems including priming water, seal water, and corrosion inhibitor.

**Main Station Electrical Upgrade Study, Illinois American Water, Peoria, Illinois.** Lead Electrical Engineer: Evaluated various alternatives to upgrade the 21-mgd Water Treatment Plant's electrical distribution system. The project included site visits, inventory of equipment, investigation of equipment condition, coordination with the electric utility to provide redundant services and recommendations for equipment replacement and upgrade. The following 4,160V equipment was investigated to replace 2,400V

AWARDS (continued)
2010 ACEC Wisconsin Engineering Excellence State Finalist, Electrical Engineer: Wastewater Plant Expansion & Optimization at Two Rivers, Wisconsin

PRESENTATIONS
"Lincoln Source Water – The Odyssey," Illinois AWWA Source Water Summit, May 2019

"Addressing Single Point Failures in Electrical Systems," Wisconsin AWWA Annual Meeting, September 2018

"Conquering Floods, Maintaining Historic Sites, and Re-Purposing a 45-Year-Old Asset: The Story of Peoria Main Station's Electrical Improvements, "Illinois WATERCON Conference, March 2018

"Stormwater Pump Station 101: Keeping the Pavement Dry" Association of Highway Engineers Annual Conference, September 2017

"Electrical Upgrades at a 21 MGD Water Plant" Stewart Spreading Field Day, September 2017

"Identifying Weak Points in Electrical Systems," Missouri WEA and Missouri AWWA Joint Meeting, March 2017

"Electrical Distribution System Vulnerabilities" Illinois AWWA WATERCON Conference, March 2015

equipment: fused interrupter switchgear (manual and electrically operated), aerial load break switches (manually and electrically operated), aerial fault interrupting switches, padmount switchgear and transformers, active front end variable frequency drives with built in bypass, reduced voltage solid state starters, induction motors, secondary unit substations, automatic transfer switches and diesel engine-generators. Recommendations were made based on capital costs, equipment safety and maintenance, and system redundancy.

**Well Field Development and Water Treatment Facilities Design, South Sangamon Water Commission, Chatham, Illinois.** Lead Electrical Engineer: Development of design concepts for a 4.1 mgd water treatment facility. Processes include well fields, aeration/detention, microfiltration, ion-exchange softening, high service pumping, and chemical feed facilities for sodium hypochlorite, hydrofluosilicic acid, caustic, and citric acid. Electrical design included the design and installation on a 12.47kV switchgear with auto-throwover system, 1,000kW 12.47kV emergency diesel generator, 480V motor control center to power process loads, single phase medium voltage feed the well fields, use variable frequency drives for phase conversion and ten variable frequency drives and harmonic filters ranging in size from 40 hp to 200 hp. Special project challenges included feeding the nine Well Fields located on average 1.5 miles away from Water Treatment Plant, designing a distribution system at each Well Field out of the flood plain, and coordinating incoming power between two separate utility companies. Construction related services including answering contractor questions and shop drawing reviews were also provided.

**Streator Water Treatment Facility Improvements, Illinois American Water, Streator, Illinois.** Lead Electrical Engineer: This project included the replacement of the river intake pump station with three new vertical turbine pumps with a capacity of 10 mgd and replacement of the Carbon Building. Electrical design included tying into an existing 1600 amp switchboard and re-feeding several facilities throughout the site. Design included a new variable frequency drive for the 60-hp reservoir pump and relocated of existing chemical feed equipment to the new facility.

**Interurban East St. Louis Water Treatment Facility, Electrical Improvements Project Value Engineering and Peer Review, Illinois American Water, East St Louis, Illinois.** Project Manager and Lead Reviewer: This project included review of the design concepts for the estimated $7.2M project that involves the installation of a new building to house switchgear along with exterior diesel engine generators. The preliminary design consisted of a split bus 4160V circuit breaker switchgear and two 3.0 MW generators sized to provide standby power for a peak day. One of the generators could be taken out of service and still maintain power for an average day. The switchgear would replace aged equipment that had ratings and coordination limitations. During the value engineering session it was recommended to reduce the generator sizes to save on capital costs ($300k per generator). By using diesel engines on select High Service Pumps, the engine generator sizes could be reduced. Further, utilizing the engine driven pumps provides the plant with additional reliability which will allow for system pressure to be maintained in the event of a utility outage. Money saved through the value engineering session allowed the Water Company to include additional equipment replacements to be added to the project including upgrading the feeders to the River Intake. Construction sequencing was verified and recommendations were made to limit the amount of temporary electrical equipment that would be required during construction as well as limit the amount of outages to the plant processes.



Attachment: Donohue - ILAW&VGE Interconnect Design

DONOHUE

# JOSEPH V. PISULA, PE

PROFESSIONAL ENGINEER
Illinois: 62040825

YEARS OF EXPERIENCE
41

EDUCATION
Bachelor of Science
Environmental Engineering
Pennsylvania State University
1978

PROFESSIONAL ASSOCIATIONS
ACEC Illinois

AWARDS
2016 ACEC Missouri Engineering Excellence Grand Award, Civil Engineer: Jefferson City-Cole Junction Pump Station and Force Main

2005 Engineering Excellence Merit Award - ACEC Illinois, Project Manager: Headworks Study and Design, Decatur Sanitary District, Illinois

PRESENTATIONS
"Operation Rolling Thunder; Solving a Forcemain Mystery in Charleston, IL," Illinois Wastewater Professionals Conference, April 2017

"Decatur Sanitary District Digester Upgrades," Central Illinois Professional Wastewater Operators, July 2015

"Decatur Digester Rehabilitation and Mixer Replacement," WATERCON, March 2014

"Starting a Water System from Scratch in Illinois: A Case Study," WATERCON: Illinois AWWA and Illinois WEA Joint Conference, March 2013

"Cost Effective Waste Treatment Solutions," Illinois City/County Association Fall Meeting, August 2010

"How to Survive A CSO Long-term Plan without Braking the Bank," Illinois Rural Water Association Annual Meeting, February 2010

"I Need Another Anaerobic Digester, Don't I? - A Case Study at the Rantoul, IL Wastewater Treatment Plant" Central States Water Environment Federation Annual Meeting, Lincolnshire, Illinois, May 2009

"Rantoul Water Plant Collapse / Reconstruction," Wisconsin Water Association Annual Meeting, September 2008

"CSO Long Term Control Planning for Small Illinois Communities," Central Illinois Professional Wastewater Operators Summer Meeting, July 2008

"Low Pressure Sewers," Illinois Rural Water Association Annual Conference, October 2007

Mr. Pisula has 41 years of experience in all phases of water and wastewater projects. His duties include facilities plan reports, treatment process sizing and design, preparation of construction contract documents and specifications, construction cost opinions, grant and loan administration, construction observation and administration, plant start-up, and O&M manual preparation. He has extensive experience administering SRF and DWRF loans. He has administered over $183 million in SRF/DWRF loans in various states since 1997.

**South Logan Booster Station and Ross Lane Elevated Tank, Danville, Illinois.** Assistant Engineer: Study and design to eliminate low water pressure problems in the south end of the City. Improvements included the construction of a 1-million-gallon elevated storage tower and an underground package booster pump station and control system. Duties included completion of a hydraulic model of the south pressure zone, engineering assistance during the preliminary study, project cost opinions, site design, and preparation of the plans and specifications.

**Elevated Tank, Westville, Illinois.** Process Engineer: Design phase services of 100,000-gallon elevated storage tank at the south side of the Village. Prepared detailed plans and specifications, compiled the construction cost opinion, and provided bid phase assistance.

**High Service Pump Station, Illinois American Water, Sterling, Illinois.** Quality Control Engineer: Replacement of the existing high service finished water pump station at the ILAWC Sterling District East WTP. Project includes an assessment of pump station alternatives, field investigations including survey, geotechnical borings, and utility location, coordination with package pump station supplier, wet well-detailed design, demolition of existing station, and enclosures for four raw water well pumps and meter facilities. Station consists of three 750 gpm pumps, VFDs, wet well, and electrical facilities.

**Water Distribution Study, Illinois American Water, Champaign, Illinois.** Project Manager: Managed this project that included a water distribution study for the ILAWC-Champaign District utilizing an existing WaterGems hydraulic model. The two primary objectives were to analyze the adequacy of the transmission main supplying the south service area and to recommend system improvements necessary to create an additional pressure zone to accommodate future growth.

**Illinois American Water Company, Wastewater Plant Upgrade – Phases 1 and 2, Homer Glen, Illinois Service Area.** Study Phase Engineer: Compiled and secured IEPA-approval on the Facilities Plan Report for this two-phase, $20 million project that will regionalize ILAWC's two wastewater plants and which will add biological nutrient removal (BNR) facilities for removing total phosphorus and total nitrogen from the plant flows. Also served as lead negotiator between ILAWC and two environmental groups that had a regulatory interest in the project. Also serving as Project Manager on the design of Phase 1, which includes the addition of a new SCADA system, new aeration basins and selector zones, new high efficiency blowers, new clarifiers, a new UV disinfection system, new chemical feed systems, and new standby generator.

**Water System Improvements, Sangamon Valley Public Water District, Mahomet, Illinois.** Construction Phase Project Manager/Loan Manager: Took over from another consultant the construction management duties and DWRF Loan Administration during the construction of this $6.8 million drinking water project that included one new 500 gpm well, a 250,000 gallon ground storage tank and booster pump station and 1,000 gpm ion exchange softening plant. Duties included rectifying previous loan deficiencies, loan reimbursement request preparation, and loan amendment processing, all completed in a timely manner.

**New Water Treatment System and Well Field, Chatham, Illinois.** Project Manager: 3.3 mgd all-new water softening treatment plant that utilized the microfiltration and ion exchange softening processes, as well as aeration and detention facilities. The project also included a new well field consisting of nine shallow alluvial wells drilled into a flood

PRESENTATIONS (continued)

"Nutrient Removal technologies," Illinois Rural Water Association Northern Section Meeting, October 2006

"Upgrades to Lift Stations in Marquette, MI," Central States Water Environment Association Conference, May 2006

"Marquette Lift Stations, Let's' Take Our Four Largest Wastewater Lift Stations Out of Service This Summer and Not Lose any Sleep at Night: A Case Study," ISAWWA/IWEA Joint Water Conference, March 2006

"Operator Input During Design," Missouri Water Environment Federation Annual Meeting, March 2005

"Grit System Improvements, Decatur, IL Wastewater Treatment Plant – A Case Study" Illinois Water Environment Federation Annual Meeting, March 2005

"Lincoln WWTP Upgrade," Illinois Association of Water Pollution Control Operators Annual Meeting, April 2004; Illinois Association of Wastewater Operators Regional Conference, October 2003

prone area. The project allowed the Village of Chatham and other communities to develop their own source of supply and treatment system and to become independent from its existing third party bulk water supplier.

**Water Plant Addition, Oakwood, Illinois.** Project Manager: Design, construction, and start-up phases of addition to the Village's 0.5-mgd surface water treatment plant. Processes added to the facilities included new finished water transfer pumps, a new 100,000-gallon ground storage tank, new high service pumps, and new pumping system controls. Duties included management and administration of the Village's Illinois First grant, which funded the project entirely.

**Water Plant Upgrades and New SCADA System, Rantoul, Illinois.** Process Engineer and Project Manager: Major plant upgrades in 1997 and 2007. In 1997, Mr. Pisula designed portions of the upgrade to this 4.75-mgd split treatment lime softening groundwater plant, including two new rapid sand filters media, valves, and controls, and the addition of a new plant SCADA system. In 2007, he managed a $4.9 million upgrade that was caused by a roof collapse in the east end of the plant. That upgrade included an upgrade to the SCADA system, the replacement of the collapsed building, and the addition of carbon dioxide for pH control plus a new 30-foot diameter Claricone unit.

**Water Plant Upgrade, Pontiac, Illinois.** Project Manager: Final design and construction phases of multi-phase surface water treatment plant upgrade. Improvements included increasing production capacity from 3 mgd to 4 mgd, new chlorination facilities, and new treatment, storage, and recycle facilities for spent backwash water and residue blowdown flows. Facilities added include a new 1-mgd treatment unit, two filter units, filter effluent transfer pumps, and control system using Intellution operator interface software running on an IBM-compatible PC. Duties included selection and management of design consultants, construction management, coordination with plant production staff, and control system design philosophy.

**NPDES Permit Compliance Project, Streator, Illinois.** Project Manager: Addition of new treatment, storage, and recycle facilities for spent backwash water and residue blowdown flows for surface water treatment plant upgrade. Improvements included new earthen lagoons for process waste storage and new waste transfer pumps and controls. Duties included preparation of program plan and budget, management of design consultant, construction management, and coordination with plant production staff.

**Low Service Pump Replacement, Streator, Illinois.** Lead Engineer: Design phase of replacement of the plant's low service pumps. Duties included completion of the initial project planning and budgeting, pump hydraulic calculations, pump and valve selection, equipment and piping layout, plans and specifications, construction contract bidding, selection of the electrical subconsultant, and coordination with plant production staff.

**Water Distribution System Master Plan, Rantoul, Illinois.** Project Manager: This 2008 study compiled a comprehensive water distribution plan for the currently undeveloped areas beyond the Village's corporate limits. The study utilized WaterCAD software for the evaluation. The analysis also examined several options for resolving low pressure problems in the west end of the Village. The study recommended the creation of a second pressure zone which would be created in conjunction with growth out into undeveloped areas that are relatively high in ground surface elevation.

DONOHUE

# ERIC COCKERILL, PE, BCEE

PROFESSIONAL ENGINEER
Illinois: 62053666

PROFESSIONAL DESIGNATION
Board Certified Environmental Engineer – American Academy of Environmental Engineers (Water/Wastewater Engineering)

YEARS OF EXPERIENCE
25

EDUCATION
Master of Science
Environmental Engineering
University of Michigan
1995

Bachelor of Science
Environmental Engineering
Northwestern University
1994

PROFESSIONAL ASSOCIATIONS
Illinois Water Environment Association
Water Environment Federation
American Public Works Association
American Academy of Environmental Engineers
ACEC Illinois

PUBLICATIONS
"CFD Modeling Optimizes the Design of Primary Settling Tanks at MWRDGC's Calumet Water Reclamation Plant," WEFTEC, 2008 (with E. Podczerwinski, E. Brosius, T. Weber, M. Garcia, X. Liu, and C. Brunner).

"Elevated Water Tower: Cooperation/ The Cutting Edge/The Competitive Edge," Illinois Section of the American Water Works Association Conference, Springfield, Illinois, 2004 (with E. Glatfelter).

PRESENTATIONS
"Biosolid Management Approaches", IAWA Technical Meeting, July 2019

"Efficient Design of High Efficiency Blowers: Dynamic Modeling and Control Strategies Reduce Costs," WATERCON, March 2014

"How Much Chemical Will I Really Need? Estimating Chemical Demands for Phosphorus Removal," WATERCON: Illinois AWWA and Illinois WEA Joint Conference, March 2013

"The Role of Owner, Contractor, and Engineer during Construction," ISAWWA/IWEA Joint Conference, Springfield, Illinois, 2009.

"Challenges and Successes of Residuals Solids Treatment Startup," ISAWWA/IWEA Joint Conference, Springfield, Illinois, 2006.

Mr. Cockerill has 24 years of experience in water and wastewater treatment facilities. This includes conceptual and detailed design for wastewater treatment and collection system projects encompassing lift stations, sewers, CIPP sewer rehabilitation, grit removal systems, scum handling, biological nutrient removal, chemical treatment/disinfection, wet weather treatment, sludge pumping, sludge thickening and sludge conditioning. His work in water drinking facilities includes pump station design and rehabilitations, control strategy development, water transmission main design, and O&M manual development.

He also has experience with many computer models used in planning and design of water, wastewater and water resources projects. These include H2ONET, XP-SWMM, HYDRA, BIOWIN, and STOAT.

In addition to his pre-construction experience, Mr. Cockerill has been involved with construction phase engineering services including a $168 million sludge treatment project, $27 million water treatment plant upgrade, $2.5 million elevated water storage tank, and $5 million wastewater biosolids processing improvement project. He has been responsible for coordination of office services, submittal review, schedule review, contractor claim review, and correspondence with contractors.

**Elevated Water Storage Tank Design and Construction, Lake Bluff, Illinois.** Project Manager: As part of the Central Lake County Joint Action Water Agency water system plan, designed a 1.5MG, 200-foot tall elevated water storage tank to provide additional operational storage and surge protection for the area. The tank also provides key protection to the system downstream of the booster station. Project manager and resident engineer during the construction phase of the project. Responsible for onsite inspection, submittal review, RFI response, pay application review, change order review, and construction document control coordination. Total construction cost is $2.3 million.

**Chickasaw Hills WRF Regionalization Phase I, Illinois American Water Company, Homer Glen, Illinois.** Technical Advisor: Design for the replacement of an existing packaged wastewater facility with a new biological nutrient removal facility with UV disinfection and aerobic digestion. Work included review and input for design of aeration basins, secondary clarifiers, aerobic digesters, UV disinfection, post aeration, and blower facilities.

**East Side Influent Pump Station, East Side Treatment Plant, Joliet, Illinois.** Project Principal: Project involved design of a replacement for the existing influent pump station and screening facility. Station designed for 45 mgd expandable to 75 mgd in the future using four dry-pit submersible pumps. Two screens included with full redundancy. Screens are 35 feet deep and able to be pivoted out of the channel for maintenance.

**Replacement Lift Station Design, West Chicago, Illinois.** Project Manager: Prepared the preliminary and detailed design for a 12-mgd sanitary lift station. Responsibilities included reviewing wastewater flow projections, reviewing the sizing and design of the sanitary lift station tributary to the proposed station, and identifying requisite design characteristics. Responsible for pump selection (submersible, non-clog pumps), station layout design, and the development of process mechanical equipment specifications.

**Phase 2 Improvement Project, Lake Bluff, Illinois.** Project Manager: Construction services project for the Central Lake County Joint Action Water Agency Phase 2 Improvement Project. Involves new construction of a dedicated residual solids processing train to support previous increases to the plant's treatment capacity. The project includes the construction of an expanded maintenance area, installation of additional power generation to provide peak shaving ability, a new backwash sedimentation basin, gravity thickeners, and centrifuge dewatering equipment. In addition, the project included a new 2.5MG underground clearwell and the addition of ultraviolet disinfection to augment existing sodium hypochlorite disinfection. Responsibilities include onsite inspection, submittal review, RFI response, change order review, special coordination of field changes, and construction document control coordination. Total construction cost is approximately $27 million.



Attachment: Donohue - ILAW&VGE Interconnect Design

**Pump Station Improvements and Reservoir Project, Oak Park, Illinois.** Lead Engineer: Responsible for the evaluation, design, and specification of existing equipment removal and salvage, two 2,600-gpm pumps, piping, chlorination system, valves, flow meter, and appurtenances for each station. Coordinated assignments with a multidisciplinary staff and attended public meetings to explain the project, answer resident questions, and coordinate with the Village's landscape architect. Also reviewed conceptual and detailed designs of a 2.5-million-gallon belowground water reservoir.

**Leclaire Water Pumping Station and Reservoir Project, Bedford Park, Illinois.** Lead Engineer and Assistant Project Manager: Design of a 5MG prestressed wire wound above ground storage tank and 45-mgd pumping station. Prepared detailed drawings and specifications, provided office support during construction activities, and coordinated activities of a multidisciplinary project team that included mechanical, structural, electrical and architectural engineers. Responsible for the design and specification of pumps, piping, valves, and appurtenances.

**Cumana-Carupano Water and Wastewater Master Plan, Venezuela.** Lead Design Engineer: Participated in overseas assignment involving master planning water and wastewater infrastructure improvements for two cities in Venezuela (350,000 inhabitants total). This project for Ministerio del Ambiente y de los Recursos Naturales Renovables involved field investigations throughout the systems including flow measurement using non-intrusive ultrasonic flow meters for the water distribution system and open channel ultrasonic flow meters for the wastewater collection system. In addition, hydraulic modeling was performed on both the water distribution system and wastewater collection system using H2ONET and Hydra Graphics 3.0. Detailed land use patterns and growth rate estimates were developed to estimate future demands on the water and wastewater systems. An analysis of improvement alternatives was completed for the final report involving all aspects of the Master Plan. The recommendations included operational and capital improvements.

**Pump Station Rehabilitation, District 1, Illinois Department of Transportation, Schaumburg, Illinois.** Quality Control Engineer: Provided QA/QC for mechanical systems and design of necessary mechanical improvements to rehabilitate the following IDOT Pumping Stations: PS No. 8 , PS No. 12, PS No. 14, PS No. 24 and PS No. 37.

**Pump Station Assessment Study, Illinois Department of Transportation.** Mechanical Engineer: Assessment study for all pump stations located in Districts 2 through 9. The project included visiting the stations, performing visual inspections, meeting with maintenance personnel to find equipment history and writing reports detailing deficiencies and cost opinions to correct the deficiencies.

**Phase 2 Operations and Maintenance Project, Lake Bluff, Illinois.** Project Manager: As part of the Central Lake County Joint Action Water Agency Phase 2 Improvements Project, updated the Agencies O&M Manual by creating an electronic O&M Manual based on the existing manual and the new equipment installed as part of the project. The manual provided access to all equipment O&M manuals as well as provides overall system information including standard operating procedures and troubleshooting guides. In addition, O&M specialists will review manufacturer's information and original design documents to prepare a system level training to Agency staff. The end result will be an O&M information system that will provide the basis of training for new employees, the primary reference for operations and maintenance staff, and be maintained by the Agency. Responsibilities include coordination of design review and input from the engineering disciplines, mechanical process review, coordination with construction services efforts, and supervision of O&M specialists.



Attachment: Donohue - ILAW&VGE Interconnect Design

DONOHUE

# TIMOTHY J. BATES, PE, SE

PROFESSIONAL ENGINEER
Wisconsin: 42074
Indiana: PE11400728
Michigan: 6201062732
Minnesota: 53323
Iowa: 24245

STRUCTURAL ENGINEER
Illinois: 081.007911

CERTIFICATIONS
2-Hour OSHA, 2017
Confined Space Entry

YEARS OF EXPERIENCE
12

EDUCATION
Master of Science
Structural Engineering
Michigan Technological University
2008

Bachelor of Science
Civil Engineering
Michigan Technological University
2006

PROFESSIONAL ASSOCIATIONS
American Society of Civil Engineers
American Concrete Institute
American Institute of Steel Construction

AWARDS
2018 ACEC Indiana Merit Award Structural Engineer: City of Rushville Utilities - Cloth-Media Disk Filters for CSO Treatment, Rushville, Indiana

Mr. Bates has extensive structural planning, design and construction experience on specialized and complex projects. His structural engineering experience includes the following:

- Inspection and structural evaluation of existing structures
- Design and detailing of repairs and modifications to existing concrete, steel and wood structures
- Design of environmental structures
- Field engineering to address construction conflicts

**Pump Station Assessment Study, Illinois Department of Transportation.** Structural Engineer: Served as a structural engineer on an assessment study for all pump stations located in Districts 2 through 9. The project included visiting the stations, performing visual inspections, meeting with maintenance personnel to find equipment history and writing reports detailing deficiencies and cost opinions to correct the deficiencies.

**Pump Station Rehabilitation, District 1, Illinois Department of Transportation, Schaumburg, Illinois.** Quality Control Engineer: Provided QA/QC for structural systems and design of necessary structural improvements to rehabilitate the following IDOT Pumping Stations: PS No. 8, PS No. 12, and PS No. 14.

**Phase II Design Services, Pump Station 37 Relocation, District 1, Illinois Department of Transportation, Schaumburg, Illinois.** Structural Engineer: Provided structural engineering for this new 6,000 gpm pump station being relocated due to anticipated highway expansion.

**Phase II Services, District 1, Illinois Department of Transportation, Schaumburg, Illinois.** Structural Engineer: Provided structural engineering for Phase II work, which included bringing the pump station into conformance with current standards and extending the useful life for stormwater pump station No. 14. Structural modifications included a new below grade discharge chamber, including reinforced concrete structural top slab to support a masonry electrical room above.

**Biosolids Holding Tank, Naperville, Illinois.** Lead Structural Engineer: Design and construction of a conventionally reinforced above grade 550,000 gallon biosolids holding tank with hyperbolic mixer and sparger to replace an existing deteriorated steel tank. Design included the incorporation of a large below grade valve vault attached to the tank with enclosed stairway access from grade as well as future considerations for a second tank in the future. Project required the specification of a flat, trussed, aluminum cover system with integral hatches as well as design and modification of associated support structures. Project drafting included development of a three dimensional structural model, which when combined with the site and piping models, allowed a virtual walkthrough of the design prior construction.

**Disinfection System Upgrade, Brookfield, Wisconsin.** Lead Structural Engineer and Construction Services Manager: Design and construction services for upgrading the existing gaseous chlorine/sulfur dioxide feed, storage, and mixing systems to chemical disinfection/dechlorination feed, storage, and mixing systems. Project included modifications to existing structures to accommodate new chemical systems and overall upgrades to bring structure into compliance with modern building code. Construction phase services included all phases of the construction project from preconstruction meeting, through RFIs, submittals, pay application, dispute resolution, and approval of final payment application. Overall project construction costs were $900,000 and were completed in just over one year.

**UV Disinfection Facility, Sheboygan, Wisconsin.** Resident Project Engineer: Project involved an addition to an existing water treatment facility for two new Ultraviolet Disinfection (UV) reactors. Construction related services included regular site inspections, coordination between contractor, sub-contractors, and owner, submittal review, pay application and change order processing, project documentation, and addressing field conflicts. Overall project construction costs were $2.9 million and were completed over an 18-month duration.



Attachment: Donohue - ILAW&VGE Interconnect Design

**Primary Clarifier Rehabilitation, Holland, Michigan.** Lead Structural Engineer/Assistant Project Manager: Donohue was retained by the Holland Board of Public Works to provide planning, design, and construction phase services for improvements to its wastewater primary clarifiers. The project focusses on the rehabilitation of the facilities four existing covered primary clarifiers. Design includes: the condition assessment of the clarifier concrete; evaluation of the aluminum covers and structural elements; recommended rehabilitation methods; and design and specification of the rehabilitation approach.

**WWTP Secondary Treatment System Upgrades, Battle Creek, Michigan.** Lead Structural Engineer: Completed the preliminary design for high efficiency blower improvements, advanced aeration controls, biological nutrient removal, and advanced nutrient controls for the secondary treatment system. Structural work includes design of new equipment support bridges, analysis of existing reinforced concrete structures for change in use, and new structural steel framing to support an outside monorail system.

**Thickening Centrifuge Replacement, Wyoming, Michigan.** Lead Structural Engineer/ Assistant Project Manager: Donohue was retained by Wyoming to provide planning, design and construction phase services for the replacement of one of the facility's thickening centrifuges. Design includes upgrades to the building to meet current codes, coordination with selected equipment vendor and integration into the existing systems.

**Biosolids Master Plan, East Lansing, Michigan.** Lead Structural Engineer: Completed a comprehensive evaluation of long-range biosolids disposal options. All possible options were initially considered and then economic and qualitative aspects of each option were developed to allow the stakeholders to narrow down the choices. Structural evaluation considered cost of renovations of existing buildings and structures. Final options for consideration were considered at a conceptual project level to accurately evaluate how the proposed facilities would be located on the site and the capital and operational cost for each. The outcome will be a well-defined phased plan for facility improvements.

**Wastewater Treatment Plant Improvements, Whitewater, Wisconsin.** Structural Engineer: Following a detailed facility plan developed by Donohue, a design aimed at upgrading aging infrastructure throughout Whitewater's wastewater treatment plant was produced by Donohue. This included several new structures including a high strength waste receiving station and tank, sewer jetter cleanout pad, and a prefabricated wood storage building among other renovations to existing structures.



Attachment: Donohue - ILAW&VGE Interconnect Design

DONOHUE

# WILLIAM J. GRAY, PE

PROFESSIONAL ENGINEER
Illinois: 62065438

YEARS OF EXPERIENCE
11

EDUCATION
Bachelor of Science
Agricultural Engineering
University of Illinois
2008

Mr. Gray is experienced in the design of water treatment and distribution facilities and wastewater collection and treatment facilities.

**High Service Pump Station, Illinois American Water, Sterling, Illinois.** Lead Civil Engineer: For the replacement of the existing high service finished water pump station at the ILAWC Sterling District East WTP. Project includes an assessment of pump station alternatives, field investigations including survey, geotechnical borings, and utility location, coordination with package pump station supplier, wet well detailed design, demolition of existing station, and enclosures for four raw water well pumps and meter facilities. Station consists of three 750 gpm pumps, VFDs, wet well, and electrical facilities.

**Pump Station Vulnerability and Risk Assessment Study, Metropolitan Water Reclamation District of Greater Chicago, Illinois.** Project Engineer: Assisted the project team with the analysis of alternate routes and methods for gravity conveyance of wastewater.

**Front Street Lift Station Replacement, Monticello, Illinois.** Project Engineer: The project consisted of the replacement of an existing self-priming type sanitary lift station with a new fabricated self-priming lift station with a natural gas fueled standby engine (including demolition and removal of existing lift station and portions of force main), approximately 610 feet of 8-inch force main and fittings, 35 feet of gravity sewer piping, and a new wet well. Project responsibilities include civil site design, new packaged pump station design, new force main design, project permitting, bid document preparation, and construction inspection services.

**Singleton, Zion, and K-Mart Pump Stations Upgrade, Lincoln, Illinois.** Project Engineer: The project consisted of replacing or upgrading the existing Singleton, Zion, and K-Mart sanitary pump stations. The project also included the design of new gravity sewers and a new discharge force main using horizontal directional drilling methods. Project responsibilities included site civil design, pump station replacement coordination, bypass pumping coordination, force main design, gravity sewer design, site surveying, bid document preparation, and multidiscipline coordination with other regional Donohue offices.

**Well Field Design, Chatham, Illinois.** Project Engineer: Design services for the construction of a well field to supply raw water to the South Sangamon Water Commission Water Plant. Total capacity of the well field is 3 mgd. Project responsibilities include site civil and process design of nine vertical wells within the Sangamon River Floodplain.

**Water System Upgrade, Penfield Water District, Illinois.** Lead Engineer: This project consisted of the replacement of all the process equipment in the Penfield Water District Plant. Mr. Gray designed replacement aerator, detention tank, pressure filter, and high service pumping equipment for the 50-gpm plant.

**Induced Draft Aerator Replacement, Gibson, Illinois.** Project Engineer: Project consisted of replacing the aerator at the Gibson City Water Plant. Project responsibilities included site visits, drawing production, and bidding assistance.

**Raw Water Main and Lagoon Effluent Force Main, Chatham, Illinois.** Project Engineer: The project consisted of the construction of approximately 6,057 lineal feet of new 20-inch raw water main, 1,082 lineal feet of new 18-inch raw water main, 7,174 lineal feet of new 8-inch red water lagoon effluent force main, and 1,868 lineal feet of 6-inch finished water main. Responsibilities included the civil and process design of the raw water main and lagoon effluent force main, preparation of bid documents, project permitting, and compilation of the cost estimate.

**Water Treatment Plant, South Sangamon Water Commission, Illinois.** Project Engineer: The project consisted of the construction of a new 3.1-mgd water treatment plant (including new microfiltration equipment, an induced draft aerator, ion exchange

softening equipment, bolted steel ground storage water tanks, new split case low service and high lift pumps, an above-ground package salt storage and brine feed system, and emergency generator), plus the construction of a new pre-engineered building, new earthen lagoons, new chemical feed equipment, new site piping, site fencing, electrical work, and pavements. Project responsibilities include design of an induced draft aerator for iron removal, design of several bolted steel ground storage tanks (detention tank, clear well, high chloride waste storage tank), design of three pump station of various sizes (400 gpm, 2,100 gpm, and 50 gpm), and design of two red water storage lagoons.

**Booster Pump Station Upgrade, Chatham, Illinois.** Project Engineer: The project consisted of the construction of a new potable water booster pump station at the Village's existing ground storage tank site along with new site water piping, a new generator, and a new transfer switch. Project responsibilities included site civil design work, process piping layout, and preparation of bid documents.

**Route 9 and Wood Street Water Main Replacement, Gibson, Illinois.** Lead Engineer: Project consisted of the replacement of a leaking water main under Illinois Route 9 at its intersection with Wood Street via directional drilling. This project timeline was expedited due to the potential for structural damage to Route 9 due to the leaking water main. Responsibilities included visiting the site, performing a simple site survey, completing the design, producing construction documents, and securing IDOT and IEPA permits.

**Wastewater Treatment Plant Disinfection and Phosphorous Removal Addition, Fisher, Illinois.** Lead Engineer: This project consisted of the design of three new chemical feed systems and two new chemical feed buildings for the Fisher Wastewater Treatment Plant. Mr. Gray's project responsibilities included design of a liquid alum fed system for phosphorous removal, design of a sodium hypochlorite feed system for effluent disinfection, and design of a sodium bisulfite feed system to remove excess chlorine from the disinfected effluent, design of two new chemical feed structures, design of chemical containment areas, civil site design, project permitting with IDOT and IEPA, construction document preparation and bidding services. Mr. Gray also served as the construction inspector.

**High Strength Waste Receiving Station, Sanitary District of Decatur, Illinois.** Project Engineer: This project consisted of the design of a high strength waste receiving station for the Sanitary District of Decatur (SDD). The SDD began receiving high strength wastes from local industry and commissioned Donohue to design a receiving station. Provided site civil design for the project, including the design of fully reinforced pavements for the access road, various site process piping layouts, and storm water conveyance.

**Wastewater Treatment Plant Upgrade, Stelle Community Association, Illinois.** Lead Engineer: Stelle was charged with replacing its existing package activated sludge wastewater plant with a low maintenance, cost effective recirculating sand filter. Performed design and project management service activities related to design and construction of a new 16,000-gallon-per-day recirculating sand filter wastewater treatment plant for the Stelle Community Association. Mr. Gray's project responsibilities included lead process design, manufacturer coordination, multidiscipline coordination with other regional Donohue offices, project permitting, bid document preparation, and compilation of cost estimates.

**Primary Anaerobic Digester's Mixing System Replacement – Facility Plan Amendment Report, Sanitary District of Decatur, Illinois.** Lead Engineer: Wrote a facility plan amendment to the Biosolids Handling Master Plan Donohue previously wrote to secure IEPA funding for a digester mixing project at the Sanitary District of Decatur.



Attachment: Donohue - ILAW&VGE Interconnect Design

DONOHUE

# ARIC H. BERGSTROM, PE

PROFESSIONAL ENGINEER
Wisconsin: 39114
Michigan: 6201059305
Illinois: 062069797
Indiana: PE11700652

YEARS OF EXPERIENCE
17

EDUCATION
Bachelor of Science
Chemical Engineering
University of Minnesota
2002

AWARDS
2014 ACEC Missouri Engineering Excellence Honor Award, Process Engineer: In-line Storage Optimizes Existing Riverside Pump Station, Jefferson City, Missouri

2013 ACEC Wisconsin Engineering Excellence Grand Award, Process Engineer: Sheboygan Regional WWTP Achieves Net Zero Energy, Sheboygan, Wisconsin

2013 ACEC Indiana Engineering Excellence State Finalist, Process Engineer: Long-term Control Plan and Wastewater Treatment Plant No. 1 Improvements, Auburn, Indiana

PAPERS
"Wastewater Treatment Plant Upgrades in Grafton, Wisconsin," May 2010, Water Environment Federation Magazine

Mr. Bergstrom has experience as both a Process Engineer and Control Systems Engineer. His experience includes the planning, design, and specification/documentation of treatment processes and equipment and the associated control systems utilizing PLCs, HMIs, and VFDs.

**Chickasaw Hills WRF Regionalization Phase I, Illinois American Water Company, Homer Glen, Illinois.** Controls Engineer: Development of instrumentation and controls plans and specifications for the replacement of an existing packaged wastewater facility with a new biological nutrient removal facility with UV disinfection and aerobic digestion. Including the aeration basins, secondary clarifiers, aerobic digesters, UV disinfection, post aeration, and blower facilities.

**Clearwells and High Service Pump Station, South Milwaukee, Wisconsin.** Project Manager, Process Engineer, and Controls Engineer: Responsible for design of a new 6.0 mgd high service pump station and two 850,000 gallon prescast, prestressed concrete clearwells to store finished water. Upgraded plant's ControlNet communication network to Ethernet/IP.

**Carlton Water Treatment Plant, Carlton, Minnesota.** Controls Engineer: Responsible for controls system and telemetry design for a new 350 gpm water treatment plant including a new well, filter equipment, high service pumping, disinfection, acid feed, and a remote meter station. Project provided all new PLC controls and HMI software and included remote site telemetry via Ethernet radios to two wells, the water plant, water tower, meter station, and two sanitary lift stations.

**Raw Water Pump Station, Streator, Illinois.** Process Engineer: Responsible for design of new raw water pump station and activated carbon feed system for the Streator water treatment plant.

**Chemical Phosphorus Removal Gurnee and Clavey Road Water Reclamation Facilities, Gurnee, Illinois.** Process and Controls Engineer: Responsible for design of multi-point chemical phosphorous with online orthophosphate analyzer flow pacing at the North Shore Water Reclamation District's Gurnee and Clavey Road facilities.

**Dewatering Improvements, Plover, Wisconsin.** Process and Controls Engineer: Responsible for design of a new screw press dewatering system for replace the Utility's original belt press.

**Biosolids Dewatering and Drying Improvements, Sheboygan, Wisconsin.** Project Manager/Process Engineer: Responsible for project management and process design of biosolids dewatering and drying facilities at the 40-mgd Sheboygan Regional Wastewater Treatment Facility. The project included preparing owner procurement documents for the City to purchase major pieces of process equipment and then preparing plans and specifications for a contractor to install the procured equipment and other support facilities. The project added screw press dewatering equipment, cake sludge pumping, a medium temperature belt dryer, biosolids cooling and transport equipment, and a biosolids storage silo with a nitrogen blanket for fire suppression. Nitrogen is generated onsite using a rotary screw compressor and membrane separation system.

**Wastewater Treatment Plant Upgrades, Kewaunee, Wisconsin.** Project Manager/Process Engineer: Existing wastewater treatment plant upgrade project to meet ammonia limits. Project included new influent pumping facilities, preliminary treatment, aeration basin expansion and modifications, new blowers, secondary clarifiers, UV disinfection, chemical phosphorous removal, sludge storage, and reed beds.

**Lift Station Evaluation and Design, Appleton, Wisconsin.** Process Engineer: Project to evaluate the performance and condition of an existing lift station, prepare improvement alternatives, and design the selected alternative.

**Wastewater Treatment Plant Improvements, Whitewater, Wisconsin.** Process Engineer: Responsible for facility planning and process for a 2 mgd wastewater treatment facility including preliminary treatment improvements, high strength waste receiving, anaerobic digestion, RAS and scum pumping, aeration blowers, and centrifuge sludge thickening.

**Secondary Treatment Improvements, South Bend Indiana.** Process Engineer: Responsible for design of a 33 mgd RAS pumping system to evenly distribute RAS from seven secondary clarifiers via four pump stations to four aeration basins.

**Digester Mixing Facilities, Sheboygan, Wisconsin.** Project Manager/Process Engineer: Responsible for project management and process design of new digester mixing facilities, digester cover restoration and digester gas distribution piping modifications at the 40-mgd Sheboygan Regional Wastewater Treatment Facility. The project included alternate designs for "linear motion" and internal draft tube digester mixing equipment.

**Solids Handling Study, Sheboygan, Wisconsin.** Process Engineer: Principal author of Near-Term Improvements Solids Handling Study for the Sheboygan Regional Wastewater Treatment Facility. The study examined sludge thickening alternatives, digester mixing technologies, and digester gas distribution piping modifications.

**DO Control Loop Modifications, Sheboygan, Wisconsin.** Process Engineer: Design to modify the existing DO control loop to provide effective, reliable control of aeration basin DO concentrations. The new DO control system uses two separate control loops to maintain the desired DO concentration in each aeration basin. Blower capacity is varied by maintaining a set pressure in the main blower header. DO sensors located in each of the four aeration basins control the position of an electrically actuated air flow control valve on the air header leading to each basin.

**Sludge Management Program Evaluation, North Shore Water Reclamation District, Gurnee, Illinois.** Process Engineer: As part of an overall evaluation of the District's sludge management program analyzed the grit and scum removal operations at all three of the District's WWTPs. Evaluated the possibility of replacing the Waukegan WWTP's Imhoff tanks with new primary clarifiers. The study showed that the Imhoff tanks could be removed from service to reduce odor complaints without overloading the existing primary clarifiers.

**Wastewater Plant Upgrades, Auburn, Indiana.** Process Engineer: Responsible for the design of new high-speed aeration blowers, return activated sludge (RAS), and waste activated sludge (WAS) pumping facilities at Auburn's 4-mgd Plant No. 1.

**Secondary Clarifier Mechanism Upgrade, Milwaukee Metropolitan Sewerage District, Wisconsin.** Process Engineer: Responsible for the design of scum subnatant pumping facilities and plant effluent water chlorination at the South Shore Water Reclamation Facility as part of the Secondary Clarifier Mechanism Upgrade Project.

**Wastewater Treatment Plant Upgrade, Rantoul, Illinois.** Project Manager/Process Engineer: Responsible for process design and project management involving the installation of two new fine screens to replace existing comminutors, new jet mixing equipment of the anaerobic digester, and SCADA system upgrades at this 2.8-mgd WWTP.

**Wastewater Treatment Plant Upgrade, Sheboygan, Wisconsin.** Process Engineer: Responsible for design of screening equipment, screenings conveyance, and screenings washing and compaction at this 15.5-mgd (40-mgd) regional WWTP.

# Kelly A. Simpson, PE, LEED® AP

Flinn engineering

*PROFESSIONAL LICENSES*
*Illinois Professional Engineer 1998*
*Missouri Professional Engineer 2007*
*LEED® AP 2009*

*YEARS OF EXPERIENCE*
*25*

*EDUCATION*
*Coursework for Master of Business Administration*
*Lindenwood University 2002-2003*

*Bachelor of Science*
*Civil Engineering*
*Southern Illinois University - Edwardsville*
*1993*

*PROFESSIONAL ASSOCIATIONS*
*American Public Works Association*
*American Water Works Association-Water for People Committee and Women in Water Committee*
*Society of American Military Engineers*
*Metro Water Infrastructure Partnership*

*COMMUNITY ASSOCIATIONS*
*Triad School Board Member*
*Triad Foundation – President*
*United Way of Greater St. Louis – Board of Directors*
*Illinois Division of United Way – Past Chair*
*Madison County, Illinois Planning Commission*

## EXPERIENCE

Ms. Simpson is the co-owner and co-founder of Flinn Engineering, LLC. Ms. Simpson's experience includes planning, designing, and managing construction of drinking water infrastructure including treatment, distribution, pumping, and storage. Her experience includes surface water and groundwater treatment plants ranging from 4 million gallons per day (mgd) to 60 mgd and water main ranging from 2 inches to 60 inches. She has developed and calibrated hydraulic models using WaterCAD/WaterGEMS and utilized the hydraulic models to plan future infrastructure improvements, isolate operational issues, and recommend operational strategies to improve efficiency. Additional planning work includes demand projections, emergency power analysis, treatment plant analysis, and pumping/storage analysis. Ms. Simpson also has extensive experience collaborating with operations and maintenance staff to successfully troubleshoot and solve operational issues associated with water treatment and pumping.

## PROJECTS

**LT2ESWTR Bin 2 Compliance Conceptual Design, Illinois American - Granite City and Alton.** Subconsultant/Project Engineer. This project included preparing a study comparing alternatives to comply with the LT2ESWTR Bin 2 requirements. Responsible for preparing hydraulic profiles of alternative UV configurations at the Granite City (15.2 mgd) and Alton (16 mgd) water treatment plants, preparing piping layout for the alternatives, preparing cost estimates for the alternatives, preparing exhibits for the study, and preparing relevant sections of the study.

**Source of Supply and Production Facility Study, Illinois American – East St. Louis and Granite City.** Project Engineer. Prepare a study with recommended improvements and estimated costs for two (2) Mississippi River Intakes and two (2) water treatment plants. The treatment plants are rated at 15.2 mgd and 56.6 mgd. The improvements were based on historic water quality data, historic chemical usage, historic pumping records, and anticipated new regulations. This study is part of the overall Comprehensive Planning Study used to prepare the 5-year capital expenditure plan. Anticipated Completion in 2018.

**Spill Prevention, Control, and Countermeasure Plans, Illinois American – Statewide Facilities.** Project Engineer. This project included reviewing and updating the SPCC plans for several facilities in Illinois including the Peoria and Chicago facilities. Responsible for visiting each site, reviewing procedures with Production staff, and updating the plans to include new equipment.

**Water Customer and Demand Projections, Illinois American – East St. Louis, Belleville, and Granite City.** Project Engineer. Prepare a study showing the projected water demands in 2020, 2025, and 2030. The customer and demand projections were based on historic trends, population projections, and input from water company staff and large-use customers. The study is part of the overall Comprehensive Planning Study used to prepare the 5-year capital expenditure plan.

**Streator Raw Water Pump Station – Illinois American – Streator, IL.** Project Engineer/Subconsultant to Donohue & Associates. Review construction drawings for compliance with Illinois American standards and acquire permits from Illinois EPA and City of Streator. Also responsible for coordination with Illinois DNR to identify potential cultural resources and possible mitigation efforts.

Accurate
GROUP, INC.



# AUGUSTO MANAHAN, PLS

Chief Surveyor

Mr. Manahan has over 20 years of experience in the field of surveying and CAD. He is the Survey and CAD manager supporting the design team and the survey crews on various private, Illinois State Toll Highway Authority, Illinois Department of Transportation and Chicago Department of Transportation projects. Responsibilities include:

**Education**

- BS Civil Engineering

**License and Certifications**

- PLS License Illinois #035-003967 - 2017
- SIT License Illinois #028-001443-2011
- eRailSafe 131924707740 (Exp. Oct. 2016)

**Skills**

- MicroStation V8i (SELECTseries 3) 2014
- Geopak (SELECTseries 3) 2013
- AutoCad Civil 3D 2016
- Microsoft Office

- Research land records, right-of-way records and legal boundaries of property in public records and other documents, such as deeds, legal records, plats, maps and physical evidence in areas to be surveyed
- Direct/conduct land surveys to establish legal boundaries for properties based on deeds or titles
- Direct/conduct surveys for the retracement of government survey lines and reestablishment of land survey corners
- Investigate any easements or encroachments on property boundaries
- Write legal descriptions in plats of surveys or highways, deeds and other legal documents
- Prepares legal documents for right-of-way acquisitions and/or vacations
- Oversee survey work by monitoring assignments, establishing priorities, coordinating activities and resolving related work problems.

**MWRDGC: Final Design for a Flood Control Project (City of Robbins)**

Survey Manager for Accurate Group, Inc. (AGI) as a subconsultant to Donohue & Associates is responsible for the topographic and utility location survey for the Flood Control Project in Robbins, IL. Base files will be prepared for the design and will also include parcel information for property owners or easements that fall within the project site.

Tasks included in this are as follows:
-Horizontal & Vertical Control Tie to State Plane Coordinates
-Topographic Survey, 25 foot Grid Ground Shots
-Topographic Survey of existing Buildings within the area
-Utility Survey including a pipe culvert survey
-Box culvert and bridge survey over 135th Street
-Kedzie Ave. topographic survey
-139th, 137th, 135th, and Clair Blvd. topographic survey
-Tree Survey (Shoot individual trees 6 inches and bigger)
-Creek Cross Section 25 foot intervals (1330 feet total)
-QA Survey
-Process Survey data and Submittals



101 Shelter Road, Suite B 200, Lincolnshire IL Phone (847) 613 1100

Accurate
GROUP, INC.



AUGUSTO MANAHAN, PLS
Chief Surveyor

**IDOT: PTB 178-002 – US 41 at IL 176 Storm Water Pump Station No. 37 (Village of Lake Bluff)**

Accurate Group, Inc. (AGI) as a subconsultant to Donohue & Associates is responsible for the topographic survey, civil design plans and their associated specifications, quantities and construction cost estimate for the new Storm Water Pumping Station 37. The civil design items include closure of the existing frontage road, permits (SWPPP, ACOE, IDNR, Lake County, Union Pacific Railroad, PESA Response and ESR Addendum), and the new Pump Station 37 outlet drainage pipe. Construction will be completed utilizing staged construction as necessary to close the frontage road and install the outlet drainage pipe.

**IDOT: CN Railroad Survey - Job No. P-30-006-12 (CREATE Project P6) AGI (sub consultant)**

Performed survey services at the direction of Patrick Engineering (consultant) and in accordance with the IDOT's survey procedures. Limits of the survey runs along the CN tracks from approximately 4000 feet south of the CP Canal Interlocking to the First Avenue bridge. Survey extends 40 feet beyond existing right-of-ways. Job participation included the following:

- Establish primary control stationing utilizing state plane coordinates and GPS equipment
- Establish existing right-of-way along the corridor based on monumentation/evidence found in the field, available plats of highways and railroad right-of-way/valuation maps.
- Conduct topographic and cross section surveys including bridge details
- Survey of existing storm sewers (rim, inverts and pipe sizes) and above ground utilities/facilities

**IDOT: Chicago to St. Louis High Speed Rail Project - Job No. D-30-002-11 (Livingston, Macoupin and Madison counties) AGI (sub consultant)**

Perform survey services at the direction of URS Corporation (consultant) and coordinate with Design Nine, Inc. regarding survey requirements for the High Speed Rail fencing plans. Survey limits are expressed in mile posts and stations in various cities and villages covering three counties namely Livingston, Macoupin and Madison. Job participation includes the following:

- Establish state plane coordinate control stations at proposed fence survey locations
- Conduct topographic survey at various proposed fence survey locations
- Perform field survey of existing boundary monumentation/evidence of existing right-of-way
- Provide J.U.L.I.E. coordination and survey location of utilities
- Provide QA/QC of survey work



101 Shelter Road, Suite B 200, Lincolnshire IL Phone (847) 613 1100

Wang Engineering

**CORINA FAREZ, PE, PG**
Principal-in-Charge/Vice President

## EDUCATION

MSc, Civil Engineering/Structural and Geotechnical Emphasis - University of Wisconsin at Platteville, 2017

MSc, Civil Engineering/ Geotechnical Engineering - University of Science and Technology, Algeria, 1988

BSc/MSc, Geological/Geophysical Engineering - University of Bucharest, Romania, 1977

## REGISTRATIONS/CERTIFICATIONS

***Professional Engineer (PE)***

Illinois 2017 (062.070162)

Wisconsin 2004 (37136);

Indiana 2007 (10707864);

Iowa 2006; (17905);

Michigan 2006 (6201053468);

Ohio 2006 (70707);

Kentucky 2005 (24450);

**Professional Geologist (PG)**

Illinois 1995 No. (196-000607);

Wisconsin 1997 (343)

## PROFESSIONAL AFFILIATIONS

ASCE–American Society of Civil Engineers
NSPE–National Society of Professional Engineers
WTS–Women in Transportation Society (WTS)
DFI–Deep Foundation Institute

## EMPLOYMENT HISTORY

1999 – Present, Wang Engineering, Inc.
1998 – 1999, Everest Engineering Company
1992 – 1998, Wang Engineering, Inc.
1981 – 1991, University of Science and Technology, Algeria,
1977 – 1978, Testing and Drilling State Company, Romania

## EXPERIENCE PROFILE

Ms. Farez has over 35 years of experience in geotechnical, geological, geophysical, and water resources engineering technologies. She has extensive experience in the performance and management of subsurface investigations, construction material inspection, geotechnical laboratory testing as well as engineering analysis, design, and recommendations for a wide range of geotechnical projects. She is very familiar with standards, specifications, and practices of various transportation agencies. Ms. Farez completed numerous preliminary site assessments for soils disposal as required by 35 Illinois Administrative Code 1100, Clean Construction or Demolition Debris and Uncontaminated Soil Fill Operations and provide Uncontaminated Soil Certification by Licensed Professional Engineer or Professional Geologist (LPC-663).

## PROJECT EXPERIENCE

**Illinois American Water Company Pump Room, Sterling, Whiteside County, Illinois**
Ms. Farez served as the Principal in Charge and project manager responsible for overall project direction, Quality Assurance, coordination with the Client, preparation of geotechnical investigation and laboratory testing programs. Wang performed geotechnical investigations and provided foundation recommendations to support the design and construction of a new pump room, electrical, room, and waterlines at Illinois American Water Company Pump Station in Sterling, Whiteside County, Illinois. Wang performed one soil boring to a depth of 45 feet below ground surface at the location of the proposed pump and electrical rooms. In addition to typical geotechnical laboratory testing, analytical testing for Clean Construction Demolition Debris and Clean Soil Disposal was performed on soil samples. Wang prepared a geotechnical report describing investigation methods and results and presenting geotechnical recommendations to support the design and construction of the proposed structures. The report also included the results of solid waste characterization and a Clean Soil Disposal Certification as defined in 35 Ill. Adm. Code 1100, Clean Construction or Demolition Debris and Uncontaminated Soil Fill Operations.

**Illinois Route 170 Bridge over Illinois River, Seneca, Illinois**
Ms. Farez served as the Principal in Charge and co-project manager responsible for overall project direction, Quality Assurance, coordination with the Client, preparation of geotechnical investigation and laboratory testing programs. Wang performed geotechnical investigations and provided foundation recommendations for the design and construction of a new bridge will be approximately 1500-foot long new bridge over the Illinois River. Wang drilled and sampled structure borings to investigate the subsurface and groundwater conditions at the proposed off-shore bridge pier locations. River water levels prevented the conventional drilling operation to take place at the proposed boring/pier location and required a large barge to float the drill rig to the location. The borings were advanced through sediments, shale and sandstone.

**Illinois Route 104 over the Illinois River, Meredosia, Illinois**
Ms. Farez served as the Principal in Charge and co-project manager responsible for overall project direction, Quality Assurance, coordination with the Client, preparation of geotechnical investigation and laboratory testing programs. Wang performed the subsurface investigation, geotechnical laboratory testing and engineering analysis for a new 10-span structure over the Illinois River; two single-span structures over McGee Creek and Washington Street; two Mechanically Stabilized Earth walls. In addition, analyses were also provided for a 21,000-foot long realigned roadway section with up to a 30-foot tall approach embankment on the west side of the Illinois River. The subsurface investigation consisted of over 2,300 feet of auger drilling and conventional rock coring in 50 boreholes, 5-foot deep dynamic cone penetration tests. Barge drilling within the main river channel required US Army Corp of Engineers permitting. Wang collected bulk streambed samples to test the suitability of dredged material as embankment fill. Slug testing in 30-foot deep piezometers provided estimates of hydraulic conductivity. Electronic dataloggers monitored water table elevation and response to storm events over a nine-month period. Single-ring infiltration tests were performed in 4-foot deep boreholes.

**I-55 Interchange at Arsenal Road, Will County, Illinois**
Ms. Farez served as the Project Manager responsible for daily project management, coordination with the Client and Owner, preparation of geotechnical investigation and laboratory testing programs and the implementation of the Quality Assurance Program.
Wang performed the subsurface investigation, laboratory testing, and geotechnical engineering analyses and evaluations. Wang completed Roadway Geotechnical Reports and Structure Geotechnical Reports (RGRs and SGRs) according to IDOT specifications. These

reports were completed for seven roadway alignments and five approach ramps having a total length of 57,000 feet; two multi-span flyover bridges; three retaining walls with exposed heights of 5.0 to 15.0 feet and a combined length of 7,000 feet; and one parking lot. The subsurface investigation consisted of over 1,100 feet of hollow-stem auger drilling and conventional rock coring in 233 boreholes and 43 full-depth pavement cores. Many of the borings were performed on private property which required Wang to negotiate and schedule access with the property owners.

**Weber Road at Interstate 55, Will County**
Ms. Farez served as the Principal-in-Charge responsible for overall project direction and quality assurance. Wang performed the subsurface exploration, laboratory testing and geotechnical engineering analyses for the Weber Road improvements from Rodeo Drive to West 135th Street in Will County, Illinois. The improvements consist of widening and reconstructing the mainline and cross roads as well as new approach embankments and reconfiguration of the interchange ramps A, B, C and D. There will be new approach embankments at I-55 from Weber Road to accommodate a 20-foot wide roadway with a maximum embankment height of about 26 feet for the new bridge abutment. The investigation consisted of 95 roadway borings, two approach embankment borings, and 20 pavement cores. Wang provided evaluations of the existing pavement conditions; long-term settlement and global stability analyses; recommendation for subgrade treatment and improvement; and parameters for pavement and drainage design.

**Weber Road, Will County**
Ms. Farez served as the Principal-in-Charge responsible for overall project direction and quality assurance. Wang provided the subsurface investigation, laboratory testing, and engineering analyses and evaluations for the design and construction of pavements and embankments for the proposed widening along a 2-mile section of Weber Road between West 135th Street and Airport Road in Will County, Illinois. The existing Weber Road alignment consisted of two travel lanes in each direction with a central turn lane/mountable median. A 2-mile section of the alignment is planned to be widened to have two 10-foot wide lanes in each direction. The geotechnical investigation, laboratory testing and analyses were also performed for a single box culvert at Mink Creek. The subsurface investigation consisted of 36 roadway borings, 11 culvert borings, and 11 pavement cores. Wang provided evaluations of the existing pavement conditions; long-term settlement and global stability analyses; recommendation for subgrade treatment and improvement; and parameters for pavement, drainage and design.

**Geotechnical Engineering for IDOT District One Various/Various Geotechnical Engineering Services – Years 1994, 2000, 2006, 2008, 2010 and 2011, 2017**
As Geotechnical Consultant to IDOT District One, Wang provided geotechnical engineering services for various projects under numerous blanket contracts. Ms. Farez served as the Project Manager responsible for daily project management, coordination with the Client and Owner, preparation of geotechnical investigation and laboratory testing programs and the implementation of the Quality Assurance Program.

**Preliminary environmental site assessment and solid waste characterization for disposal, Watermain Improvements, Mount Prospect, Cook County, Illinois.**
Ms. Farez served as project manager responsible for coordination with Client and Owner and for the execution of solid waste investigation and laboratory testing programs for soil disposal. The solid waste characterization was conducted in conjunction with the geotechnical investigation completed to support the design and construction of a major watermain for the Village of Mount Prospect. Wang prepared a combined geotechnical and solid waste characterization report and provided a Clean Soil Disposal Certification as defined in 35 Ill. Adm. Code 1100, Clean Construction or Demolition Debris and Uncontaminated Soil Fill Operations.

**Preliminary Environmental Site Assessment and Solid Waste Characterization, City Streets Reconstruction, West Chicago, DuPage County, Illinois.**
Ms. Farez served as project manager responsible for coordination with Client and Owner and for the execution of solid waste investigation and laboratory testing programs for soil disposal. The solid waste characterization was conducted in conjunction with the geotechnical investigation. The geotechnical investigation and the environmental site assessment for solid waste characterization were performed to support the design and reconstruction of several streets within the City of West Chicago. Wang prepared a combined geotechnical and solid waste characterization report and provided a Clean Soil Disposal Certification as defined in 35 Ill. Adm. Code 1100, Clean Construction or Demolition Debris and Uncontaminated Soil Fill Operations.

# Project Understanding and Approach

## Project Understanding

Illinois American Water Company (ILAWC) and the Village of Glen Ellyn (VGE) are planning to establish an emergency interconnection between their water systems near the Glenbard South High School in Glen Ellyn, Illinois and wish to share the costs for the project. They are jointly requesting a proposal to provide professional engineering services for the design and permitting for the Project. ILAWC will act the contracting agency for the combined Project, but specific scopes of work and costs for each agency are to be identified.

### Illinois American Water Company Project

The ILAWC portion of the Project consists of the installation of approximately 600 LF of 8-inch water main and a Valve and Meter interconnection vault. The water main will be located entirely with the property of the St. Luke Lutheran Church in unincorporated Glen Ellyn. It will connect to an existing ILAWC watermain stub-out provided in a lot on Ashley Dr. to the west of the church property, as well as to the proposed VGE watermain extension in Butterfield road near the southeast corner of the church property. ILAWC is currently in the process of finalizing an agreement with the Church property, but are in general agreement with locating the facilities on the property.

Included within this property will be a prefabricated Valve and Meter Station manufactured, delivered, and set by EFI Solutions (EFI) under a separate contract with ILAWC. Coordination with EFI, including design comment and submittal review, are to be included as part of engineering services provided for the project.

### Village of Glen Ellyn Project

The VGE portion of the Project consists of the installation of approximately 950 LF of 8-inch water main on the north side of the IL Route 56 (Butterfield Road) right-of-way along the frontage of the Glenbard South High School. The proposed main will connect to the proposed ILAWC watermain at the southeast corner of the St. Luke Church property as well as a connection at the existing VGE 12-inch main near the hydrant at the southwest corner of the O'Carroll & Associates property on Butterfield Road. To avoid impacts to traffic and drainage, it is anticipated this segment of the project will be constructed utilizing trenchless technology.

## Project Approach

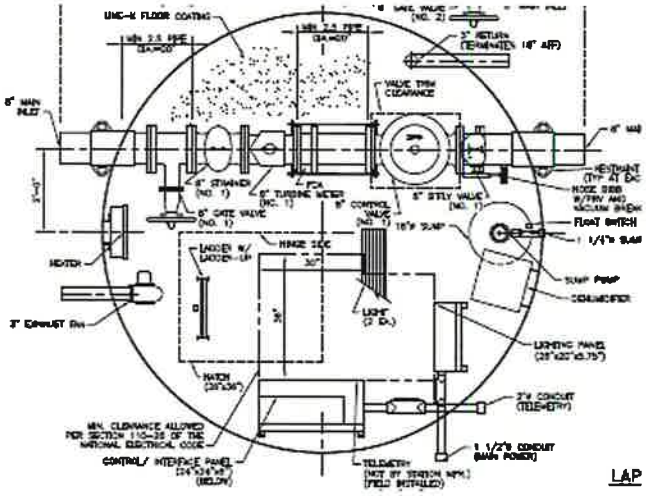
Our approach to all watermain projects incorporates standard practices with a focus on specific design elements, all of which are important to a successful operation. These include:

- Understand ILAWC and VGE's goals and objectives for the project, including desired operational strategies and accessibility to facilities.
- At the Kick-off meeting, confirm what type of Valve and Meter Vault structure is desired by ILAWC and VGE (i.e., access above grade or below grade, single or bidirectional, type of flow control and/or backflow prevention desired, if any, etc.). This impacts directly impacts access, location and piping approach design.
- Determine the most cost-effective alignment and method of construction to minimize impacts to traffic in Butterfield Road and access to Glenbard South High School, and St. Luke Church.
- Involve EFI early and often during the design process to understand connection and access constraints presented by alternative vault designs.
- Comply with local codes and regulatory requirements, including IEPA, IDOT, and AWWA Standards and Guidelines
- Develop an alignment that minimizes high points and provides air relief/release where needed.
- Provide adequate access for maintenance and servicing of piping and vault.
- Install proper piping/valves for operational flexibility and isolation.

# Key Project Challenges and Technical Considerations

The following section describes what we consider to be key challenges and considerations that need to be addressed during design. These will certainly affect the watermain alignment and vault configuration and location.

- **Coordination with Engineered Fluid, Inc.** EFI has partnered directly with ILAWC on similar projects and are slated to do so again here. Proactive and consistent coordination and review of vault design criteria and impacts on pipe approach, vault location, and power and instrumentation needs are critical for a successful project. Donohue has worked with EFI on previous successful ILAWC designs and has developed an excellent working relationship. A sample drawing for a recent package meter vault is provided below.



Sample EFI Valve and Meter Interconnection Vault

- **Watermain Alignment.** Several site constraints and challenges exist that will need to be addressed. For the watermain alignment, the route of way along Butterfield Road is an IDOT ROW, sloped for a deep wide swale, with major overhead power lines and poles along the proposed alignment, as shown in the photos below. This appears to be a good candidate for trenchless construction, but consideration should be given to open-cut construction east of the High School entrance as shown on the site plan below. Directional drilling will likely be the best option from the High School access road to the Church property to avoid access and wetland permitting issues.

Butterfield Rd North ROW West of HS Access Rd  Butterfield Rd North ROW East of HS Access Road

G.1.d

Packet Pg. 127

Project Site Considerations

- **Vault Location.** ILAWC has expressed an interest in locating the Valve and Meter Vault on the Church property and not in the Butterfield Road ROW. Given this, there are several possibilities for locating the structure, two of which are shown on the plan view above. A location must be chosen to provide good access by both ILAWC and VGE while avoiding existing facilities, maintaining required set-backs, and minimizing impacts to the Church surroundings. The location also needs to be coordinated with the type of structure ultimately selected by ILAWC and VGE (below grade, above grade, etc.).

- **Impacts on Surrounding Community.** The project site is adjacent to facilities that have high vehicular and pedestrian traffic volumes. These include the Glenbard South High School and St. Luke Lutheran Church. Vault location and watermain alignment and construction and phasing will need to be coordinated with these facilities. Consideration should be given to performing the watermain work (open cut or trenchless) in Butterfield Road at the beginning of construction, estimated to occur in late summer, to minimize impacts to school operations.

- **Completing Field Investigations in Winter.** ILAWC would like to have this project constructed by the end of 2020. To achieve that, our estimated project schedule calls for completing survey and geotechnical investigations in February and March of 2020. There is always the risk in northeastern Illinois of unfavorable weather that time of year that could prevent scheduling investigations. This will have to be closely monitored and managed. On other projects, this has been addressed by lining up crews on and "on call" basis to be respond when weather is favorable, and that approach will be implemented for this project as well.

- **Meeting Requirements of All Stakeholders.** ILAWC and VGE have a vested interest in providing this emergency connection for their customers. Both organizations however may have different standards and design guidelines and practices that will need to be mutually accommodated in this design.

Attachment: Donohue - ILAW&VGE Interconnect Design

# Scope of Services and Tasks

## Scope of Services

The following is our proposed scope of services, summarizing tasks which form the basis for the fees provided on the Engineering Services Proposal Cover Sheet at the front of this proposal. This scope and list of tasks is based on the RFP documents, discussions with ILAWC and EFI, a review of the site from digital resources, and evaluations discussed in previous sections of this proposal.

### Task 1 – Land Survey

Perform a topographic survey of the proposed project site in accordance with the requirements stated in the RFP. Survey does not includes a detailed Property Boundary Survey and title search, but will depict property lines based on publicly available property information as required. The survey will be completed by Accurate Group, Inc.

### Task 2 – Geotechnical Report

Complete geotechnical investigations in accordance with the requirements of the RFP. Investigations include one day of on-site drilling and up to six (6) borings to fifteen feet (15') below ground surface. The results will be included in a final report, including the required evaluation and recommendations for CCDD and trenchless watermain construction methods. The geotechnical investigations and report will be completed by Wang Engineering.

### Task 3 – Permitting

Prepare permit applications and provide technical input required in securing the permits. ILAWC to sign and submit applications and pay fees associated with the permits. Anticipated permits requiring applications during design are Illinois EPA Public Water Supply Construction Permits (one each for ILAWC and VGE) and an IDOT ROW work permit for construction in Butterfield Road (IL Rt. 56). No other local, county, or building permits are anticipated since the proposed EFI Valve and Meter vault is assumed to be a below grade vault. Illinois EPA NPDES permit for Construction Activity, if required, is assumed to be obtained by the Contractor. Permitting services will be performed by Flinn Engineering.

### Task 4– Design

Complete design evaluations and calculations and prepare detailed plans in accordance with the requirements of the RFP. Additional details are provided below.

Perform a check of the ILAWC and VGE watermain pipe sizing and design based on flow and pressure requirements provided by ILAWC and VGE and Valve and Meter vault requirements provided by EFI. Prepare a letter report summarizing the hydraulic assessment and conclusions of the evaluation. Hydraulic evaluation and detailed design of the Valve and Meter vault to be completed by others (EFI).

One set of design plans will be prepared for the combined ILAWC and VGE projects. The plans will be prepared using AutoCAD 2018. Anticipated detailed design plan sheets are:

- General
  - Cover
  - Signature
  - Index
  - Discipline Legends/Symbols/Survey Ties and Benchmarks
  - Schedule of Quantities (ILAWC, VGE, Total)
- Civil/Site
  - Existing Site
  - Access, Laydown/Staging, and Traffic Control
  - Proposed Site Plan
  - Demolition and Erosion Control (SWPPP provided by Contractor)
  - Watermain Plan and Profiles
  - Grading and Restoration
- Structural
  - Plans - Foundation Slab (for prefabricated Vault by EFI)
  - Sections and Details
- Electrical (New service)
  - Site Plan
  - Electrical Details
- Instrumentation and Control (Coordinate with EFI, ILAWC, and VGE)
- Standard Details (All Disciplines, In addition to ILAWC and VGE Standard Details)

Draft Plans will be submitted to ILAWC and VGE for review at the following stages of completion:

- 30% Hydraulic and Design Review
- 60% Design Review/Permitting
- 95% Design Review

## Task 5 – Specifications

Preparation of technical specifications utilizing and modifying standard ILAWC and VGE specifications as applicable to the project. Additional supplemental and detailed specifications, in CSI 50 Division Format, will be prepared. Standard American Water front end (Bidding, Agreement, General Conditions, Supplementary Conditions) will be utilized. Specifications will be provided with the 60% and 95% Design Review and Bid Documents.

## Task 6 – Cost Estimate

Prepare and submit an Engineer's Estimate of Probable Construction Costs at the 60% and 95% design milestones. Cost estimates will include separate estimates for each of the ILAWC and VGE components of the project.

## Task 7 – Meetings and Design Review

Prepare, record, and submit all meeting agendas and minutes for meetings held at the ILAWC Woodridge office. It is anticipated that four meetings will be held with ILAWC and VGE during design as follows:

- Project kick-off meeting
- 30% Hydraulic and Design Review
- 60% Permit and Design Review
- 95% Final Design Review

It is suggested that the Valve and Meter Vault fabricator (EFI) be invited to attend as many of these meetings as possible, if not all. Note that conference calls can be scheduled in addition to or in lieu of the meetings above, particularly for coordination with EFI, VGE, Impacted utility owners, and other project stakeholders.

## Task 8 – Schedule

Donohue believes the design schedule proposed by ILAWC can be met and possibly expedited. However, we note that the construction schedule proposed appears to be very aggressive. Given that, Donohue feels it is possible to expedite the design phase and this is reflected in the project schedule presented in another section of this proposal.

## Task 9 – Bidding

Engineering services during bidding will be provided in accordance with the RFP. Bidding services include:

- Preparation and electronic distribution of bid documents to prospective contractors selected by ILAWC and VGE.
- Preparation of two (2) paper copies and on digital copy for submittal to ILAWC and VGE
- Respond to contractor's questions and prepare and addendum, if necessary
- Review bids and provide recommendation to ILAWC and VGE

We note that a pre-bid meeting is not anticipated by ILAWC and, as such, has not been included in this scope of services.

## Task 10 – Contract Document Creation

Once the project has been bid and awarded, prepare a conformed set of documents for use in the agreement between ILAWC and the selected contractor and as a reference during construction. Documents will be prepared in accordance with ILAWC procedures stated in the RFP and outlined as follows:

- Consultant modifies contract
- Consultant forwards electronic version of contract to ILAWC for legal/finance approval
- ILAWC approves contract
- Consultant issues five hard copies of contract to selected contractor for signature
- Contractor forwards all copies for ILAWC's signature
- ILAWC signs and disburses two copies to VGE, one copy to contractor and one to consultant.

## Task 11 – Construction Administration and Observation

Engineering services during construction are not included in this scope of services, however the Donohue team can certainly provide those services if requested by ILAWC and VGE.

# Project Assumptions

The following assumptions form the basis of the development of this scope of services and proposed engineering fee for this project:

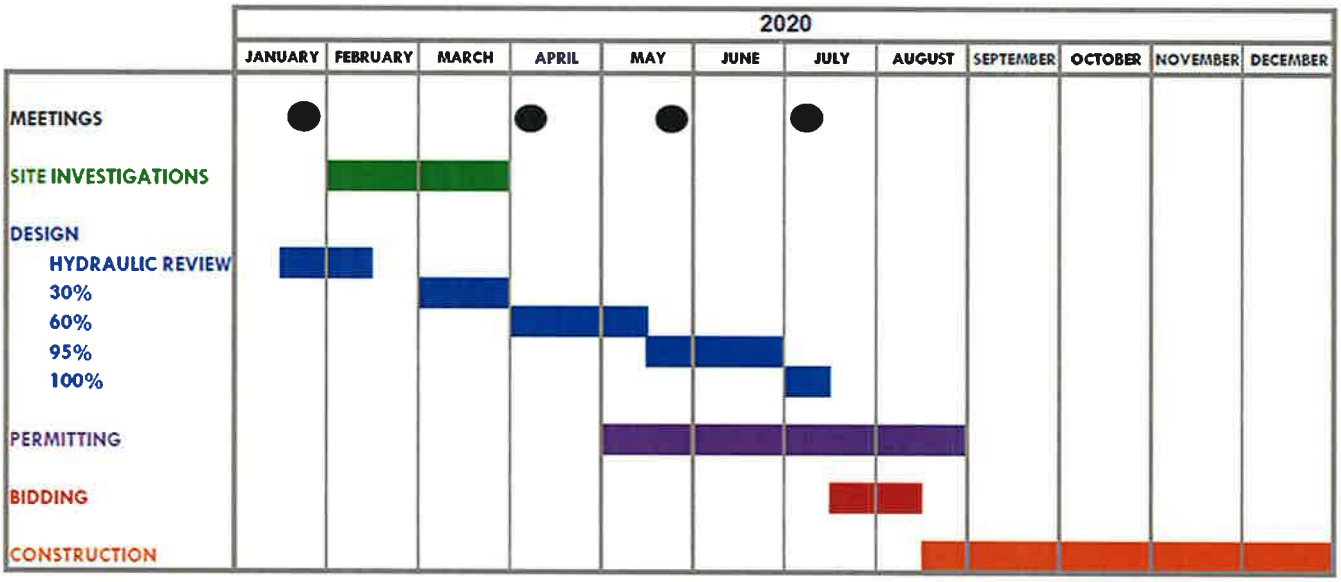
- One combined set of Contract Documents will be prepared for bidding for construction of both the ILAWC and VGE components of the project under a single construction contract.
- Valve and Meter Vault designed, fabricated, and set by EFI under separate contract with ILAWC. Vault is assume to be simple bi-directional below grade structure requiring power for heating/dehumidification and connection to local SCADA telemetry, if available.
- Detailed Property Boundary Survey and title search is not required
- Existing access drive and security fencing at the Church and other parts of the site are adequate for construction and future maintenance and operation of the facilities. No special access or security is required.
- Temporary and/or permanent easements, if required, with adequate clearances and set-backs from current site boundaries within the Church property and along Butterfield Road will be obtained by ILAWC.
- SCADA system integration and programming, if desired, provided by others.
- All excavation and demolition materials meet CCDD requirements.
- Stormwater runoff at project completion is not expected to change significantly and detailed analysis or stormwater management design will not be required. Temporary stormwater issues during construction are to be addressed by the contractor-provided SWPPP required to be submitted prior to start of construction.
- Permit applications and fees will be formally submitted and paid for by ILAWC.
- Record drawings, operational data, previous reports, etc. provided by ILAWC and VGE.

# Schedule

Donohue believes the design schedule proposed by ILAWC can be met and possibly expedited. However, we note that the construction schedule proposed appears to be very aggressive. Given that, Donohue feels it is possible to expedite the design phase and this is reflected in the project schedule presented below. However, completing survey and geotechnical investigations during the winter months creates challenges that will need to managed.

Illinois American Water Company
IAWC-VGE Emergency Interconnect

Proposed Schedule



# References

We encourage you to contact our references regarding our team's performance on past water or wastewater treatment projects.

## Donohue's References

| Mr. Trip Barton | Mr. Eric LeReau | Mr. Steve Wegman |
|---|---|---|
| Engineering Manager | Engineering Project Manager | Senior Engineer |
| Illinois American Water | Illinois American Water | Illinois American Water |
| 7500 N. Hacker Drive | 1000 International Parkway | 1406 Cardinal Court |
| Peoria, IL 61615 | Woodridge, IL 60517 | Urbana, IL 61801 |
| 309.566.4148 | 630.738.8837 | 217.373.3255 |
| Charles.barton@amwater.com | Eric.lereau@amwater.com | Steven.wegman@amwater.com |

## Flinn Engineering References

| Mr. Trip Barton | Ms. Jennifer Birger | Mr. Jeff Taylor |
|---|---|---|
| Engineering Manager | Engineering Manager | Public Works Director |
| Illinois American Water | Missouri American Water | City of O'Fallon |
| 7500 N. Hacker Drive | 727 Craig Road | 255 South Lincoln |
| Peoria, IL 61615 | St. Louis, MO 63141 | O'Fallon, IL 62269 |
| 309.566.4148 | 314.996.2423 | 618.624.4500 ext. 3 |
| Charles.barton@amwater.com | Jennifer.birger@amwater.com | jtaylor@ofallon.org |

## Accurate Group, Inc. References

| Mr. Derek N. Mall, PE | Mr. Jason Gregor, PE | Mr. Andrew T. Hable, PE |
|---|---|---|
| Project Manager | Project Manager | Project Manager |
| Civiltech Engineering, Inc. | HNTB Corporation | AECOM Technical Services, Inc. |
| Two Pierce Place, Suite 1400 | 1 South Wacker Drive | 303 East Wacker DR. Suite 1400 |
| Itasca, IL 60143 | Chicago, IL 60606 | Chicago, IL 60601 |
| 630.735.3361 | 312.798.0292 | 905.390.2027 |
| dmall@civiltechinc.com | jgregor@hntb.com | Andrew.hable@aecom.com |

## Wang Engineering References

| Mr. Matt Cooper, PE | Mr. Marin Ross, PE | Mr. James Hamelka, PE, SE |
|---|---|---|
| AECOM | Transystems | Collins Engineers |
| 303 E. Wacker Drive #1400 | 1475 Woodfield Rd. Ste. 600 | 123 N. Upper Wacker DR. #900 |
| Chicago, IL 60601 | Schaumburg, IL 60173 | Chicago, IL 60606 |
| 312.373.6627 | 847.407.5281 | 312.236.5117 |
| Matt.cooper@aecom.com | maross@transystems.com | jhamelka@collinsengr.com |

# Project Portfolio

Donohue has extensive watermain, pumping, and treatment facility experience with well over 100 facility improvements in the past twenty years. The following projects were picked to illustrate our experience because of similarities to your project, including horizontal directional drilling for watermain construction and coordination with pre-fabricated facilities manufactured by EFI.

## Sterling East WTP High Service Pump Station Replacement

Illinois American Water Company, Sterling, IL | Mr. Eric LaReau – Engineering Project Manager | 630.738.8837

The City of Sterling, IL is located in Whiteside County in the northwest portion of the State of Illinois. The Sterling Water System serves approximately 6,545 customers located within the City of Sterling limits. This project focuses on facilities at the East Water Treatment Plant (WTP) located on the Rock River in the southeast portion of the City.

The High Service Pump Station (HSPS) located at the treatment plant draws water from the plant clearwell and conveys finished water to the distribution system. The existing station was a circular below grade structure that was in need of major repairs. Replacement was considered the most cost-efficient option, but replacement needed to be phased in a manner that did not disrupt current operations at the plant. After review of various alternatives, a package pump station was selected.

The station provides a firm capacity of 2.2 mgd (1,500 gpm) using two 750 gpm pumps and include one spare 750 gpm pump at a total dynamic head (TDH) of 205 feet. The station was designed utilizing vertical turbine pumps in a compact pump room with an adjacent electrical room and reinforced concrete wet well below. The package pump station was provided by Engineered Fluid, Inc. (EFI) with technical assistance from Donohue. Donohue also provided other support discipline design including demolition of existing facilities, structural design of wet well, site piping layout and connections, power analysis and design, control and monitoring assistance, and arranging for completion of topographical survey and geotechnical investigations.

In addition, the East WTP receives its supply from four groundwater wells located on the plant site. Each well site has a pump and a meter installed in a below grade meter vault. Rated design pump flow and well capacity for each well range from 350 to 550 gpm. Plant operators use these wells in pairs. During the summer, they use wells #1 and #4 simultaneously. In the winter, they use Wells #2 and #3 together. Plant staff identified structural deficiencies in at least one of the meter vaults and tight confined space entry made maintenance and operation difficult.

ILAWC asked Donohue to design above grade meter enclosures that also enclose the existing well pumps. The project involved new above grade piping and meter installed in a weatherproof enclosure. Donohue prepared an alternative enclosure memorandum and a custom built split face block masonry building was selected for detailed design. The replacement had to be phased in a fashion that did not disrupt current operations at the plant.

## North Side Water Transmission Main – Phase 1

Illinois American Water Company, Champaign, IL | Mr. Steve Wegman – Senior Engineer | 217.373.3255

**PROJECT HIGHLIGHTS**

- *Includes approximately 7,800 feet of 24-inch ductile iron main along Olympian Drive and 1,300 feet of 16-inch ductile iron main along Market Street*
- *Design includes open cut installation and Horizontal Directional Drilling (HDD)*
- *IEPA construction permit was acquired ahead of schedule with no comments from IEPA*

Donohue was retained by the Illinois American Water Company in February 2014 to complete the design, bidding, and construction phases of a new water transmission to improve the capacity from west Champaign, where reliable water supply is available, to the east, where reliable supply is decreasing. The new 24-inch transmission main has been planned to be installed along the Olympian Drive corridor in four phases that coincide with the timing of the roadway design and construction.

Phase 1 included approximately 7,800 feet of 24-inch ductile iron main along Olympian Drive and approximately 1,300 feet of 16-inch ductile iron main along Market Street. As the new main was built, it was connected to the existing dead-end mains at Market Street and Apollo Drive. This improved water quality for customers connected near these areas. The main was located entirely in the public right-of-way, and was installed via open-cut construction methods when possible. The street crossings were horizontal directional drilled to avoid pavement replacement and traffic control.

Donohue was responsible for obtaining the topographic survey of the project route, water main design and bid document preparation, and completing the applications for permits from the Illinois Environmental Protection Agency (IEPA), the City of Champaign, the local drainage district, and prepared the storm water pollution prevention plant (SWPPP). Donohue was also responsible for construction administration and day-to-day field observation during construction. The project was bid in January and February 2015. Construction started in the Spring of 2015, and was completed over that summer. The phase 1 main was substantially complete and put into service in November 2015.

## Streator Raw Water Pumping Station

Illinois American Water Company, Streator, IL | Mr. Steve Wegman – Senior Engineer | 217.373.3255

**PROJECT HIGHLIGHTS**

- *Expedited design schedule to meet client operational needs*
- *Extensive coordination with numerous team partners including package pump station provider, system integrator, contractor, and owner*

Donohue was selected by Illinois American Water Company as the Prime Consultant for design and construction related engineering services for improvements to the raw water pumping system at the Streator District Water Treatment Plant in Streator, Illinois. The project included the preparation of conceptual designs, permitting with state and local authorities, working with the pump station package plant provider, providing project design plans and specification deliverables for bidding, construction observation, and office related engineering services during construction.

This pump station consisted of design of a wet well and control vault in a structure below to support a new 6-mgd raw water pump station provided by a package plant provider. The project also included a new carbon feed building to accept relocated facilities from the existing carbon feed building. The site work included 2 new 24-inch diameter intake pipes, 16-inch diameter pump discharge, site electrical improvements, demolition of the existing raw water pumps station, and general site regrading.

Donohue also provided construction related services including regular site observation, shop drawing reviews, responses to RFIs, and participation in weekly progress meetings.

## 2017 Obsolete Water Main Replacement

Indiana American Water Company, Terre Haute, Indiana | Ms. Jacquelyne Sanders – Engineering Project Manager
317.807.2462

**PROJECT HIGHLIGHTS**

- *Design of three sections of water main replacements*
- *Connection to existing water mains*
- *Installation methods include open cut and directional drilling*

Indiana American retained Donohue & Associates, Inc. to prepare design drawings for two sections of 12-inch diameter water main and one section of 8-inch water main to be replaced in various areas of Terre Haute, Indiana. The following describes each of the three areas.

### South 19th Street

South 19th Street, from Ohio Street to Poplar Street is a two-lane street in a developed neighborhood with parking available on either side of the street. Challenges to locating the water main included a sanitary sewer and large mature trees along the east side of the street. The design includes maintaining service to St. Patrick School. In addition to the school service, approximately 15 services will have to be disconnected and reconnected to the new water main.

### South 7th Street

South 7th Street, from East Marley Drive to East Hospital Lane, is a four-lane road with two lanes traveling in the north and south direction with heavy traffic. The street is primarily commercial with Terre Haute Regional Hospital and associated medical offices at the northern end of the segment. Near the southern portion of the segment, a stream crossing was required under a drainage ditch. Directional drilling was used as an alternate installation method on this segment.

### Buckeye Street

Buckeye Street, from North 22nd Street to North 26th Street, is a residential two-lane road with parking on either side of the road. Connection of existing water mains to the new water main was required at each intersection on the project. In addition, there are more than twenty water services that will need to be replaced throughout the project.

The client's accelerated project design schedule was completed on time by Donohue in November of 2016 to meet their annual funding schedule, and construction is expected to begin in early 2017.

# Annual Utility Improvements – 2017, 2018, 2019

City of Sheboygan Falls, WI | Mr. Jerry Benzschawel – Director of Public Works | 920.467.7901

## PROJECT HIGHLIGHTS

- *Watermain Replacements*
- *To minimize construction conflicts, used AutoCAD Civil 3D to create 3D pipe networks of the existing buried utilities*
- *Traffic management and stakeholder communication were important project aspects*

Donohue performs design and construction services for the replacement of existing water main annually for the City of Sheboygan Falls. The existing water mains in project locations consist of cast iron material constructed in the 1920s. The mains are deteriorating causing breaks which require frequent repairs.

In March of 2017 the City adopted new sections of the City Code requiring full lead water service and sanitary lateral replacement. The goal is to reduce the number of lead services and non-code compliant sanitary laterals to reduce clearwater infiltration into the sanitary sewer system. Replacement limits extend from the main in the street to the connection points within the dwellings and is limited to the locations where the City is performing utility work.

Replacement is completed trenchless by pulling a new water service and new sanitary lateral through the existing sanitary lateral. Trenchless installation minimizes disturbance to private property. Many homeowners have many features in their yards including landscaping, porches, steps, sidewalks, etc. which would require replacement if traditional open cut construction methods were used.

A major project challenge is defining the vertical and horizontal alignment of the new water main so existing sanitary and water service connections will not be significantly interrupted during construction. This is done using AutoCAD Civil 3D to create 3D pipe networks of the existing buried utilities. This three-dimensional design tool identifies utility conflicts using georeferenced physical data.

In addition, the condition and capacity of the existing sanitary and storm sewers is examined. If replacement or upsizing is needed, details are added to the project bid documents.

While the actual design of the water main is the primary focus, items such as traffic management and stakeholder communication were important project aspects. Donohue developed drawings, specifications, construction cost opinions, and other necessary documents to receive competitive bids. Donohue successfully completed application materials for water system plan reviews and submitted to WDNR. All water services were replaced and new curb stops were added.

Construction services performed by Donohue included conducting a preconstruction conference, contract execution, contract administration, shop drawing reviews, responding to field questions, and preparation of record drawings upon project completion. A public involvement meeting is held and led by Donohue.

# Lump Sum Price

Our estimated total fee (lump sum price) for this project, based on the Scope of Services outlined in this proposal, is **$79,990.** We understand that the design and construction costs are to be shared by both ILAWC and VGE. To that end, the separate engineering fees associated with each are **ILAWC - $45,610** and **VGE - $34,380.** These costs are also shown, as required by ILAWC, on the Engineering Services Proposal Cover Sheet included as the first page of our proposal.

ILAWC - Glen Ellyn Emergency Interconnect

12/30/2019

Preliminary Estimate of Construction Cost

| Item No. | Description | Unit | Quantity | Unit Cost | Extension |
|---|---|---|---|---|---|
| 1 | Preconstruction Video Taping | L.S. | 1 | 2,000 | $ 2,000 |
| 2 | Traffic Control & Protection | L.S. | 1 | 10,000 | $ 10,000 |
| 3 | Mobilization | L.S. | 1 | 10,000 | $ 10,000 |
| 4 | Protective Tree Fence | L.S. | 1 | 3,000 | $ 3,000 |
| 5 | Erosion Control | L.S. | 1 | 5,000 | $ 5,000 |
| 6 | Construction Layout | L.S. | 1 | 5,000 | $ 5,000 |
| 7 | Water Main, 8" PVC, C900 DR18 & Fittings (Direction Drill) | L.F. | 950 | 200 | $ 190,000 |
| 8 | 8" Valve in 5' Diameter Vault | EA. | 2 | 5,000 | $ 10,000 |
| 9 | Hydrant w/Aux. Valve & Box, cut-in | EA. | 1 | 9,000 | $ 9,000 |
| 10 | Hydrant w/Aux. Valve & Box, w/ Flushing Station | EA. | 1 | 10,000 | $ 10,000 |
| 11 | Trench Backfill | C.Y. | 100 | 20 | $ 2,000 |
| 12 | Connect to Existing Water Main | EA. | 1 | 4,000 | $ 4,000 |
| 13 | Topsoil & Seeding | S.Y. | 500 | 15 | $ 7,500 |
| | | | | Subtotal | $ 267,500 |
| | | | | w/ 25% Contingency | $ 66,875 |
| | | | | **TOTAL** | **$ 334,375** |
| | | | | **say** | **$ 350,000** |

Unit Prices based on 2018 Roosevelt Road (I-38) Water Main Improvements Project (average of nine bid prices), modified as needed

**Glen Ellyn Village Board**
535 Duane Street
Glen Ellyn, IL 60137

Meeting: 01/21/20 07:00 PM
Department: Community Development
Department Head: Staci Springer
Category: Discussion Item
Prepared By: Kelly Purvis

**SCHEDULED**

**AGENDA ITEM (ID # 4328)** DOC ID: 4328

# Community Development Director Springer will present options for the McChesney & Miller development site.

**Background.**

Over the last several months, there has been renewed developer interest in the McChesney & Miller site (460 Crescent Boulevard). Staff has been discussing potential opportunities with a number of interested developers. Over the years, the Village has discussed different concepts for the site that would have included the Crescent Boulevard right-of-way and/or portions of the Village-owned Crescent-Glenwood parking lot (see Attachment 1). As conversations progress with interested developers, staff would like to have clearer direction from the Village Board on a number of questions related to the development of the site including what the limits of the site footprint should be (if any Village property should be included in the development) whether or not the Crescent Boulevard right-of-way should be included in the development and what the maximum building height should be for a proposed development. To help inform the Village Board's discussion on these topics, staff has put together a packet of information including massing models, a traffic analysis and a utility location analysis which are attached to this memo and summarized in the following paragraphs.

**Site Details.**

The McChesney and Miller site is located at 460 Crescent Boulevard in the C5B Central Service Subdistrict of the Central Business District. The property is on the north side of Crescent Boulevard between Glenwood Avenue and Prospect Avenue and is approximately 0.8 acres (see Attachment 2). It is possible that the site could be redeveloped in conjunction with the Lord's Auto Clinic property located at 453 Pennsylvania Avenue on the southeast corner of Prospect Avenue and Pennsylvania Avenue which has a total site area of approximately 1.07 acres. For purposes of this memo, the site limits are assumed to include the McChesney & Miller site and the Lord's Auto Clinic property at a minimum.

**Massing Models.**

Village staff requested Houseal Lavigne and Associates create some massing models to help the Village Board envision what the potential for this development site could be if the Crescent Boulevard right-of-way and/or the Village-owned parking lot were included in the site plan (see Attachment 3). Please note, these are block diagrams and are not meant to show design or architectural features. Each of the three massing models shows a 6-story residential building (no commercial component included) with an amenity space for the residents and a parking deck that has the potential to provide both public and private parking spaces. Note, most interested developers have indicated there is little demand for commercial development on the site, so none has been included in the massing models. Staff is interested in whether the Village Board would like to require first floor commercial for a project on this site or if a development without a commercial use would be acceptable.

The height of the massing models is comparable to past approvals in the downtown including the Forest Apartments (7-stories), Glen Astor Condominiums (6-stories) and Churchill Condominiums (5-6-stories). The Plan Commission and the public have expressed support for a taller building on this site, as it is further from Main Street at a lower elevation in the downtown.

The parking requirement shown on the massing models is based upon a parking ratio of 1.5 spaces per unit, which would likely be less than the Zoning Code requires, but would be compatible with past Village approvals for transit oriented developments such as Avere on Duane (parking ratio of 1.7), Crescent Station Condos (parking ratio of 1.5) and Glen Astor Condos (parking ratio of 1.7). This is also compatible with what other communities are requiring for residential units near train stations. We are seeking feedback if the Village Board would be comfortable with a minimum parking ratio of 1.5 spaces per unit or if a lower parking ratio would be acceptable provided that a developer would be required to submit a parking study showing this ratio to be sufficient.

Option 1:
The first massing model shows the McChesney & Miller property and the Lord's Auto Clinic property included within the site limits. This option is fairly straight forward and would allow for approximately 110 residential units with 221 parking spaces on site. It is most likely that this development would just provide parking for the residential units, but if the appropriate parking deviation were granted to allow a parking ratio of 1.5 spaces per unit, the bottom level of the central parking deck (about 40 spaces) could be used for public parking.

Option 2:
The second massing model includes the McChesney & Miller property, Lord's Auto Clinic, a portion of the Crescent Boulevard right-of-way and the western part of the Crescent-Glenwood parking lot within the site limits. This option would involve constructing a three-story parking garage over the Crescent Boulevard right-of-way, and changing the traffic flow from two-way traffic on Crescent Boulevard to one-way eastbound traffic from Prospect Avenue to Glenwood Avenue. A photo from a similar project in Arlington Heights, where a roadway passes under a building, has been attached for visual reference (Attachment 4). Approximately 137 residential units could be provided on the site with a total of 579 parking spaces. This option would provide roughly 375 public parking stalls on the north side of the tracks (a net gain of 266 parking spaces), but it is likely that the Village would carry the cost for the construction of the garage with this option since there are no residential units above the garage.

Option 3:
The third massing model includes the McChesney & Miller property, Lord's Auto Clinic, the full Crescent Boulevard right-of-way and the western part of the Crescent-Glenwood parking lot. This option would involve completely closing off Crescent Boulevard between Glenwood and Prospect, but could allow traffic to potentially circulate from Prospect Avenue to Glenwood Avenue through the parking garage. Option 3 would provide 210 residential units with 421 parking spaces on the site along with some open courtyard space for the residents to enjoy in addition to the rooftop amenity space. The existing public parking would be replaced, but there would be no net gain in public parking with this option. The parking would however be enclosed, which would provide some

public benefit.

**Traffic Circulation Impact.**
Traffic consultants from KLOA conducted a traffic evaluation to determine if there would be any impact to the levels of service at downtown intersections if the Village were to change Crescent Boulevard traffic to one-way from Prospect Avenue to Glenwood Avenue, or if the Village were to completely close off that same portion of the roadway. The attached evaluation shows that neither alternative would change the levels of service at adjacent intersections (see Attachment 5). It is further noted that both alternatives would reduce conflicts created by the proximity of the railroad to the intersection of Prospect Avenue and Crescent Boulevard. By completely closing Crescent Boulevard, Duane Street will experience increased eastbound traffic.

**Utility Relocation.**
Village Engineer Daubert drafted a memo (see Attachment 6) that outlines where utilities are located in proximity to the site. As noted in the memo, there are Village storm, sanitary and water mains in the Crescent Boulevard right-of-way. Adjacent to the site in the parkway there are gas, electric and communication cables, and along the north and west property line on the McChesney & Miller property there are overhead wires. While option 1 does not include the public right-of-way and would not require the relocation of utilities, the Village's PUD regulations do require that overhead wires on the site be buried underground. This would be required for any development on the site.

Option 2 would allow limited access to the Village's water, sanitary and storm mains in the Crescent Boulevard right-of-way and may require that these utilities be relocated. This option may be the most difficult in terms of utility relocation/maintenance. Staff has indicated that appropriate building clearance would be required in order to maintain Village utilities that would remain in the right-of-way. All of the dry utilities including gas lines, electric lines and communication cables would need to be relocated and all of street lights in the parkway would need to be removed.

Since option 3 would completely close off a portion of the Crescent Boulevard right-of-way, the water main would need to be retired, and the sanitary and storm mains would need to be relocated in addition to all of the dry utilities mentioned above in option 2. A 15-foot utility easement is shown on the massing model in option 3 for relocation of the utilities. Realistically a 20-foot utility easement might be required to provide some separation from the building foundation. There would likely be significant costs associated with relocating these utilities.

**Additional Considerations.**
There are additional factors that make this site a challenge to develop including a grade change from north to south of approximately 10 feet; there is likely to be environmental remediation required for at least a portion of the site; and the cost to acquire the property coupled with the Village's desire to have high quality materials and architectural elements, requires that a higher density of units be permitted in order for a viable development to move forward. To differing degrees, the three options shown in the massing models would add to the number of residential units in the downtown, have the potential to balance some of the parking need on the north side of the tracks, and would add a tax generating development to an underutilized site in the downtown. In addition,

any significant development could generate significant short term TIF revenue that would contribute to capital projects being planned in the downtown including the Civic Center parking garage, streetscape, and train station/pedestrian tunnel projects. Please note, that the TIF district expires in 15 years, therefore, the Village has limited time to develop these significant CBD sites with the ability to help offset any extraordinary development costs.

**Action Requested.** Village staff are looking for feedback from the Village Board to be able to provide developers with clearer direction in developing concept plans for the site. Please provide any initial feedback related to the following:

- Would the Village Board support including Crescent Boulevard in a redevelopment project? If so, should the inclusion of the Lord's property be a requirement so there is no remnant portion of Crescent Boulevard right-of-way remaining west of the development?
- Is the Village Board comfortable with a 6-story structure in this location?
- Does the Village Board want some commercial development on the first floor to be a requirement for a project?
- Is the Village Board comfortable with a minimum requirement of 1.5 parking spaces per unit?

We welcome any Village Board questions in advance of the Village Board workshop so staff may be able to gather information in advance of the meeting and be sufficiently prepared for the discussion.

**Attachments.**

- Attachment 1 - Example site plans from past developers
- Attachment 2 - Site Location Aerial
- Attachment 3 - Massing models prepared by Houseal Lavigne and Associates
- Attachment 4 - Photo of Arlington Heights' parking garage
- Attachment 5 - Traffic impact analysis prepared by KLOA traffic consultants
- Attachment 6 - Utility location analysis memo prepared by Professional Engineer, Rich Daubert

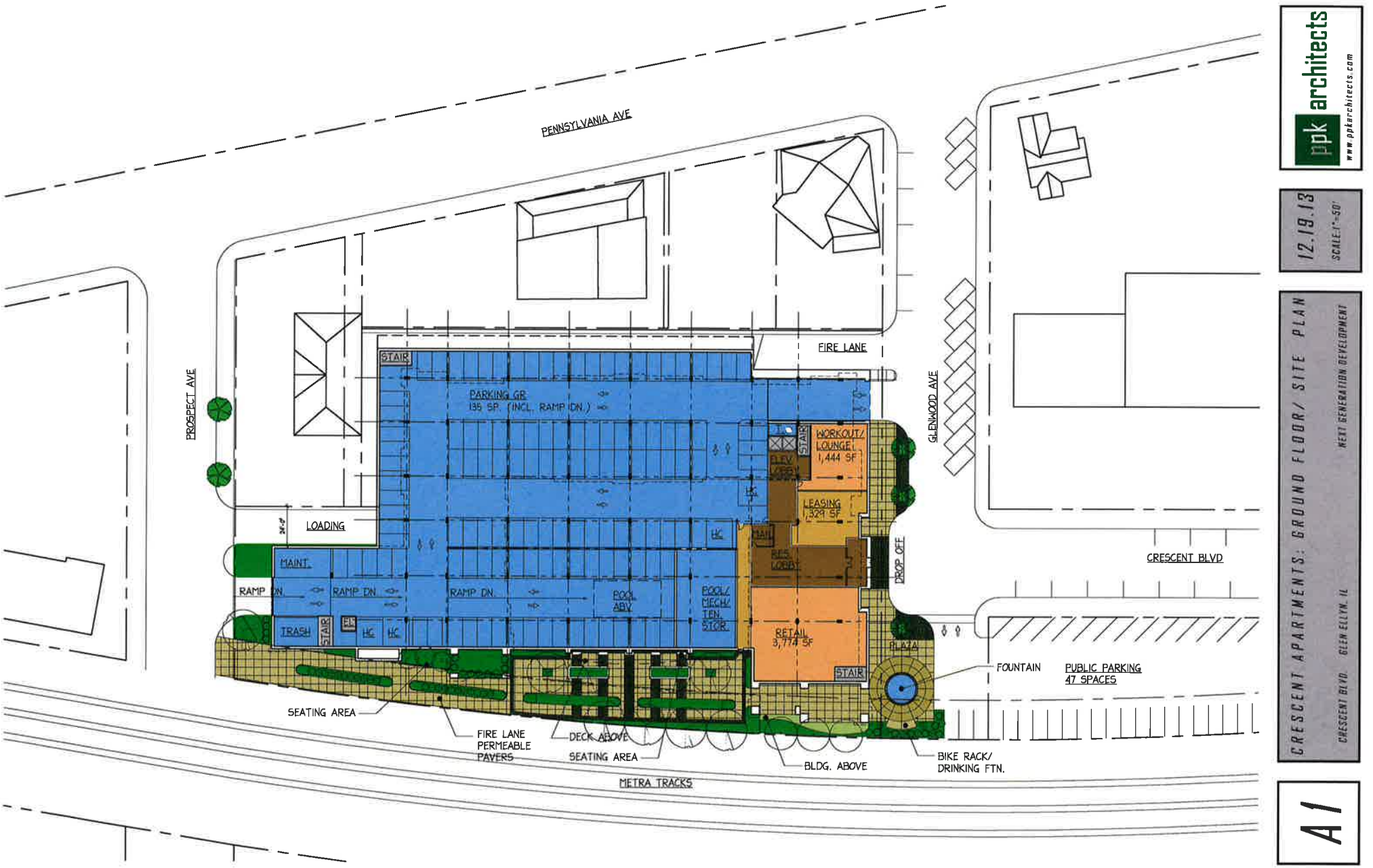
Cc: Rich Daubert, Professional Engineer
Amy McKenna, Civil Development Engineer
Katie Ashbaugh, Planner
Cole Jackson, Associate Planner
AJ Goyal, Economic Development Coordinator

X:\Plandev\PLANNING\Street Files\Crescent 460, McChesney Property\Crescent Blvd. Options\VB Memo - McChesney & Miller Site Development Options 01132020.doc

**ATTACHMENTS:**

- Attachment 1 - Examples Plans from previous developers (PDF)
- Attachment 2 - Site Location Aerial (PDF)

- Attachment 3 - Massing Models prepared by HLA (PDF)
- Attachment 4 - Arlington Heights' parking garage (JPG)
- Attachment 5 - Traffic impact analysis prepared by KLOA traffic consultants (PDF)
- Attachment 6 - Utility location analysis memo prepared by Professional Engineer, Rich Daubert (PDF)



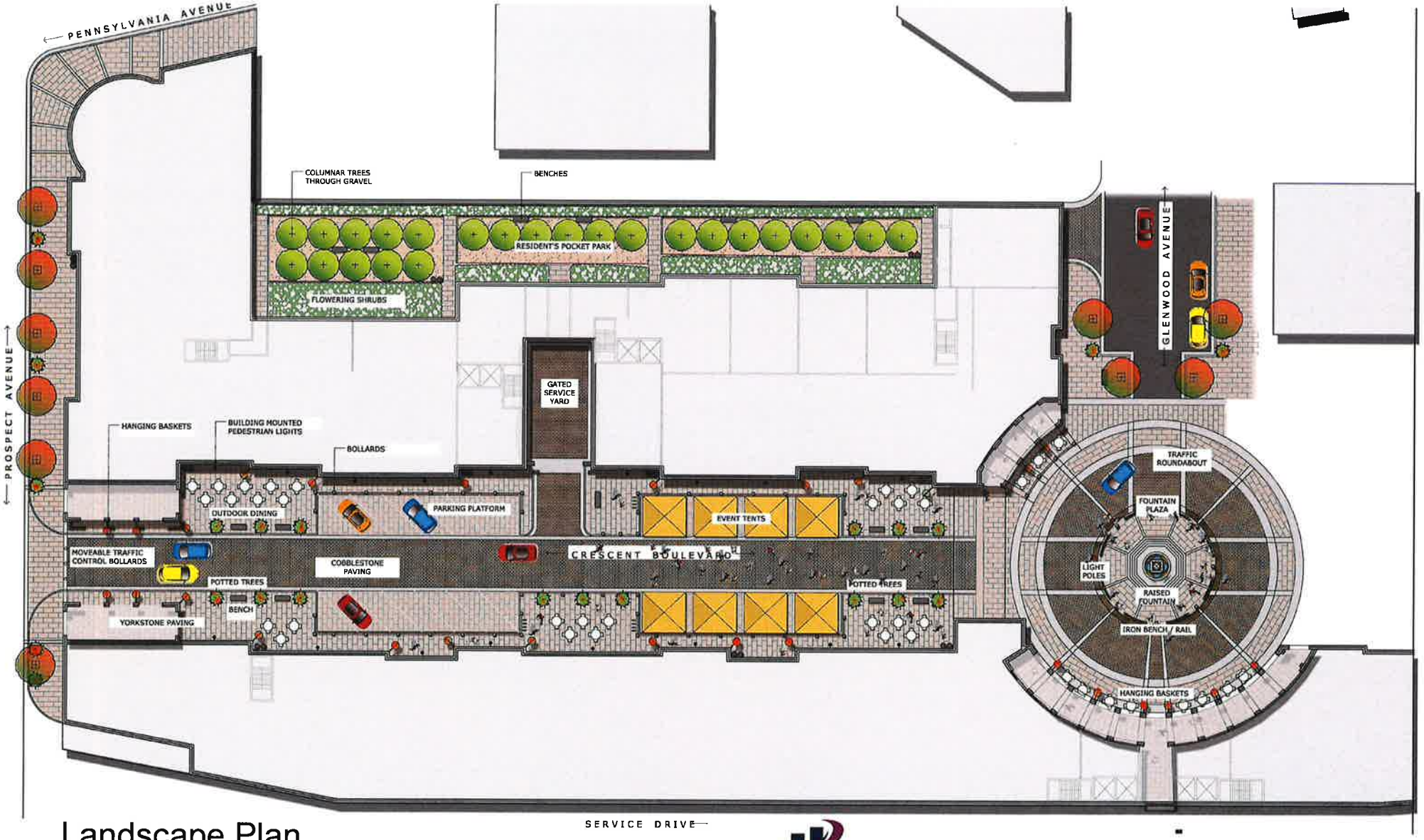

ppk architects
www.ppkarchitects.com

12.19.13
SCALE: 1"=50'

CRESCENT APARTMENTS: GROUND FLOOR/ SITE PLAN
NEXT GENERATION DEVELOPMENT
CRESCENT BLVD. GLEN ELLYN, IL

A1

Elevated view to the northwest from Crescent and Glenwood




# Landscape Plan

The Crescent Transit Oriented Development
Glen Ellyn, Illinois

SPRINGBANK
REAL ESTATE GROUP

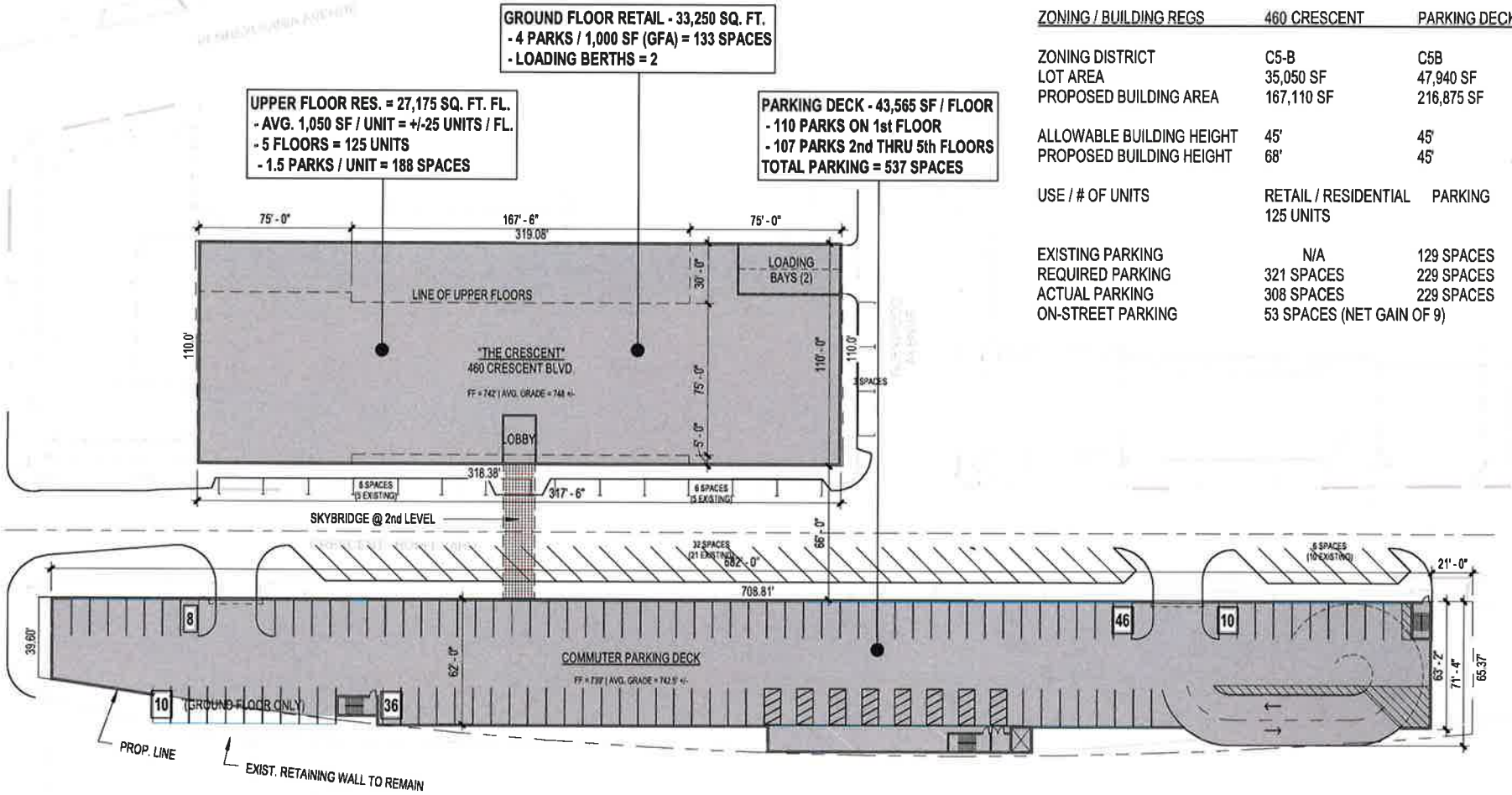
Conceptual Presentation
October 28, 2015

# Design Approach

The Crescent Transit Oriented Development
Glen Ellyn, Illinois

SPRINGBANK
REAL ESTATE GROUP

Conceptual Presentation
October 28, 2015




| ZONING / BUILDING REGS | 460 CRESCENT | PARKING DECK |
|---|---|---|
| ZONING DISTRICT | C5-B | C5B |
| LOT AREA | 35,050 SF | 47,940 SF |
| PROPOSED BUILDING AREA | 167,110 SF | 216,875 SF |
| ALLOWABLE BUILDING HEIGHT | 45' | 45' |
| PROPOSED BUILDING HEIGHT | 68' | 45' |
| USE / # OF UNITS | RETAIL / RESIDENTIAL<br>125 UNITS | PARKING |
| EXISTING PARKING | N/A | 129 SPACES |
| REQUIRED PARKING | 321 SPACES | 229 SPACES |
| ACTUAL PARKING | 308 SPACES | 229 SPACES |
| ON-STREET PARKING | 53 SPACES (NET GAIN OF 9) | |

1 MASTER SITE DIAGRAM
1" = 50'-0"

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

N
SCALE: 1" = 50'-0"
0' 12.5 25 50'

Springbank CAPITAL ADVISORS
THE BRADFORD REAL ESTATE COMPANIES

THE CRESCENT T.O.D.
CRESCENT BLVD. & GLENWOOD AVE.
MARCH 1, 2017 Project #: 16087

A-01

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

VIEW FROM SOUTHWEST
THE CRESCENT T.O.D.
CRESCENT BLVD. & GLENWOOD AVE.
MARCH 1, 2017 Project #: 16087

A-04

**Site Location Map, January 16, 2020**

Attachment: Attachment 3 - Massing Models prepared by



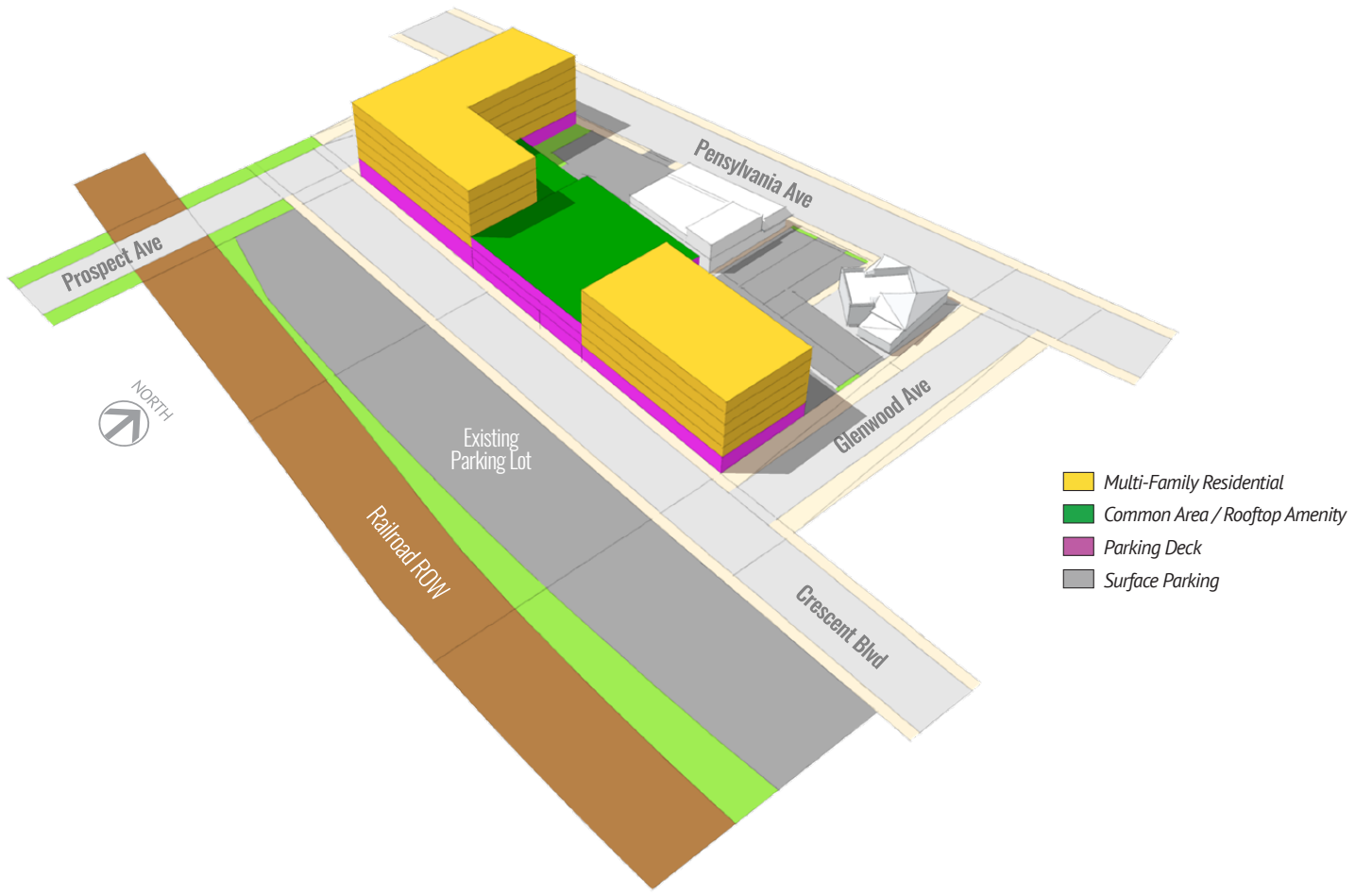
# McChesney Site Development

## Option 1

**Multi-Family Residential:**
*121,450 s.f. total, 110 units total*

**Parking:**
*West Tower Parking - 95 required, 59 provided*
*East Tower Parking - 70 required, 34 provided*
*Parking Deck - 128 provided (43 spaces per floor)*

*Total Parking Required: 166 spaces*
*Total Parking Provided: 221 spaces*

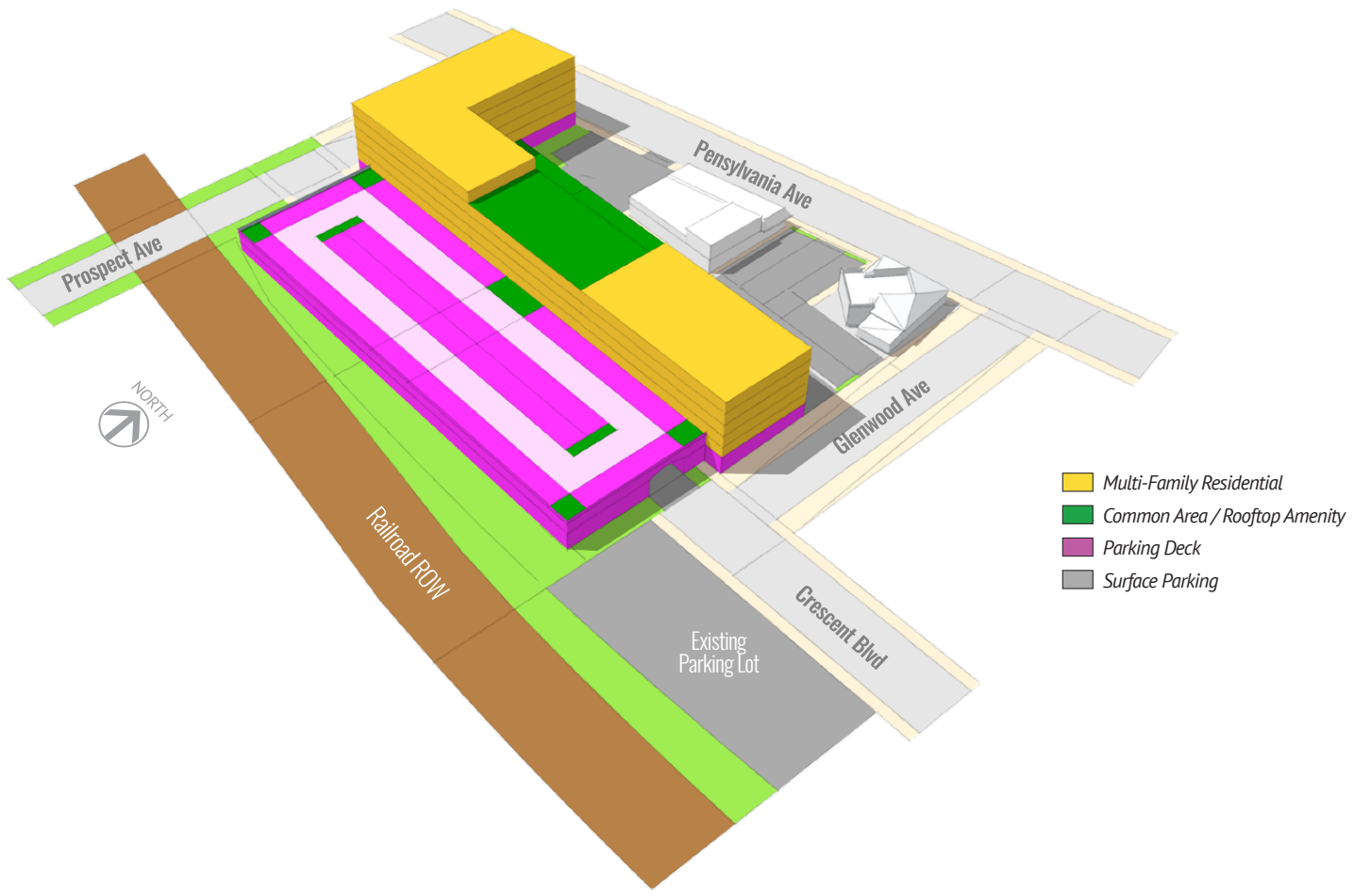



## Option 2

**Multi-Family Residential:**
*150,250 s.f. total, 137 units total*

**Parking:**
*West Tower Parking - 95 required, 60 provided*
*Central Tower Parking - 39 required, 85 provided*
*East Tower Parking - 70 required, 34 provided*
*Parking Deck - 400 provided (133 spaces per floor)*

*Total Parking Required: 205 spaces*
*Total Parking Provided: 579 spaces*

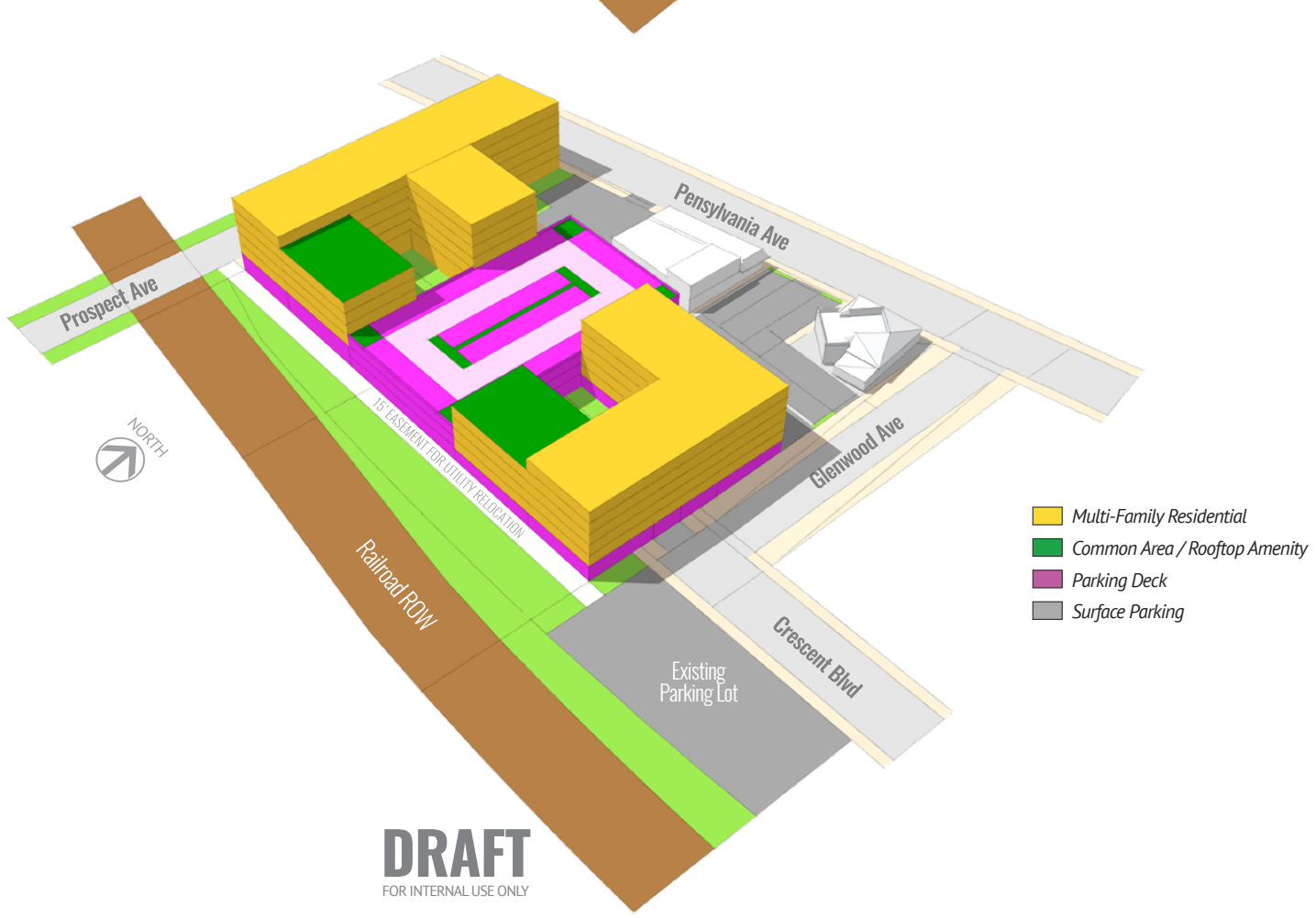



## Option 3

**Multi-Family Residential:**
*231,070 s.f. total, 210 units total*

**Parking:**
*West Tower Parking - 188 required, 28 provided*
*East Tower Parking - 128 required, 65 provided*
*Parking Deck - 328 provided (82 spaces per floor)*

*Total Parking Required: 315 spaces*
*Total Parking Provided: 421 spaces*




DRAFT
FOR INTERNAL USE ONLY

Attachment: A
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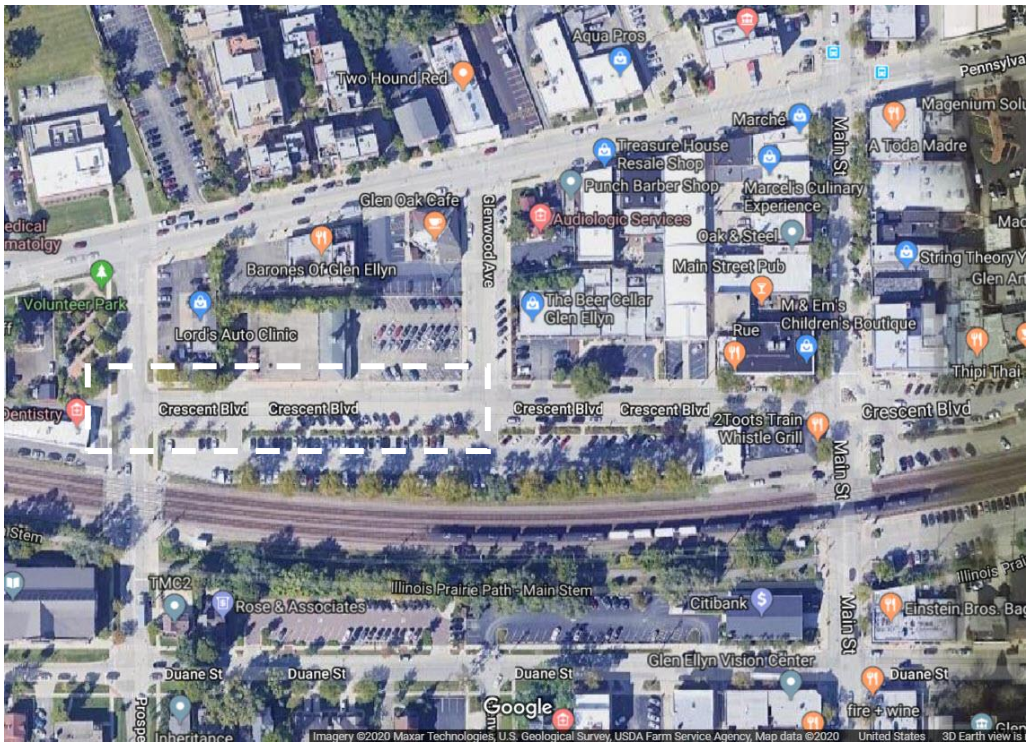
- A
ARLINGTON HEIGHTS
Packet Pg. 154

# Traffic Evaluation Study
# Crescent Boulevard Traffic Flow Alternatives
## Glen Ellyn, Illinois




Prepared for

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

January 16, 2020

# 1. Introduction

This study presents the methodologies, findings, and recommendations of a preliminary traffic evaluation conducted by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) to evaluate three potential alternatives for Crescent Boulevard between Prospect Avenue and Glenwood Avenue as part of possible development concepts for the 460 Crescent Boulevard site (commonly known as the McChesney Miller site) in downtown Glen Ellyn, Illinois.

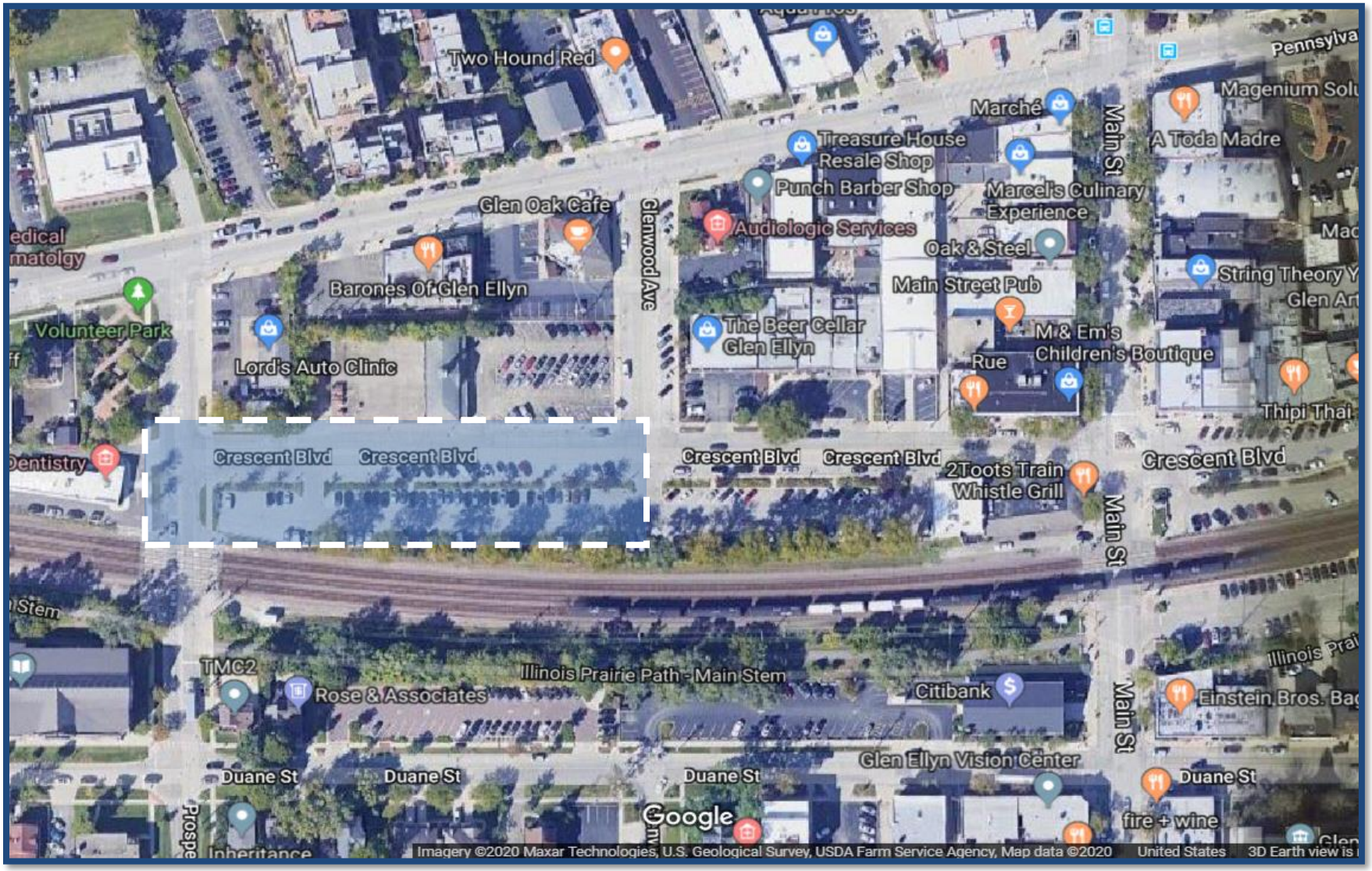
In addition to maintaining Crescent Boulevard as it currently is, the other two options being considered are:

1. Vacate and close Crescent Boulevard between Prospect Avenue and Glenwood Avenue
2. Convert Crescent Boulevard between Prospect Avenue and Glenwood Avenue to allow one-way eastbound traffic only

The study area for this analysis includes Pennsylvania Avenue to the north, Main Street to the east, Prospect Avenue to the west and Duane Street to the south. **Figure 1** shows an aerial view of the study area.

The specific objectives of the study are:

- Examine existing traffic conditions and peak period traffic flow
- Identify traffic problems and deficiencies
- Determine what impact the current traffic patterns and the two options will have on traffic circulation in the vicinity of the site




**Aerial View Of Study Area** **Figure 1**

# 2. Existing Roadway System

Transportation conditions in the vicinity of the site were inventoried based on field visits. The roadway system and on-street parking serving downtown Glen Ellyn is summarized below.

## Area Overview and Land Uses

The study area is primarily commercial with some newer multi-family residential buildings buffering Pennsylvania Avenue to the north. The Metra Union Pacific (UP) West Line is located just north of Duane Street and runs parallel to St. Charles Road.

## Area Roadway System

The primary roads in the study area that serve the Glen Ellyn downtown area and surrounding land uses are described below. The existing characteristics are shown in **Figure 2**.

*Main Street* is a north-south road that has an at-grade crossing with the UP railroad tracks. It provides one lane in each direction except the section between Pennsylvania Avenue and Crescent Boulevard, which is restricted to one-way southbound traffic. Parking is prohibited on both sides of the road except between Anthony Street and Hillside Avenue, where it is generally permitted on both sides of the road.

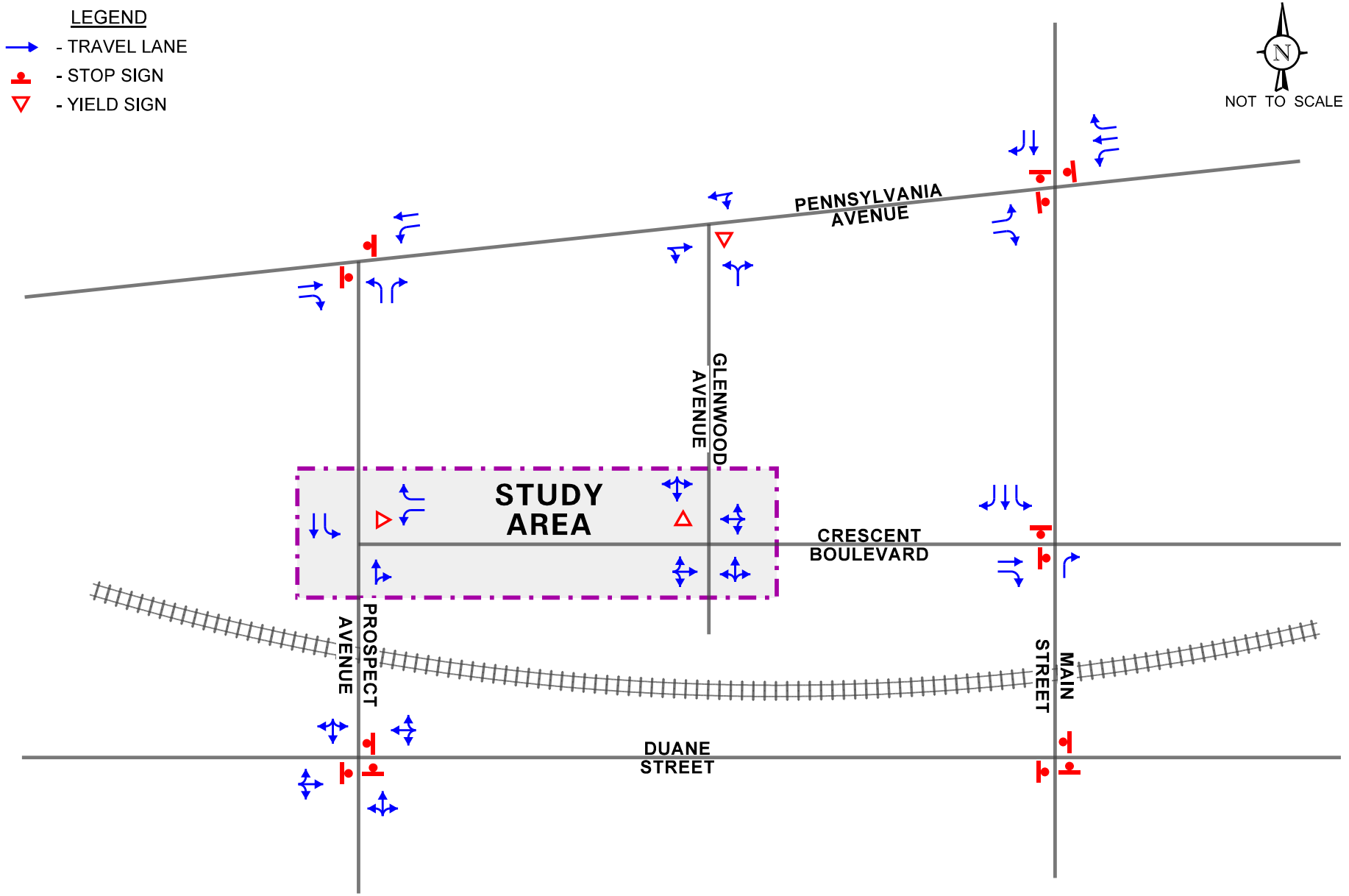
*Glenwood Avenue* is a north-south road that provides one lane in each direction with parking permitted on both sides of the road. Glenwood Avenue is under yield control at its intersections with Pennsylvania Avenue and Crescent Boulevard.

*Pennsylvania Avenue* is an east-west road that provides one lane in each direction except the section between Forest Avenue and Main Street which is restricted to one-way westbound traffic. Exclusive turning lanes are provided at its unsignalized intersection with Prospect Avenue. Parking is generally permitted on both sides of the road.

*Crescent Boulevard* is an east-west road that provides one lane in each direction except the section between Main Street and Forest Avenue which is restricted to one-way eastbound traffic. Within the study area, parking is generally permitted on both sides of the road.

*Prospect Avenue* is a north-south roadway that provides one through lane in each direction and is classified as a neighborhood collector street by the Village of Glen Ellyn Comprehensive Plan. At its three way stop-sign controlled intersection with Duane Street, Prospect Avenue provides a shared left-turn/through/right-turn lane and a high visibility crosswalk on both approaches.

*Duane Street* is an east-west local street that provides one through lane in each direction and is classified as a community collector roadway by the Village of Glen Ellyn Comprehensive Plan. At its three-way stop-sign controlled intersection with Prospect Avenue, Duane Street provides a shared left-turn/through/right-turn lane under stop sign control with a high visibility crosswalk provided on both legs. On-street parking is not permitted on either side of the roadway west of Prospect Avenue. Duane Street is under the jurisdiction of the Village of Glen Ellyn and has a posted school zone speed limit of 20 miles per hour.




Crescent Boulevard Evaluation
Glen Ellyn, Illinois

Existing Roadway Characteristics

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

Job No: 20-010

Figure: 2

# 3. Current Traffic Conditions

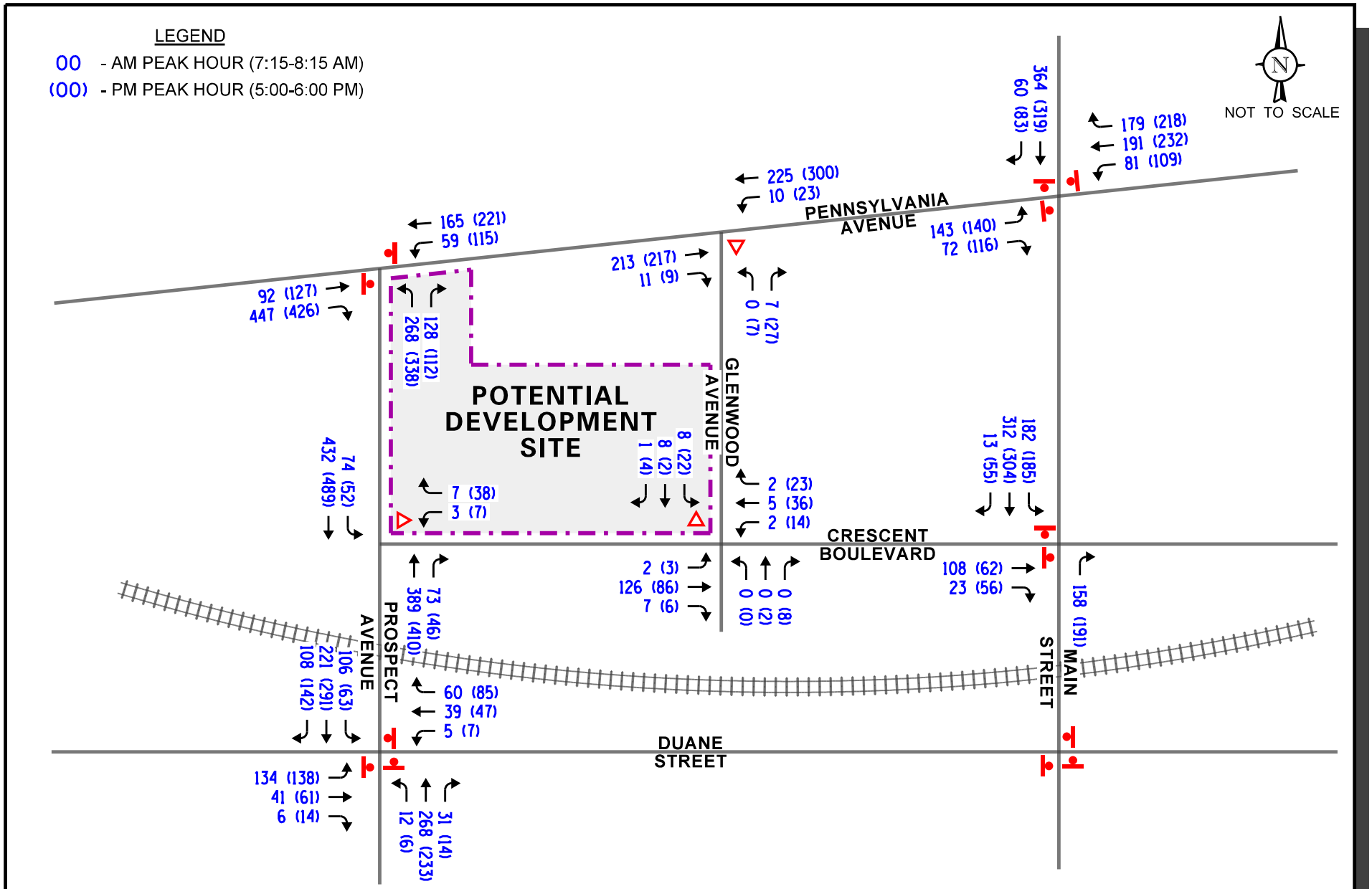
In order to determine current traffic conditions in the area, KLOA, Inc. utilized previous traffic and pedestrian counts conducted on Tuesday December 1, 2015 and Tuesday August 28, 2018 during the morning (7:00 to 9:00 A.M.) and evening (4:00 to 7:00 P.M.) peak periods at the following intersections:

Pennsylvania Avenue with
- Main Street
- Glenwood Avenue
- Prospect Avenue

Crescent Boulevard with
- Main Street
- Glenwood Avenue
- Prospect Avenue

Prospect Avenue with
- Duane Street

Based on the results of the traffic counts, the weekday morning peak hour occurs from 7:15 to 8:15 A.M. while the weekday evening peak hour occurs from 5:00 to 6:00 P.M. The existing weekday morning and evening peak-hour traffic volumes are shown in **Figure 3**.




Crescent Boulevard Evaluation
Glen Ellyn, Illinois

Existing Traffic Volumes

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

Job No: 20-010

Figure: 3

## Current Conditions Traffic Operations

Traffic analyses were performed for the study area intersections to determine the operation of the roadway system under existing conditions and to serve as a basis for comparison to traffic conditions under the two other alternatives to traffic along Crescent Boulevard between Prospect Avenue and Glenwood Avenue. Analyses were performed for the morning and evening peak hour periods of a typical weekday.

The traffic analyses were accomplished using the Synchro/SimTraffic 10 computer software, which generally follows the methodologies outlined in the Transportation Research Board's *Highway Capacity Manual* (HCM), 6th Edition. The methodologies use traffic controls, traffic volumes, and roadway characteristics to determine the average control delay and levels of service for vehicles at an intersection.

For all-way stop controlled (AWSC) intersections, an intersection level of service is calculated based on the weighted average of the delay on each of the approaches (the approach delay consists of the weighted average of the delay on each lane of the approach). For two-way stop controlled (TWSC) intersections, levels of service are only calculated for the approaches controlled by a stop sign (not for the intersection as a whole). Level of Service F at TWSC intersections occurs when there are not enough suitable gaps in the flow of traffic on the major (uncontrolled) street to allow minor-street traffic to safely enter the major street flow or cross the major street.

The Highway Capacity Manual criteria for levels of service and the corresponding control delay for signalized intersections is included in the Appendix. **Table 1** summarizes the results of the traffic analyses for the morning and evening peak hour traffic for existing conditions. The capacity analysis worksheets are in the Appendix.

Table 1
CAPACITY ANALYSIS - EXISTING TRAFFIC CONDITIONS

| Intersection | Weekday Morning Peak Hour | | Weekday Evening Peak Hour | |
|---|---|---|---|---|
| | Level of Service | Delay (seconds) | Level of Service | Delay (seconds) |
| Prospect Avenue/Duane Street[1] | C | n.a. | D | n.a. |
| Main Street/Pennsylvania Avenue[2] | C | 16.6 | C | 16.2 |
| Main Street/Crescent Boulevard[1] | A | n.a. | A | n.a. |
| Prospect Avenue/Pennsylvania Avenue[3] | A | n.a. | A | n.a |
| Prospect Avenue/Crescent Boulevard | B | 13.9 | B | 12.8 |
| Glenwood Avenue/Pennsylvania Avenue | A | 9.5 | B | 10.4 |
| Crescent Boulevard/Glenwood Avenue | | | | |
| • Northbound | A | 0.0 | A | 9.1 |
| • Southbound | A | 9.7 | A | 9.8 |

[1]Given that three of the four legs are under stop sign control, the estimated delay at this intersection cannot be determined. The operation of the intersection is based on a volume to capacity (V/C) evaluation.
[2]All-way stop controlled intersection. Represents operations of intersection as a whole.
[3]Given that the northbound approach is running free, the estimated delay at this intersection cannot be determined. The operation of the intersection is based on a volume to capacity (V/C) evaluation

The traffic analysis results indicate that all of the study area intersections operate at acceptable levels of service during the weekday morning and evening peak hours. However, there are a few traffic movements at some of the intersections evaluated such as the westbound to southbound left-turn movement at the intersection of Pennsylvania Avenue with Prospect Avenue that experience longer delays than desirable. However, this is typical and expected given that the northbound traffic does not stop in order to reduce the chances for it to back up onto the railroad tracks.

## Train Observations

Located approximately 200 feet north of Duane Street is the at-grade railroad crossing on Prospect Avenue with the Union Pacific – West Metra Commuter Railway that carries 25 inbound trips and 24 outbound trips on weekdays, resulting in a total of 49 commuter trains per day. This railroad also carries an average of 40 freight trains per day. Field observations conducted during the peak hours indicated that northbound queues on Prospect Avenue at the at-grade railroad crossing only extended beyond Duane Street two times during the weekday morning peak hour, three times during the afternoon peak hour, and four times during the evening peak hour, with queues clearing Duane Street within three minutes following the train event. However, the queues did not block the intersection of Duane Street with Prospect Avenue.

# 4. Crescent Boulevard Alternative Evaluation

As previously mentioned, in addition to keeping the existing configuration of Crescent Boulevard, the Village of Glen Ellyn is considering two other potential alternatives for Crescent Boulevard between Prospect Avenue and Glenwood Avenue as part of possible development concepts for the 460 Crescent Boulevard (commonly known as the McChesney Miller site) in downtown Glen Ellyn, Illinois.

These two additional alternatives being considered are:

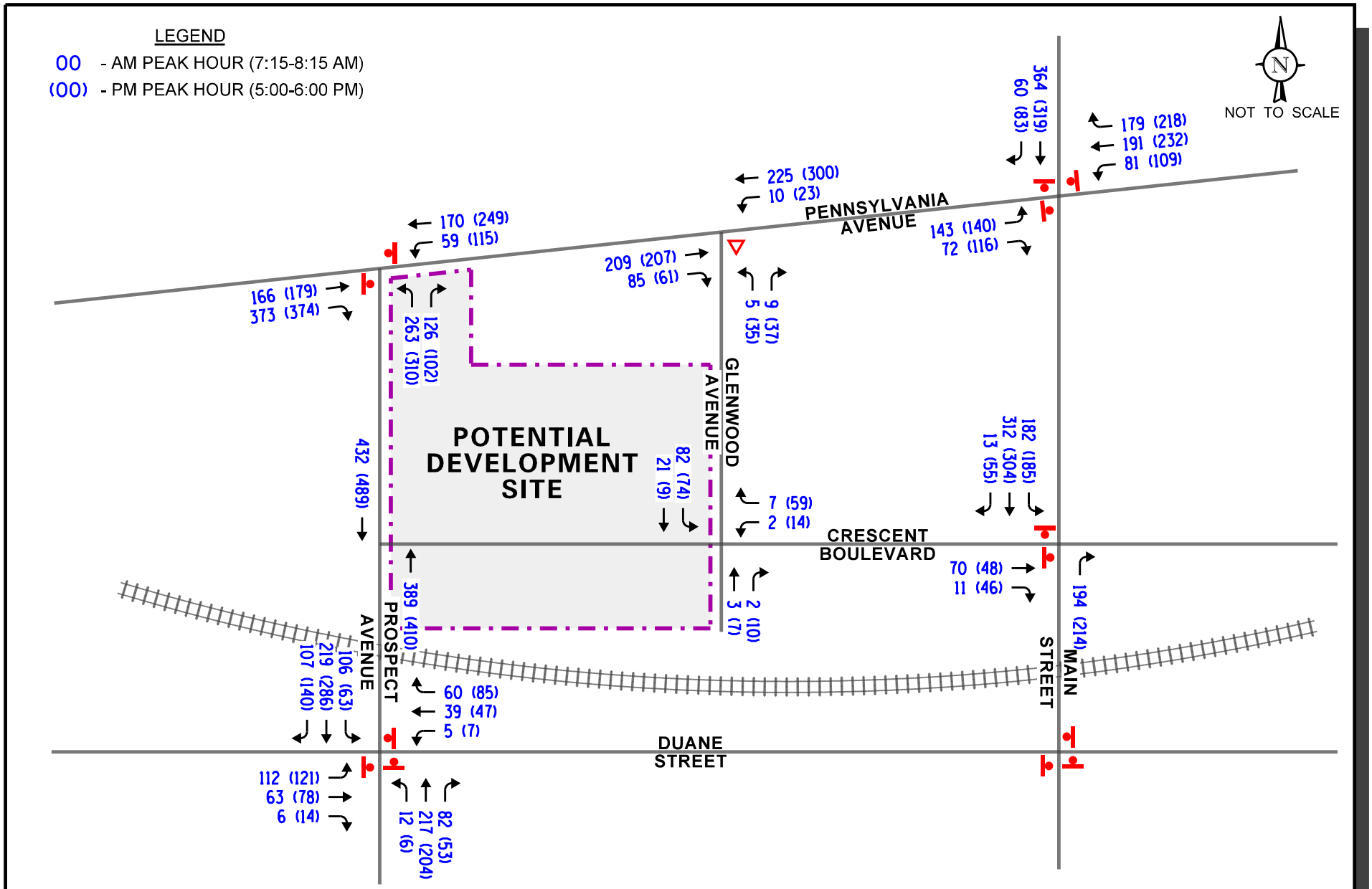
1. Vacate and close Crescent Boulevard between Prospect Avenue and Glenwood Avenue
2. Convert Crescent Boulevard between Prospect Avenue and Glenwood Avenue to only allow one-way eastbound traffic

In order to determine the impact of each potential alternative, the existing traffic volumes were reassigned to reflect each alternative. Alternative 1 will require the traffic turning eastbound onto Crescent Boulevard from Prospect Avenue and the traffic traveling westbound on Crescent Boulevard turning right and left onto Prospect Avenue to seek other routes while Alternative 2 will only require traffic traveling westbound on Crescent Boulevard turning right and left onto Prospect Avenue to seek other routes.

Based on the existing travel patterns, it is estimated that approximately 50 to 75 trips during the peak hours will be diverted from traveling south on Prospect Avenue to traveling south on Glenwood Avenue under Alternative 1. In addition, approximately the same number of vehicles will be diverted to travel east on Duane Street.

Under Alternative 2, only a small amount of traffic (between 10 and 45 vehicles) during the peak hours will be diverted to other intersections.

**Figures 4** and **5** show the reassigned traffic volumes for Alternatives 1 and 2, respectively.



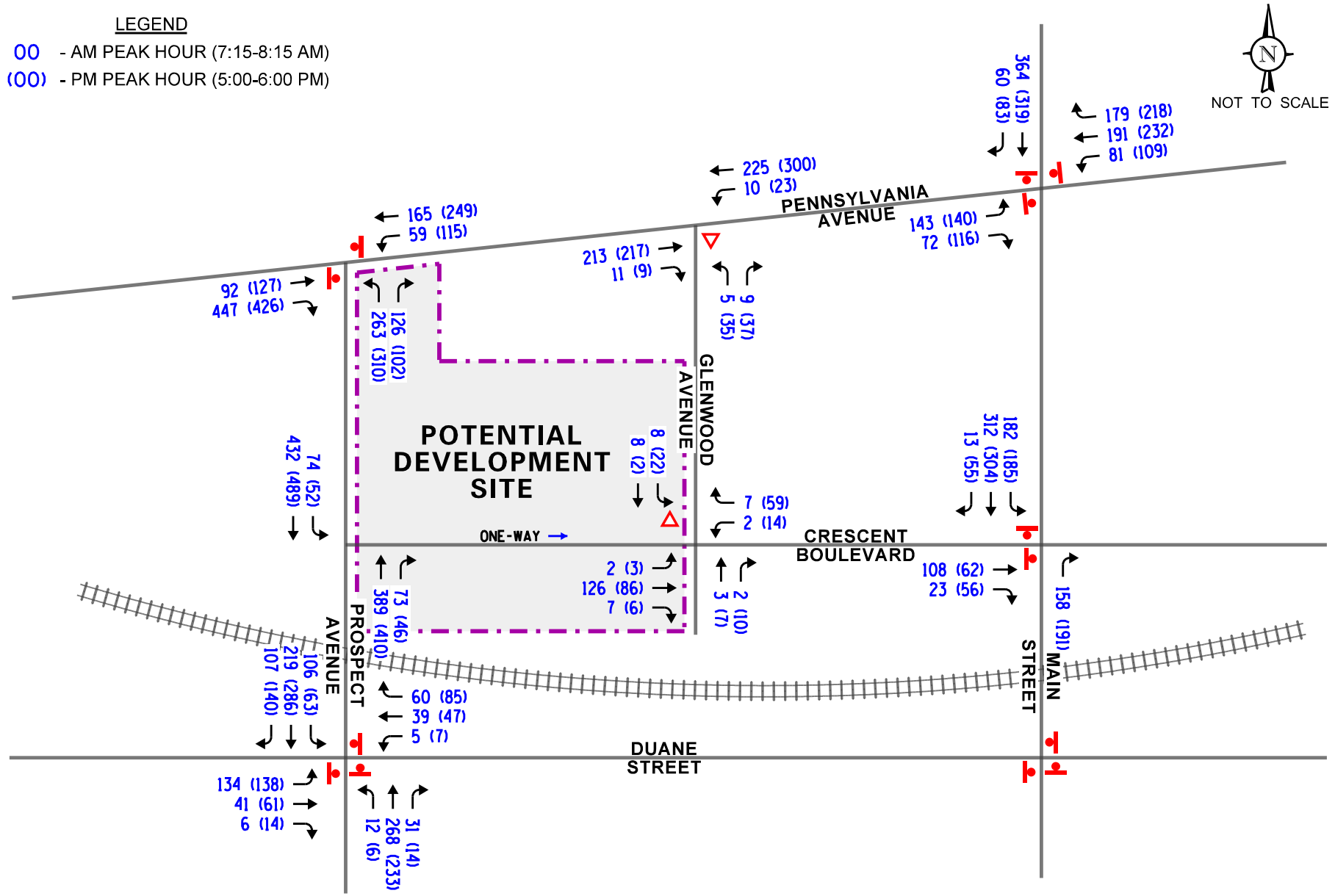

Crescent Boulevard Evaluation
Glen Ellyn, Illinois

Alternative 1 - Reassigned Traffic Volumes
(Crescent Boulevard Vacation
Between Prospect Avenue and Glenwood Avenue)

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

Job No: 20-010

Figure: 4




Crescent Boulevard Evaluation
Glen Ellyn, Illinois

Alternative 2 - Reassigned Traffic Volumes
(Crescent Boulevard One-Way Eastbound
Between Prospect Avenue and Glenwood Avenue)

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

Job No: 20-010

Figure: 5

## Traffic Operations

Traffic analyses were performed for the studied intersections to determine the operation of the roadway system under each alternative. **Tables 2** and **3** summarize the results of the traffic analyses for the weekday morning and evening peak hour periods for Alternative 1 and 2, respectively.

The traffic analysis results indicate that all of the study area intersections will continue operating at the same levels of service during the weekday morning and evening peak hours with minimal increases in the delay experienced. Similar to existing conditions, there will still be a few traffic movements at some of the intersections that will continue to experience longer delays than desirable.

Table 2
CAPACITY ANALYSIS - EXISTING TRAFFIC CONDITIONS (ALTERNATIVE 1)

| Intersection | Weekday Morning Peak Hour | | Weekday Evening Peak Hour | |
|---|---|---|---|---|
| | Level of Service | Delay (seconds) | Level of Service | Delay (seconds) |
| Prospect Avenue/Duane Street[1] | C | n.a. | D | n.a. |
| Main Street/Pennsylvania Avenue[2] | C | 16.6 | C | 16.2 |
| Main Street/Crescent Boulevard[1] | A | n.a. | A | n.a. |
| Prospect Avenue/Pennsylvania Avenue[3] | A | n.a. | A | n.a |
| Glenwood Avenue/Pennsylvania Avenue | B | 10.6 | B | 12.2 |
| Crescent Boulevard/Glenwood Avenue[4] | A | 7.6 | A | 7.4 |

[1]Given that three of the four legs are under stop sign control, the estimated delay at this intersection cannot be determined. The operation of the intersection is based on a volume to capacity (V/C) evaluation.
[2]All-way stop controlled intersection. Represents operations of intersection as a whole.
[3]Given that the northbound approach is running free, the estimated delay at this intersection cannot be determined. The operation of the intersection is based on a volume to capacity (V/C) evaluation
[4]Assumed to operate as an all-way stop controlled intersection

Table 3
CAPACITY ANALYSIS - EXISTING TRAFFIC CONDITIONS (ALTERNATIVE 2)

| Intersection | Weekday Morning Peak Hour | | Weekday Evening Peak Hour | |
|---|---|---|---|---|
| | Level of Service | Delay (seconds) | Level of Service | Delay (seconds) |
| Prospect Avenue/Duane Street[1] | C | n.a. | D | n.a. |
| Main Street/Pennsylvania Avenue[2] | C | 16.6 | C | 16.2 |
| Main Street/Crescent Boulevard[1] | A | n.a. | A | n.a. |
| Prospect Avenue/Pennsylvania Avenue[3] | A | n.a. | A | n.a |
| Prospect Avenue/Crescent Boulevard | A | n.a | A | n.a. |
| Glenwood Avenue/Pennsylvania Avenue | B | 10.4 | B | 12.0 |
| Crescent Boulevard/Glenwood Avenue | | | | |
| • Northbound | A | 9.5 | A | 9.4 |
| • Southbound | A | 9.8 | A | 9.9 |

[1]Given that three of the four legs are under stop sign control, the estimated delay at this intersection cannot be determined. The operation of the intersection is based on a volume to capacity (V/C) evaluation.
[2]All-way stop controlled intersection. Represents operations of intersection as a whole.
[3]Given that the northbound approach is running free, the estimated delay at this intersection cannot be determined. The operation of the intersection is based on a volume to capacity (V/C) evaluation
[4]Assumed to operate as an all-way stop controlled intersection

# 5. Discussion and Recommendations

As previously indicated and based on the results of the capacity analyses, all of the studied intersections are operating at acceptable LOS under existing conditions and will continue operating at the same levels of service under each scenario. Below is a summary of the pros and cons of each alternative including maintaining Crescent Boulevard as is.

## Existing Conditions

### Pros

- Provides for two-way traffic between Prospect Avenue and Main Street
- Existing traffic patterns will be maintained
- Maximum accessibility will be maintained for the existing businesses along Crescent Boulevard

### Cons

- The existing full ingress/egress turning movements at the intersection of Prospect Avenue with Crescent Boulevard will continue to occur within close proximity (100 feet) of the UP railroad tracks
- Limits the potential of the redevelopment to only the two lots on the north side of Crescent Boulevard

## Alternative 1

### Pros

- Eliminates the conflict points within close proximity to the UP railroad tracks
- Greatly increases the size of the redevelopment parcel

### Cons

- Forces additional traffic to the intersections of Pennsylvania Avenue with Prospect Avenue and Glenwood Avenue and additional traffic eastbound on Duane Street.
- Limits the accessibility of other existing businesses along Crescent Boulevard to/from Prospect Avenue

## Alternative 2

### Pros

- Increases the size of the redevelopment parcel
- Provides for one-way eastbound traffic flow allowing vehicles to access other businesses along Crescent Boulevard without traversing to other intersections in the area
- Reduces the number of conflict points within close proximity to the UP railroad tracks

### Cons

- Forces a limited amount of westbound traffic on Crescent Boulevard to other intersections
- May not be cost effective due to the bridging of the road through the site

Based on the above and the results of the capacity analyses, it is our opinion that Alternative 2 would maximize the size of the redevelopment parcel and reduce the number of conflict points within close proximity to the UP railroad tracks while still maintaining some accessibility for the existing businesses along Crescent Boulevard.

# 7. Conclusion

This report evaluated three potential alternatives for Crescent Boulevard between Prospect Avenue and Glenwood Avenue as part of possible redevelopment concepts for the 460 Crescent Boulevard site (commonly known as the McChesney Miller site) in downtown Glen Ellyn, Illinois.

Based on the results of the preliminary evaluation, field observations and the analyses performed, the following is concluded.

- Based on the results of the capacity analyses, the two Alternatives will have a limited impact on traffic conditions in the area from a capacity standpoint and all of the studied intersections will continue operating at the same levels of service with minimal increases in delay.

- Alternative 1 (Vacation of Crescent Boulevard between Prospect Avenue and Glenwood Avenue) will maximize the size of the redevelopment parcel and will completely eliminate the number of conflict points on Prospect Avenue within close proximity to the UP railroad tracks. However, it will force additional traffic to other intersections in the area.

- Alternative 2 (Crescent Boulevard restricted to one-way eastbound between Prospect Avenue and Glenwood Avenue) will also maximize the size of the redevelopment parcel, reduce the number of conflict points within close proximity to the UP railroad tracks while still maintaining some accessibility from Prospect Avenue for the existing businesses along Crescent Boulevard.

- Based on the above, it is KLOA, Inc.'s opinion that Alternative 2 provides the most flexibility for maximizing the development site while reducing to a minimum the changes in the existing traffic patterns in the area.

# Appendix

# Capacity Analysis

## Existing Conditions

HCM 6th AWSC
6: Main St & Pennsylvania Ave

01/15/2020

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 16.6 |
| Intersection LOS | C |

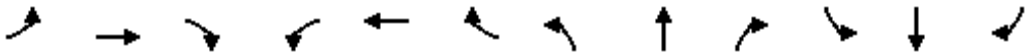
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 143 | 0 | 72 | 81 | 191 | 179 | 0 | 0 | 0 | 0 | 364 | 60 |
| Future Vol, veh/h | 143 | 0 | 72 | 81 | 191 | 179 | 0 | 0 | 0 | 0 | 364 | 60 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 151 | 0 | 76 | 85 | 201 | 188 | 0 | 0 | 0 | 0 | 383 | 63 |
| Number of Lanes | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |

| Approach | EB | WB | SB |
|---|---|---|---|
| Opposing Approach | WB | EB | |
| Opposing Lanes | 3 | 2 | 0 |
| Conflicting Approach Left | SB | | WB |
| Conflicting Lanes Left | 2 | 0 | 3 |
| Conflicting Approach Right | | SB | EB |
| Conflicting Lanes Right | 0 | 2 | 2 |
| HCM Control Delay | 13.2 | 12.6 | 22.6 |
| HCM LOS | B | B | C |

| Lane | EBLn1 | EBLn2 | WBLn1 | WBLn2 | WBLn3 | SBLn1 | SBLn2 |
|---|---|---|---|---|---|---|---|
| Vol Left, % | 100% | 0% | 100% | 0% | 0% | 0% | 0% |
| Vol Thru, % | 0% | 0% | 0% | 100% | 0% | 100% | 0% |
| Vol Right, % | 0% | 100% | 0% | 0% | 100% | 0% | 100% |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 143 | 72 | 81 | 191 | 179 | 364 | 60 |
| LT Vol | 143 | 0 | 81 | 0 | 0 | 0 | 0 |
| Through Vol | 0 | 0 | 0 | 191 | 0 | 364 | 0 |
| RT Vol | 0 | 72 | 0 | 0 | 179 | 0 | 60 |
| Lane Flow Rate | 151 | 76 | 85 | 201 | 188 | 383 | 63 |
| Geometry Grp | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| Degree of Util (X) | 0.331 | 0.141 | 0.173 | 0.38 | 0.319 | 0.715 | 0.105 |
| Departure Headway (Hd) | 7.916 | 6.684 | 7.318 | 6.808 | 6.095 | 6.718 | 6.013 |
| Convergence, Y/N | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Cap | 458 | 540 | 487 | 525 | 584 | 536 | 591 |
| Service Time | 5.616 | 4.384 | 5.115 | 4.605 | 3.891 | 4.507 | 3.802 |
| HCM Lane V/C Ratio | 0.33 | 0.141 | 0.175 | 0.383 | 0.322 | 0.715 | 0.107 |
| HCM Control Delay | 14.5 | 10.5 | 11.7 | 13.8 | 11.8 | 24.8 | 9.5 |
| HCM Lane LOS | B | B | B | B | B | C | A |
| HCM 95th-tile Q | 1.4 | 0.5 | 0.6 | 1.8 | 1.4 | 5.8 | 0.4 |

# Intersection Capacity Utilization
## 3: Prospect Avenue & Duane Street

01/15/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 134 | 41 | 6 | 5 | 39 | 60 | 12 | 268 | 31 | 106 | 221 | 108 |
| Pedestrians | 14 | | 8 | 8 | | 14 | 8 | | 8 | 8 | | 8 |
| Ped Button | | Yes | | | Yes | | | Yes | | | Yes | |
| Pedestrian Timing (s) | | 16.0 | | | 16.0 | | | 16.0 | | | 16.0 | |
| Free Right | | | No | | | No | | | No | | | No |
| Ideal Flow | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Green (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Refr Cycle Length (s) | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 |
| Volume Combined (vph) | 0 | 181 | 0 | 0 | 104 | 0 | 0 | 311 | 0 | 0 | 435 | 0 |
| Lane Utilization Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Factor (vph) | 0.95 | 0.96 | 0.85 | 0.95 | 0.91 | 0.85 | 0.95 | 0.98 | 0.85 | 0.95 | 0.95 | 0.85 |
| Saturated Flow (vph) | 0 | 1821 | 0 | 0 | 1731 | 0 | 0 | 1868 | 0 | 0 | 1807 | 0 |
| Ped Intf Time (s) | 0.0 | 0.0 | 1.0 | 0.0 | 1.0 | 1.7 | 0.0 | 0.1 | 1.0 | 0.0 | 0.3 | 1.0 |
| Pedestrian Frequency (%) | | 0.23 | | | 0.37 | | | 0.23 | | | 0.23 | |
| Protected Option Allowed | | No | | | No | | | No | | | No | |
| Reference Time (s) | | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 |
| Adj Reference Time (s) | | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 |
| Permitted Option | | | | | | | | | | | | |
| Adj Saturation A (vph) | 0 | 270 | | 0 | 1757 | | 0 | 1805 | | 0 | 641 | |
| Reference Time A (s) | 0.0 | 80.4 | | 0.0 | 8.1 | | 0.0 | 20.8 | | 0.0 | 81.7 | |
| Adj Saturation B (vph | 0 | 0 | | 0 | 0 | | NA | NA | | NA | NA | |
| Reference Time B (s) | 16.9 | 20.0 | | 8.3 | 16.2 | | NA | NA | | NA | NA | |
| Reference Time (s) | | 20.0 | | | 8.1 | | | 20.8 | | | 81.7 | |
| Adj Reference Time (s) | | 24.0 | | | 15.0 | | | 24.8 | | | 85.7 | |
| Split Option | | | | | | | | | | | | |
| Ref Time Combined (s) | 0.0 | 12.0 | | 0.0 | 8.2 | | 0.0 | 20.1 | | 0.0 | 29.1 | |
| Ref Time Seperate (s) | 8.9 | 2.7 | | 0.3 | 3.7 | | 0.8 | 17.3 | | 7.0 | 14.9 | |
| Reference Time (s) | 12.0 | 12.0 | | 8.2 | 8.2 | | 20.1 | 20.1 | | 29.1 | 29.1 | |
| Adj Reference Time (s) | 16.9 | 16.9 | | 15.1 | 15.1 | | 24.1 | 24.1 | | 33.1 | 33.1 | |

| Summary | EB WB | NB SB | Combined |
|---|---|---|---|
| Protected Option (s) | NA | NA | |
| Permitted Option (s) | 24.0 | 85.7 | |
| Split Option (s) | 32.0 | 57.2 | |
| Minimum (s) | 24.0 | 57.2 | 81.2 |

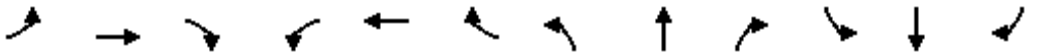
| Right Turns |
|---|
| Adj Reference Time (s) |
| Cross Thru Ref Time (s) |
| Oncoming Left Ref Time (s) |
| Combined (s) |

| Intersection Summary | | | |
|---|---|---|---|
| Intersection Capacity Utilization | 67.7% | ICU Level of Service | C |

Reference Times and Phasing Options do not represent an optimized timing plan.

# Intersection Capacity Utilization
## 7: Main St & Crescent Blvd

01/15/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↑ | ↱ | | | | | | ↱ | ↰ | ↑ | ↱ |
| Volume (vph) | 0 | 108 | 23 | 0 | 0 | 0 | 0 | 0 | 158 | 182 | 312 | 13 |
| Pedestrians | | | | | | | | | | | | |
| Ped Button | | | | | | | | | | | | |
| Pedestrian Timing (s) | | | | | | | | | | | | |
| Free Right | | | No | | | No | | | No | | | No |
| Ideal Flow | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Green (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Refr Cycle Length (s) | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 |
| Volume Combined (vph) | 0 | 108 | 23 | 0 | 0 | 0 | 0 | 0 | 158 | 182 | 312 | 13 |
| Lane Utilization Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Factor (vph) | 0.95 | 1.00 | 0.85 | 0.95 | 1.00 | 0.85 | 0.95 | 1.00 | 0.85 | 0.95 | 1.00 | 0.85 |
| Saturated Flow (vph) | 0 | 1900 | 1615 | 0 | 0 | 0 | 0 | 0 | 1615 | 1805 | 1900 | 1615 |
| Ped Intf Time (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Pedestrian Frequency (%) | | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | |
| Protected Option Allowed | | Yes | | | Yes | | | Yes | | | Yes | |
| Reference Time (s) | 0.0 | 6.8 | 1.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 11.7 | 12.1 | 19.7 | 1.0 |
| Adj Reference Time (s) | 0.0 | 10.8 | 8.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 15.7 | 16.1 | 23.7 | 8.0 |
| Permitted Option | | | | | | | | | | | | |
| Adj Saturation A (vph) | 0 | 1900 | | 0 | 0 | | 0 | 0 | | 120 | 1900 | |
| Reference Time A (s) | 0.0 | 6.8 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 181.5 | 19.7 | |
| Adj Saturation B (vph | 0 | 1900 | | 0 | 0 | | NA | NA | | 0 | 1900 | |
| Reference Time B (s) | 0.0 | 6.8 | | 0.0 | 0.0 | | NA | NA | | 20.1 | 19.7 | |
| Reference Time (s) | | 6.8 | | | 0.0 | | | 0.0 | | | 20.1 | |
| Adj Reference Time (s) | | 10.8 | | | 8.0 | | | 8.0 | | | 24.1 | |
| Split Option | | | | | | | | | | | | |
| Ref Time Combined (s) | 0.0 | 6.8 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 12.1 | 19.7 | |
| Ref Time Seperate (s) | 0.0 | 6.8 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 12.1 | 19.7 | |
| Reference Time (s) | 6.8 | 6.8 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 19.7 | 19.7 | |
| Adj Reference Time (s) | 10.8 | 10.8 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 23.7 | 23.7 | |

| Summary | EB WB | NB SB | Combined |
|---|---|---|---|
| Protected Option (s) | 10.8 | 23.7 | |
| Permitted Option (s) | 10.8 | 24.1 | |
| Split Option (s) | 10.8 | 23.7 | |
| Minimum (s) | 10.8 | 23.7 | 34.5 |

| Right Turns | EBR | NBR | SBR |
|---|---|---|---|
| Adj Reference Time (s) | 8.0 | 15.7 | 8.0 |
| Cross Thru Ref Time (s) | 23.7 | 10.8 | 0.0 |
| Oncoming Left Ref Time (s) | 0.0 | 16.1 | 0.0 |
| Combined (s) | 31.7 | 42.7 | 8.0 |

| Intersection Summary | | | |
|---|---|---|---|
| Intersection Capacity Utilization | 35.6% | ICU Level of Service | A |

Reference Times and Phasing Options do not represent an optimized timing plan.

# Intersection Capacity Utilization
## 8: Prospect Avenue & Pennsylvania Ave

01/15/2020

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 92 | 447 | 59 | 165 | 268 | 128 |
| Pedestrians | | | | | | |
| Ped Button | | | | | | |
| Pedestrian Timing (s) | | | | | | |
| Free Right | | No | | | | No |
| Ideal Flow | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Green (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Refr Cycle Length (s) | 120 | 120 | 120 | 120 | 120 | 120 |
| Volume Combined (vph) | 92 | 447 | 59 | 165 | 268 | 128 |
| Lane Utilization Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Factor (vph) | 1.00 | 0.85 | 0.95 | 1.00 | 0.95 | 0.85 |
| Saturated Flow (vph) | 1900 | 1615 | 1805 | 1900 | 1805 | 1615 |
| Ped Intf Time (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Pedestrian Frequency (%) | 0.00 | | | 0.00 | 0.00 | |
| Protected Option Allowed | Yes | | | Yes | No | |
| Reference Time (s) | 5.8 | 33.2 | 3.9 | 10.4 | | 9.5 |
| Adj Reference Time (s) | 9.8 | 37.2 | 8.0 | 14.4 | | 13.5 |
| Permitted Option | | | | | | |
| Adj Saturation A (vph) | 1900 | | 120 | 1900 | 120 | |
| Reference Time A (s) | 5.8 | | 58.8 | 10.4 | 267.3 | |
| Adj Saturation B (vph | NA | | 0 | 1900 | NA | |
| Reference Time B (s) | NA | | 11.9 | 10.4 | NA | |
| Reference Time (s) | 5.8 | | | 11.9 | | |
| Adj Reference Time (s) | 9.8 | | | 15.9 | | |
| Split Option | | | | | | |
| Ref Time Combined (s) | 5.8 | | 3.9 | 10.4 | 17.8 | |
| Ref Time Seperate (s) | 5.8 | | 3.9 | 10.4 | 17.8 | |
| Reference Time (s) | 5.8 | | 10.4 | 10.4 | 17.8 | |
| Adj Reference Time (s) | 9.8 | | 14.4 | 14.4 | 21.8 | |

| Summary | EB WB | NB | Combined |
|---|---|---|---|
| Protected Option (s) | 17.8 | NA | |
| Permitted Option (s) | 15.9 | Err | |
| Split Option (s) | 24.2 | 21.8 | |
| Minimum (s) | 15.9 | 21.8 | 37.7 |

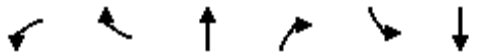
| Right Turns | EBR | NBR |
|---|---|---|
| Adj Reference Time (s) | 37.2 | 13.5 |
| Cross Thru Ref Time (s) | 0.0 | 9.8 |
| Oncoming Left Ref Time (s) | 8.0 | 0.0 |
| Combined (s) | 45.2 | 23.3 |

| Intersection Summary | | | |
|---|---|---|---|
| Intersection Capacity Utilization | 37.7% | ICU Level of Service | A |

Reference Times and Phasing Options do not represent an optimized timing plan.

# HCM Unsignalized Intersection Capacity Analysis
## 18: Prospect Avenue & Crescent Blvd

01/15/2020



| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 3 | 7 | 389 | 73 | 74 | 432 |
| Future Volume (Veh/h) | 3 | 7 | 389 | 73 | 74 | 432 |
| Sign Control | Yield | | Free | | | Free |
| Grade | 0% | | 0% | | | 0% |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Hourly flow rate (vph) | 3 | 7 | 409 | 77 | 78 | 455 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | None | | | None |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | 137 | | | |
| pX, platoon unblocked | 0.95 | 0.95 | | | 0.95 | |
| vC, conflicting volume | 1058 | 448 | | | 486 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 1037 | 397 | | | 437 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 99 | 99 | | | 93 | |
| cM capacity (veh/h) | 227 | 623 | | | 1071 | |

| Direction, Lane # | WB 1 | WB 2 | NB 1 | SB 1 | SB 2 |
|---|---|---|---|---|---|
| Volume Total | 3 | 7 | 486 | 78 | 455 |
| Volume Left | 3 | 0 | 0 | 78 | 0 |
| Volume Right | 0 | 7 | 77 | 0 | 0 |
| cSH | 227 | 623 | 1700 | 1071 | 1700 |
| Volume to Capacity | 0.01 | 0.01 | 0.29 | 0.07 | 0.27 |
| Queue Length 95th (ft) | 1 | 1 | 0 | 6 | 0 |
| Control Delay (s) | 21.1 | 10.8 | 0.0 | 8.6 | 0.0 |
| Lane LOS | C | B | | A | |
| Approach Delay (s) | 13.9 | | 0.0 | 1.3 | |
| Approach LOS | B | | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.8 | | |
| Intersection Capacity Utilization | 42.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

# HCM Unsignalized Intersection Capacity Analysis
## 34: Glenwood Avenue & Pennsylvania Ave

01/15/2020

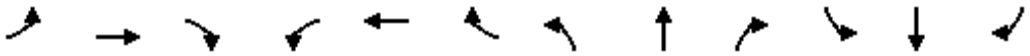
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 213 | 11 | 10 | 225 | 0 | 7 |
| Future Volume (Veh/h) | 213 | 11 | 10 | 225 | 0 | 7 |
| Sign Control | Free | | | Free | Yield | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Hourly flow rate (vph) | 224 | 12 | 11 | 237 | 0 | 7 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | None | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | | | 236 | | 489 | 230 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | | | 236 | | 489 | 230 |
| tC, single (s) | | | 4.1 | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | | | 2.2 | | 3.5 | 3.3 |
| p0 queue free % | | | 99 | | 100 | 99 |
| cM capacity (veh/h) | | | 1331 | | 534 | 809 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 |
|---|---|---|---|
| Volume Total | 236 | 248 | 7 |
| Volume Left | 0 | 11 | 0 |
| Volume Right | 12 | 0 | 7 |
| cSH | 1700 | 1331 | 809 |
| Volume to Capacity | 0.14 | 0.01 | 0.01 |
| Queue Length 95th (ft) | 0 | 1 | 1 |
| Control Delay (s) | 0.0 | 0.4 | 9.5 |
| Lane LOS | | A | A |
| Approach Delay (s) | 0.0 | 0.4 | 9.5 |
| Approach LOS | | | A |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | | 0.3 | |
| Intersection Capacity Utilization | | 30.0% | ICU Level of Service A |
| Analysis Period (min) | | 15 | |

# HCM Unsignalized Intersection Capacity Analysis
## 35: Crescent Blvd & Glenwood Avenue

01/15/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 2 | 126 | 7 | 2 | 5 | 2 | 0 | 0 | 0 | 8 | 8 | 1 |
| Future Volume (Veh/h) | 2 | 126 | 7 | 2 | 5 | 2 | 0 | 0 | 0 | 8 | 8 | 1 |
| Sign Control | | Free | | | Free | | | Yield | | | Yield | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Hourly flow rate (vph) | 2 | 133 | 7 | 2 | 5 | 2 | 0 | 0 | 0 | 8 | 8 | 1 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 7 | | | 140 | | | 156 | 152 | 136 | 150 | 154 | 6 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 7 | | | 140 | | | 156 | 152 | 136 | 150 | 154 | 6 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 100 | | | 100 | 100 | 100 | 99 | 99 | 100 |
| cM capacity (veh/h) | 1614 | | | 1443 | | | 802 | 738 | 912 | 815 | 736 | 1077 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 142 | 9 | 0 | 17 |
| Volume Left | 2 | 2 | 0 | 8 |
| Volume Right | 7 | 2 | 0 | 1 |
| cSH | 1614 | 1443 | 1700 | 787 |
| Volume to Capacity | 0.00 | 0.00 | 0.00 | 0.02 |
| Queue Length 95th (ft) | 0 | 0 | 0 | 2 |
| Control Delay (s) | 0.1 | 1.7 | 0.0 | 9.7 |
| Lane LOS | A | A | A | A |
| Approach Delay (s) | 0.1 | 1.7 | 0.0 | 9.7 |
| Approach LOS | | | A | A |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 1.2 | | | |
| Intersection Capacity Utilization | 17.3% | ICU Level of Service | | A |
| Analysis Period (min) | 15 | | | |

HCM 6th AWSC
6: Main St & Pennsylvania Ave

01/15/2020

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 16.2 |
| Intersection LOS | C |

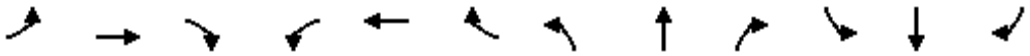
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 140 | 0 | 116 | 109 | 232 | 218 | 0 | 0 | 0 | 0 | 319 | 83 |
| Future Vol, veh/h | 140 | 0 | 116 | 109 | 232 | 218 | 0 | 0 | 0 | 0 | 319 | 83 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 147 | 0 | 122 | 115 | 244 | 229 | 0 | 0 | 0 | 0 | 336 | 87 |
| Number of Lanes | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |

| Approach | EB | WB | SB |
|---|---|---|---|
| Opposing Approach | WB | EB | |
| Opposing Lanes | 3 | 2 | 0 |
| Conflicting Approach Left | SB | | WB |
| Conflicting Lanes Left | 2 | 0 | 3 |
| Conflicting Approach Right | | SB | EB |
| Conflicting Lanes Right | 0 | 2 | 2 |
| HCM Control Delay | 13.5 | 14.1 | 20.9 |
| HCM LOS | B | B | C |

| Lane | EBLn1 | EBLn2 | WBLn1 | WBLn2 | WBLn3 | SBLn1 | SBLn2 |
|---|---|---|---|---|---|---|---|
| Vol Left, % | 100% | 0% | 100% | 0% | 0% | 0% | 0% |
| Vol Thru, % | 0% | 0% | 0% | 100% | 0% | 100% | 0% |
| Vol Right, % | 0% | 100% | 0% | 0% | 100% | 0% | 100% |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 140 | 116 | 109 | 232 | 218 | 319 | 83 |
| LT Vol | 140 | 0 | 109 | 0 | 0 | 0 | 0 |
| Through Vol | 0 | 0 | 0 | 232 | 0 | 319 | 0 |
| RT Vol | 0 | 116 | 0 | 0 | 218 | 0 | 83 |
| Lane Flow Rate | 147 | 122 | 115 | 244 | 229 | 336 | 87 |
| Geometry Grp | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| Degree of Util (X) | 0.332 | 0.233 | 0.238 | 0.472 | 0.399 | 0.674 | 0.158 |
| Departure Headway (Hd) | 8.114 | 6.881 | 7.474 | 6.964 | 6.261 | 7.222 | 6.516 |
| Convergence, Y/N | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Cap | 444 | 521 | 481 | 518 | 576 | 504 | 553 |
| Service Time | 5.859 | 4.626 | 5.213 | 4.703 | 3.988 | 4.931 | 4.224 |
| HCM Lane V/C Ratio | 0.331 | 0.234 | 0.239 | 0.471 | 0.398 | 0.667 | 0.157 |
| HCM Control Delay | 14.9 | 11.7 | 12.5 | 15.8 | 13.1 | 23.6 | 10.4 |
| HCM Lane LOS | B | B | B | C | B | C | B |
| HCM 95th-tile Q | 1.4 | 0.9 | 0.9 | 2.5 | 1.9 | 5 | 0.6 |

# Intersection Capacity Utilization
## 3: Prospect Avenue & Duane Street

01/15/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ✣ | | | ✣ | | | ✣ | | | ✣ | |
| Volume (vph) | 138 | 61 | 14 | 7 | 47 | 85 | 6 | 233 | 14 | 63 | 291 | 142 |
| Pedestrians | 14 | | 8 | 8 | | 14 | 8 | | 8 | 8 | | 8 |
| Ped Button | | Yes | | | Yes | | | Yes | | | Yes | |
| Pedestrian Timing (s) | | 16.0 | | | 16.0 | | | 16.0 | | | 16.0 | |
| Free Right | | | No | | | No | | | No | | | No |
| Ideal Flow | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Green (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Refr Cycle Length (s) | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 |
| Volume Combined (vph) | 0 | 213 | 0 | 0 | 139 | 0 | 0 | 253 | 0 | 0 | 496 | 0 |
| Lane Utilization Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Factor (vph) | 0.95 | 0.96 | 0.85 | 0.95 | 0.91 | 0.85 | 0.95 | 0.99 | 0.85 | 0.95 | 0.95 | 0.85 |
| Saturated Flow (vph) | 0 | 1820 | 0 | 0 | 1721 | 0 | 0 | 1882 | 0 | 0 | 1807 | 0 |
| Ped Intf Time (s) | 0.0 | 0.1 | 1.0 | 0.0 | 1.0 | 1.7 | 0.0 | 0.1 | 1.0 | 0.0 | 0.3 | 1.0 |
| Pedestrian Frequency (%) | | 0.23 | | | 0.37 | | | 0.23 | | | 0.23 | |
| Protected Option Allowed | | No | | | No | | | No | | | No | |
| Reference Time (s) | | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 |
| Adj Reference Time (s) | | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 |
| Permitted Option | | | | | | | | | | | | |
| Adj Saturation A (vph) | 0 | 312 | | 0 | 1740 | | 0 | 1788 | | 0 | 856 | |
| Reference Time A (s) | 0.0 | 82.1 | | 0.0 | 10.6 | | 0.0 | 17.0 | | 0.0 | 69.8 | |
| Adj Saturation B (vph | NA | NA | | 0 | 0 | | NA | NA | | NA | NA | |
| Reference Time B (s) | NA | NA | | 8.5 | 18.7 | | NA | NA | | NA | NA | |
| Reference Time (s) | | 82.1 | | | 10.6 | | | 17.0 | | | 69.8 | |
| Adj Reference Time (s) | | 86.1 | | | 16.6 | | | 21.0 | | | 73.8 | |
| Split Option | | | | | | | | | | | | |
| Ref Time Combined (s) | 0.0 | 14.1 | | 0.0 | 10.7 | | 0.0 | 16.2 | | 0.0 | 33.2 | |
| Ref Time Seperate (s) | 9.2 | 4.0 | | 0.5 | 4.3 | | 0.4 | 14.9 | | 4.2 | 19.6 | |
| Reference Time (s) | 14.1 | 14.1 | | 10.7 | 10.7 | | 16.2 | 16.2 | | 33.2 | 33.2 | |
| Adj Reference Time (s) | 18.6 | 18.6 | | 16.7 | 16.7 | | 20.2 | 20.2 | | 37.2 | 37.2 | |

| Summary | EB WB | NB SB | Combined |
|---|---|---|---|
| Protected Option (s) | NA | NA | |
| Permitted Option (s) | 86.1 | 73.8 | |
| Split Option (s) | 35.2 | 57.4 | |
| Minimum (s) | 35.2 | 57.4 | 92.7 |

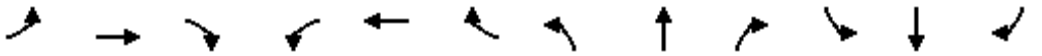
| Right Turns | |
|---|---|
| Adj Reference Time (s) | |
| Cross Thru Ref Time (s) | |
| Oncoming Left Ref Time (s) | |
| Combined (s) | |

| Intersection Summary | | | |
|---|---|---|---|
| Intersection Capacity Utilization | 77.2% | ICU Level of Service | D |

Reference Times and Phasing Options do not represent an optimized timing plan.

# Intersection Capacity Utilization
## 7: Main St & Crescent Blvd

01/15/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↑ | ↱ | | | | | | ↱ | ↰ | ↑ | ↱ |
| Volume (vph) | 0 | 62 | 56 | 0 | 0 | 0 | 0 | 0 | 191 | 185 | 304 | 55 |
| Pedestrians | | | | | | | | | | | | |
| Ped Button | | | | | | | | | | | | |
| Pedestrian Timing (s) | | | | | | | | | | | | |
| Free Right | | | No | | | No | | | No | | | No |
| Ideal Flow | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Green (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Refr Cycle Length (s) | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 |
| Volume Combined (vph) | 0 | 62 | 56 | 0 | 0 | 0 | 0 | 0 | 191 | 185 | 304 | 55 |
| Lane Utilization Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Factor (vph) | 0.95 | 1.00 | 0.85 | 0.95 | 1.00 | 0.85 | 0.95 | 1.00 | 0.85 | 0.95 | 1.00 | 0.85 |
| Saturated Flow (vph) | 0 | 1900 | 1615 | 0 | 0 | 0 | 0 | 0 | 1615 | 1805 | 1900 | 1615 |
| Ped Intf Time (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Pedestrian Frequency (%) | | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | |
| Protected Option Allowed | | Yes | | | Yes | | | Yes | | | Yes | |
| Reference Time (s) | 0.0 | 3.9 | 4.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 14.2 | 12.3 | 19.2 | 4.1 |
| Adj Reference Time (s) | 0.0 | 8.0 | 8.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 18.2 | 16.3 | 23.2 | 8.1 |
| Permitted Option | | | | | | | | | | | | |
| Adj Saturation A (vph) | 0 | 1900 | | 0 | 0 | | 0 | 0 | | 120 | 1900 | |
| Reference Time A (s) | 0.0 | 3.9 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 184.5 | 19.2 | |
| Adj Saturation B (vph | 0 | 1900 | | 0 | 0 | | NA | NA | | 0 | 1900 | |
| Reference Time B (s) | 0.0 | 3.9 | | 0.0 | 0.0 | | NA | NA | | 20.3 | 19.2 | |
| Reference Time (s) | | 3.9 | | | 0.0 | | | 0.0 | | | 20.3 | |
| Adj Reference Time (s) | | 8.0 | | | 8.0 | | | 8.0 | | | 24.3 | |
| Split Option | | | | | | | | | | | | |
| Ref Time Combined (s) | 0.0 | 3.9 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 12.3 | 19.2 | |
| Ref Time Seperate (s) | 0.0 | 3.9 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 12.3 | 19.2 | |
| Reference Time (s) | 3.9 | 3.9 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 19.2 | 19.2 | |
| Adj Reference Time (s) | 8.0 | 8.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 23.2 | 23.2 | |

| Summary | EB WB | NB SB | Combined |
|---|---|---|---|
| Protected Option (s) | 8.0 | 23.2 | |
| Permitted Option (s) | 8.0 | 24.3 | |
| Split Option (s) | 8.0 | 23.2 | |
| Minimum (s) | 8.0 | 23.2 | 31.2 |

| Right Turns | EBR | NBR | SBR |
|---|---|---|---|
| Adj Reference Time (s) | 8.2 | 18.2 | 8.1 |
| Cross Thru Ref Time (s) | 23.2 | 8.0 | 0.0 |
| Oncoming Left Ref Time (s) | 0.0 | 16.3 | 0.0 |
| Combined (s) | 31.4 | 42.5 | 8.1 |

| Intersection Summary | | | |
|---|---|---|---|
| Intersection Capacity Utilization | 35.4% | ICU Level of Service | A |

Reference Times and Phasing Options do not represent an optimized timing plan.

# Intersection Capacity Utilization
## 8: Prospect Avenue & Pennsylvania Ave

01/15/2020

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 127 | 426 | 115 | 221 | 338 | 112 |
| Pedestrians | | | | | | |
| Ped Button | | | | | | |
| Pedestrian Timing (s) | | | | | | |
| Free Right | | No | | | | No |
| Ideal Flow | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Green (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Refr Cycle Length (s) | 120 | 120 | 120 | 120 | 120 | 120 |
| Volume Combined (vph) | 127 | 426 | 115 | 221 | 338 | 112 |
| Lane Utilization Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Factor (vph) | 1.00 | 0.85 | 0.95 | 1.00 | 0.95 | 0.85 |
| Saturated Flow (vph) | 1900 | 1615 | 1805 | 1900 | 1805 | 1615 |
| Ped Intf Time (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Pedestrian Frequency (%) | 0.00 | | | 0.00 | 0.00 | |
| Protected Option Allowed | Yes | | | Yes | No | |
| Reference Time (s) | 8.0 | 31.7 | 7.6 | 14.0 | | 8.3 |
| Adj Reference Time (s) | 12.0 | 35.7 | 11.6 | 18.0 | | 12.3 |
| Permitted Option | | | | | | |
| Adj Saturation A (vph) | 1900 | | 120 | 1900 | 120 | |
| Reference Time A (s) | 8.0 | | 114.7 | 14.0 | 337.1 | |
| Adj Saturation B (vph | NA | | NA | NA | NA | |
| Reference Time B (s) | NA | | NA | NA | NA | |
| Reference Time (s) | 8.0 | | | 114.7 | | |
| Adj Reference Time (s) | 12.0 | | | 118.7 | | |
| Split Option | | | | | | |
| Ref Time Combined (s) | 8.0 | | 7.6 | 14.0 | 22.5 | |
| Ref Time Seperate (s) | 8.0 | | 7.6 | 14.0 | 22.5 | |
| Reference Time (s) | 8.0 | | 14.0 | 14.0 | 22.5 | |
| Adj Reference Time (s) | 12.0 | | 18.0 | 18.0 | 26.5 | |

| Summary | EB WB | NB | Combined |
|---|---|---|---|
| Protected Option (s) | 23.7 | NA | |
| Permitted Option (s) | 118.7 | Err | |
| Split Option (s) | 30.0 | 26.5 | |
| Minimum (s) | 23.7 | 26.5 | 50.1 |

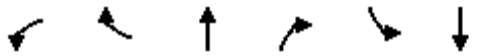
| Right Turns | EBR | NBR |
|---|---|---|
| Adj Reference Time (s) | 35.7 | 12.3 |
| Cross Thru Ref Time (s) | 0.0 | 12.0 |
| Oncoming Left Ref Time (s) | 11.6 | 0.0 |
| Combined (s) | 47.3 | 24.3 |

| Intersection Summary | | | |
|---|---|---|---|
| Intersection Capacity Utilization | 41.8% | ICU Level of Service | A |

Reference Times and Phasing Options do not represent an optimized timing plan.

# HCM Unsignalized Intersection Capacity Analysis
## 18: Prospect Avenue & Crescent Blvd

01/15/2020



| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 7 | 38 | 410 | 46 | 52 | 489 |
| Future Volume (Veh/h) | 7 | 38 | 410 | 46 | 52 | 489 |
| Sign Control | Yield | | Free | | | Free |
| Grade | 0% | | 0% | | | 0% |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Hourly flow rate (vph) | 7 | 40 | 432 | 48 | 55 | 515 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | None | | | None |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | 137 | | | |
| pX, platoon unblocked | 0.95 | 0.95 | | | 0.95 | |
| vC, conflicting volume | 1081 | 456 | | | 480 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 1061 | 406 | | | 431 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 97 | 94 | | | 95 | |
| cM capacity (veh/h) | 224 | 615 | | | 1077 | |

| Direction, Lane # | WB 1 | WB 2 | NB 1 | SB 1 | SB 2 |
|---|---|---|---|---|---|
| Volume Total | 7 | 40 | 480 | 55 | 515 |
| Volume Left | 7 | 0 | 0 | 55 | 0 |
| Volume Right | 0 | 40 | 48 | 0 | 0 |
| cSH | 224 | 615 | 1700 | 1077 | 1700 |
| Volume to Capacity | 0.03 | 0.06 | 0.28 | 0.05 | 0.30 |
| Queue Length 95th (ft) | 2 | 5 | 0 | 4 | 0 |
| Control Delay (s) | 21.6 | 11.3 | 0.0 | 8.5 | 0.0 |
| Lane LOS | C | B | | A | |
| Approach Delay (s) | 12.8 | | 0.0 | 0.8 | |
| Approach LOS | B | | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 1.0 | | |
| Intersection Capacity Utilization | 41.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

# HCM Unsignalized Intersection Capacity Analysis
## 34: Glenwood Avenue & Pennsylvania Ave

01/15/2020

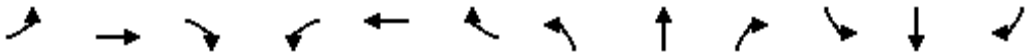
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 217 | 9 | 23 | 300 | 7 | 27 |
| Future Volume (Veh/h) | 217 | 9 | 23 | 300 | 7 | 27 |
| Sign Control | Free | | | Free | Yield | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Hourly flow rate (vph) | 228 | 9 | 24 | 316 | 7 | 28 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | None | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | | | 237 | | 596 | 232 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | | | 237 | | 596 | 232 |
| tC, single (s) | | | 4.1 | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | | | 2.2 | | 3.5 | 3.3 |
| p0 queue free % | | | 98 | | 98 | 97 |
| cM capacity (veh/h) | | | 1330 | | 458 | 807 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 |
|---|---|---|---|
| Volume Total | 237 | 340 | 35 |
| Volume Left | 0 | 24 | 7 |
| Volume Right | 9 | 0 | 28 |
| cSH | 1700 | 1330 | 700 |
| Volume to Capacity | 0.14 | 0.02 | 0.05 |
| Queue Length 95th (ft) | 0 | 1 | 4 |
| Control Delay (s) | 0.0 | 0.7 | 10.4 |
| Lane LOS | | A | B |
| Approach Delay (s) | 0.0 | 0.7 | 10.4 |
| Approach LOS | | | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 1.0 | | |
| Intersection Capacity Utilization | 42.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

# HCM Unsignalized Intersection Capacity Analysis
## 35: Crescent Blvd & Glenwood Avenue

01/15/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 3 | 86 | 6 | 14 | 36 | 23 | 0 | 2 | 8 | 22 | 2 | 4 |
| Future Volume (Veh/h) | 3 | 86 | 6 | 14 | 36 | 23 | 0 | 2 | 8 | 22 | 2 | 4 |
| Sign Control | | Free | | | Free | | | Yield | | | Yield | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Hourly flow rate (vph) | 3 | 91 | 6 | 15 | 38 | 24 | 0 | 2 | 8 | 23 | 2 | 4 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 62 | | | 97 | | | 185 | 192 | 94 | 189 | 183 | 50 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 62 | | | 97 | | | 185 | 192 | 94 | 189 | 183 | 50 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 99 | | | 100 | 100 | 99 | 97 | 100 | 100 |
| cM capacity (veh/h) | 1541 | | | 1496 | | | 764 | 695 | 963 | 756 | 703 | 1018 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 100 | 77 | 10 | 29 |
| Volume Left | 3 | 15 | 0 | 23 |
| Volume Right | 6 | 24 | 8 | 4 |
| cSH | 1541 | 1496 | 894 | 780 |
| Volume to Capacity | 0.00 | 0.01 | 0.01 | 0.04 |
| Queue Length 95th (ft) | 0 | 1 | 1 | 3 |
| Control Delay (s) | 0.2 | 1.5 | 9.1 | 9.8 |
| Lane LOS | A | A | A | A |
| Approach Delay (s) | 0.2 | 1.5 | 9.1 | 9.8 |
| Approach LOS | | | A | A |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 2.4 | | | |
| Intersection Capacity Utilization | 25.2% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |

# Capacity Analysis
# Alternative 1

HCM 6th AWSC
6: Main St & Pennsylvania Ave

01/15/2020

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 16.6 |
| Intersection LOS | C |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 143 | 0 | 72 | 81 | 191 | 179 | 0 | 0 | 0 | 0 | 364 | 60 |
| Future Vol, veh/h | 143 | 0 | 72 | 81 | 191 | 179 | 0 | 0 | 0 | 0 | 364 | 60 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 151 | 0 | 76 | 85 | 201 | 188 | 0 | 0 | 0 | 0 | 383 | 63 |
| Number of Lanes | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |

| Approach | EB | WB | SB |
|---|---|---|---|
| Opposing Approach | WB | EB | |
| Opposing Lanes | 3 | 2 | 0 |
| Conflicting Approach Left | SB | | WB |
| Conflicting Lanes Left | 2 | 0 | 3 |
| Conflicting Approach Right | | SB | EB |
| Conflicting Lanes Right | 0 | 2 | 2 |
| HCM Control Delay | 13.2 | 12.6 | 22.6 |
| HCM LOS | B | B | C |

| Lane | EBLn1 | EBLn2 | WBLn1 | WBLn2 | WBLn3 | SBLn1 | SBLn2 |
|---|---|---|---|---|---|---|---|
| Vol Left, % | 100% | 0% | 100% | 0% | 0% | 0% | 0% |
| Vol Thru, % | 0% | 0% | 0% | 100% | 0% | 100% | 0% |
| Vol Right, % | 0% | 100% | 0% | 0% | 100% | 0% | 100% |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 143 | 72 | 81 | 191 | 179 | 364 | 60 |
| LT Vol | 143 | 0 | 81 | 0 | 0 | 0 | 0 |
| Through Vol | 0 | 0 | 0 | 191 | 0 | 364 | 0 |
| RT Vol | 0 | 72 | 0 | 0 | 179 | 0 | 60 |
| Lane Flow Rate | 151 | 76 | 85 | 201 | 188 | 383 | 63 |
| Geometry Grp | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| Degree of Util (X) | 0.331 | 0.141 | 0.173 | 0.38 | 0.319 | 0.715 | 0.105 |
| Departure Headway (Hd) | 7.916 | 6.684 | 7.318 | 6.808 | 6.095 | 6.718 | 6.013 |
| Convergence, Y/N | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Cap | 458 | 540 | 487 | 525 | 584 | 536 | 591 |
| Service Time | 5.616 | 4.384 | 5.115 | 4.605 | 3.891 | 4.507 | 3.802 |
| HCM Lane V/C Ratio | 0.33 | 0.141 | 0.175 | 0.383 | 0.322 | 0.715 | 0.107 |
| HCM Control Delay | 14.5 | 10.5 | 11.7 | 13.8 | 11.8 | 24.8 | 9.5 |
| HCM Lane LOS | B | B | B | B | B | C | A |
| HCM 95th-tile Q | 1.4 | 0.5 | 0.6 | 1.8 | 1.4 | 5.8 | 0.4 |

HCM 6th AWSC
35: Crescent Blvd & Glenwood Avenue

01/15/2020

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 7.6 |
| Intersection LOS | A |

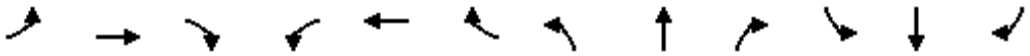
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 2 | 7 | 3 | 2 | 82 | 21 |
| Future Vol, veh/h | 2 | 7 | 3 | 2 | 82 | 21 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 2 | 7 | 3 | 2 | 86 | 22 |
| Number of Lanes | 1 | 0 | 1 | 0 | 0 | 1 |

| Approach | WB | NB | SB |
|---|---|---|---|
| Opposing Approach | | SB | NB |
| Opposing Lanes | 0 | 1 | 1 |
| Conflicting Approach Left | NB | | WB |
| Conflicting Lanes Left | 1 | 0 | 1 |
| Conflicting Approach Right | SB | WB | |
| Conflicting Lanes Right | 1 | 1 | 0 |
| HCM Control Delay | 6.8 | 6.8 | 7.7 |
| HCM LOS | A | A | A |

| Lane | NBLn1 | WBLn1 | SBLn1 |
|---|---|---|---|
| Vol Left, % | 0% | 22% | 80% |
| Vol Thru, % | 60% | 0% | 20% |
| Vol Right, % | 40% | 78% | 0% |
| Sign Control | Stop | Stop | Stop |
| Traffic Vol by Lane | 5 | 9 | 103 |
| LT Vol | 0 | 2 | 82 |
| Through Vol | 3 | 0 | 21 |
| RT Vol | 2 | 7 | 0 |
| Lane Flow Rate | 5 | 9 | 108 |
| Geometry Grp | 1 | 1 | 1 |
| Degree of Util (X) | 0.006 | 0.01 | 0.124 |
| Departure Headway (Hd) | 3.79 | 3.708 | 4.113 |
| Convergence, Y/N | Yes | Yes | Yes |
| Cap | 943 | 957 | 876 |
| Service Time | 1.817 | 1.764 | 2.118 |
| HCM Lane V/C Ratio | 0.005 | 0.009 | 0.123 |
| HCM Control Delay | 6.8 | 6.8 | 7.7 |
| HCM Lane LOS | A | A | A |
| HCM 95th-tile Q | 0 | 0 | 0.4 |

# Intersection Capacity Utilization
## 3: Prospect Avenue & Duane Street

01/15/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 112 | 63 | 6 | 5 | 39 | 60 | 12 | 217 | 82 | 106 | 219 | 107 |
| Pedestrians | 14 | | 8 | 8 | | 14 | 8 | | 8 | 8 | | 8 |
| Ped Button | | Yes | | | Yes | | | Yes | | | Yes | |
| Pedestrian Timing (s) | | 16.0 | | | 16.0 | | | 16.0 | | | 16.0 | |
| Free Right | | | No | | | No | | | No | | | No |
| Ideal Flow | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Green (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Refr Cycle Length (s) | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 |
| Volume Combined (vph) | 0 | 181 | 0 | 0 | 104 | 0 | 0 | 311 | 0 | 0 | 432 | 0 |
| Lane Utilization Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Factor (vph) | 0.95 | 0.96 | 0.85 | 0.95 | 0.91 | 0.85 | 0.95 | 0.96 | 0.85 | 0.95 | 0.95 | 0.85 |
| Saturated Flow (vph) | 0 | 1832 | 0 | 0 | 1731 | 0 | 0 | 1821 | 0 | 0 | 1807 | 0 |
| Ped Intf Time (s) | 0.0 | 0.0 | 1.0 | 0.0 | 1.0 | 1.7 | 0.0 | 0.3 | 1.0 | 0.0 | 0.2 | 1.0 |
| Pedestrian Frequency (%) | | 0.23 | | | 0.37 | | | 0.23 | | | 0.23 | |
| Protected Option Allowed | | No | | | No | | | No | | | No | |
| Reference Time (s) | | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 |
| Adj Reference Time (s) | | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 |
| Permitted Option | | | | | | | | | | | | |
| Adj Saturation A (vph) | 0 | 320 | | 0 | 1746 | | 0 | 1761 | | 0 | 638 | |
| Reference Time A (s) | 0.0 | 67.8 | | 0.0 | 8.1 | | 0.0 | 21.5 | | 0.0 | 81.5 | |
| Adj Saturation B (vph | 0 | 0 | | 0 | 0 | | NA | NA | | NA | NA | |
| Reference Time B (s) | 15.4 | 19.9 | | 8.3 | 16.2 | | NA | NA | | NA | NA | |
| Reference Time (s) | | 19.9 | | | 8.1 | | | 21.5 | | | 81.5 | |
| Adj Reference Time (s) | | 23.9 | | | 15.1 | | | 25.5 | | | 85.5 | |
| Split Option | | | | | | | | | | | | |
| Ref Time Combined (s) | 0.0 | 11.9 | | 0.0 | 8.2 | | 0.0 | 20.8 | | 0.0 | 28.9 | |
| Ref Time Seperate (s) | 7.4 | 4.1 | | 0.3 | 3.7 | | 0.8 | 14.6 | | 7.0 | 14.8 | |
| Reference Time (s) | 11.9 | 11.9 | | 8.2 | 8.2 | | 20.8 | 20.8 | | 28.9 | 28.9 | |
| Adj Reference Time (s) | 16.9 | 16.9 | | 15.1 | 15.1 | | 24.8 | 24.8 | | 32.9 | 32.9 | |

| Summary | EB WB | NB SB | Combined |
|---|---|---|---|
| Protected Option (s) | NA | NA | |
| Permitted Option (s) | 23.9 | 85.5 | |
| Split Option (s) | 31.9 | 57.7 | |
| Minimum (s) | 23.9 | 57.7 | 81.6 |

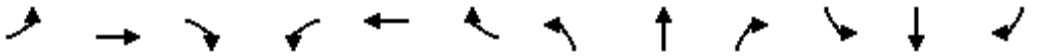
| Right Turns |
|---|
| Adj Reference Time (s) |
| Cross Thru Ref Time (s) |
| Oncoming Left Ref Time (s) |
| Combined (s) |

| Intersection Summary | | | |
|---|---|---|---|
| Intersection Capacity Utilization | 68.0% | ICU Level of Service | C |

Reference Times and Phasing Options do not represent an optimized timing plan.

# Intersection Capacity Utilization
## 7: Main St & Crescent Blvd

01/15/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↑ | ↱ | | | | | | ↱ | ↰ | ↑ | ↱ |
| Volume (vph) | 0 | 70 | 11 | 0 | 0 | 0 | 0 | 0 | 194 | 182 | 312 | 13 |
| Pedestrians | | | | | | | | | | | | |
| Ped Button | | | | | | | | | | | | |
| Pedestrian Timing (s) | | | | | | | | | | | | |
| Free Right | | | No | | | No | | | No | | | No |
| Ideal Flow | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Green (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Refr Cycle Length (s) | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 |
| Volume Combined (vph) | 0 | 70 | 11 | 0 | 0 | 0 | 0 | 0 | 194 | 182 | 312 | 13 |
| Lane Utilization Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Factor (vph) | 0.95 | 1.00 | 0.85 | 0.95 | 1.00 | 0.85 | 0.95 | 1.00 | 0.85 | 0.95 | 1.00 | 0.85 |
| Saturated Flow (vph) | 0 | 1900 | 1615 | 0 | 0 | 0 | 0 | 0 | 1615 | 1805 | 1900 | 1615 |
| Ped Intf Time (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Pedestrian Frequency (%) | | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | |
| Protected Option Allowed | | Yes | | | Yes | | | Yes | | | Yes | |
| Reference Time (s) | 0.0 | 4.4 | 0.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 14.4 | 12.1 | 19.7 | 1.0 |
| Adj Reference Time (s) | 0.0 | 8.4 | 8.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 18.4 | 16.1 | 23.7 | 8.0 |
| Permitted Option | | | | | | | | | | | | |
| Adj Saturation A (vph) | 0 | 1900 | | 0 | 0 | | 0 | 0 | | 120 | 1900 | |
| Reference Time A (s) | 0.0 | 4.4 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 181.5 | 19.7 | |
| Adj Saturation B (vph | 0 | 1900 | | 0 | 0 | | NA | NA | | 0 | 1900 | |
| Reference Time B (s) | 0.0 | 4.4 | | 0.0 | 0.0 | | NA | NA | | 20.1 | 19.7 | |
| Reference Time (s) | | 4.4 | | | 0.0 | | | 0.0 | | | 20.1 | |
| Adj Reference Time (s) | | 8.4 | | | 8.0 | | | 8.0 | | | 24.1 | |
| Split Option | | | | | | | | | | | | |
| Ref Time Combined (s) | 0.0 | 4.4 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 12.1 | 19.7 | |
| Ref Time Seperate (s) | 0.0 | 4.4 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 12.1 | 19.7 | |
| Reference Time (s) | 4.4 | 4.4 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 19.7 | 19.7 | |
| Adj Reference Time (s) | 8.4 | 8.4 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 23.7 | 23.7 | |

| Summary | EB WB | NB SB | Combined |
|---|---|---|---|
| Protected Option (s) | 8.4 | 23.7 | |
| Permitted Option (s) | 8.4 | 24.1 | |
| Split Option (s) | 8.4 | 23.7 | |
| Minimum (s) | 8.4 | 23.7 | 32.1 |

| Right Turns | EBR | NBR | SBR |
|---|---|---|---|
| Adj Reference Time (s) | 8.0 | 18.4 | 8.0 |
| Cross Thru Ref Time (s) | 23.7 | 8.4 | 0.0 |
| Oncoming Left Ref Time (s) | 0.0 | 16.1 | 0.0 |
| Combined (s) | 31.7 | 42.9 | 8.0 |

| Intersection Summary | | | |
|---|---|---|---|
| Intersection Capacity Utilization | 35.8% | ICU Level of Service | A |

Reference Times and Phasing Options do not represent an optimized timing plan.

# Intersection Capacity Utilization
## 8: Prospect Avenue & Pennsylvania Ave

01/15/2020

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 166 | 373 | 59 | 170 | 263 | 126 |
| Pedestrians | | | | | | |
| Ped Button | | | | | | |
| Pedestrian Timing (s) | | | | | | |
| Free Right | | No | | | | No |
| Ideal Flow | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Green (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Refr Cycle Length (s) | 120 | 120 | 120 | 120 | 120 | 120 |
| Volume Combined (vph) | 166 | 373 | 59 | 170 | 263 | 126 |
| Lane Utilization Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Factor (vph) | 1.00 | 0.85 | 0.95 | 1.00 | 0.95 | 0.85 |
| Saturated Flow (vph) | 1900 | 1615 | 1805 | 1900 | 1805 | 1615 |
| Ped Intf Time (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Pedestrian Frequency (%) | 0.00 | | | 0.00 | 0.00 | |
| Protected Option Allowed | Yes | | | Yes | No | |
| Reference Time (s) | 10.5 | 27.7 | 3.9 | 10.7 | | 9.4 |
| Adj Reference Time (s) | 14.5 | 31.7 | 8.0 | 14.7 | | 13.4 |
| Permitted Option | | | | | | |
| Adj Saturation A (vph) | 1900 | | 120 | 1900 | 120 | |
| Reference Time A (s) | 10.5 | | 58.8 | 10.7 | 262.3 | |
| Adj Saturation B (vph | NA | | NA | NA | NA | |
| Reference Time B (s) | NA | | NA | NA | NA | |
| Reference Time (s) | 10.5 | | | 58.8 | | |
| Adj Reference Time (s) | 14.5 | | | 62.8 | | |
| Split Option | | | | | | |
| Ref Time Combined (s) | 10.5 | | 3.9 | 10.7 | 17.5 | |
| Ref Time Seperate (s) | 10.5 | | 3.9 | 10.7 | 17.5 | |
| Reference Time (s) | 10.5 | | 10.7 | 10.7 | 17.5 | |
| Adj Reference Time (s) | 14.5 | | 14.7 | 14.7 | 21.5 | |

| Summary | EB WB | NB | Combined |
|---|---|---|---|
| Protected Option (s) | 22.5 | NA | |
| Permitted Option (s) | 62.8 | Err | |
| Split Option (s) | 29.2 | 21.5 | |
| Minimum (s) | 22.5 | 21.5 | 44.0 |

| Right Turns | EBR | NBR |
|---|---|---|
| Adj Reference Time (s) | 31.7 | 13.4 |
| Cross Thru Ref Time (s) | 0.0 | 14.5 |
| Oncoming Left Ref Time (s) | 8.0 | 0.0 |
| Combined (s) | 39.7 | 27.8 |

| Intersection Summary | | | |
|---|---|---|---|
| Intersection Capacity Utilization | 36.6% | ICU Level of Service | A |

Reference Times and Phasing Options do not represent an optimized timing plan.

# HCM Unsignalized Intersection Capacity Analysis
## 34: Glenwood Avenue & Pennsylvania Ave

01/15/2020

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 209 | 85 | 10 | 225 | 5 | 9 |
| Future Volume (Veh/h) | 209 | 85 | 10 | 225 | 5 | 9 |
| Sign Control | Free | | | Free | Yield | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Hourly flow rate (vph) | 220 | 89 | 11 | 237 | 5 | 9 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | None | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | | | 309 | | 524 | 264 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | | | 309 | | 524 | 264 |
| tC, single (s) | | | 4.1 | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | | | 2.2 | | 3.5 | 3.3 |
| p0 queue free % | | | 99 | | 99 | 99 |
| cM capacity (veh/h) | | | 1252 | | 509 | 774 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 |
|---|---|---|---|
| Volume Total | 309 | 248 | 14 |
| Volume Left | 0 | 11 | 5 |
| Volume Right | 89 | 0 | 9 |
| cSH | 1700 | 1252 | 653 |
| Volume to Capacity | 0.18 | 0.01 | 0.02 |
| Queue Length 95th (ft) | 0 | 1 | 2 |
| Control Delay (s) | 0.0 | 0.4 | 10.6 |
| Lane LOS | | A | B |
| Approach Delay (s) | 0.0 | 0.4 | 10.6 |
| Approach LOS | | | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | | 0.4 | |
| Intersection Capacity Utilization | | 30.0% | ICU Level of Service A |
| Analysis Period (min) | | 15 | |

HCM 6th AWSC
6: Main St & Pennsylvania Ave

01/15/2020

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 16.2 |
| Intersection LOS | C |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 140 | 0 | 116 | 109 | 232 | 218 | 0 | 0 | 0 | 0 | 319 | 83 |
| Future Vol, veh/h | 140 | 0 | 116 | 109 | 232 | 218 | 0 | 0 | 0 | 0 | 319 | 83 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 147 | 0 | 122 | 115 | 244 | 229 | 0 | 0 | 0 | 0 | 336 | 87 |
| Number of Lanes | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |

| Approach | EB | WB | SB |
|---|---|---|---|
| Opposing Approach | WB | EB | |
| Opposing Lanes | 3 | 2 | 0 |
| Conflicting Approach Left | SB | | WB |
| Conflicting Lanes Left | 2 | 0 | 3 |
| Conflicting Approach Right | | SB | EB |
| Conflicting Lanes Right | 0 | 2 | 2 |
| HCM Control Delay | 13.5 | 14.1 | 20.9 |
| HCM LOS | B | B | C |

| Lane | EBLn1 | EBLn2 | WBLn1 | WBLn2 | WBLn3 | SBLn1 | SBLn2 |
|---|---|---|---|---|---|---|---|
| Vol Left, % | 100% | 0% | 100% | 0% | 0% | 0% | 0% |
| Vol Thru, % | 0% | 0% | 0% | 100% | 0% | 100% | 0% |
| Vol Right, % | 0% | 100% | 0% | 0% | 100% | 0% | 100% |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 140 | 116 | 109 | 232 | 218 | 319 | 83 |
| LT Vol | 140 | 0 | 109 | 0 | 0 | 0 | 0 |
| Through Vol | 0 | 0 | 0 | 232 | 0 | 319 | 0 |
| RT Vol | 0 | 116 | 0 | 0 | 218 | 0 | 83 |
| Lane Flow Rate | 147 | 122 | 115 | 244 | 229 | 336 | 87 |
| Geometry Grp | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| Degree of Util (X) | 0.332 | 0.233 | 0.238 | 0.472 | 0.399 | 0.674 | 0.158 |
| Departure Headway (Hd) | 8.114 | 6.881 | 7.474 | 6.964 | 6.261 | 7.222 | 6.516 |
| Convergence, Y/N | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Cap | 444 | 521 | 481 | 518 | 576 | 504 | 553 |
| Service Time | 5.859 | 4.626 | 5.213 | 4.703 | 3.988 | 4.931 | 4.224 |
| HCM Lane V/C Ratio | 0.331 | 0.234 | 0.239 | 0.471 | 0.398 | 0.667 | 0.157 |
| HCM Control Delay | 14.9 | 11.7 | 12.5 | 15.8 | 13.1 | 23.6 | 10.4 |
| HCM Lane LOS | B | B | B | C | B | C | B |
| HCM 95th-tile Q | 1.4 | 0.9 | 0.9 | 2.5 | 1.9 | 5 | 0.6 |

HCM 6th AWSC
35: Crescent Blvd & Glenwood Avenue

01/15/2020

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 7.4 |
| Intersection LOS | A |

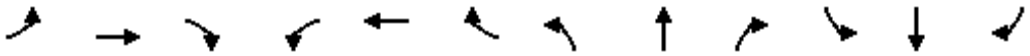
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 14 | 59 | 7 | 10 | 74 | 9 |
| Future Vol, veh/h | 14 | 59 | 7 | 10 | 74 | 9 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 15 | 62 | 7 | 11 | 78 | 9 |
| Number of Lanes | 1 | 0 | 1 | 0 | 0 | 1 |

| Approach | WB | NB | SB |
|---|---|---|---|
| Opposing Approach | | SB | NB |
| Opposing Lanes | 0 | 1 | 1 |
| Conflicting Approach Left | NB | | WB |
| Conflicting Lanes Left | 1 | 0 | 1 |
| Conflicting Approach Right | SB | WB | |
| Conflicting Lanes Right | 1 | 1 | 0 |
| HCM Control Delay | 7 | 6.9 | 7.8 |
| HCM LOS | A | A | A |

| Lane | NBLn1 | WBLn1 | SBLn1 |
|---|---|---|---|
| Vol Left, % | 0% | 19% | 89% |
| Vol Thru, % | 41% | 0% | 11% |
| Vol Right, % | 59% | 81% | 0% |
| Sign Control | Stop | Stop | Stop |
| Traffic Vol by Lane | 17 | 73 | 83 |
| LT Vol | 0 | 14 | 74 |
| Through Vol | 7 | 0 | 9 |
| RT Vol | 10 | 59 | 0 |
| Lane Flow Rate | 18 | 77 | 87 |
| Geometry Grp | 1 | 1 | 1 |
| Degree of Util (X) | 0.019 | 0.078 | 0.103 |
| Departure Headway (Hd) | 3.782 | 3.67 | 4.261 |
| Convergence, Y/N | Yes | Yes | Yes |
| Cap | 942 | 968 | 842 |
| Service Time | 1.823 | 1.724 | 2.283 |
| HCM Lane V/C Ratio | 0.019 | 0.08 | 0.103 |
| HCM Control Delay | 6.9 | 7 | 7.8 |
| HCM Lane LOS | A | A | A |
| HCM 95th-tile Q | 0.1 | 0.3 | 0.3 |

# Intersection Capacity Utilization
## 3: Prospect Avenue & Duane Street

01/15/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 121 | 78 | 14 | 7 | 47 | 85 | 6 | 204 | 53 | 63 | 286 | 140 |
| Pedestrians | 14 | | 8 | 8 | | 14 | 8 | | 8 | 8 | | 8 |
| Ped Button | | Yes | | | Yes | | | Yes | | | Yes | |
| Pedestrian Timing (s) | | 16.0 | | | 16.0 | | | 16.0 | | | 16.0 | |
| Free Right | | | No | | | No | | | No | | | No |
| Ideal Flow | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Green (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Refr Cycle Length (s) | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 |
| Volume Combined (vph) | 0 | 213 | 0 | 0 | 139 | 0 | 0 | 263 | 0 | 0 | 489 | 0 |
| Lane Utilization Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Factor (vph) | 0.95 | 0.96 | 0.85 | 0.95 | 0.91 | 0.85 | 0.95 | 0.97 | 0.85 | 0.95 | 0.95 | 0.85 |
| Saturated Flow (vph) | 0 | 1828 | 0 | 0 | 1721 | 0 | 0 | 1840 | 0 | 0 | 1807 | 0 |
| Ped Intf Time (s) | 0.0 | 0.1 | 1.0 | 0.0 | 1.0 | 1.7 | 0.0 | 0.2 | 1.0 | 0.0 | 0.3 | 1.0 |
| Pedestrian Frequency (%) | | 0.23 | | | 0.37 | | | 0.23 | | | 0.23 | |
| Protected Option Allowed | | No | | | No | | | No | | | No | |
| Reference Time (s) | | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 |
| Adj Reference Time (s) | | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 |
| Permitted Option | | | | | | | | | | | | |
| Adj Saturation A (vph) | 0 | 353 | | 0 | 1731 | | 0 | 1753 | | 0 | 842 | |
| Reference Time A (s) | 0.0 | 72.5 | | 0.0 | 10.7 | | 0.0 | 18.2 | | 0.0 | 70.0 | |
| Adj Saturation B (vph | NA | NA | | 0 | 0 | | NA | NA | | NA | NA | |
| Reference Time B (s) | NA | NA | | 8.5 | 18.7 | | NA | NA | | NA | NA | |
| Reference Time (s) | | 72.5 | | | 10.7 | | | 18.2 | | | 70.0 | |
| Adj Reference Time (s) | | 76.5 | | | 16.7 | | | 22.2 | | | 74.0 | |
| Split Option | | | | | | | | | | | | |
| Ref Time Combined (s) | 0.0 | 14.0 | | 0.0 | 10.7 | | 0.0 | 17.4 | | 0.0 | 32.8 | |
| Ref Time Seperate (s) | 8.0 | 5.1 | | 0.5 | 4.3 | | 0.4 | 13.5 | | 4.2 | 19.3 | |
| Reference Time (s) | 14.0 | 14.0 | | 10.7 | 10.7 | | 17.4 | 17.4 | | 32.8 | 32.8 | |
| Adj Reference Time (s) | 18.5 | 18.5 | | 16.7 | 16.7 | | 21.4 | 21.4 | | 36.8 | 36.8 | |

| Summary | EB WB | NB SB | Combined |
|---|---|---|---|
| Protected Option (s) | NA | NA | |
| Permitted Option (s) | 76.5 | 74.0 | |
| Split Option (s) | 35.2 | 58.1 | |
| Minimum (s) | 35.2 | 58.1 | 93.3 |

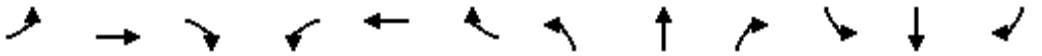
| Right Turns |
|---|
| Adj Reference Time (s) |
| Cross Thru Ref Time (s) |
| Oncoming Left Ref Time (s) |
| Combined (s) |

| Intersection Summary | | | |
|---|---|---|---|
| Intersection Capacity Utilization | 77.8% | ICU Level of Service | D |

Reference Times and Phasing Options do not represent an optimized timing plan.

# Intersection Capacity Utilization
## 7: Main St & Crescent Blvd

01/15/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↑ | ↱ | | | | | | ↱ | ↰ | ↑ | ↱ |
| Volume (vph) | 0 | 48 | 46 | 0 | 0 | 0 | 0 | 0 | 214 | 185 | 304 | 55 |
| Pedestrians | | | | | | | | | | | | |
| Ped Button | | | | | | | | | | | | |
| Pedestrian Timing (s) | | | | | | | | | | | | |
| Free Right | | | No | | | No | | | No | | | No |
| Ideal Flow | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Green (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Refr Cycle Length (s) | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 |
| Volume Combined (vph) | 0 | 48 | 46 | 0 | 0 | 0 | 0 | 0 | 214 | 185 | 304 | 55 |
| Lane Utilization Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Factor (vph) | 0.95 | 1.00 | 0.85 | 0.95 | 1.00 | 0.85 | 0.95 | 1.00 | 0.85 | 0.95 | 1.00 | 0.85 |
| Saturated Flow (vph) | 0 | 1900 | 1615 | 0 | 0 | 0 | 0 | 0 | 1615 | 1805 | 1900 | 1615 |
| Ped Intf Time (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Pedestrian Frequency (%) | | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | |
| Protected Option Allowed | | Yes | | | Yes | | | Yes | | | Yes | |
| Reference Time (s) | 0.0 | 3.0 | 3.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 15.9 | 12.3 | 19.2 | 4.1 |
| Adj Reference Time (s) | 0.0 | 8.0 | 8.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 19.9 | 16.3 | 23.2 | 8.1 |
| Permitted Option | | | | | | | | | | | | |
| Adj Saturation A (vph) | 0 | 1900 | | 0 | 0 | | 0 | 0 | | 120 | 1900 | |
| Reference Time A (s) | 0.0 | 3.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 184.5 | 19.2 | |
| Adj Saturation B (vph | 0 | 1900 | | 0 | 0 | | NA | NA | | 0 | 1900 | |
| Reference Time B (s) | 0.0 | 3.0 | | 0.0 | 0.0 | | NA | NA | | 20.3 | 19.2 | |
| Reference Time (s) | | 3.0 | | | 0.0 | | | 0.0 | | | 20.3 | |
| Adj Reference Time (s) | | 8.0 | | | 8.0 | | | 8.0 | | | 24.3 | |
| Split Option | | | | | | | | | | | | |
| Ref Time Combined (s) | 0.0 | 3.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 12.3 | 19.2 | |
| Ref Time Seperate (s) | 0.0 | 3.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 12.3 | 19.2 | |
| Reference Time (s) | 3.0 | 3.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 19.2 | 19.2 | |
| Adj Reference Time (s) | 8.0 | 8.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 23.2 | 23.2 | |

| Summary | EB WB | NB SB | Combined |
|---|---|---|---|
| Protected Option (s) | 8.0 | 23.2 | |
| Permitted Option (s) | 8.0 | 24.3 | |
| Split Option (s) | 8.0 | 23.2 | |
| Minimum (s) | 8.0 | 23.2 | 31.2 |

| Right Turns | EBR | NBR | SBR |
|---|---|---|---|
| Adj Reference Time (s) | 8.0 | 19.9 | 8.1 |
| Cross Thru Ref Time (s) | 23.2 | 8.0 | 0.0 |
| Oncoming Left Ref Time (s) | 0.0 | 16.3 | 0.0 |
| Combined (s) | 31.2 | 44.2 | 8.1 |

| Intersection Summary | | | |
|---|---|---|---|
| Intersection Capacity Utilization | 36.8% | ICU Level of Service | A |

Reference Times and Phasing Options do not represent an optimized timing plan.

# Intersection Capacity Utilization
## 8: Prospect Avenue & Pennsylvania Ave

01/15/2020

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 179 | 374 | 115 | 249 | 310 | 102 |
| Pedestrians | | | | | | |
| Ped Button | | | | | | |
| Pedestrian Timing (s) | | | | | | |
| Free Right | | No | | | | No |
| Ideal Flow | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Green (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Refr Cycle Length (s) | 120 | 120 | 120 | 120 | 120 | 120 |
| Volume Combined (vph) | 179 | 374 | 115 | 249 | 310 | 102 |
| Lane Utilization Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Factor (vph) | 1.00 | 0.85 | 0.95 | 1.00 | 0.95 | 0.85 |
| Saturated Flow (vph) | 1900 | 1615 | 1805 | 1900 | 1805 | 1615 |
| Ped Intf Time (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Pedestrian Frequency (%) | 0.00 | | | 0.00 | 0.00 | |
| Protected Option Allowed | Yes | | | Yes | No | |
| Reference Time (s) | 11.3 | 27.8 | 7.6 | 15.7 | | 7.6 |
| Adj Reference Time (s) | 15.3 | 31.8 | 11.6 | 19.7 | | 11.6 |
| Permitted Option | | | | | | |
| Adj Saturation A (vph) | 1900 | | 120 | 1900 | 120 | |
| Reference Time A (s) | 11.3 | | 114.7 | 15.7 | 309.1 | |
| Adj Saturation B (vph | NA | | NA | NA | NA | |
| Reference Time B (s) | NA | | NA | NA | NA | |
| Reference Time (s) | 11.3 | | | 114.7 | | |
| Adj Reference Time (s) | 15.3 | | | 118.7 | | |
| Split Option | | | | | | |
| Ref Time Combined (s) | 11.3 | | 7.6 | 15.7 | 20.6 | |
| Ref Time Seperate (s) | 11.3 | | 7.6 | 15.7 | 20.6 | |
| Reference Time (s) | 11.3 | | 15.7 | 15.7 | 20.6 | |
| Adj Reference Time (s) | 15.3 | | 19.7 | 19.7 | 24.6 | |

| Summary | EB WB | NB | Combined |
|---|---|---|---|
| Protected Option (s) | 27.0 | NA | |
| Permitted Option (s) | 118.7 | Err | |
| Split Option (s) | 35.0 | 24.6 | |
| Minimum (s) | 27.0 | 24.6 | 51.6 |

| Right Turns | EBR | NBR |
|---|---|---|
| Adj Reference Time (s) | 31.8 | 11.6 |
| Cross Thru Ref Time (s) | 0.0 | 15.3 |
| Oncoming Left Ref Time (s) | 11.6 | 0.0 |
| Combined (s) | 43.4 | 26.9 |

| Intersection Summary | | | |
|---|---|---|---|
| Intersection Capacity Utilization | 43.0% | ICU Level of Service | A |

Reference Times and Phasing Options do not represent an optimized timing plan.

# HCM Unsignalized Intersection Capacity Analysis
## 34: Glenwood Avenue & Pennsylvania Ave

01/15/2020

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 207 | 61 | 23 | 300 | 35 | 37 |
| Future Volume (Veh/h) | 207 | 61 | 23 | 300 | 35 | 37 |
| Sign Control | Free | | | Free | Yield | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Hourly flow rate (vph) | 218 | 64 | 24 | 316 | 37 | 39 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | None | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | | | 282 | | 614 | 250 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | | | 282 | | 614 | 250 |
| tC, single (s) | | | 4.1 | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | | | 2.2 | | 3.5 | 3.3 |
| p0 queue free % | | | 98 | | 92 | 95 |
| cM capacity (veh/h) | | | 1280 | | 447 | 789 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 |
|---|---|---|---|
| Volume Total | 282 | 340 | 76 |
| Volume Left | 0 | 24 | 37 |
| Volume Right | 64 | 0 | 39 |
| cSH | 1700 | 1280 | 575 |
| Volume to Capacity | 0.17 | 0.02 | 0.13 |
| Queue Length 95th (ft) | 0 | 1 | 11 |
| Control Delay (s) | 0.0 | 0.7 | 12.2 |
| Lane LOS | | A | B |
| Approach Delay (s) | 0.0 | 0.7 | 12.2 |
| Approach LOS | | | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 1.7 | | |
| Intersection Capacity Utilization | 45.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

# Capacity Analysis
# Alternative 2

HCM 6th AWSC
6: Main St & Pennsylvania Ave

01/15/2020

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 16.6 |
| Intersection LOS | C |

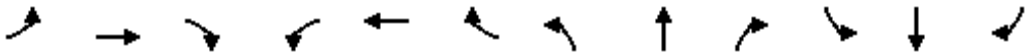
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 143 | 0 | 72 | 81 | 191 | 179 | 0 | 0 | 0 | 0 | 364 | 60 |
| Future Vol, veh/h | 143 | 0 | 72 | 81 | 191 | 179 | 0 | 0 | 0 | 0 | 364 | 60 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 151 | 0 | 76 | 85 | 201 | 188 | 0 | 0 | 0 | 0 | 383 | 63 |
| Number of Lanes | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |

| Approach | EB | WB | SB |
|---|---|---|---|
| Opposing Approach | WB | EB | |
| Opposing Lanes | 3 | 2 | 0 |
| Conflicting Approach Left | SB | | WB |
| Conflicting Lanes Left | 2 | 0 | 3 |
| Conflicting Approach Right | | SB | EB |
| Conflicting Lanes Right | 0 | 2 | 2 |
| HCM Control Delay | 13.2 | 12.6 | 22.6 |
| HCM LOS | B | B | C |

| Lane | EBLn1 | EBLn2 | WBLn1 | WBLn2 | WBLn3 | SBLn1 | SBLn2 |
|---|---|---|---|---|---|---|---|
| Vol Left, % | 100% | 0% | 100% | 0% | 0% | 0% | 0% |
| Vol Thru, % | 0% | 0% | 0% | 100% | 0% | 100% | 0% |
| Vol Right, % | 0% | 100% | 0% | 0% | 100% | 0% | 100% |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 143 | 72 | 81 | 191 | 179 | 364 | 60 |
| LT Vol | 143 | 0 | 81 | 0 | 0 | 0 | 0 |
| Through Vol | 0 | 0 | 0 | 191 | 0 | 364 | 0 |
| RT Vol | 0 | 72 | 0 | 0 | 179 | 0 | 60 |
| Lane Flow Rate | 151 | 76 | 85 | 201 | 188 | 383 | 63 |
| Geometry Grp | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| Degree of Util (X) | 0.331 | 0.141 | 0.173 | 0.38 | 0.319 | 0.715 | 0.105 |
| Departure Headway (Hd) | 7.916 | 6.684 | 7.318 | 6.808 | 6.095 | 6.718 | 6.013 |
| Convergence, Y/N | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Cap | 458 | 540 | 487 | 525 | 584 | 536 | 591 |
| Service Time | 5.616 | 4.384 | 5.115 | 4.605 | 3.891 | 4.507 | 3.802 |
| HCM Lane V/C Ratio | 0.33 | 0.141 | 0.175 | 0.383 | 0.322 | 0.715 | 0.107 |
| HCM Control Delay | 14.5 | 10.5 | 11.7 | 13.8 | 11.8 | 24.8 | 9.5 |
| HCM Lane LOS | B | B | B | B | B | C | A |
| HCM 95th-tile Q | 1.4 | 0.5 | 0.6 | 1.8 | 1.4 | 5.8 | 0.4 |

# Intersection Capacity Utilization
## 3: Prospect Avenue & Duane Street

01/15/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 134 | 41 | 6 | 5 | 39 | 60 | 12 | 268 | 31 | 106 | 219 | 107 |
| Pedestrians | 14 | | 8 | 8 | | 14 | 8 | | 8 | 8 | | 8 |
| Ped Button | | Yes | | | Yes | | | Yes | | | Yes | |
| Pedestrian Timing (s) | | 16.0 | | | 16.0 | | | 16.0 | | | 16.0 | |
| Free Right | | | No | | | No | | | No | | | No |
| Ideal Flow | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Green (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Refr Cycle Length (s) | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 |
| Volume Combined (vph) | 0 | 181 | 0 | 0 | 104 | 0 | 0 | 311 | 0 | 0 | 432 | 0 |
| Lane Utilization Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Factor (vph) | 0.95 | 0.96 | 0.85 | 0.95 | 0.91 | 0.85 | 0.95 | 0.98 | 0.85 | 0.95 | 0.95 | 0.85 |
| Saturated Flow (vph) | 0 | 1821 | 0 | 0 | 1731 | 0 | 0 | 1868 | 0 | 0 | 1807 | 0 |
| Ped Intf Time (s) | 0.0 | 0.0 | 1.0 | 0.0 | 1.0 | 1.7 | 0.0 | 0.1 | 1.0 | 0.0 | 0.2 | 1.0 |
| Pedestrian Frequency (%) | | 0.23 | | | 0.37 | | | 0.23 | | | 0.23 | |
| Protected Option Allowed | | No | | | No | | | No | | | No | |
| Reference Time (s) | | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 |
| Adj Reference Time (s) | | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 |
| Permitted Option | | | | | | | | | | | | |
| Adj Saturation A (vph) | 0 | 270 | | 0 | 1757 | | 0 | 1806 | | 0 | 638 | |
| Reference Time A (s) | 0.0 | 80.4 | | 0.0 | 8.1 | | 0.0 | 20.8 | | 0.0 | 81.5 | |
| Adj Saturation B (vph | 0 | 0 | | 0 | 0 | | NA | NA | | NA | NA | |
| Reference Time B (s) | 16.9 | 20.0 | | 8.3 | 16.2 | | NA | NA | | NA | NA | |
| Reference Time (s) | | 20.0 | | | 8.1 | | | 20.8 | | | 81.5 | |
| Adj Reference Time (s) | | 24.0 | | | 15.0 | | | 24.8 | | | 85.5 | |
| Split Option | | | | | | | | | | | | |
| Ref Time Combined (s) | 0.0 | 12.0 | | 0.0 | 8.2 | | 0.0 | 20.1 | | 0.0 | 28.9 | |
| Ref Time Seperate (s) | 8.9 | 2.7 | | 0.3 | 3.7 | | 0.8 | 17.3 | | 7.0 | 14.8 | |
| Reference Time (s) | 12.0 | 12.0 | | 8.2 | 8.2 | | 20.1 | 20.1 | | 28.9 | 28.9 | |
| Adj Reference Time (s) | 16.9 | 16.9 | | 15.1 | 15.1 | | 24.1 | 24.1 | | 32.9 | 32.9 | |

| Summary | EB WB | NB SB | Combined |
|---|---|---|---|
| Protected Option (s) | NA | NA | |
| Permitted Option (s) | 24.0 | 85.5 | |
| Split Option (s) | 32.0 | 57.0 | |
| Minimum (s) | 24.0 | 57.0 | 81.0 |

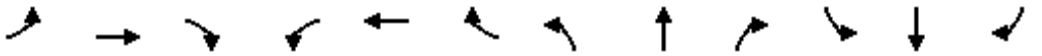
| Right Turns |
|---|
| Adj Reference Time (s) |
| Cross Thru Ref Time (s) |
| Oncoming Left Ref Time (s) |
| Combined (s) |

| Intersection Summary | | | |
|---|---|---|---|
| Intersection Capacity Utilization | 67.5% | ICU Level of Service | C |

Reference Times and Phasing Options do not represent an optimized timing plan.

# Intersection Capacity Utilization
## 7: Main St & Crescent Blvd

01/15/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↑ | ↱ | | | | | | ↱ | ↰ | ↑ | ↱ |
| Volume (vph) | 0 | 108 | 23 | 0 | 0 | 0 | 0 | 0 | 158 | 182 | 312 | 13 |
| Pedestrians | | | | | | | | | | | | |
| Ped Button | | | | | | | | | | | | |
| Pedestrian Timing (s) | | | | | | | | | | | | |
| Free Right | | | No | | | No | | | No | | | No |
| Ideal Flow | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Green (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Refr Cycle Length (s) | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 |
| Volume Combined (vph) | 0 | 108 | 23 | 0 | 0 | 0 | 0 | 0 | 158 | 182 | 312 | 13 |
| Lane Utilization Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Factor (vph) | 0.95 | 1.00 | 0.85 | 0.95 | 1.00 | 0.85 | 0.95 | 1.00 | 0.85 | 0.95 | 1.00 | 0.85 |
| Saturated Flow (vph) | 0 | 1900 | 1615 | 0 | 0 | 0 | 0 | 0 | 1615 | 1805 | 1900 | 1615 |
| Ped Intf Time (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Pedestrian Frequency (%) | | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | |
| Protected Option Allowed | | Yes | | | Yes | | | Yes | | | Yes | |
| Reference Time (s) | 0.0 | 6.8 | 1.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 11.7 | 12.1 | 19.7 | 1.0 |
| Adj Reference Time (s) | 0.0 | 10.8 | 8.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 15.7 | 16.1 | 23.7 | 8.0 |
| Permitted Option | | | | | | | | | | | | |
| Adj Saturation A (vph) | 0 | 1900 | | 0 | 0 | | 0 | 0 | | 120 | 1900 | |
| Reference Time A (s) | 0.0 | 6.8 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 181.5 | 19.7 | |
| Adj Saturation B (vph | 0 | 1900 | | 0 | 0 | | NA | NA | | 0 | 1900 | |
| Reference Time B (s) | 0.0 | 6.8 | | 0.0 | 0.0 | | NA | NA | | 20.1 | 19.7 | |
| Reference Time (s) | | 6.8 | | | 0.0 | | | 0.0 | | | 20.1 | |
| Adj Reference Time (s) | | 10.8 | | | 8.0 | | | 8.0 | | | 24.1 | |
| Split Option | | | | | | | | | | | | |
| Ref Time Combined (s) | 0.0 | 6.8 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 12.1 | 19.7 | |
| Ref Time Seperate (s) | 0.0 | 6.8 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 12.1 | 19.7 | |
| Reference Time (s) | 6.8 | 6.8 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 19.7 | 19.7 | |
| Adj Reference Time (s) | 10.8 | 10.8 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 23.7 | 23.7 | |

| Summary | EB WB | NB SB | Combined |
|---|---|---|---|
| Protected Option (s) | 10.8 | 23.7 | |
| Permitted Option (s) | 10.8 | 24.1 | |
| Split Option (s) | 10.8 | 23.7 | |
| Minimum (s) | 10.8 | 23.7 | 34.5 |

| Right Turns | EBR | NBR | SBR |
|---|---|---|---|
| Adj Reference Time (s) | 8.0 | 15.7 | 8.0 |
| Cross Thru Ref Time (s) | 23.7 | 10.8 | 0.0 |
| Oncoming Left Ref Time (s) | 0.0 | 16.1 | 0.0 |
| Combined (s) | 31.7 | 42.7 | 8.0 |

| Intersection Summary | | | |
|---|---|---|---|
| Intersection Capacity Utilization | 35.6% | ICU Level of Service | A |

Reference Times and Phasing Options do not represent an optimized timing plan.

# Intersection Capacity Utilization
## 8: Prospect Avenue & Pennsylvania Ave

01/15/2020

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 92 | 447 | 59 | 165 | 263 | 126 |
| Pedestrians | | | | | | |
| Ped Button | | | | | | |
| Pedestrian Timing (s) | | | | | | |
| Free Right | | No | | | | No |
| Ideal Flow | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Green (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Refr Cycle Length (s) | 120 | 120 | 120 | 120 | 120 | 120 |
| Volume Combined (vph) | 92 | 447 | 59 | 165 | 263 | 126 |
| Lane Utilization Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Factor (vph) | 1.00 | 0.85 | 0.95 | 1.00 | 0.95 | 0.85 |
| Saturated Flow (vph) | 1900 | 1615 | 1805 | 1900 | 1805 | 1615 |
| Ped Intf Time (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Pedestrian Frequency (%) | 0.00 | | | 0.00 | 0.00 | |
| Protected Option Allowed | Yes | | | Yes | No | |
| Reference Time (s) | 5.8 | 33.2 | 3.9 | 10.4 | | 9.4 |
| Adj Reference Time (s) | 9.8 | 37.2 | 8.0 | 14.4 | | 13.4 |
| Permitted Option | | | | | | |
| Adj Saturation A (vph) | 1900 | | 120 | 1900 | 120 | |
| Reference Time A (s) | 5.8 | | 58.8 | 10.4 | 262.3 | |
| Adj Saturation B (vph | NA | | 0 | 1900 | NA | |
| Reference Time B (s) | NA | | 11.9 | 10.4 | NA | |
| Reference Time (s) | 5.8 | | | 11.9 | | |
| Adj Reference Time (s) | 9.8 | | | 15.9 | | |
| Split Option | | | | | | |
| Ref Time Combined (s) | 5.8 | | 3.9 | 10.4 | 17.5 | |
| Ref Time Seperate (s) | 5.8 | | 3.9 | 10.4 | 17.5 | |
| Reference Time (s) | 5.8 | | 10.4 | 10.4 | 17.5 | |
| Adj Reference Time (s) | 9.8 | | 14.4 | 14.4 | 21.5 | |

| Summary | EB WB | NB | Combined |
|---|---|---|---|
| Protected Option (s) | 17.8 | NA | |
| Permitted Option (s) | 15.9 | Err | |
| Split Option (s) | 24.2 | 21.5 | |
| Minimum (s) | 15.9 | 21.5 | 37.4 |

| Right Turns | EBR | NBR |
|---|---|---|
| Adj Reference Time (s) | 37.2 | 13.4 |
| Cross Thru Ref Time (s) | 0.0 | 9.8 |
| Oncoming Left Ref Time (s) | 8.0 | 0.0 |
| Combined (s) | 45.2 | 23.2 |

| Intersection Summary | | | |
|---|---|---|---|
| Intersection Capacity Utilization | 37.7% | ICU Level of Service | A |

Reference Times and Phasing Options do not represent an optimized timing plan.

# HCM Unsignalized Intersection Capacity Analysis
## 34: Glenwood Avenue & Pennsylvania Ave

01/15/2020

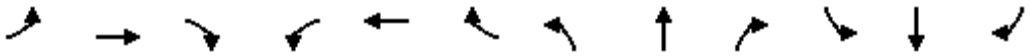
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 213 | 11 | 10 | 225 | 5 | 9 |
| Future Volume (Veh/h) | 213 | 11 | 10 | 225 | 5 | 9 |
| Sign Control | Free | | | Free | Yield | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Hourly flow rate (vph) | 224 | 12 | 11 | 237 | 5 | 9 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | None | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | | | 236 | | 489 | 230 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | | | 236 | | 489 | 230 |
| tC, single (s) | | | 4.1 | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | | | 2.2 | | 3.5 | 3.3 |
| p0 queue free % | | | 99 | | 99 | 99 |
| cM capacity (veh/h) | | | 1331 | | 534 | 809 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 |
|---|---|---|---|
| Volume Total | 236 | 248 | 14 |
| Volume Left | 0 | 11 | 5 |
| Volume Right | 12 | 0 | 9 |
| cSH | 1700 | 1331 | 683 |
| Volume to Capacity | 0.14 | 0.01 | 0.02 |
| Queue Length 95th (ft) | 0 | 1 | 2 |
| Control Delay (s) | 0.0 | 0.4 | 10.4 |
| Lane LOS | | A | B |
| Approach Delay (s) | 0.0 | 0.4 | 10.4 |
| Approach LOS | | | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | | 0.5 | |
| Intersection Capacity Utilization | | 30.0% | ICU Level of Service A |
| Analysis Period (min) | | 15 | |

# HCM Unsignalized Intersection Capacity Analysis
## 35: Crescent Blvd & Glenwood Avenue

01/15/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 2 | 126 | 7 | 2 | 0 | 7 | 0 | 3 | 2 | 8 | 8 | 0 |
| Future Volume (Veh/h) | 2 | 126 | 7 | 2 | 0 | 7 | 0 | 3 | 2 | 8 | 8 | 0 |
| Sign Control | | Free | | | Free | | | Yield | | | Yield | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Hourly flow rate (vph) | 2 | 133 | 7 | 2 | 0 | 7 | 0 | 3 | 2 | 8 | 8 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 7 | | | 140 | | | 152 | 152 | 136 | 152 | 152 | 4 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 7 | | | 140 | | | 152 | 152 | 136 | 152 | 152 | 4 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 100 | | | 100 | 100 | 100 | 99 | 99 | 100 |
| cM capacity (veh/h) | 1614 | | | 1443 | | | 807 | 738 | 912 | 810 | 738 | 1080 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 142 | 9 | 5 | 16 |
| Volume Left | 2 | 2 | 0 | 8 |
| Volume Right | 7 | 7 | 2 | 0 |
| cSH | 1614 | 1443 | 799 | 772 |
| Volume to Capacity | 0.00 | 0.00 | 0.01 | 0.02 |
| Queue Length 95th (ft) | 0 | 0 | 0 | 2 |
| Control Delay (s) | 0.1 | 1.7 | 9.5 | 9.8 |
| Lane LOS | A | A | A | A |
| Approach Delay (s) | 0.1 | 1.7 | 9.5 | 9.8 |
| Approach LOS | | | A | A |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 1.4 | | | |
| Intersection Capacity Utilization | 21.5% | ICU Level of Service | | A |
| Analysis Period (min) | 15 | | | |

HCM 6th AWSC
6: Main St & Pennsylvania Ave

01/15/2020

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 16.2 |
| Intersection LOS | C |

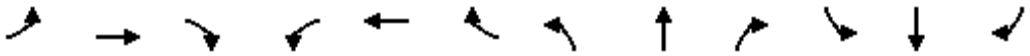
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 140 | 0 | 116 | 109 | 232 | 218 | 0 | 0 | 0 | 0 | 319 | 83 |
| Future Vol, veh/h | 140 | 0 | 116 | 109 | 232 | 218 | 0 | 0 | 0 | 0 | 319 | 83 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 147 | 0 | 122 | 115 | 244 | 229 | 0 | 0 | 0 | 0 | 336 | 87 |
| Number of Lanes | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |

| Approach | EB | WB | SB |
|---|---|---|---|
| Opposing Approach | WB | EB | |
| Opposing Lanes | 3 | 2 | 0 |
| Conflicting Approach Left | SB | | WB |
| Conflicting Lanes Left | 2 | 0 | 3 |
| Conflicting Approach Right | | SB | EB |
| Conflicting Lanes Right | 0 | 2 | 2 |
| HCM Control Delay | 13.5 | 14.1 | 20.9 |
| HCM LOS | B | B | C |

| Lane | EBLn1 | EBLn2 | WBLn1 | WBLn2 | WBLn3 | SBLn1 | SBLn2 |
|---|---|---|---|---|---|---|---|
| Vol Left, % | 100% | 0% | 100% | 0% | 0% | 0% | 0% |
| Vol Thru, % | 0% | 0% | 0% | 100% | 0% | 100% | 0% |
| Vol Right, % | 0% | 100% | 0% | 0% | 100% | 0% | 100% |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 140 | 116 | 109 | 232 | 218 | 319 | 83 |
| LT Vol | 140 | 0 | 109 | 0 | 0 | 0 | 0 |
| Through Vol | 0 | 0 | 0 | 232 | 0 | 319 | 0 |
| RT Vol | 0 | 116 | 0 | 0 | 218 | 0 | 83 |
| Lane Flow Rate | 147 | 122 | 115 | 244 | 229 | 336 | 87 |
| Geometry Grp | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| Degree of Util (X) | 0.332 | 0.233 | 0.238 | 0.472 | 0.399 | 0.674 | 0.158 |
| Departure Headway (Hd) | 8.114 | 6.881 | 7.474 | 6.964 | 6.261 | 7.222 | 6.516 |
| Convergence, Y/N | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Cap | 444 | 521 | 481 | 518 | 576 | 504 | 553 |
| Service Time | 5.859 | 4.626 | 5.213 | 4.703 | 3.988 | 4.931 | 4.224 |
| HCM Lane V/C Ratio | 0.331 | 0.234 | 0.239 | 0.471 | 0.398 | 0.667 | 0.157 |
| HCM Control Delay | 14.9 | 11.7 | 12.5 | 15.8 | 13.1 | 23.6 | 10.4 |
| HCM Lane LOS | B | B | B | C | B | C | B |
| HCM 95th-tile Q | 1.4 | 0.9 | 0.9 | 2.5 | 1.9 | 5 | 0.6 |

# Intersection Capacity Utilization
## 3: Prospect Avenue & Duane Street

01/15/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 138 | 61 | 14 | 7 | 47 | 85 | 6 | 233 | 14 | 63 | 286 | 140 |
| Pedestrians | 14 | | 8 | 8 | | 14 | 8 | | 8 | 8 | | 8 |
| Ped Button | | Yes | | | Yes | | | Yes | | | Yes | |
| Pedestrian Timing (s) | | 16.0 | | | 16.0 | | | 16.0 | | | 16.0 | |
| Free Right | | | No | | | No | | | No | | | No |
| Ideal Flow | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Green (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Refr Cycle Length (s) | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 |
| Volume Combined (vph) | 0 | 213 | 0 | 0 | 139 | 0 | 0 | 253 | 0 | 0 | 489 | 0 |
| Lane Utilization Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Factor (vph) | 0.95 | 0.96 | 0.85 | 0.95 | 0.91 | 0.85 | 0.95 | 0.99 | 0.85 | 0.95 | 0.95 | 0.85 |
| Saturated Flow (vph) | 0 | 1820 | 0 | 0 | 1721 | 0 | 0 | 1882 | 0 | 0 | 1807 | 0 |
| Ped Intf Time (s) | 0.0 | 0.1 | 1.0 | 0.0 | 1.0 | 1.7 | 0.0 | 0.1 | 1.0 | 0.0 | 0.3 | 1.0 |
| Pedestrian Frequency (%) | | 0.23 | | | 0.37 | | | 0.23 | | | 0.23 | |
| Protected Option Allowed | | No | | | No | | | No | | | No | |
| Reference Time (s) | | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 |
| Adj Reference Time (s) | | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 |
| Permitted Option | | | | | | | | | | | | |
| Adj Saturation A (vph) | 0 | 312 | | 0 | 1740 | | 0 | 1789 | | 0 | 849 | |
| Reference Time A (s) | 0.0 | 82.1 | | 0.0 | 10.6 | | 0.0 | 17.0 | | 0.0 | 69.4 | |
| Adj Saturation B (vph | NA | NA | | 0 | 0 | | NA | NA | | NA | NA | |
| Reference Time B (s) | NA | NA | | 8.5 | 18.7 | | NA | NA | | NA | NA | |
| Reference Time (s) | | 82.1 | | | 10.6 | | | 17.0 | | | 69.4 | |
| Adj Reference Time (s) | | 86.1 | | | 16.6 | | | 21.0 | | | 73.4 | |
| Split Option | | | | | | | | | | | | |
| Ref Time Combined (s) | 0.0 | 14.1 | | 0.0 | 10.7 | | 0.0 | 16.2 | | 0.0 | 32.8 | |
| Ref Time Seperate (s) | 9.2 | 4.0 | | 0.5 | 4.3 | | 0.4 | 14.9 | | 4.2 | 19.3 | |
| Reference Time (s) | 14.1 | 14.1 | | 10.7 | 10.7 | | 16.2 | 16.2 | | 32.8 | 32.8 | |
| Adj Reference Time (s) | 18.6 | 18.6 | | 16.7 | 16.7 | | 20.2 | 20.2 | | 36.8 | 36.8 | |

| Summary | EB WB | NB SB | Combined |
|---|---|---|---|
| Protected Option (s) | NA | NA | |
| Permitted Option (s) | 86.1 | 73.4 | |
| Split Option (s) | 35.2 | 57.0 | |
| Minimum (s) | 35.2 | 57.0 | 92.2 |

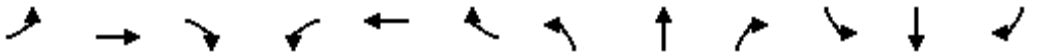
| Right Turns |
|---|
| Adj Reference Time (s) |
| Cross Thru Ref Time (s) |
| Oncoming Left Ref Time (s) |
| Combined (s) |

| Intersection Summary | | | |
|---|---|---|---|
| Intersection Capacity Utilization | 76.8% | ICU Level of Service | D |

Reference Times and Phasing Options do not represent an optimized timing plan.

# Intersection Capacity Utilization
## 7: Main St & Crescent Blvd

01/15/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↑ | ↱ | | | | | | ↱ | ↰ | ↑ | ↱ |
| Volume (vph) | 0 | 62 | 56 | 0 | 0 | 0 | 0 | 0 | 191 | 185 | 304 | 55 |
| Pedestrians | | | | | | | | | | | | |
| Ped Button | | | | | | | | | | | | |
| Pedestrian Timing (s) | | | | | | | | | | | | |
| Free Right | | | No | | | No | | | No | | | No |
| Ideal Flow | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Green (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Refr Cycle Length (s) | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 |
| Volume Combined (vph) | 0 | 62 | 56 | 0 | 0 | 0 | 0 | 0 | 191 | 185 | 304 | 55 |
| Lane Utilization Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Factor (vph) | 0.95 | 1.00 | 0.85 | 0.95 | 1.00 | 0.85 | 0.95 | 1.00 | 0.85 | 0.95 | 1.00 | 0.85 |
| Saturated Flow (vph) | 0 | 1900 | 1615 | 0 | 0 | 0 | 0 | 0 | 1615 | 1805 | 1900 | 1615 |
| Ped Intf Time (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Pedestrian Frequency (%) | | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | |
| Protected Option Allowed | | Yes | | | Yes | | | Yes | | | Yes | |
| Reference Time (s) | 0.0 | 3.9 | 4.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 14.2 | 12.3 | 19.2 | 4.1 |
| Adj Reference Time (s) | 0.0 | 8.0 | 8.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 18.2 | 16.3 | 23.2 | 8.1 |
| Permitted Option | | | | | | | | | | | | |
| Adj Saturation A (vph) | 0 | 1900 | | 0 | 0 | | 0 | 0 | | 120 | 1900 | |
| Reference Time A (s) | 0.0 | 3.9 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 184.5 | 19.2 | |
| Adj Saturation B (vph | 0 | 1900 | | 0 | 0 | | NA | NA | | 0 | 1900 | |
| Reference Time B (s) | 0.0 | 3.9 | | 0.0 | 0.0 | | NA | NA | | 20.3 | 19.2 | |
| Reference Time (s) | | 3.9 | | | 0.0 | | | 0.0 | | | 20.3 | |
| Adj Reference Time (s) | | 8.0 | | | 8.0 | | | 8.0 | | | 24.3 | |
| Split Option | | | | | | | | | | | | |
| Ref Time Combined (s) | 0.0 | 3.9 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 12.3 | 19.2 | |
| Ref Time Seperate (s) | 0.0 | 3.9 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 12.3 | 19.2 | |
| Reference Time (s) | 3.9 | 3.9 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 19.2 | 19.2 | |
| Adj Reference Time (s) | 8.0 | 8.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 23.2 | 23.2 | |

| Summary | EB WB | NB SB | Combined |
|---|---|---|---|
| Protected Option (s) | 8.0 | 23.2 | |
| Permitted Option (s) | 8.0 | 24.3 | |
| Split Option (s) | 8.0 | 23.2 | |
| Minimum (s) | 8.0 | 23.2 | 31.2 |

| Right Turns | EBR | NBR | SBR |
|---|---|---|---|
| Adj Reference Time (s) | 8.2 | 18.2 | 8.1 |
| Cross Thru Ref Time (s) | 23.2 | 8.0 | 0.0 |
| Oncoming Left Ref Time (s) | 0.0 | 16.3 | 0.0 |
| Combined (s) | 31.4 | 42.5 | 8.1 |

| Intersection Summary | | | |
|---|---|---|---|
| Intersection Capacity Utilization | 35.4% | ICU Level of Service | A |

Reference Times and Phasing Options do not represent an optimized timing plan.

# Intersection Capacity Utilization
## 8: Prospect Avenue & Pennsylvania Ave

01/15/2020

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 127 | 426 | 115 | 249 | 310 | 102 |
| Pedestrians | | | | | | |
| Ped Button | | | | | | |
| Pedestrian Timing (s) | | | | | | |
| Free Right | | No | | | | No |
| Ideal Flow | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Green (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Refr Cycle Length (s) | 120 | 120 | 120 | 120 | 120 | 120 |
| Volume Combined (vph) | 127 | 426 | 115 | 249 | 310 | 102 |
| Lane Utilization Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Factor (vph) | 1.00 | 0.85 | 0.95 | 1.00 | 0.95 | 0.85 |
| Saturated Flow (vph) | 1900 | 1615 | 1805 | 1900 | 1805 | 1615 |
| Ped Intf Time (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Pedestrian Frequency (%) | 0.00 | | | 0.00 | 0.00 | |
| Protected Option Allowed | Yes | | | Yes | No | |
| Reference Time (s) | 8.0 | 31.7 | 7.6 | 15.7 | | 7.6 |
| Adj Reference Time (s) | 12.0 | 35.7 | 11.6 | 19.7 | | 11.6 |
| Permitted Option | | | | | | |
| Adj Saturation A (vph) | 1900 | | 120 | 1900 | 120 | |
| Reference Time A (s) | 8.0 | | 114.7 | 15.7 | 309.1 | |
| Adj Saturation B (vph | NA | | NA | NA | NA | |
| Reference Time B (s) | NA | | NA | NA | NA | |
| Reference Time (s) | 8.0 | | | 114.7 | | |
| Adj Reference Time (s) | 12.0 | | | 118.7 | | |
| Split Option | | | | | | |
| Ref Time Combined (s) | 8.0 | | 7.6 | 15.7 | 20.6 | |
| Ref Time Seperate (s) | 8.0 | | 7.6 | 15.7 | 20.6 | |
| Reference Time (s) | 8.0 | | 15.7 | 15.7 | 20.6 | |
| Adj Reference Time (s) | 12.0 | | 19.7 | 19.7 | 24.6 | |

| Summary | EB WB | NB | Combined |
|---|---|---|---|
| Protected Option (s) | 23.7 | NA | |
| Permitted Option (s) | 118.7 | Err | |
| Split Option (s) | 31.7 | 24.6 | |
| Minimum (s) | 23.7 | 24.6 | 48.3 |

| Right Turns | EBR | NBR |
|---|---|---|
| Adj Reference Time (s) | 35.7 | 11.6 |
| Cross Thru Ref Time (s) | 0.0 | 12.0 |
| Oncoming Left Ref Time (s) | 11.6 | 0.0 |
| Combined (s) | 47.3 | 23.6 |

| Intersection Summary | | | |
|---|---|---|---|
| Intersection Capacity Utilization | 40.2% | ICU Level of Service | A |

Reference Times and Phasing Options do not represent an optimized timing plan.

# HCM Unsignalized Intersection Capacity Analysis
## 34: Glenwood Avenue & Pennsylvania Ave

01/15/2020

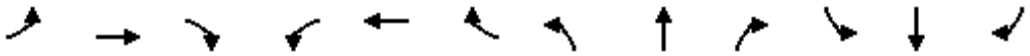
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 217 | 9 | 23 | 300 | 35 | 37 |
| Future Volume (Veh/h) | 217 | 9 | 23 | 300 | 35 | 37 |
| Sign Control | Free | | | Free | Yield | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Hourly flow rate (vph) | 228 | 9 | 24 | 316 | 37 | 39 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | None | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | | | 237 | | 596 | 232 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | | | 237 | | 596 | 232 |
| tC, single (s) | | | 4.1 | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | | | 2.2 | | 3.5 | 3.3 |
| p0 queue free % | | | 98 | | 92 | 95 |
| cM capacity (veh/h) | | | 1330 | | 458 | 807 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 |
|---|---|---|---|
| Volume Total | 237 | 340 | 76 |
| Volume Left | 0 | 24 | 37 |
| Volume Right | 9 | 0 | 39 |
| cSH | 1700 | 1330 | 588 |
| Volume to Capacity | 0.14 | 0.02 | 0.13 |
| Queue Length 95th (ft) | 0 | 1 | 11 |
| Control Delay (s) | 0.0 | 0.7 | 12.0 |
| Lane LOS | | A | B |
| Approach Delay (s) | 0.0 | 0.7 | 12.0 |
| Approach LOS | | | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 1.8 | | |
| Intersection Capacity Utilization | 43.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

# HCM Unsignalized Intersection Capacity Analysis
## 35: Crescent Blvd & Glenwood Avenue

01/15/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 3 | 86 | 6 | 14 | 0 | 59 | 0 | 7 | 10 | 22 | 2 | 0 |
| Future Volume (Veh/h) | 3 | 86 | 6 | 14 | 0 | 59 | 0 | 7 | 10 | 22 | 2 | 0 |
| Sign Control | | Free | | | Free | | | Yield | | | Yield | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Hourly flow rate (vph) | 3 | 91 | 6 | 15 | 0 | 62 | 0 | 7 | 11 | 23 | 2 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 62 | | | 97 | | | 162 | 192 | 94 | 176 | 164 | 31 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 62 | | | 97 | | | 162 | 192 | 94 | 176 | 164 | 31 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 99 | | | 100 | 99 | 99 | 97 | 100 | 100 |
| cM capacity (veh/h) | 1541 | | | 1496 | | | 794 | 695 | 963 | 765 | 720 | 1043 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 100 | 77 | 18 | 25 |
| Volume Left | 3 | 15 | 0 | 23 |
| Volume Right | 6 | 62 | 11 | 0 |
| cSH | 1541 | 1496 | 837 | 761 |
| Volume to Capacity | 0.00 | 0.01 | 0.02 | 0.03 |
| Queue Length 95th (ft) | 0 | 1 | 2 | 3 |
| Control Delay (s) | 0.2 | 1.5 | 9.4 | 9.9 |
| Lane LOS | A | A | A | A |
| Approach Delay (s) | 0.2 | 1.5 | 9.4 | 9.9 |
| Approach LOS | | | A | A |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 2.5 | | | |
| Intersection Capacity Utilization | 25.7% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |

# MEMORANDUM

**TO:** Kelly Purvis, Planner (via email)

**CC:** AJ Goyal, Economic Development Coordinator (via email)

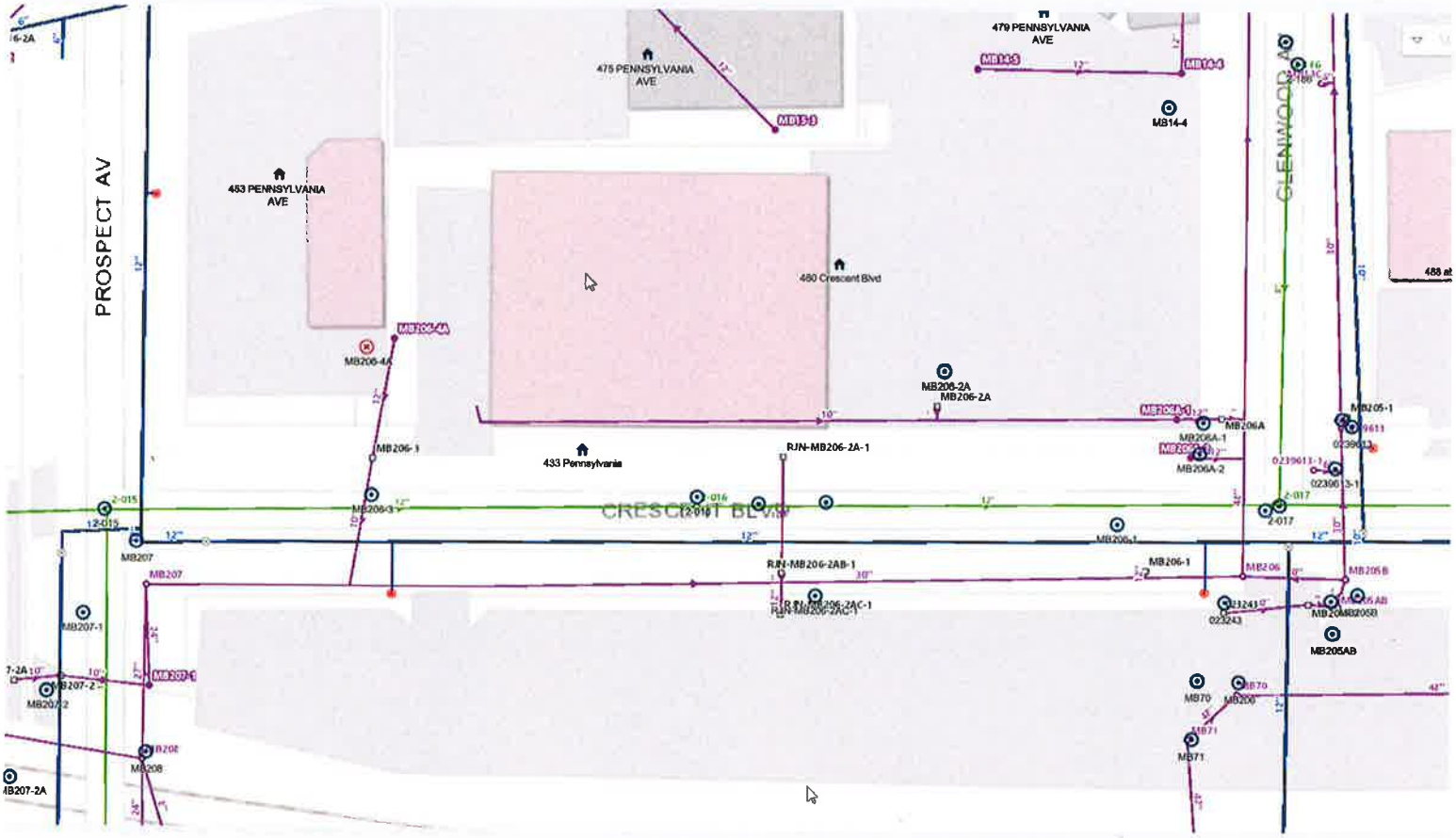
**FROM:** Rich Daubert, Professional Engineer

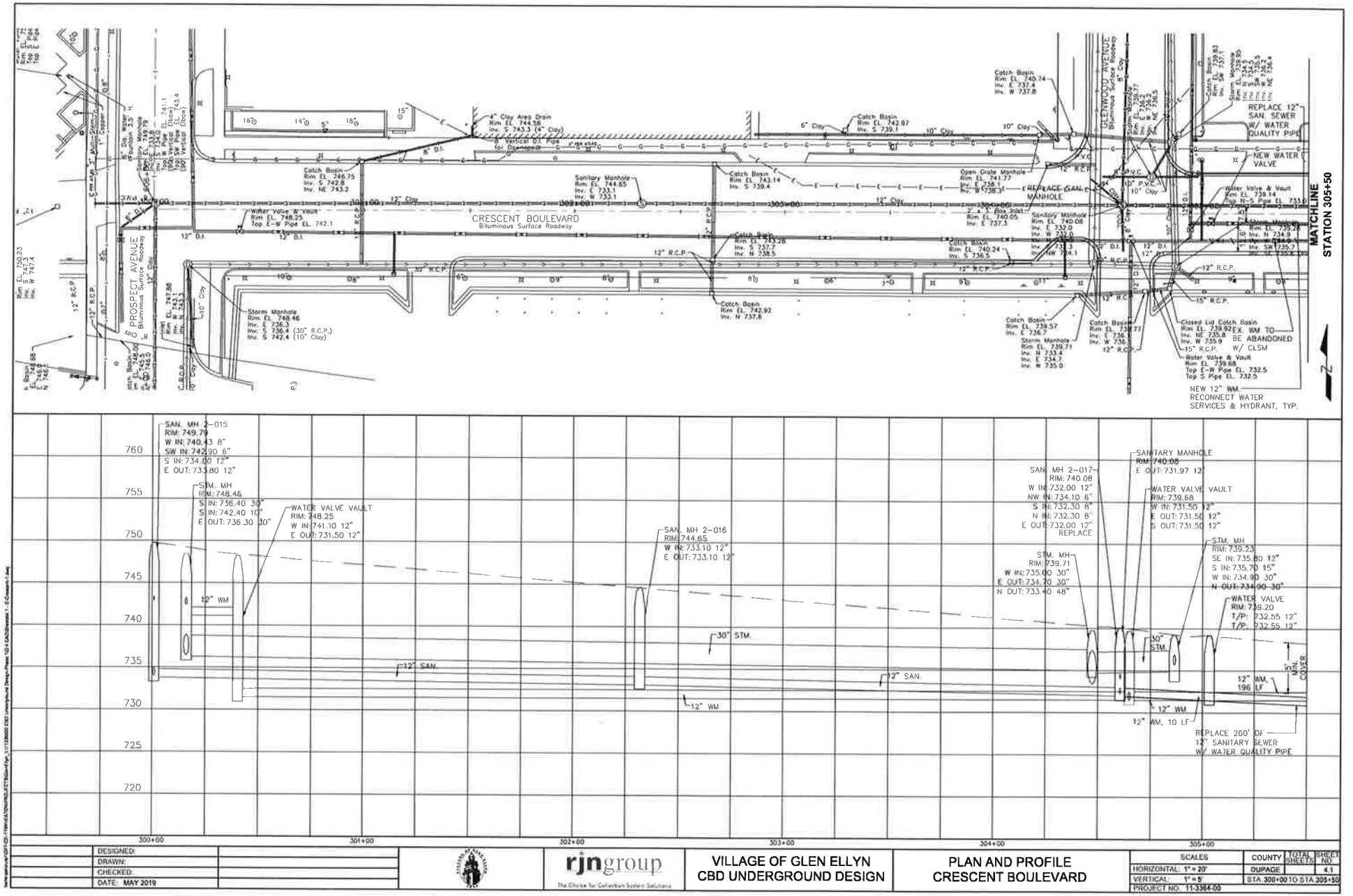
**DATE:** December 23, 2019

**SUBJECT:** Crescent Boulevard Utility Information

This memorandum serves to commemorate the transmittal of Village utility records requested via telephone on 12/19/2019. The records are being provided to facilitate due diligence for the potential redevelopment of the 460 Crescent Boulevard property. Please note that the dry utility information (Communication, Electric, and Gas) should be secured through the JULIE design stage locate process.

| File Name | Description |
|---|---|
| 1 – Cover Memo | This Memorandum |
| 2 – Clarity Map | Map depicting sanitary sewer (green), storm sewer (purple), and water main (blue) with sizes denoted. |
| 3 – Preliminary Plan for Crescent Utility Improvements | Preliminary Utility Plans for Upcoming CBD Streetscape and Utility Improvements Project. Shows some dry utilities; gas believed to be accurate but not electric; Does not show street light conduit/cable (see drawings 0114/0115) |
| 4 – 0114 Excerpts | Excerpts from Engineering Database Drawing 0114. Shows extension of the street light conduit/wiring, storm sewer improvements. |
| 5 – 0115 Excerpts | Excerpts from Engineering Database Drawing 0115. Shows the street light conduit/wiring (extended in 0114) as well as the water main improvements on Crescent (and abandoned 4-inch water main). |
| 6 – 0238 Excerpts | Excerpts from Engineering Database Drawing 0238. Shows the water main installation through the Crescent/Glenwood parking lot and general topo information for the utilities in the intersection of Crescent and Glenwood. |
| 7 – 0572 | Plans for the construction of the Crescent/Glenwood Parking Lot. |
| 8 – ComEd Plans | Plans for electrical undergrounding work completed on Pennsylvania Avenue which tie into the overhead lines along the north side of the 460 Crescent Property. |


PROSPECT AV
475 PENNSYLVANIA AVE
479 PENNSYLVANIA AVE
453 PENNSYLVANIA AVE
480 Crescent Blvd
433 Pennsylvania
CRESCENT BLVD
GLENWOOD AV
MB206-4A
MB206-2A
MB206-2A
MB206-1
MB206A
MB206A-1
MB206A-2
MB205-1
MB205B
MB205AB
MB207
MB207-1
MB207-2
MB208
MB14-4
MB14-3
MB70
MB71
RJN-MB206-2A-1
RJN-MB206-2AB-1
MB206-1
023243
2-015
2-016
2-017

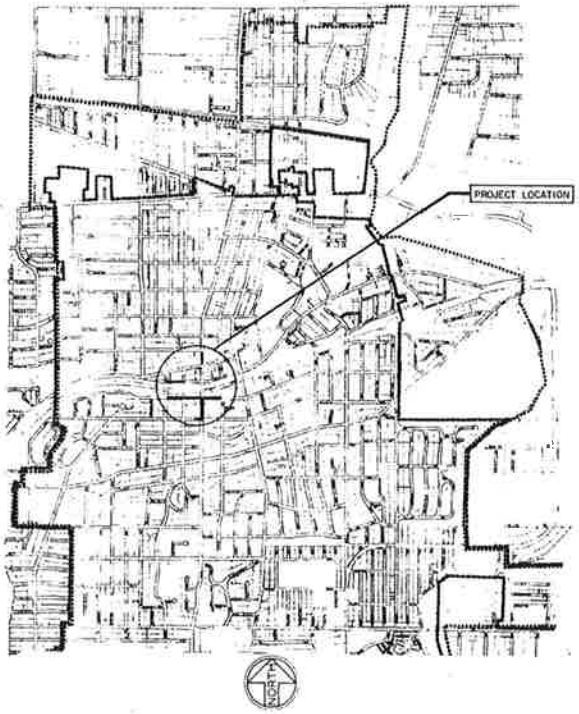

CRESCENT BOULEVARD
Bituminous Surface Roadway
PROSPECT AVENUE
Bituminous Surface Roadway
GLENWOOD AVENUE
Bituminous Surface Roadway
MATCHLINE
STATION 305+50
REPLACE 12" SAN. SEWER W/ WATER QUALITY PIPE
NEW WATER VALVE
REPLACE SAN. MANHOLE
Closed Lid Catch Basin
EX. WM TO BE ABANDONED W/ CLSM
NEW 12" WM
RECONNECT WATER SERVICES & HYDRANT, TYP.
SAN. MH 2-015
RIM: 749.79
W IN: 740.43 8"
SW IN: 742.90 6"
S IN: 734.00 12"
E OUT: 733.80 12"
STM. MH
RIM: 748.46
S IN: 736.40 30"
S IN: 742.40 10"
E OUT: 736.30 30"
WATER VALVE VAULT
RIM: 748.25
W IN: 741.10 12"
E OUT: 731.50 12"
12" WM
SAN. MH 2-016
RIM: 744.65
W IN: 733.10 12"
E OUT: 733.10 12"
30" STM.
12" SAN.
12" WM
SAN. MH 2-017
RIM: 740.08
W IN: 732.00 12"
NW IN: 734.10 6"
S IN: 732.30 8"
N IN: 732.30 8"
E OUT: 732.00 12"
REPLACE
STM. MH
RIM: 739.71
W IN: 735.00 30"
E OUT: 734.70 30"
N OUT: 733.40 48"
SANITARY MANHOLE
RIM: 740.08
E OUT: 731.97 12"
WATER VALVE VAULT
RIM: 739.68
W IN: 731.50 12"
E OUT: 731.50 12"
S OUT: 731.50 12"
STM. MH
RIM: 739.23
SE IN: 735.80 12"
S IN: 735.70 15"
W IN: 734.90 30"
N OUT: 734.90 30"
WATER VALVE
RIM: 739.20
T/P: 732.55 12"
T/P: 732.55 12"
30" STM.
12" WM, 196 LF
12" WM, 10 LF
5' MIN. COVER
REPLACE 260' OF 12" SANITARY SEWER W/ WATER QUALITY PIPE
760
755
750
745
740
735
730
725
720
300+00
301+00
302+00
303+00
304+00
305+00
DESIGNED:
DRAWN:
CHECKED:
DATE: MAY 2019
rjngroup
The Choice for Collection System Solutions
VILLAGE OF GLEN ELLYN
CBD UNDERGROUND DESIGN
PLAN AND PROFILE
CRESCENT BOULEVARD
SCALES
HORIZONTAL: 1" = 20'
VERTICAL: 1" = 5'
PROJECT NO. 11-3384-00
COUNTY
DUPAGE
TOTAL SHEETS
SHEET NO.
4.1
STA. 300+00 TO STA. 305+50

# VILLAGE OF GLEN ELLYN, ILLINOIS

## CENTRAL BUSINESS DISTRICT REHABILITATION PROJECT

## PHASE II

### STORM SEWER, PAVING AND STREET LIGHTING IMPROVEMENTS




LOCATION MAP
SCALE 1" = 1000'

FOR UNDERGROUND UTILITY LOCATIONS
CALL J.U.L.I.E.
TOLL FREE
TELEPHONE 1-800-892-0123

The Contractors for all Contracts shall notify the Commonwealth Edison Company, Illinois Bell Telephone Company, Northern Illinois Gas Company, VILLAGE OF GLEN ELLYN PUBLIC WORKS DEPARTMENT prior to beginning any construction. Said Companies will establish on the ground, the location of underground pipes, conduits or cables adjoining or crossing proposed construction.

FIELD CHECKED
by TJB
date 11-12-85

REVISIONS

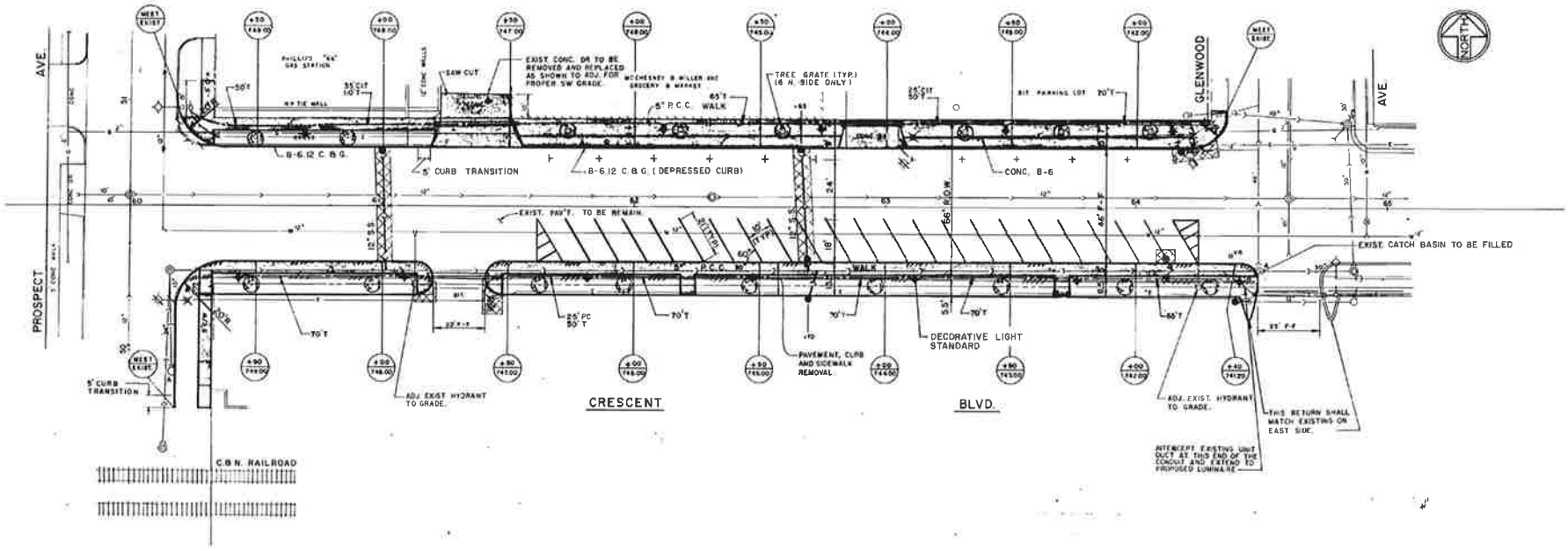
**PRC Engineering**
**CONSULTING ENGINEERS**
**CHICAGO, ILLINOIS**

3-3-86

2896

#0114

SHEET 1 OF 17 SHEETS



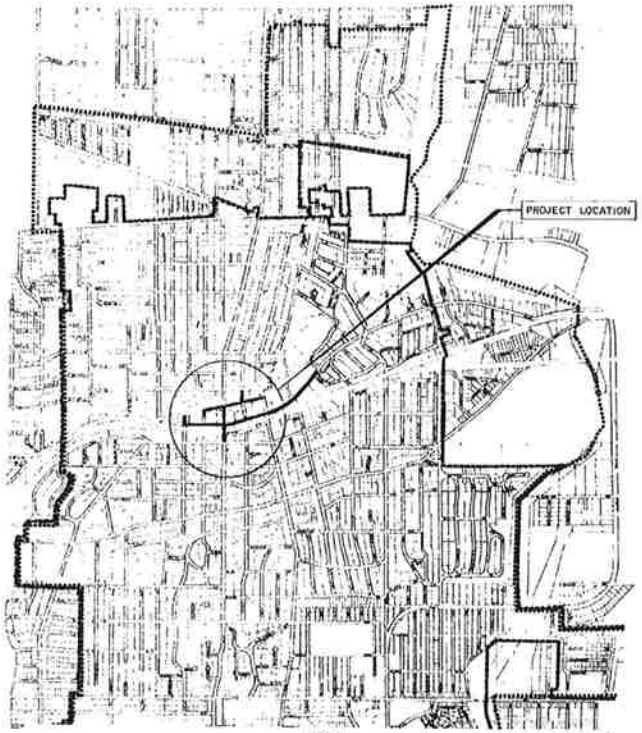

| REVISIONS | | | | DESIGNED | P.T. | PRC Engineering CONSULTING ENGINEERS | VILLAGE OF GLEN ELLYN CENTRAL BUSINESS DISTRICT REHABILITATION PROJECT PHASE - II | SCALE 1" = 20' | CRESCENT BLVD. IMPROVEMENTS | SHEET 7 OF 17 SHEETS prc PROJECT NO 2896 |
|---|---|---|---|---|---|---|---|---|---|---|
| NO. | DATE | DESCRIPTION | APPROVED | DRAWN | L.R.L. | | | | | |
| | | | | CHECKED | T.T.R. | | | | | |
| | | | | DATE | 3-5-86 | | | | | |

# VILLAGE OF GLEN ELLYN, ILLINOIS

## CENTRAL BUSINESS DISTRICT REHABILITATION PROJECT

## COMMUNITY DEVELOPMENT BLOCK GRANT PROJECT NO. 84-12

## STORM SEWER, WATER MAIN, PAVING AND STREET LIGHTING IMPROVEMENT




LOCATION MAP
SCALE: 1" = 1000'

SHEET INDEX


| | |
|---|---|
| 1 | TITLE SHEET |
| 2 | MAIN STREET UNDERGROUND IMPROVEMENTS |
| 3 | PENNSYLVANIA AVE. UNDERGROUND IMPROVEMENTS |
| 4-5 | CRESCENT BLVD UNDERGROUND IMPROVEMENTS |
| 6 | CRESCENT BLVD & FOREST AVE. UNDERGROUND IMPROVEMENTS |
| 7 | GLENWOOD AVE. & FOREST AVE. UNDERGROUND AND PAVING IMPROVEMENTS |
| 8 | MAIN STREET PAVING IMPROVEMENTS |
| 9 | PENNSYLVANIA AVE. PAVING IMPROVEMENTS |
| 10-11 | CRESCENT BLVD PAVING IMPROVEMENTS |
| 12 | CRESCENT BLVD & FOREST AVE. PAVING IMPROVEMENTS |
| 13 | CONSTRUCTION STAGING - STAGE I |
| 14 | CONSTRUCTION STAGING - STAGE II |
| 15 | CONSTRUCTION STAGING - STAGE III |
| 16 | CONSTRUCTION STAGING - STAGE IV |
| 17 | CONSTRUCTION STAGING - STAGE V |
| 18 | TYPICAL SECTIONS |
| 19-24 | CONSTRUCTION DETAILS |
| 25-26 | ELECTRICAL CONSTRUCTION DETAILS |


FOR UNDERGROUND UTILITY LOCATIONS
CALL J.U.L.I.E.
TOLL FREE
TELEPHONE 1-800-892-0123

The Contractors for all Contracts shall notify the Commonwealth Edison Company, Illinois Bell Telephone Company, Northern Illinois Gas Company, VILLAGE OF GLEN ELLYN PUBLIC WORKS DEPARTMENT prior to beginning any construction. Said Companies will establish on the ground the location of underground pipes, conduits or cables adjoining or crossing proposed construction.

FIELD CHECKED
by F.T.
date 9-21-84

| | | | |
|---|---|---|---|
| 1 | 1-2-85 | SHEETS 2-8, 10 & 11 | BEH |
| NO. | DATE | DESCRIPTION | APPROVED |

REVISIONS

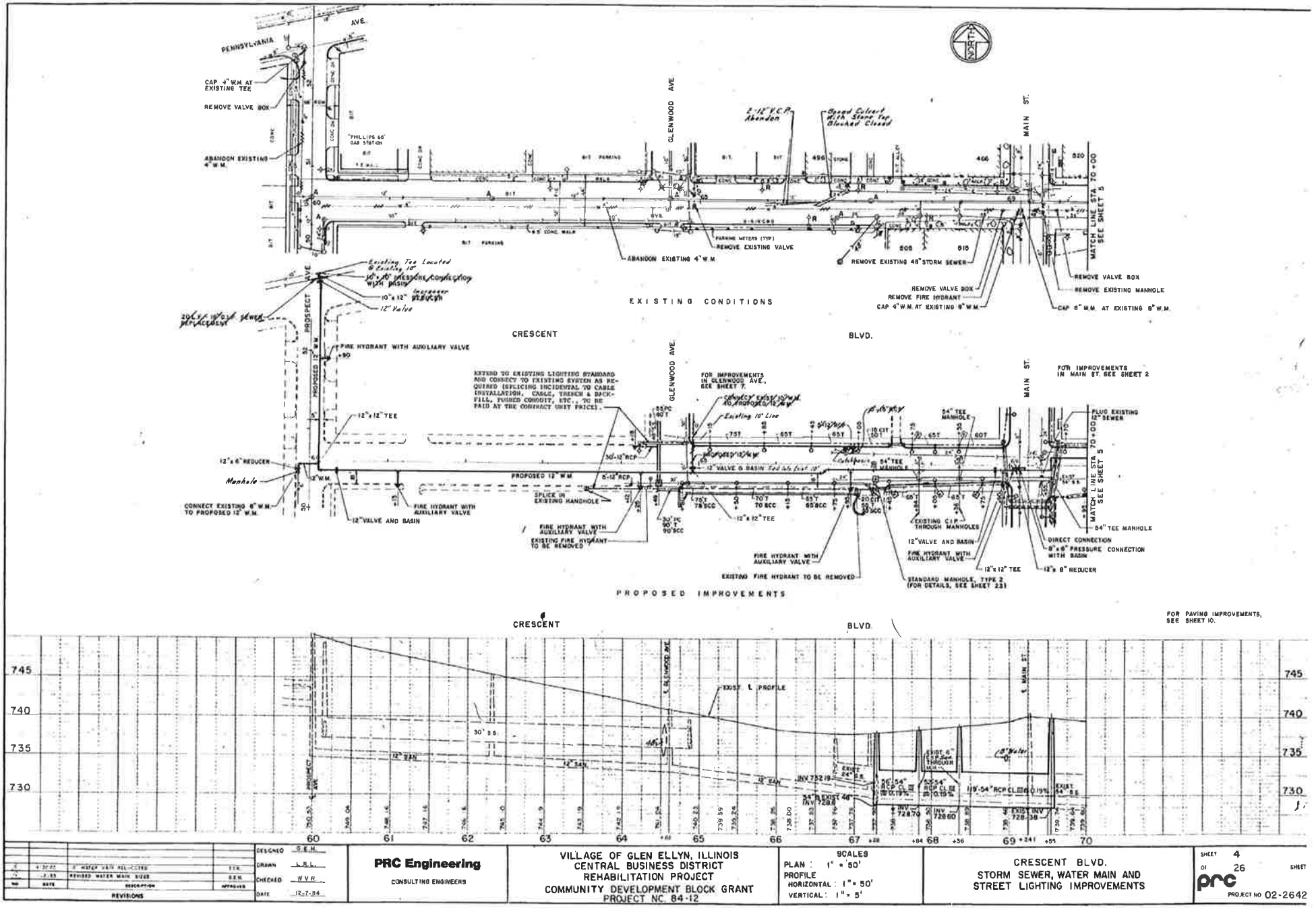
RECORD DRAWING
RECORD DRAWINGS PREPARED BY PRC CONSOER TOWNSEND FROM INFORMATION SUPPLIED BY CONTRACTOR
Dec 10, 1985

**PRC Engineering**
**CONSULTING ENGINEERS**
**CHICAGO, ILLINOIS**

DECEMBER 7, 1984

02-2642-20

#0115 SHEET 1 OF 2 SHEETS




| | | | |
|---|---|---|---|
| REVISIONS | | DESIGNED | G.E.H. |
| 4 | 4-30-85 | DRAWN | L.B.L. |
| 3 | 2-85 | CHECKED | W.V.R. |
| NO. | DATE | DATE | 12-7-84 |

**PRC Engineering**
CONSULTING ENGINEERS

VILLAGE OF GLEN ELLYN, ILLINOIS
CENTRAL BUSINESS DISTRICT
REHABILITATION PROJECT
COMMUNITY DEVELOPMENT BLOCK GRANT
PROJECT NO. 84-12

SCALES
PLAN : 1" = 50'
PROFILE
HORIZONTAL : 1" = 50'
VERTICAL : 1" = 5'

CRESCENT BLVD.
STORM SEWER, WATER MAIN AND
STREET LIGHTING IMPROVEMENTS

SHEET 4 OF 26 SHEET
PROJECT NO 02-2642

PLANS FOR

# 1996 12" WATERMAIN PROJECT
## GLENWOOD AVE – HILLSIDE AVE TO CRESCENT BLVD
## MAIN–PENN PARKING LOT – PENNSYLVANIA AVE TO ANTHONY ST

VILLAGE OF GLEN ELLYN
DUPAGE COUNTY, ILLINOIS

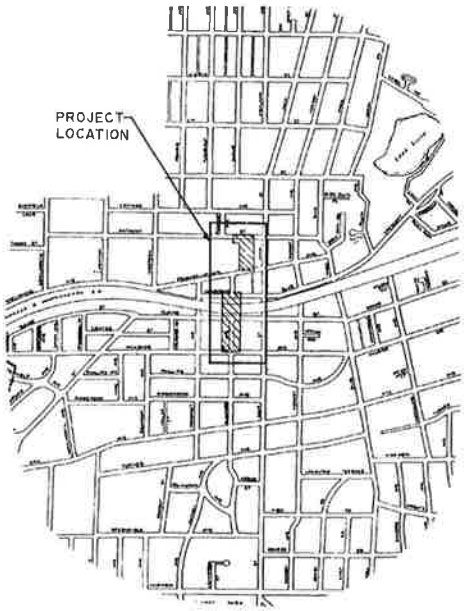
VILLAGE OF GLEN ELLYN 1834

## VILLAGE OFFICIALS

VILLAGE OF GLEN ELLYN, ILLINOIS

| | |
|---|---|
| JOHN W. DEMLING | VILLAGE PRESIDENT |
| GARY FASULES | TRUSTEE |
| VICKY HASE | TRUSTEE |
| GREGORY S. MATHEWS | TRUSTEE |
| SARAH L. POEPPEL | TRUSTEE |
| ROBERT L. RENFRO | TRUSTEE |
| RONALD E. RENNARD | TRUSTEE |
| PATRICIA A. O'CONNOR | VILLAGE CLERK |
| GARY L. WEBSTER | VILLAGE ADMINISTRATOR |
| SALLY ROETHLE | DIRECTOR OF PUBLIC WORKS |

FOR UNDERGROUND UTILITY LOCATIONS
CALL J.U.L.I.E.
TOLL FREE
TELEPHONE: 1-800-892-0123
AT LEAST 2 WORKING DAYS PRIOR TO THE BEGINNING OF ANY WORK TO HAVE UTILITIES LOCATED AND MARKED




LOCATION MAP
NOT TO SCALE
NORTH

## BENCHMARK

TBM #1
FIRE HYDRANT AT NE CORNER OF GLENWOOD AND HILLSIDE
ELEVATION . . . . . 773.06

BM #2
FIRE HYDRANT AT SW CORNER OF DUANE AND GLENWOOD
ELEVATION . . . . . 748.60

TBM #3
FIRE HYDRANT AT NE CORNER OF CRESCENT AND GLENWOOD
ELEVATION . . . . . 741.90

TBM #4
FIRE HYDRANT AT SW CORNER OF ANTHONY AND PLEASANT
ELEVATION . . . . . 771.87

TBM #5
FIRE HYDRANT SOUTH OF PUMPING STATION, WEST OF MAIN–PENN PARKING LOT
ELEVATION . . . . . 758.45

## INDEX OF SHEETS

1. COVER SHEET
2. 12" WATERMAIN BETWEEN HILLSIDE AVENUE AND DUANE STREET
3. 12" WATERMAIN BETWEEN DUANE STEET AND CRESCENT AVENUE
4. 12" WATERMAIN BETWEEN PENNSYLVANIA AVENUE AND ANTHONY STREET
5. DETAIL SHEET 1
6. DETAIL SHEET 2

I, MICHAEL P. LAUGHLIN ENGINEER A REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS HEREBY CERTIFY THAT THESE PLANS HAVE BEEN PREPARED BY A. McGURR LTD. UNDER MY PERSONAL DIRECTION.

DATED THIS 14th DAY OF JUNE, A.D. 19 96

ILLINOIS REGISTERED PROFESSIONAL ENGINEER NO. 6228097

MICHAEL P. LAUGHLIN 28097 REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS

CONTRACT PLANS

OWNER _____ TITLE _____ DATE _____

CONTRACTOR Thomas Construction TITLE PRESIDENT DATE 6-21-96

6-20-96

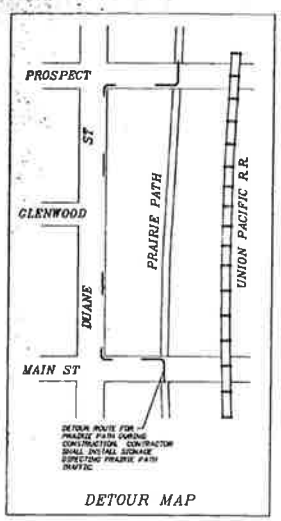
| NO. | DATE | DESCRIPTION | BY |
|---|---|---|---|
| 1 | 5/20/96 | FOR CITY REVIEW | |

A. McGURR, Ltd.
consulting engineers
951–955 West Liberty Drive
Wheaton, IL 60187-4646
(708) 665-1170

1996 12" WATERMAIN PROJECT
GLENWOOD AVE & MAIN–PENN P-LOT
COVER SHEET
Village of Glen Ellyn
Department of Public Works
30 South Lambert Road
Glen Ellyn, Illinois 60137

| | |
|---|---|
| DRAWN BY | DAS |
| DESIGNED BY | DAS |
| APPROVED BY | MPL |
| DATE | 1/24/96 |
| JOB NO. | 007.145 |
| DWG. NO. | 7445D5 |
| SHEET | 1 OF 6 |

0238




DETOUR MAP

ATTENTION: CONTRACTOR SHALL CONTACT UNION PACIFIC COMMUNICATION DEPARTMENT AT 1-800-336-9193 IN ADVANCE OF ANY WORK TO DETERMINE LOCATION OF FIBER OPTIC CABLE.

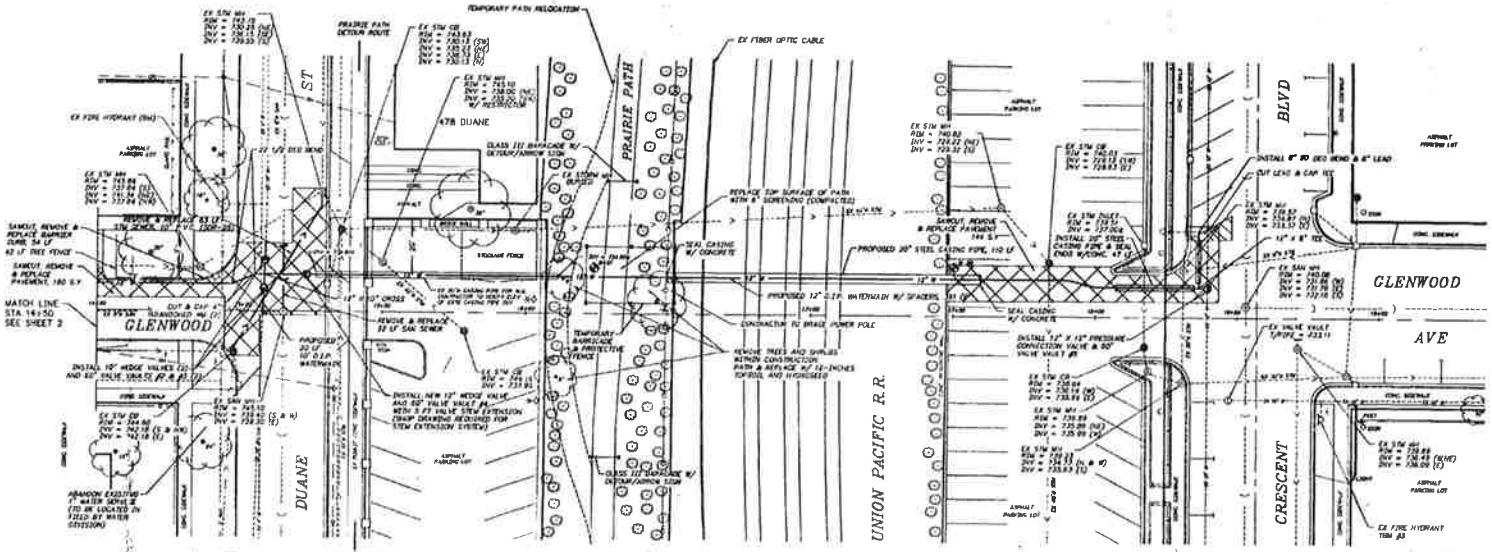
NOTE: CONTRACTOR SHALL NOTIFY STEVE BALK OF SPRINT AT 708/318-3446 FOR SCHEDULING PHYSICAL HAND EXCAVATION OF FIBER OPTIC CABLE BEFORE AUGERING CASING PIPE FOR PROPOSED WATERMAIN

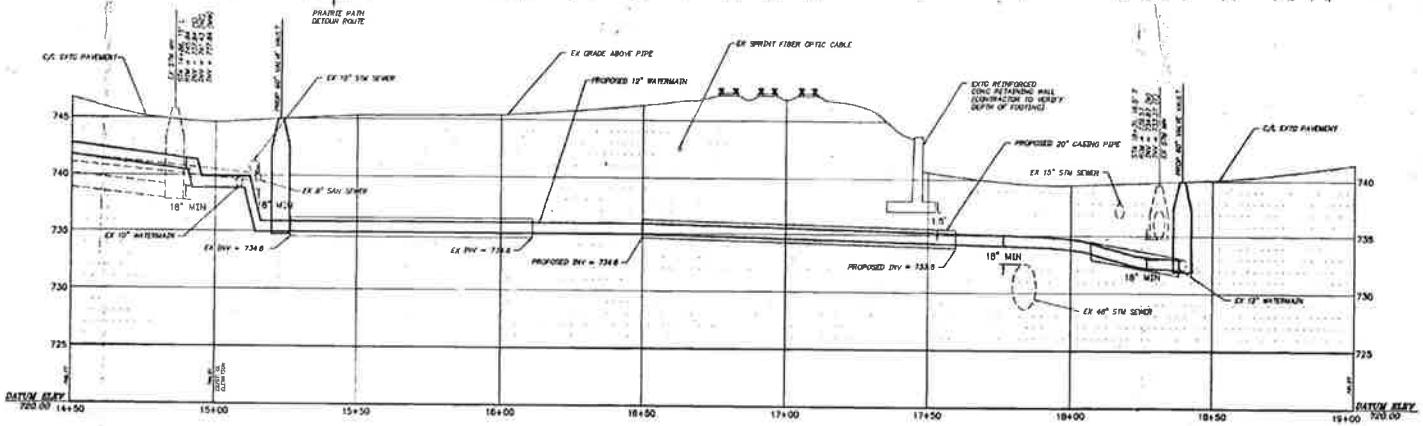
NORTH

GRAPHIC SCALE

1 inch = 20 feet

FOR UNDERGROUND UTILITY LOCATIONS
CALL J.U.L.I.E.
TOLL FREE
TELEPHONE: 1-800-892-0123
AT LEAST 2 WORKING DAYS PRIOR TO THE BEGINNING OF ANY WORK TO HAVE UTILITIES LOCATED AND MARKED



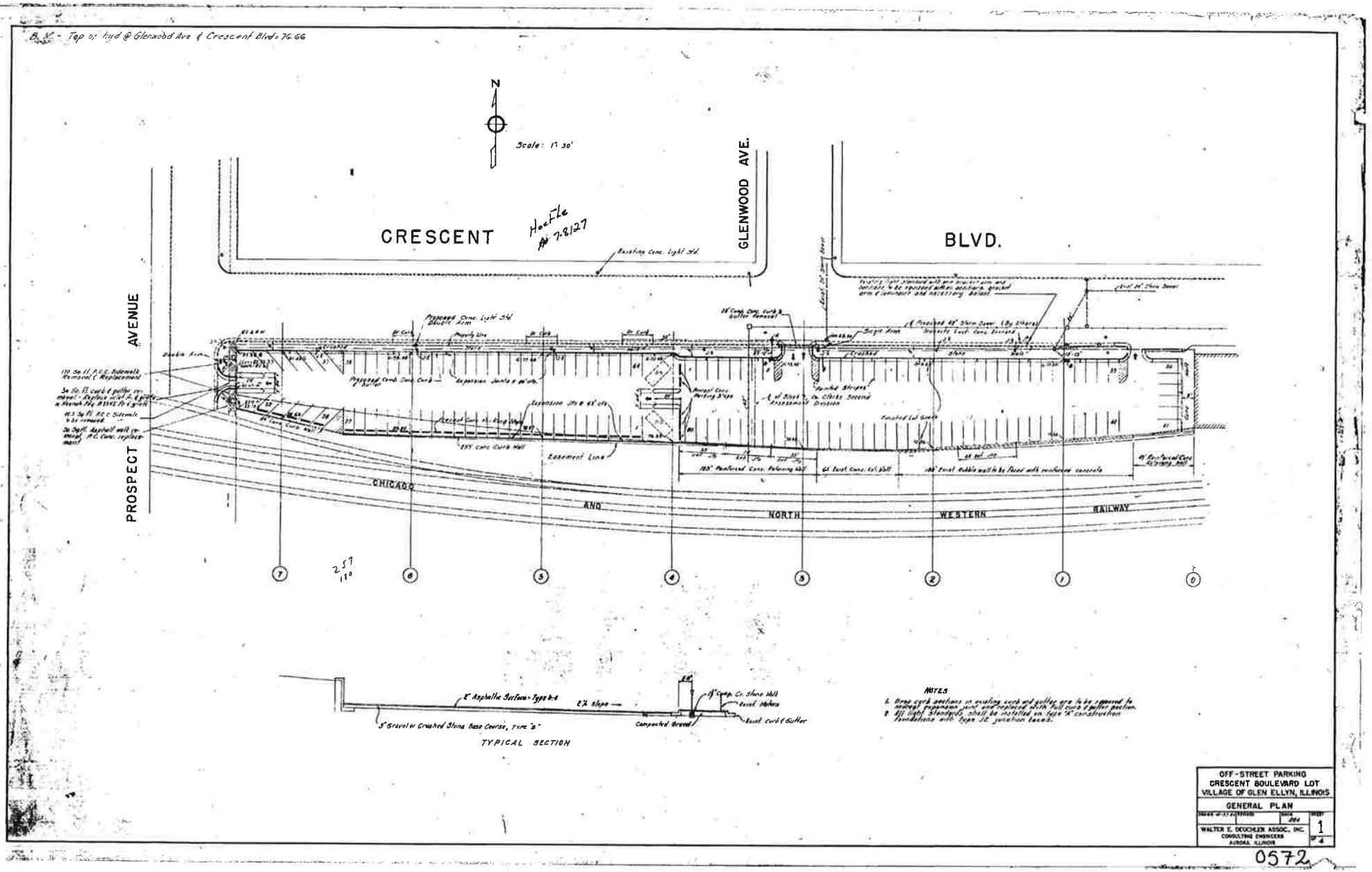



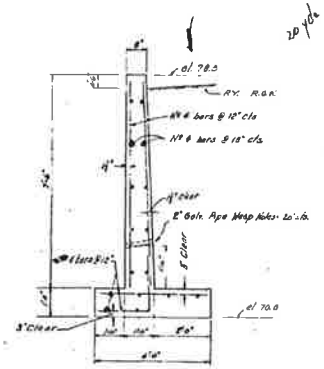

1996 12" WATERMAIN PROJECT
GLENWOOD AVENUE
BETWEEN DUANE ST & CRESCENT BLVD
Village of Glen Ellyn
Department of Public Works
30 South Lambert Road
Glen Ellyn, Illinois 60137

McGURR, Ltd.
consulting engineers
955-955 West Liberty Drive
Wheaton, IL 60187-4846
(708) 665-1170

| | |
|---|---|
| DRAWN BY | DAC |
| DESIGNED BY | DAC |
| APPROVED BY | MPL |
| DATE | 1/24/95 |
| JOB NO. | 017.440 |
| DWG NO. | 7440PP2 |
| SHEET | 3 |

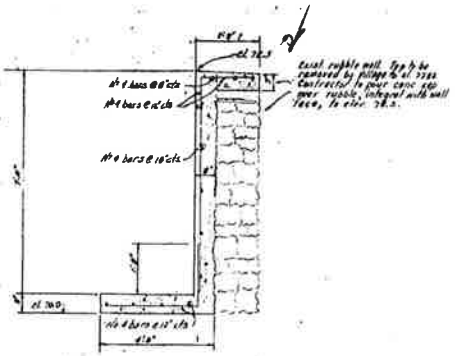
| NO. | DATE | BY | DESCRIPTION |
|---|---|---|---|
| 1 | 5/22/96 | DPS | CITY REVIEW |


B.M. - Top of hyd @ Glenwood Ave & Crescent Blvd = 76.66
N
Scale: 1" = 30'
CRESCENT BLVD.
GLENWOOD AVE.
PROSPECT AVENUE
Hoerle 7.8.27
Existing Conc. Light Std.
Proposed Conc. Light Std.
Slight Arm
Property Line
Proposed Comb. Conc. Curb & Gutter
Expansion Joints @ 40'-0" c/c
Easement Line
CHICAGO AND NORTH WESTERN RAILWAY
257 11°
7
6
5
4
3
2
1
0
E. Asphaltic Surface Type B-4
2% Slope
5" Gravel or Crushed Stone Base Course, Type "A"
Compacted Ground
Reinf. Curb & Gutter
TYPICAL SECTION
NOTES
1. Drive curb sections on existing curb and gutter are to be removed to nearest expansion joint and replaced with full curb & gutter section.
2. All light standards shall be installed on type "A" construction foundations with type SE junction boxes.
OFF-STREET PARKING
CRESCENT BOULEVARD LOT
VILLAGE OF GLEN ELLYN, ILLINOIS
GENERAL PLAN
WALTER E. DEUCHLER ASSOC., INC.
CONSULTING ENGINEERS
AURORA, ILLINOIS
SHEET 1 OF 4
0572

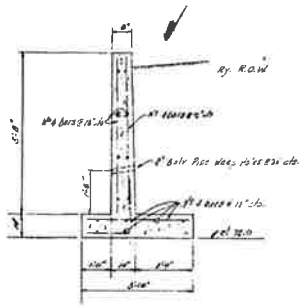



SECTION
REINFORCED CONCRETE RETAINING WALL
STA. 0+00 to STA. 0+47
Scale: 1/4"=1'-0"

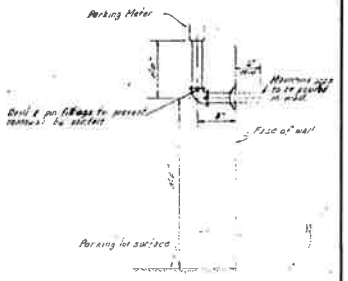
PLAN VIEW
TYPICAL EXPANSION JOINT
Scale: 1"=1'-0"



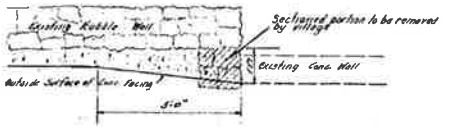

SECTION
REINFORCED CONCRETE FACING FOR RUBBLE WALL
STA 0+47 to STA 2+27
Scale: 1/4"=1'-0"



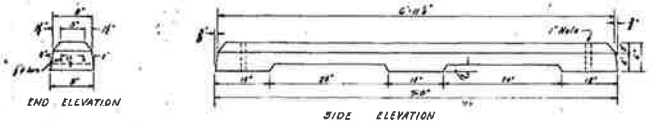

SECTION
REINFORCED CONCRETE RETAINING WALL
STA 2+27 to STA 3+32
Scale: 1/4"=1'-0"



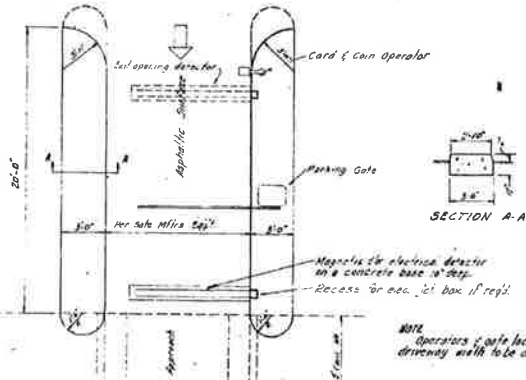

METER MOUNTING DETAILS FOR CONCRETE RETAINING WALLS




PLAN
JUNCTURE OF RUBBLE WALL & EXIST. CONC. WALL



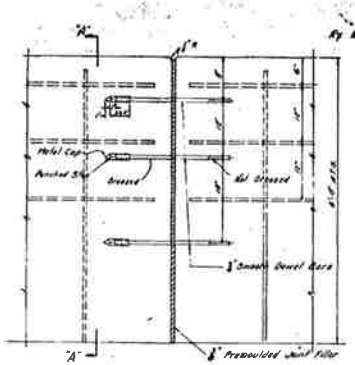

PRECAST CONCRETE PARKING STOP DETAILS



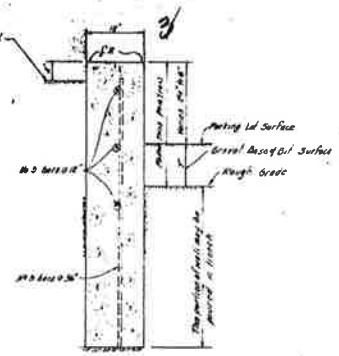

PARKING GATE ENTRANCE DETAILS
EXIT DETAILS SHOWN BY DASHED LINES



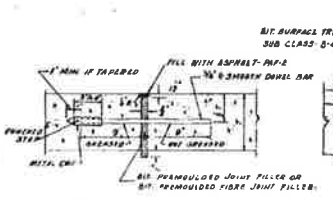

SECTION A-A




CONCRETE CURB WALL
EXPANSION JOINT
Scale: 1"=1'-0"

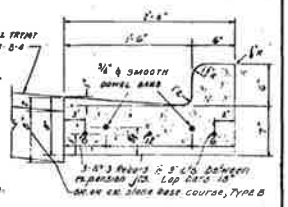



SECTION "A-A"




EXPANSION JOINT DETAIL
SCALE: 1½"=1'-0"

NOTE: COST OF EXPANSION JOINTS SHALL BE INCIDENTAL TO COST OF COMB. CONC. CURB AND GUTTER.




COMB. CONC. CURB & GUTTER
SCALE: 1½"=1'-0"

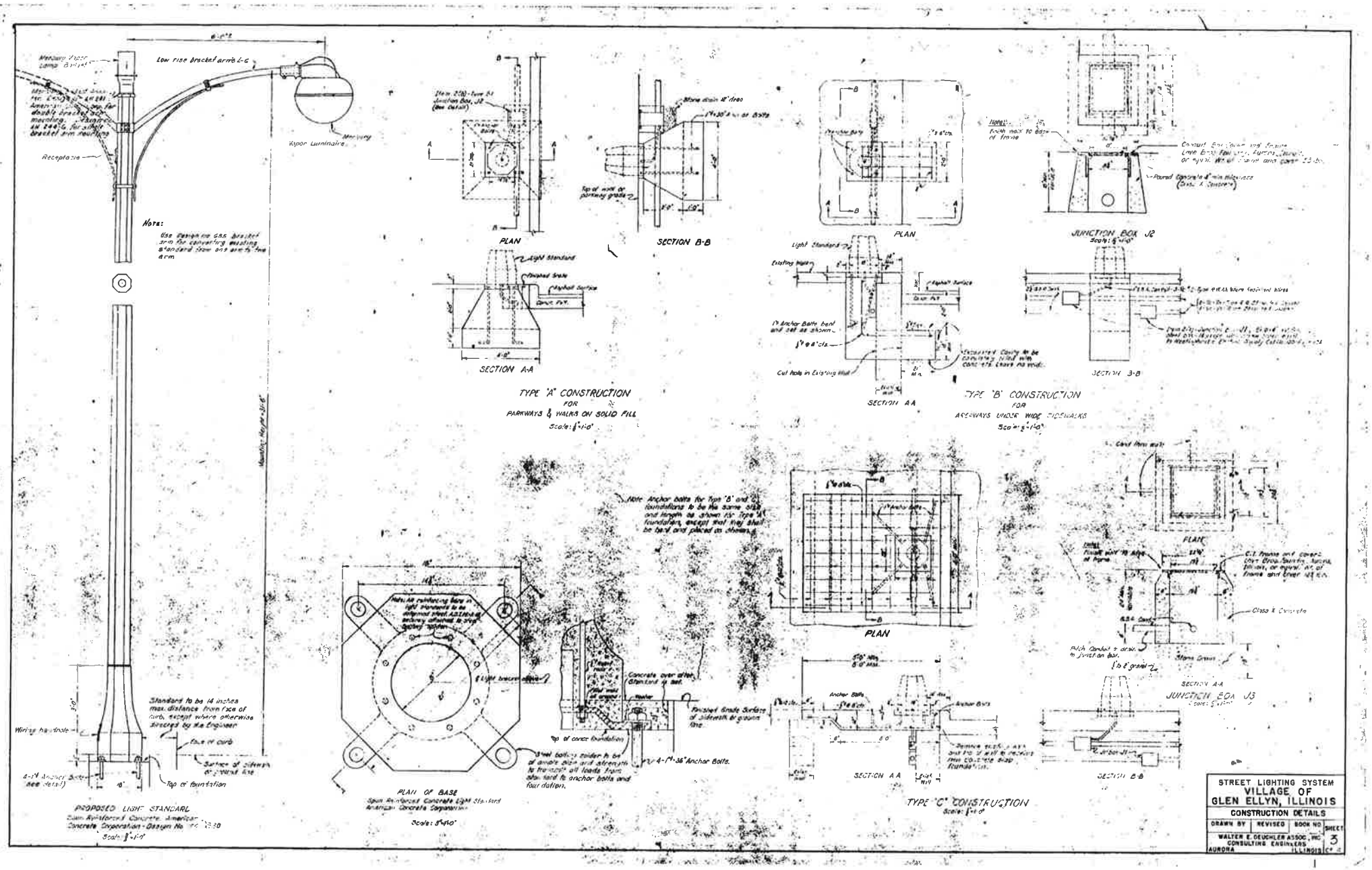
NOTE: SUBGRADE FOR CURB & GUTTER SHALL BE BROUGHT TO PROPER GRADE BY THE ADDITION OF SAND OR FINE GRAVEL. THIS SHALL BE DONE WITHOUT EXTRA COMPENSATION TO CONTRACTOR.

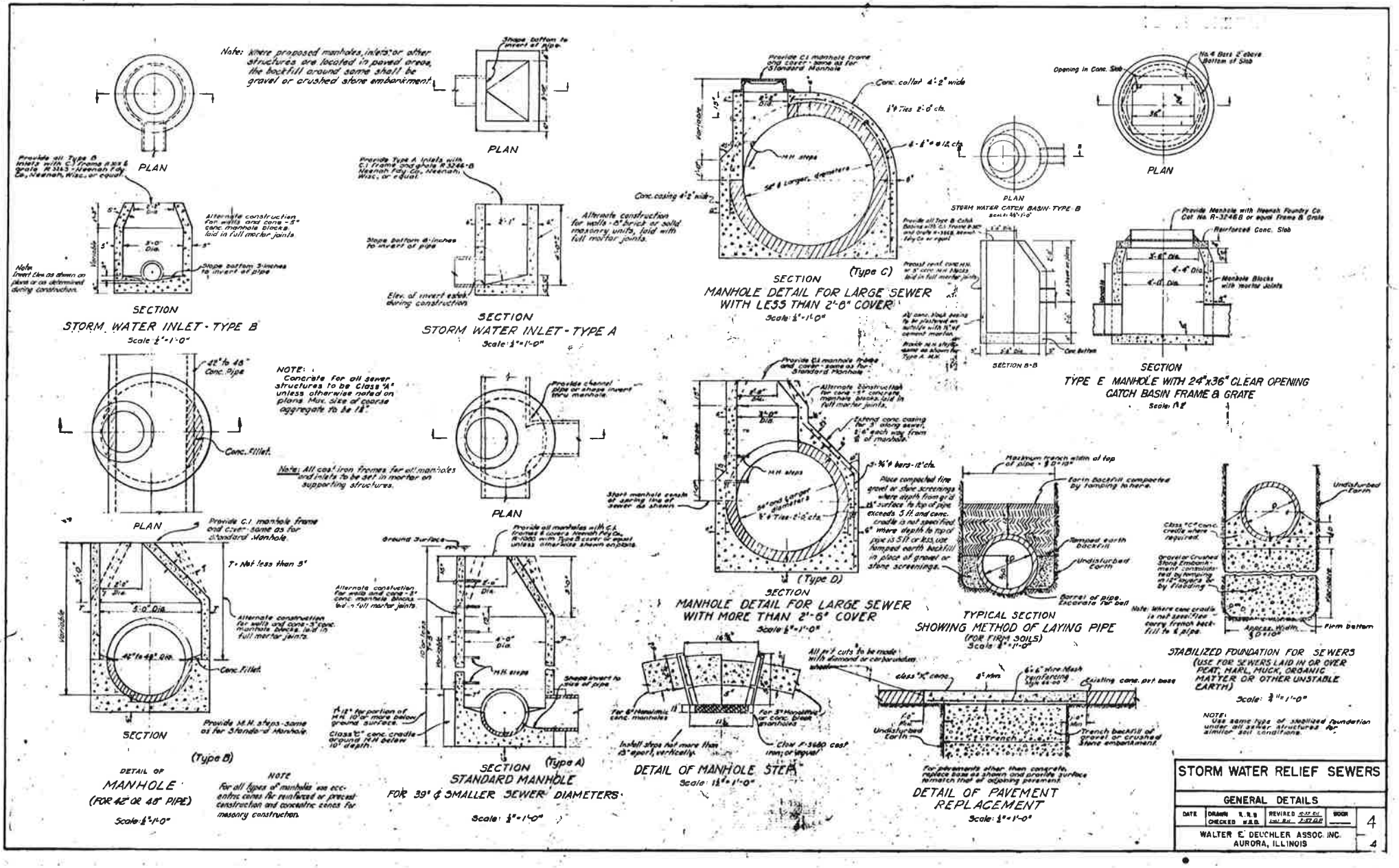
Note: Operators & gate location, conduit locations, equipment fdns. & driveway width to be determined by gate mfr.

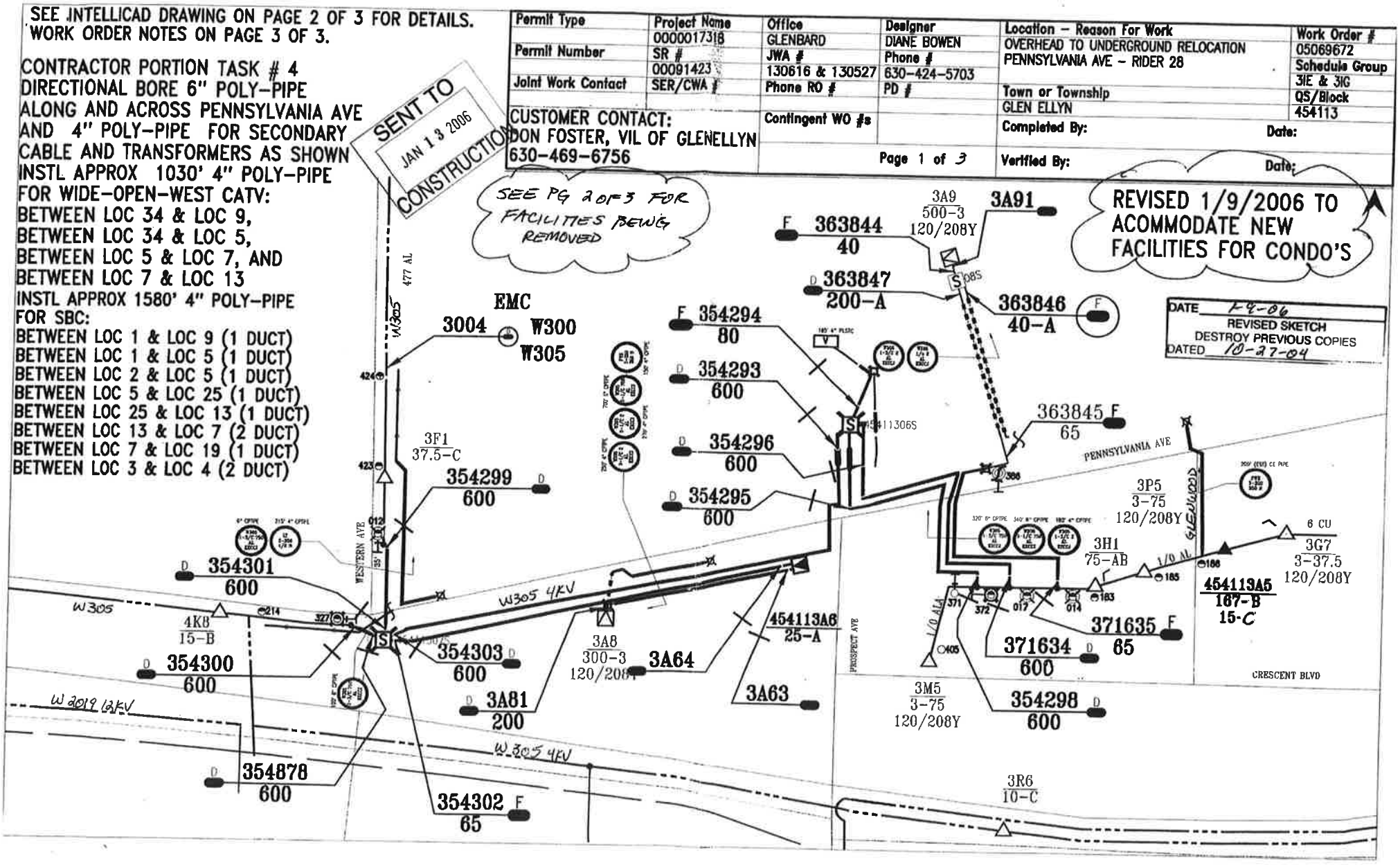
OFF-STREET PARKING
CRESCENT BOULEVARD LOT
VILLAGE OF GLEN ELLYN, ILLINOIS
CONCRETE DETAILS

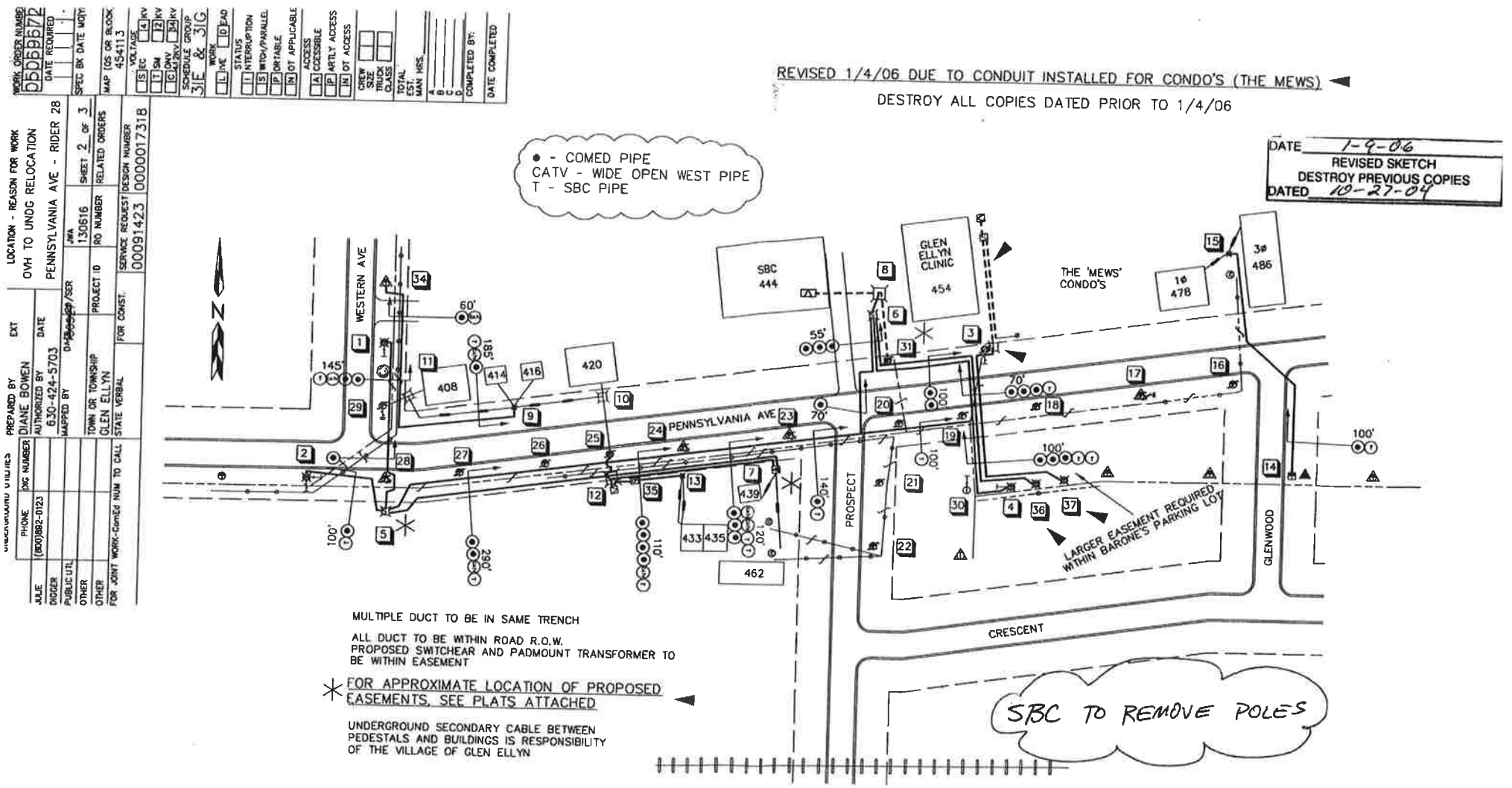
| DRAWN | REVISED | JOB | SHEET |
|---|---|---|---|
| 11-25-85 RH | | 284 | 2 |

WALTER E. DEUCHLER ASSOC. INC.
CONSULTING ENGINEERS
AURORA, ILLINOIS


Low rise Bracket arm L-C
Mercury
Vapor Luminaire
Receptacle
Note:
Use Designation G&S bracket arm for converting existing aluminum standard from arm to new arm
PLAN
SECTION B-B
SECTION A-A
TYPE 'A' CONSTRUCTION
FOR
PARKWAYS & WALKS ON SOLID FILL
PLAN
SECTION AA
TYPE 'B' CONSTRUCTION
FOR
AREAWAYS UNDER SIDEWALKS
JUNCTION BOX J2
SECTION B-B
Standard to be 14 inches max. distance from face of curb, except where otherwise directed by the Engineer
Wiring handhole
Face of curb
Surface of sidewalk or ground line
Top of foundation
PROPOSED LIGHT STANDARD
PLAN OF BASE
Scale: 3"=1'-0"
Note: Anchor bolts for Type 'B' and 'C' foundations to be the same size and length as shown for Type 'A' foundations, except that they shall be bent and placed as shown.
Concrete over-pour, Standard to set.
Finished Grade Surface of sidewalk or ground line.
Top of conc. foundation
4-1"ø-36" Anchor Bolts.
PLAN
SECTION AA
TYPE 'C' CONSTRUCTION
JUNCTION BOX J3
SECTION B-B
STREET LIGHTING SYSTEM
VILLAGE OF
GLEN ELLYN, ILLINOIS
CONSTRUCTION DETAILS
DRAWN BY | REVISED | BOOK NO | SHEET
3
WALTER E. DEUCHLER ASSOC., INC.
CONSULTING ENGINEERS
AURORA ILLINOIS


PLAN
Note: Where proposed manholes, inlets or other structures are located in paved areas, the backfill around same shall be gravel or crushed stone embankment.
Provide all Type B inlets with C.I. frame & grate, R 3153 - Neenah Fdy. Co., Neenah, Wisc., or equal
Alternate construction for walls and cone - 5" conc. manhole blocks laid in full mortar joints.
Slope bottom 3 inches to invert of pipe
Note: Invert Elev. as shown on plans or as determined during construction.
SECTION
STORM WATER INLET - TYPE B
Scale: ½"=1'-0"
Provide Type A inlets with C.I. frame and grate R 3246-B Neenah Fdy. Co., Neenah, Wisc., or equal
Slope bottom 6 inches to invert of pipe
Alternate construction for walls - 8" brick or solid masonry units, laid with full mortar joints.
Elev. of invert established during construction
SECTION
STORM WATER INLET - TYPE A
Scale: ½"=1'-0"
Slope bottom to invert of pipe
PLAN
Provide C.I. manhole frame and cover - same as for Standard Manhole
Conc. collar 4'-2" wide
¾" Ties 2'-0" ctr.
6-¾" ø @ 12 ctr.
M.H. steps
24" & Larger diameters
Conc. casing 4'-2" wide
(Type C)
SECTION
MANHOLE DETAIL FOR LARGE SEWER WITH LESS THAN 2'-0" COVER
Scale: ½"=1'-0"
PLAN
STORM WATER CATCH BASIN - TYPE B
Scale: ½"=1'-0"
Opening in Conc. Slab
No. 4 Bars 2" above Bottom of Slab
Provide all Type B Catch Basins with C.I. frame R 3067 and Grate R-3568, Neenah Fdy. Co. or equal
Precast reinf. cone M.H. or 5' conc. M.H. Blocks laid in full mortar joints
All conc. block apping to be plastered on outside with ½" of cement mortar.
Provide M.H. steps - same as shown for Type A M.H.
Conc. Bottom
SECTION B-B
Provide Manhole with Neenah Foundry Co. Cat. No. R-3246 B or equal Frame & Grate
Reinforced Conc. Slab
3'-6" Dia.
4'-0" Dia.
4'-0" Dia.
Manhole Blocks with Mortar Joints
SECTION
TYPE E MANHOLE WITH 24"x36" CLEAR OPENING CATCH BASIN FRAME & GRATE
Scale: 1"=1'-0"
42" to 48" Conc. Pipe
Conc. Fillet.
PLAN
NOTE: Concrete for all sewer structures to be Class "A" unless otherwise noted on plans. Max. size of coarse aggregate to be 1½".
Note: All cast iron frames for all manholes and inlets to be set in mortar on supporting structures.
Provide channel pipe or shape invert thru manhole.
PLAN
Provide C.I. manhole frame and cover - same as for Standard Manhole
Alternate construction for walls and cone - 8" conc. manhole blocks laid in full mortar joints.
Extend conc. casing for 3' along sewer, 1'-6" each way from ℄ of manhole.
Short manhole cones at spring line of sewer as shown
M.H. steps
24" and Larger diameters
6'-6" Ties - 2'-0" ctr.
3-¾" ø bars - 12" ctr.
(Type D)
SECTION
MANHOLE DETAIL FOR LARGE SEWER WITH MORE THAN 2'-6" COVER
Scale: ½"=1'-0"
Maximum trench width at top of pipe = O.D. + 18"
Earth backfill compacted by tamping to here.
Tamped earth backfill
Undisturbed Earth
Barrel of Pipe. Encircle Top Bell
TYPICAL SECTION SHOWING METHOD OF LAYING PIPE (FOR FIRM SOILS)
Scale: 1"=1'-0"
Undisturbed Earth
Class "C" Conc. cradle where required.
Greater Crushed Stone Embankment consolidated by tamping and puddling or by flooding
Note: Where cone cradle is not specified - pipe to be laid in trench, trench backfilled to ℄ of pipe.
Firm bottom
Approx. Width = O.D. + 10"
STABILIZED FOUNDATION FOR SEWERS (USE FOR SEWERS LAID IN OR OVER PEAT, MARL, MUCK, ORGANIC MATTER OR OTHER UNSTABLE EARTH)
Scale: ¾"=1'-0"
NOTE: Use same type of stabilized foundation under all other structures for similar soil conditions.
Provide C.I. manhole frame and cover - same as for Standard Manhole
T - Not less than 5"
5'-0" Dia.
42" to 48" Dia.
Alternate construction for walls and cone - 8" conc. manhole blocks laid in full mortar joints.
Conc. Fillet.
Provide M.H. steps - same as for Standard Manhole
SECTION
(Type B)
DETAIL OF MANHOLE (FOR 42" OR 48" PIPE)
Scale: ½"=1'-0"
NOTE
For all types of manholes use eccentric cones for reinforced or precast construction and concentric cones for masonry construction.
Ground Surface
Provide all manholes with C.I. frames & covers Neenah Fdy. Co. R-1000 with Type B cover or equal unless otherwise shown on plans.
Alternate construction for walls and cone - 8" conc. manhole blocks laid in full mortar joints.
4'-0" Dia.
M.H. steps
Shape invert to size of pipe
1'-6" top portion of M.H. 10' or more below ground surface.
Class "C" conc. cradle across M.H. below 10' depth.
SECTION (Type A)
STANDARD MANHOLE FOR 39" & SMALLER SEWER DIAMETERS
Scale: ½"=1'-0"
All 8" I cuts to be made with diamond or carborundum wheel
For 8" Hanamil conc. manholes
For 3" Hanamil or conc. block manholes
Install steps not more than 15" apart, vertically.
Class "A" conc.
8" Min.
6"x6" wire Mesh reinforcing 4/4-00
Existing conc. or rock base
Undisturbed Earth
Trench backfill of gravel or crushed Stone embankment.
Cast iron M.H. steps Clow F-3460 cast iron, or equal
DETAIL OF MANHOLE STEP
Scale: 1½"=1'-0"
For pavements other than concrete, replace base as shown and provide surface to match that of adjoining pavement.
DETAIL OF PAVEMENT REPLACEMENT
Scale: ½"=1'-0"
STORM WATER RELIEF SEWERS
GENERAL DETAILS
DATE
DRAWN R.R.B.
CHECKED W.R.B.
REVISED 4-17-61
WORK
4
WALTER E. DEUCHLER ASSOC. INC.
AURORA, ILLINOIS
4


SEE INTELLICAD DRAWING ON PAGE 2 OF 3 FOR DETAILS.
WORK ORDER NOTES ON PAGE 3 OF 3.
CONTRACTOR PORTION TASK # 4
DIRECTIONAL BORE 6" POLY-PIPE
ALONG AND ACROSS PENNSYLVANIA AVE
AND 4" POLY-PIPE FOR SECONDARY
CABLE AND TRANSFORMERS AS SHOWN
INSTL APPROX 1030' 4" POLY-PIPE
FOR WIDE-OPEN-WEST CATV:
BETWEEN LOC 34 & LOC 9,
BETWEEN LOC 34 & LOC 5,
BETWEEN LOC 5 & LOC 7, AND
BETWEEN LOC 7 & LOC 13
INSTL APPROX 1580' 4" POLY-PIPE
FOR SBC:
BETWEEN LOC 1 & LOC 9 (1 DUCT)
BETWEEN LOC 1 & LOC 5 (1 DUCT)
BETWEEN LOC 2 & LOC 5 (1 DUCT)
BETWEEN LOC 5 & LOC 25 (1 DUCT)
BETWEEN LOC 25 & LOC 13 (1 DUCT)
BETWEEN LOC 13 & LOC 7 (2 DUCT)
BETWEEN LOC 7 & LOC 19 (1 DUCT)
BETWEEN LOC 3 & LOC 4 (2 DUCT)
SENT TO CONSTRUCTION
JAN 13 2006
Permit Type
Project Name
0000017318
Office
GLENBARD
Designer
DIANE BOWEN
Permit Number
SR #
00091423
JWA #
130616 & 130527
Phone #
630-424-5703
Joint Work Contact
SER/CWA #
Phone RO #
PD #
CUSTOMER CONTACT:
DON FOSTER, VIL OF GLENELLYN
630-469-6756
Contingent WO #s
Page 1 of 3
Location - Reason For Work
OVERHEAD TO UNDERGROUND RELOCATION
PENNSYLVANIA AVE - RIDER 28
Work Order #
05069672
Schedule Group
3IE & 3IG
Town or Township
GLEN ELLYN
QS/Block
454113
Completed By:
Date:
Verified By:
Date:
SEE PG 2 OF 3 FOR FACILITIES BEING REMOVED
REVISED 1/9/2006 TO ACOMMODATE NEW FACILITIES FOR CONDO'S
DATE 1-9-06
REVISED SKETCH
DESTROY PREVIOUS COPIES
DATED 10-27-04
EMC
3004
W300
W305
3A9
500-3
120/208Y
3A91
363844
40
363847
200-A
363846
40-A
354294
80
354293
600
354296
600
354295
600
363845
65
3F1
37.5-C
354299
600
354301
600
4K8
15-B
354300
600
354303
600
3A8
300-3
120/208Y
3A64
3A81
200
3A63
454113A6
25-A
354878
600
354302
65
3P5
3-75
120/208Y
3H1
75-AB
371635
65
371634
600
354298
600
3M5
3-75
120/208Y
3R6
10-C
3G7
3-37.5
120/208Y
6 CU
454113A5
167-B
15-C
W305
W2019 12KV
W305 4KV
WESTERN AVE
PENNSYLVANIA AVE
PROSPECT AVE
CRESCENT BLVD


WORK ORDER NUMBER 05D6867D
DATE REQUIRED
SPEC BK DATE MO/YR
MAP (OS OR BLOCK) 454113
VOLTAGE 4 KV 12 KV 34 KV
SCHEDULE GROUP 31E & 31G
WORK LIVE DEAD
STATUS INTERRUPTION SWITCH/PARALLEL PORTABLE NOT APPLICABLE
ACCESS ACCESSIBLE ARTLY ACCESS NOT ACCESS
CREW SIZE TRUCK CLASS
TOTAL EST. MAN HRS. A B C D
COMPLETED BY:
DATE COMPLETED
LOCATION - REASON FOR WORK
OVH TO UNDG RELOCATION
PENNSYLVANIA AVE - RIDER 28
SHEET 2 OF 3
JMA 130616
RO NUMBER
PROJECT ID
SERVICE REQUEST 00091423
DESIGN NUMBER 0000017318
RELATED ORDERS
FOR CONST.
PREPARED BY DIANE BOWEN
AUTHORIZED BY
630-424-5703
MAPPED BY
DATE
EXT
TOWN OR TOWNSHIP GLEN ELLYN
STATE VERBAL
FOR JOINT WORK-ComEd NUM TO CALL
UNDERGROUND UTILITIES
PHONE
DIG NUMBER
JULIE (800)892-0123
DIGGER
PUBLIC UTL
OTHER
OTHER
REVISED 1/4/06 DUE TO CONDUIT INSTALLED FOR CONDO'S (THE MEWS)
DESTROY ALL COPIES DATED PRIOR TO 1/4/06
● - COMED PIPE
CATV - WIDE OPEN WEST PIPE
T - SBC PIPE
DATE 1-9-06
REVISED SKETCH
DESTROY PREVIOUS COPIES
DATED 10-27-04
N
WESTERN AVE
PENNSYLVANIA AVE
PROSPECT
CRESCENT
GLENWOOD
SBC 444
GLEN ELLYN CLINIC 454
THE 'MEWS' CONDO'S
1ø 478
3ø 486
408
414
416
420
439
433
435
462
60'
55'
145'
185'
70'
100'
140'
120'
290'
110'
LARGER EASEMENT REQUIRED WITHIN BARONE'S PARKING LOT
MULTIPLE DUCT TO BE IN SAME TRENCH
ALL DUCT TO BE WITHIN ROAD R.O.W.
PROPOSED SWITCHEAR AND PADMOUNT TRANSFORMER TO BE WITHIN EASEMENT
FOR APPROXIMATE LOCATION OF PROPOSED EASEMENTS, SEE PLATS ATTACHED
UNDERGROUND SECONDARY CABLE BETWEEN PEDESTALS AND BUILDINGS IS RESPONSIBILITY OF THE VILLAGE OF GLEN ELLYN
SBC TO REMOVE POLES

| Permit Type | Project Name | Office | Designer | Location – Reason For Work | Work Order # |
|---|---|---|---|---|---|
| | SR # | JWA # | NE BOWEN Phone # | OVERHEAD TO UNDERGROUND RELOC PENNSYLVANIA AVE | 05069672 Schedule Group |
| | 00091423 | 130616 & 130527 | 630-424-5703 | | 3IE & 3IG |
| Joint Work Contact | SER / CWA # | Phone RO # | PD # | Town or Township | QS / Block |
| | | Contingent WO #s | | GLEN ELLYN | 454113 |
| | | | | Completed By : | Date : |
| | | Page 3 of 3 | | Verified By : | Date : |

DATE 1-9-06
REVISED SKETCH
DESTROY PREVIOUS COPIES
DATED 10-27-04

CUSTOMER CONTACT:
DON FOSTER, PUBLIC WORKS, VILLAGE OF GLEN ELLYN – (630)469-6756

LOC 1: INSTL 40-2 JOINT POLE AND BUILD 750 DOWNFEED – NEW POLE TO BE 35' NORTH OF EXISTING CORNER POLE (LABEL DISC # 354299 PER C7493)
LOC 2: BUILD 750 DOWNFEED ON EXISTING JOINT POLE (LABEL DISC # 354300 PER C7493)
LOC 3: REM EXISTING DOWNFEED POLE (BY GLEN ELLYN CLINIC) AND SPLICE INTO 3/C #2 CABLE (LABEL DISC # 354298 PER C7493)
LOC 5: INSTL PADMOUNT SWITCHGEAR (3-L, 1-F) IN EASEMENT ON SOUTHWEST CORNER OF HARRIS BANK PROPERTY (LABEL SWGR # 45411307S, FUSE # 354302, & DISC #'S 354878, 354301 AND 354303 PER C7493) – SEE ATTACHED EASEMENT SKETCH
LOC 6: INSTL PADMOUNT SWITCHGEAR (3-L, 1-F) IN EASEMENT APPROX 50' NORTH OF SOUTHEAST CORNER OF SBC PROPERTY NORTH OF EXISTING DOWNFEED POLE (LABEL SWGR # 45411306S, FUSE # 354294 & DISC #'S 354293, 354295 AND 354296 PER C7493) – SEE ATTACHED EASEMENT SKETCH
LOC 7: INSTL 1-PH PADMOUNT TRANSFORMER ON NORTHWEST CORNER OF FOUNDER'S PARK (S/S PENNSYLVANIA AVE) FEED 3-PHASE THRU TO TR 3A8 (LOC 12) (LABEL TRANSFORMER # 454113A6 AND DISC #'S 3A64 & 3A63 PER C7493)
LOC 8: BREAK DUCT AND SPLICE CABLE TO SBC VAULT (444 PENNSYLVANIA AVE)
LOC 9: INSTL 1-PH PEDESTAL ON NORTHSIDE OF PENNSYLVANIA AVE TO SERVE THE 4 BUILDINGS ON THE SOUTHEAST CORNER OF WESTERN AND PENNSYLVANIA (408, 414, 416 & 420 PENNSYLVANIA AVE)
LOC 10 & 11: SPLICE INTO EXISTING UNDERGROUND SECONDARY CABLE SERVING 408 & 420 PENNSYLVANIA AVE
LOC 12: SPLICE INTO CABLE BETW TR 454113A8 & FUSE # 355544 (LOC 25). INSTL 3/C #2 AL CABLE FROM TR 454113A6 (LOC 7).
LOC 13: INSTALL 3-PHASE PEDESTAL TO SERVE 433 & 435 PENNSYLVANIA SERVICE CABLE BY VILLAGE
LOC 14: REPLACE 35-2 JOINT POLE WITH 45-2 POLE – INSTALL OPEN-DELTA TRANSFORMER (LABEL TRANSF # 454113A5)
LOC 15: INSTALL 3-PH PEDESTAL FOR SERVICE TO 478 & 486 PENNSYLVANIA AVE – SERVICE CABLE BY VILLAGE – 4/C 350 SECONDARY CABLE BETWEEN POLE & PED BY COMED
LOC's 16 THRU 29 & LOC 31: REMOVE ALL POLES AND OVERHEAD FACILITIES
LOC 30: INSTALL ANCHOR ON EXISTING 'L' CORNER POLE (E/PROSPECT)
LOC'S 32 & 33: WIRE/CABLE NOTES
LOC 34: INSTALL SECONDARY RISER ON TRANSF POLE 3F1 AND INSTALL 3/C 350 SECONDARY CABLE TO PEDESTAL (LOC 9)
LOC 35: REMOVE CABLE PROTECTION BOX AND SPLICE 4/C 350 SECONDARY TO 3-PHASE PEDESTAL (LOC 13)
LOC 36: INSTALL 40-2 POLE AND BUILD 750 DOWNFEED (LABEL DISC # 371634 PER C7493)
LOC 37: INSTALL 40-2 POLE AND BUILD #2 DOWNFEED (LABEL FUSE # 371635 PER C7493)

INSTALL 750 AL CABLE IN ALL MAIN LINE DUCT
INSTALL 3/C #2 BETWEEN SWITCHGEAR 45411307S AND TRANSF 454113A6, BETWEEN TRANSF 3A6 AND 454113A7, AND BETW LOC 3 AND FUSE # 371635

ALL CABLE TO BE IN COMED DUCT

REVISED 10/25/05 – SBC SWITCHGEAR LOCATION – EASEMENT CHANGED

REVISED 1/4/2006 – ADD 2 NEW DOWNFEED POLES TO ACOMMODATE THE MEWS CONDO'S

**Glen Ellyn Village Board**
535 Duane Street
Glen Ellyn, IL 60137

Meeting: 01/21/20 07:00 PM
Department: Glen Ellyn Village Board
Department Head: Lindsey Kaminsky
Category: Discussion Item
Prepared By: Lindsey Kaminsky

**SCHEDULED**

**AGENDA ITEM (ID # 4319)** DOC ID: 4319

# Village Manager Franz will provide an update to the 2018-2020 Strategic Plan.

**Background**

The attached Strategic Plan and Action Plan has been updated to incorporate results over the last quarter. The new Village Board intends to conduct the next strategic plan discussions after the Comprehensive Plan is complete, so this plan will continue to be our overall focus over the next few months. Remember, this plan has been our road map for the last few years, so staff has, and will continue to execute, on these strategic issues, goals and action steps. Strategic Plans allow boards to focus on strategic issues and goals and management to focus on actions steps to achieve those goals. This plan was created and executed within this recommended framework. During the strategic planning session, the Village Board identified the following strategic issues:

1. **Strategic Issue I: INFRASTRUCTURE. Invest in infrastructure to meet key needs, including downtown accessibility, Village facilities, streets, utility, and technology improvement**
2. **Strategic Issue II: ECONOMIC DEVELOPMENT. Engage in progressive and proactive economic development to attract and retain key businesses to foster a vibrant business community by strategically increasing the Village's footprint, adding housing variety and increasing downtown commercial growth and residential density.**
3. **Strategic Issue III: COMMUNICATIONS AND ENGAGEMENT: Communicate, inform, engage, and involve the community and volunteers to support and act on the Village's high priority needs and opportunities.**
4. **Strategic Issue IV: FINANCIAL SUSTAINABILITY. Grow revenue and focus spending in line with anticipated resources to meet the highest priority needs and maintain the Village's AAA bond rating.**
5. **Strategic Issue V: Village Links/Reserve 22 mission is to enhance the quality of life in Glen Ellyn by offering outstanding recreational and dining opportunities, while providing storm water protection, at no costs to the taxpayer.**

This plan includes both short-term and long-term goals and this plan, like most plans, evolves over time as priorities shift and resources are assigned. Each strategic issue has multiple goals and action

steps associated with each. These action steps have comments and indicates a status based on a classification of the following:

- On Schedule
- Delayed
- Off Track
- High Priority Project

In addition, the Village Board has identified the highest priority projects (blue) to indicate the level of importance to those particular goals. We have on schedule or achieved 18 of the 19 strategic goals and the vast majority of action steps; so the execution has been good. Staff will be discussing some of these projects and projects that are off track at the Village Board Workshop on Tuesday night.

**Recommendation**

For discussion purposes only, no action is requested at this time.

**ATTACHMENTS:**

- Copy of 2018-20 Village Strategic Plan-CY19 Q4 Update-2020-01-1 (PDF)

1/1/2020

# 2018-2020 Village of Glen Ellyn Strategic Plan
## CY19 - Q4

KEY:

Green: On-Track - no issues likely to affect project scope, schedule, and or budget. Successful project completion is expected. (X indicates completion.)

Yellow: At-risk - known or potential issues are likely to affect project scope, schedule and/or budget. Successful project completion still achievable.

Red: Critical - significant unresolved issues impacts project scope, schedule &/or budget. Successful project completion unlikely w/o changes or resources

Blue: Highest priority Initiatives of Village Board

| | |
|---|---|
| TOTAL GOALS COMPLETE/ON TRACK: | 18/19 |
| TOTAL ACTION STEPS COMPLETE/ON TRACK | 48/60 |

## 2018-2020 Village Strategic Issues and Critical Goals

| Goals | Strategic Issue I: INFRASTRUCTURE. Invest in infrastructure to meet key needs, including downtown accessibility, Village facilities, streets, utility, and technology improvements. | On Track | Complete | Notes |
|---|---|---|---|---|
| I-1 | Evaluate and implement pedestrian and vehicular traffic improvements in and around the community. | | X | Taylor Ave. Ped underpass, Park Blvd, Lake Ellyn sidewalk improvements, Taft and Lambert, etc. complete. Proceeding ahead with Streetscape Improvements and applying for grants for Train Station/Ped Tunnel project. Roosevelt Rd improvements scheduled for 8/19. |
| I-2 | Develop an implementation strategy to invest in Village facilities by December 31, 2019. | | X | Police Station Complete<br>Civic Center complete with punch list items.<br>Forest Preserve building-complete<br>Update facilities plan for Village in CY20<br>Historic Center flood issue-8/19<br>Fire Company-Assessment by 8/1/19<br>PW minor improvements by 10/1/19<br>GWA facility project 11/19 (delays) & new facility plan is complete, built into capital budget for CY20. |
| I-3 | Develop and continuously review the 5-year Capital Improvement Plan (CIP) and monitor and enhance funding options as necessary to execute plan. | | X | Complete and incorporated into CY19 Budget. On budget and on time with projects in CY18; same goal is CY19. |
| I-4 | Improve downtown infrastructure including pedestrian accessibility and parking improvements to encourage more pedestrian activity, outdoor dining, and enhance special event space in the CBD to spur future private investment. | | | Streetscape: August workshop to complete Phase I.<br>Parking garage: Phase I approved, demo scheduled for Q1 CY20; Revised Phase I going back to VB on 1/27/20, finalizing easements.<br>Food and Beverage Tax Approved, bonds issued, another bond scheduled to be issued in Q4 CY20.<br>Tentative timing: Garage to be started in Spring 2020, completed by 2/21; Streetscape designed in 2020, construction in 2021, 2022 & 2023.<br>**Including the Train Station project, Village poised to spend $60M in capital improvements and see $60M in private development (Avere and Apex Projects) over the next five years. |
| **ISSUES** | **Strategic Issue II: ECONOMIC DEVELOPMENT. Engage in progressive and proactive economic development to attract and retain key businesses to foster a vibrant business community by strategically increasing the Village's footprint, adding housing variety and increasing downtown commercial growth and residential density.** | **On Track** | **Complete** | **Notes** |
| II-1 | Implement strategic plan for Economic Development that focuses on overall commercial vitality, EAV growth and sales tax growth. | | X | Pete's Fresh Market opened in September '19, $15M renovation:<br>Apex 400 approved, demo complete, construction on hold, $20M Project;<br>Avere on Duane Approved, demo complete, construction to begin in October '19, $41M project;<br>McChesney back on market;<br>Fresh Market waiting for market forces to converge. |
| II-2 | Update Comprehensive Plan to assist in guiding future development, revise codes and regulations that inhibit commercial development and business retention, and continue to make the approval process more user friendly. | | | Community Survey Complete, Downtown core draft complete, rest of plan continues through end of the year; open house in November. |
| II-3 | Review and consider annexation opportunities to increase the tax base, control future development, share costs of infrastructure, and provide and protect high quality of life for neighborhoods. | | | Various annexation projects are proceeding along: Swift Rd. Complete; Hill Ave. 4Q CY19; Cumnor/Alcorn, Arden; Highland on hold. |
| II-4 | In partnership with our local business-oriented agencies, continue to provide progressive and proactive efforts to recruit new businesses and retain current business by creating a favorable, welcoming climate for all businesses. | | | New restaurants adding to restaurant niche; 18 hour downtown becoming a reality. Alliance and Chamber events help create a more vibrant climate; recruitment efforts continue promoting GE charm, TIFs, and award program. |
| **Goals** | **Strategic Issue III: COMMUNICATIONS AND ENGAGEMENT: Communicate, inform, engage, and involve the community and volunteers to support and act on the Village's high priority needs and opportunities.** | **On Track** | **Complete** | **Notes** |
| III-1 | Develop and utilize a comprehensive communications plan to educate and inform the community and continue to implement a management strategy that mandates responsiveness and convenience. | | X | Plan is in place including social media and other tools, community survey being utilized regularly; new website complete; with improved notification process. |

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# 2018-2020 Village of Glen Ellyn Strategic Plan
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| III-2 | Utilize multiple communication tools to ensure the Village is engaged with residents, businesses, and intergovernmental partners. | | X | New Website, Social Media, e-news, etc. Emergency communication includes radio station, alerting system, and sirens. | |
| III-3 | Communicate the strategic plan and priorities and ensure the Village Board and Boards and Commissions are aligned. | | X | Quarterly updates on website and VB workshops. | |
| III-4 | Recruit and identify meaningful roles for volunteers. | | X | Completed a more formal communication plan to volunteers, Village President meets with chairs a few times a year. | |
| **Goals** | **Strategic Issue IV: FINANCIAL SUSTAINABILITY. Grow revenue and focus spending in line with anticipated resources to meet the highest priority needs and maintain the Village's AAA bond rating.** | **On Track** | **Complete** | **Notes** | |
| VI-1 | Evaluate new revenue concepts and cost controls that continue to deliver high quality services and necessary capital investment. | | X | Renegotiated contracts in 2018: EMS, Refuse and water rates. Evaluating revenue options: Food and Beverage Tax, storm water fee, and building permit fees. Food and Beverage Tax approved; Water/Sewer Fee frozen for CY19; survey pending. | |
| VI-2 | Complete financial monitoring including annual audits, five-year forecast, CIP, and Scorecard as appropriate to maintain long-term financial stability. | | X | Budget and audit awards received. Scorecard to be completed by 10/19 | |
| VI-3 | Ensure maximum productivity and efficiency by reviewing staffing allocations, creating succession plans, motivating employees by focusing on talent development and training to empower the greatest asset in the organization: employees. | | | **Focused on retention and results.** Succession planning is ongoing within all departments. Performance reviews and talent management meetings will be complete this fall determining 100% merit system.-Complete Assessment of overall employee engagement by 8/1 and rolling out ways to improve by Q2 CY20. | |
| **Goals** | **Strategic Issue V: Village Links/Reserve 22 mission is to enhance the quality of life in Glen Ellyn by offering outstanding recreational and dining opportunities, while providing storm water protection, at no costs to the** | **On Track** | **Complete** | **Notes** | |
| V-1 | Develop and implement business goals and growth options to maximize profits without sacrificing overall quality or resident/community benefits. | | | 2018 was challenging weather year, impacting golf and restaurant, banquet business was strong again. Restaurant renovation did meet goal of 10% increase, something to build on for 2019. '19 has been slow due to very poor weather this spring. Summer was very strong, best months on record from a revenue perspective. | |
| V-2 | Reposition Reserve 22 with renewed focus on quality and consistent food and service. | | X | New Management team on board and driving results. Met quality goals for the year. Need to continue to be consistent. | |
| V-3 | Sustain the financial stability of the business through capital planning and cash reserve policies. | | X | Cash reserve policy modified, 10-year capital plan finalized, and budget plan for CY19 completed. | |
| V-4 | Develop a comprehensive marketing plan and ensure communication and alignment between Recreation Commission and Village Board. | | X | New Marketing Strategist currently executing plan for 2019. | |

## 2018-2020 Village Strategic Issues and Action Plan

**Strategic Issue I: INFRASTRUCTURE. Invest in infrastructure to meet key needs, including downtown accessibility, Village facilities, streets, utility, and technology improvements.**

| Goal # | Action Steps | On track | Complete | Comments | Dept. |
|---|---|---|---|---|---|
| I-1a | Construct the pedestrian underpass on Taylor Ave. by December 2018. | | X | Project complete by December 31, 2018. | PW/ Admin |
| I-1b | Complete Phase I engineering design and submit grants for the pedestrian tunnel and renovated or new train station by June 1, 2019 | | X | Team selected 18 month process to finalize design and identify funding sources. Grant applications are submitted for first round of grants and earmarked $14.5M through CMP; another $3M from Metra. | CD/ PW/ Admin |
| I-1c | Design and construct Roosevelt Rd. access improvements for the Baker Hill shopping center as well as improved access south of Roosevelt Rd by September 2019. | | X | Completed just ahead of the Grand Opening of Pete's Market; better access that benefits all businesses in the Baker Hill Shopping Center as well as improves overall traffic flow in the area. | PW/ Admin |
| I-2a | Complete the renovations of the Civic Center including overseeing the Innovation DuPage build-out on time and on budget by May 2019. | | X | Expected the GMP by end of July, 2018. Construction began in November including HVAC improvements. Substantial completion is expected by April 25. | All |
| I-2b | Build out the salt dome space at the Forest Preserve Building by April 2019 and facilitate the McKee House Preservation group on plans to save this historic structure by October 2019. | | X | Forest Preserve moved out by February 1, complete renovations for winter 2019/20; McKee House committee is struggling raising funds, update schedule for VB in Q1. | PW/ Admin |
| I-2c | Complete and monitor GWA infrastructure projects including Combined Heat and Power (CHP) and Facilities Improvement Project (FIP) by July 2020. | | | CHP completed, but monitoring is ongoing. Phase I of Facility Project substantially completed by April 2018; Phase II deadline is now set for July 2020, concerns with timing and need to negotiate final costs. New Facility Study draft completed; approved by EOC. | PW |

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| I-2d | Update the annual facilities plan that ensures annual investment in Village facilities including Fire Stations, Police Station, Public Works, Village Links, and History Center by December 2018. | | X | Police Station Complete<br>Civic Center complete with punch list items.<br>Forest Preserve building-complete<br>Update facilities plan for Village in CY20<br>Historic Center flood issue resolved and they are back open for business<br>Fire Company-Assessment completed and will be incorporated into Facilities Study.<br>PW Building minor improvements completed<br>GWA facility project 11/19 (delays) & new facility plan is complete, built into capital budget for CY20. | Admin |
| I-3a | Execute the Capital Improvement Plan (CIP) including IT improvements, facility improvements, and equipment replacement by Jan. 1, 2021. | | | Reoccurring annually. | All |
| I-3b | Develop and begin to implement the Roosevelt Road water main replacement project by November 2019. | | X | Phase I (Nicoll Way to IL-53) Complete; other water improvements scheduled for over next 5 years. | PW |
| I-4a | Design and update utility and streetscape improvements in CBD to enhance critical commercial area to allow further private investment and improve quality of life by December 2019. | | | CBD Utility Study completed; design team (Civil Tech) finalizing Phase I by January 1, 2020. New schedule: Phase II approved by VB set to be completed by end of 2020; Construction scheduled for 2021, 2022, and 2023. | PW/Admin |
| I-4b | Evaluate parking garage alternatives as well as economic development partnerships that would increase parking in the downtown by October 2019. Village Board provided further direction to proceed with plans to construct a parking garage behind the Civic Center by July 2020. | | | Apex 400 parking garage project is delayed because of court actions. Civic Center Parking Garage going back to VB on 1/27; If approved, set for constrution to begin in March, completed by 2/2021 | CD/ Admin |
| I-4c | Execute implementation of Phase I of Village wayfinding plan by August 2019. | | X | First phase was installed in August 2019, final components to be installed this fall. Next phase scheduled for 2021. | CD/PW |
| | | | | **TOTAL COMPLETE/ON TARGET=TOTAL: 9/12** | |
| | | | | | |

**Strategic Issue II: ECONOMIC DEVELOPMENT. Engage in progressive and proactive economic development to attract and retain key businesses to foster a vibrant business community by strategically increasing the Village's footprint, adding housing variety and increasing downtown commercial growth and residential density.**

| Goal # | Action Steps | On track | Complete | Comments | Dept. |
|---|---|---|---|---|---|
| II-1a | Focus on key development sites in the CBD and move forward with Giesche and McChesney sites and other underutilized parcels by December 31, 2019. | | | Apex 400 Approved. Litigation Pending<br>Avere Project Approved<br>McChensey Project moving forward, VB Workshop scheduled for 1/21/20 | CD/ Admin |
| II-1b | Review plans and work with Pete's Market to ensure their project is completed by September 2019. | | X | Pete's Open for business | CD/ Admin |
| II-1c | Execute the Economic Development plan including TIF promotion, Awards Program, business retention, as well as market village events, business education and promote available sites and other opportunities to grow EAV, sales tax and a diverse and dynamic commercial districts; monitor annually by December 31, 2019. | | | Efforts continue on all fronts; business recruitment and retention efforts focused on award program, TIF Districts promotion and development review. CBD becoming a thriving restaurant district with good mix of entertainment and other retail options. | CD/ Admin |
| II-2a | Engage the community in a process and update the Village's Comprehensive Plan by May 2020. | | | Project has begun, CBD discussed by Plan Commission and VB, finalizing draft plan and preparing for open house in Q1 CY20. Plan to be finalized and approved by summer 2020. | CD |
| II-2b | Implement an online building permit system to provide customer flexibility and improved service by October 2021. | | | This will be a multi-step process. First, we need to analyze all current workflows (Munis-PACE) and make necessary improvements to prepare to insall upgrades to our permitting system. Hope to complete the workflow improvements in CY20 and install new software in CY21. | CD |
| II-2c | Review and modify building codes, and ARC guidelines to create more flexibility for businesses by June 2020. | | | Zoning Code modifications approved by VB; Sign Codes finalized in fall 2018, contractor registration propsoed to be simplified in Q1 CY20; building and ARC codes scheduled for Q2 2020. | CD |
| II-3a | Embrace residential and commercial annexation opportunities:<br>* Finalize the annexation of the industrial properties on the north side of Hill Ave. **Complete**<br>*Finalize the annexation of DuPage Forest Preserve between Crescent and St. Charles by March 1, 2018.-**Complete**<br>* Finalize the annexation of the industrial properties on the south side of Hill Ave by March 1, 2020<br>*Finalize the annexation of the development on Swift Rd. through the existing pre-annexation agreement. **Complete**<br>*Continue to pursue annexation on Cumnor by March 2020.<br>* Continue to pursue annexation of areas near GWA by December 2020. | | | See notes under Goal | CD/ Admin |
| II-4a | Grow business relationships with economic development partners, including but not limited to, Alliance of Downtown Glen Ellyn, Glen Ellyn Chamber of Commerce, Choose DuPage, College of DuPage, Glen Ellyn Public Library, DuPage Convention and Visitors Bureau. Ongoing. | | | Assist with events, Innovation DuPage, marketing and communications, support COD initiatives; strengthen role with CVB. Meeting montly with ED Stakeholders beginning in 2020. | CD/ Admin |
| II-4b | Develop a plan to include the new Innovation DuPage in our business recruitment and retention efforts by January 2020 and implement plan by June 2020 | | | Working with partners including Library, Realtors, HS, Chamber and Alliance. | Admin |

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| II-4c | Consider including additional green space (plaza/pocket parks/fire pits), sidewalk cafes, a sound system, improved alleys and parking lots, and enhanced lighting in the CBD as part of the streetscape improvements being considered by October 2020. | | | CBD Utility Study In Progress, will be included in Streetscape Plan. Purchased 423 Main to create better accessibility for parking garage. | Admin/ PW |
| II-4d | Partner with the Chamber and the Alliance on opportunities to encourage CBD businesses to extend hours by increasing pedestrian traffic and customers through special events and activities. Ongoing. | | | Events and new restaurants and retail shops are achieving that goal. | CD/ Admin |
| II-4e | Monitor and promote a balanced approach to meeting the parking needs of the community and work with the business community to educate and collaborate on solutions by December 2019. | | | Short term parking ideas such as signage, private use, valet parking, and enforcement modifications implemented. Rolled out communication plan and additional modifications over next year as capital projects impact downtown parking. Park by the Path and signage are significant accomplishments. Working on shared parking arrangements with a number of businesses and churches. | Admin/Police/Fin |
| II-4f | Market and redevelop 825 N. Main property by June 2020 | | | Proceed to buy back property and redevelop the property as a key corner in the commercial district. Broker has been hired and the property is back on the market. | Admin/CD |
| | | | | **TOTAL COMPLETE/ON TARGET=TOTAL: 9/13** | |

**Strategic Issue III: COMMUNICATIONS AND ENGAGEMENT. Communicate with, educate and involve the community and volunteers to support and act on the Village's high priority needs and opportunities.**

| Goal # | Action Steps | On track | Complete | Comments | Dept. |
|---|---|---|---|---|---|
| III-1a | Educate and promote the community survey as part of the strategic planning process by March 2018. | | X | Survey completed in October 2017. | Admin |
| III-1b | Conduct emergency preparedness drill annually in the new EOC and continue to promote Reverse 911 system, radio station, cable station for emergency communication by August 2018 | | X | Drill complete in October 2018. Follow up work and communicate legislative and County changes over next year. | PD/ Admin |
| III-1c | Continue philosophy that all customers are responded to by the village within two business days with an acknowledgement of their request. -Ongoing | | | Ongoing. Periodic review in place. | All |
| III-1d | Develop an annual joint marketing plan with the Chamber and Alliance focused on special event promotion annually by end of February. | | X | Reoccurs annually. | Admin |
| III-2a | Increase customer convenience, interaction, and improve transparency by enhancing the functionality of the Village website by May 2019. | | X | Complete, new website is much improved and public education continues on how best to utilize all functions. Will be considering utilizing other portals in the future such as Boards and Commissions and meeting agendas. | Admin |
| III-2b | Monitor the success of the PW service request system (YourGOV) and evaluate alternatives for other departments to utilize byApril 2020. | | | PW is complete, shifting to See/Click/Fix by Q2 CY20; then expanding uses to other departments. Admin to lead this effort with Finance, Property Maintenance and Police Records as next departments. | Admin/PW |
| III-2c | Continue to evaluate and increase opportunities for partnership with intergovernmental entities. Ongoing | | | **Ongoing efforts to share resources & ideas, including:**<br>COD: ID, Police training and range utilization, Culinary Partnership Village Links;<br>Park District: reviewing property ownership, capital projects, Lake Ellyn and joint purchasing;<br>Library: capital projects, payroll support<br>Schools: Space needs assistance, HS capital and parking collaboration; IGA with SD 41 for water main;<br>Lombard IGA with Hill Ave. water main project; Fire IGA<br>Forest Preserve: Salt Storage, stormwater projects;<br>County: capital and beautification efforts, North/South bike route. | Admin |
| III-2d | Enhance social media presence and cable channel utilization as communication tools: Audio, Video Aspect, Programming | | | Village is using various social media platforms effectively; Twitter for PD; reviewing Next Door; Village Links has embraced social media: Budgeted improvements to cable equipment for Q2 CY20. | Admin |
| III-3a | Communicate updates to 2018-20 Strategic Plan quarterly, develop new Strategic Plan and incorporate goals into the annual budget process -March 1, 2020 | | | Working with VB to develop Strategic Plan update with new VB this fall/winter. | Admin |
| III-4a | Encourage voter turnout by promoting Town Hall Meetings and the election process by October 2020. | | | Working with Civic Betterment Party to promote activities as appropriate. | Admin |
| III-4b | Continue to educate potential commissioners and recruit volunteers for meaningful roles on Boards and Commissions and work with the Alliance and Chamber to foster volunteerism for special events. Ongoing. | | | Reoccurring annually. Annual meeting with Village President and the Board/Commission Chairswill be scheduled. New members scheduled for VB meeting in May. | Admin |
| III-4c | Continue to be responsive and adapt to elected officials requests for information and involvement. Ongoing | | X | Continue producing Manager's Reports and conducting biweekly meetings with Elected Officials; provide updates on ED, Capital projects, and other important topics. New Elected Officials meetings held in March/April. Developed various Work Groups to engage elected officials in the planning and development phase. | Admin |
| | | | | **TOTAL COMPLETE/ON TARGET=TOTAL: 11/12** | |

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**Strategic Issue IV: FINANCIAL SUSTAINABILITY. Grow revenue and focus spending in line with anticipated resources to meet the highest priority needs and maintain the Village's AAA bond rating. Evaluate the feasibility of consolidating operations, services, procedures, and common tasks within and across departments and explore cost sharing partnerships with intergovernmental groups and recommend changes as part of budget process annually**

| Goal IV | Action Steps | On track | Complete | Comments | Dept. |
|---|---|---|---|---|---|
| IV-1a | Monitor state budget impacts and identify new revenue sources and grant opportunities to address budget shortfalls including HRST increase and food and beverage tax:<br>*HRST Increase in June 2018<br>*No increase to W/S for 2019.<br>*New building permit fees went into effect on January 1, 2019 (Need to modify by Q4 CY19.)<br>*Food and Beverage Tax went into effect on March 1, 2019.<br>*EMS Contact (3 years) took effect July 2019<br>*Issuing 3 Series of Bonds (Series 1-Complete-2018; Series 2-fall-2020; Series 3-2022 if necessary) | | X | Home Rule increase agreed to in 2018 budget, Food and Beverage Tax approved for capital projects beginning March 2019. Plan to issue bonds by end of year to pay for streetscape, parking garage, and Civic Center renovations. Fees/Fines completed and being implemented. W&S Rate Study to be started in CY19. | All |
| IV-1b | Periodically adjust Village fees and fines to be commensurate with the cost of providing services by establishing gradual and appropriate increases in line with other communities by October 2018. | | X | Building Permit, Parking, Business registration, parking fines, and other fees/fines being considered and implemented. | All |
| IV-1c | Evaluate opportunities to utilize technology to consolidate functions, streamline work processes, and deliver services more efficiently and transition the IT department by December 2019 | | | Updating a Five-Year Plan; hires IT Director- retirement, complete 2019 goals including AP (delayed), building permit (delayed), LPR cameras and parking kiosk projects, RMS/CAD through DuComm/ETSB, and completed GIS projects including website enhancements | All |
| IV-1d | Automate the Accounts Payable process by April 2020. | | | Slow rollout continues, system working, but need Dashboard to be implemented before we go 100%. | Finance/ Admin |
| IV-2a | Develop a five-year Capital Improvement Plan (CIP) to guide future capital investment and present to Village Board as part of annual budget process annually by August 2018. | | X | Reoccurring annually. Presented to Village Board in September '19. | Finance/ Admin |
| IV-2b | Complete annual five year forecast by October 2019. | | X | Reoccurring annually. Completed, reviewed by Finance Commission and will be presented to VB at first budget workshop. | Finance |
| IV-2c | Complete the Financial Scorecard by April 2020. | | | Fiannce Commission has reviewed at 2 meetigns. Scheduled for Q2 CY20 | Finance |
| IV-2d | Receive the budget and audit awards from GFOA by October 1, 2019. | | X | Reoccurring annually. | Finance |
| IV-2e | Review reserve policy for all funds by May 2018. | | X | Completed General Fund, W&S and Links/Reserve 22 were evaluated and modified in 2018. Covered with Five year Forecast in 2019. | Finance |
| Iv-3a | Create succession plans in all departments and continually review staffing allocation and needs. - Ongoing | | X | Discussing internally. | All |
| IV-3b | Foster training, continuing education, skill development, and cross-training for personnel by October 1, 2020. | | | Part of employee engagement assessment and scheduling customer service training for all employees in Q2 CY20. Diversity and Ethics training will be scheduled for Supervisor Team in 2020. | All |
| | | | | **TOTAL COMPLETE/ON TARGET=TOTAL: 10/11** | |

**Strategic Issue V: Village Links/Reserve 22 mission is to enhance the quality of life in Glen Ellyn by offering outstanding recreational and dining opportunities, while providing storm water protection, at no costs to the taxpayer.**

| Goal V | Action Steps | On Track | Complete | Comments | Dept. |
|---|---|---|---|---|---|
| V-1a | Generate profit to cover annual debt, execute CIP targets, build cash reserves, and meet financial goals at the Village Links/Reserve 22 by January 1, 2020:<br><br>• Operating Revenues at $3M in Golf; and $2.5M in Food & Beverage including $850K in banquet sales<br>• Overall Operating Profits at 18% of Revenues, to cover debt, capital projects, and maintain adequate cash reserves. Prime cost between 75% and 85%.<br>• Guest Satisfaction Rating at 4 or above, measured by online reviews, customer satisfaction rating cards, and Secret Shopper program | | | Goal: Challenging year in CY18; need stronger golf year to carry over into restaurant, for restaurant improvements to get results, grow off-season business, maximize marketing potential, and ideally have a solid spring. Banquet business still growing steadily; golf has stay steady, but need more growth.<br><br>Result: After very slow spring, poor weather, improved marketing efforts and took advantage of terrific weather this summer, highest revenue months in June, July and August. Still falling short of reserve policy, but debt will fall off in 2023. Customer Satisfaction Scores are good; banquets business continues to grow, marketing efforts are producing results. | Village Links-Reserve 22 |
| V-1b | Review reserve policy, future capital projects and determine a timeframe for possible short-term investments in the facility by May, 2018. | | X | Reviewed with Rec Commission in 2019, plan for next few years. | Admin/Village Links-Reserve 22 |
| V-1c | Evaluate catering and take-out programs as way to grow business by January 2020. | | | Take out program will be enhanced with new app (Chow Now) ; waiting on researching catering program. | Village Links-Reserve 22 |
| V-1d | Develop a sales & marketing team to maximize capacity of banquet business, with a goal of reaching $1M in banquet sales by December 2020. | | | Hired new Marketing Strategist who is implementing new marketing plan developed by our consultant and evaluating hiring sales force. Sales Plan and execution to begin in March 2020. | Admin/Village Links-Reserve 22 |

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| V-2a | Review and modify staffing structure and hire Executive Chef and Restaurant Manager to improve upon employee retention, employee training, and build a quality staff to implement business plan starting in March 1, 2018. | | X | Exec Chef hired on January 5, 2018. Sous Chef hired in June 2019. Holding off on replacing new Restaurant Manager. | Admin/Village Links-Reserve 22 |
| V-2b | Provide consistent service and a creative culinary experience by December 1, 2019. | | X | Prelaunch the restaurant in mid-October with dinning room renovation, new Chef and staff via a new marketing strategy. Modify menu three times a year; service levels have improved. | Village Links-Reserve 22 |
| V-3a | Develop a 10-year Capital Improvement Plan that prioritizes potential renovations including clubhouse, patio and/or pavilion enhancements by October 2019. | | X | Reviewed with Rec Commission in April. | Village Links-Reserve 22 |
| V-3b | Evaluate kitchen needs and options to consider potential to renovate/expand business options by December 2018. | | HOLD | Dinning room construction was priority. Funds not available to take on more projects. On hold. | Village Links-Reserve 22 |
| V-3c | Execute a renovation of the Reserve 22 Dining Room by August, 2018. | | X | Complete; 10% increase. | Village Links-Reserve 22 |
| V-4a | Develop a communication process to keep Recreation Commission informed and engaged on project progress and provide quarterly reports to the Village Board starting in April 1, 2018 | | X | Ongoing. | Admin/Village Links-Reserve 22 |
| V-4b | Execute a Marketing Plan which accomplishes maximum exposure/branding of the Village Links and Reserve 22 while generating new avenues of growth by December 2019. | | X | Hiring Marketing Manager in CY18; developed a marketing plan. Adding a wedding component and developing more specific goals for golf. | Admin/Village Links-Reserve 22 |
| V-4c | Monitor and coordinate customer feedback system including Secret Shopper and Comment Cards and achieve goal of over 4 to be reviewed monthly with Recreation Commission. Monthly | | X | | Admin/Village Links-Reserve 22 |
| | | | | **TOTAL COMPLETE/ON TARGET=TOTAL: 8/12** | |
| | | | | | |