# LAND USE APPLICATION

VILLAGE OF LIBERTYVILLE
COMMUNITY DEVELOPMENT DEPARTMENT
200 EAST COOK AVENUE
LIBERTYVILLE, IL 60048
(847) 918-2028
(847) 367-5148 (Fax)

DATE:_____

REQUESTED ACTION(S) (check all that apply)

| | | | |
|---|---|---|---|
| ____ | Comp. Plan | ____ | Preliminary/Final Plat |
| ____ | Comp. Plan Amendment | ____ | Plat of Consolidation |
| ____ | Map Amendment | ____ | Site Plan Permit |
| X | Planned Dev. (Concept/Final) | X | Special Use Permit |
| ____ | Planned Dev. (Final Amendment) | ____ | Text Amendment |
| ____ | Planned Dev. (Adjustment) | ____ | Variation |
| ____ | Planned Dev. (Master Plan) | ____ | Zoning Appeal |
| ____ | Planned Dev. (Master Plan Amendment) | | |

TO THE VILLAGE PRESIDENT, VILLAGE BOARD OF TRUSTEES AND THE ZONING BOARD OF APPEALS OF THE VILLAGE OF LIBERTYVILLE, LAKE COUNTY, ILLINOIS 60048.

The applicant(s) LIBERTYVILLE LAND LLC represents that they are the OWNER _____, CONTRACT PURCHASER X, LESSEE _____, AUTHORIZED AGENT _____ (please check correct term) of the following described real estate: (Insert or attach legal description of the real estate)

PROPERTY TAX IDENTIFICATION NUMBER (P.I.N. #): 11-16-300-020; 11-16-300-021; 11-16-300-022; 11-16-300-023; 11-16-300-024

The property is also known as: (street address) 725-747 NORTH MILWAUKEE AVENUE / 126-140 LAKE STREET, LIBERTYVILLE, ILLINOIS

If someone other than the applicant(s) has the title to the property, include the name, address, trust number with beneficiaries (if applicable), and phone number of such owner(s). **A written, notarized statement from the owner(s) which acknowledges and consents to this request must be provided.**

Docusign Envelope ID: BF31017A-6D8B-4BCE-ABD6-3D4CDD99FC05



The property is now classified under the Libertyville Zoning Code and is located in the C-1 DOWNTOWN CORE COMMERCIAL District.

FOR VARIATION ONLY: Please check the type of variation(s) requested:

| | | | |
|---|---|---|---|
| ____ | Front Yard Setback | ____ | Sign |
| ____ | Corner Side Yard Setback | ____ | Fence |
| ____ | Side Yard Setback | ____ | Lot Coverage |
| ____ | Rear Yard Setback | ____ | Building Coverage |
| ____ | Perimeter Landscaped Open Space | ____ | Building Height |
| ____ | Other (specify) _____ | | |

Please attach a detailed narrative description of the requested development action(s).

DocuSigned by:
Willard Hunter
8267D0B7D16541B...
applicant/representative signature

Willard Hunter
please print full name

1259 West Madison Street, Chicago, Illinois
address of applicant/representative

312-450-8421
phone number

s.barnes@gozdel.com
e-mail (*Attorney for Applicant*)

**NOTE!** If several parties are involved with the project (i.e., architect, engineer, consultant, etc.), please attach a list including the names, addresses and phone numbers of such parties. This application must be complete before it will be accepted by the Village.

**Rev. 11.2023**

**LAND USE APPLICATION**
**PAGE 2**

The property is now classified under the Libertyville Zoning Code and is located in the C-1 DOWNTOWN CORE COMMERCIAL District.

FOR VARIATION ONLY: Please check the type of variation(s) requested:

| | | | |
|---|---|---|---|
| ____ | Front Yard Setback | ____ | Sign |
| ____ | Corner Side Yard Setback | ____ | Fence |
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| ____ | Rear Yard Setback | ____ | Building Coverage |
| ____ | Perimeter Landscaped Open Space | ____ | Building Height |
| ____ | Other (specify) _____ | | |

Please attach a detailed narrative description of the requested development action(s).

_____
applicant/representative signature

Evan Meador
please print full name

_____

1259 West Madison Street, Chicago, Illinois
address of applicant/representative

312-450-8421
phone number

s.barnes@gozdel.com
e-mail (*Attorney for Applicant*)

**NOTE!** If several parties are involved with the project (i.e., architect, engineer, consultant, etc.), please attach a list including the names, addresses and phone numbers of such parties. This application must be complete before it will be accepted by the Village.

Docusign Envelope ID: BF31017A-6D8B-4BCE-ABD6-3D4CDD99FC05

# APPEARANCE REVIEW APPLICATION

VILLAGE OF LIBERTYVILLE
COMMUNITY DEVELOPMENT DEPARTMENT
200 EAST COOK AVENUE
LIBERTYVILLE, IL 60048
(847) 918-2028
(847) 367-5148 (Fax)

DATE: 10/8/2024

REQUESTED ACTION(S) (check all that apply)

_____ Building Facades _____ Lighting
_____ Landscaping _____ Signage
_____ Other _____

TO THE VILLAGE PRESIDENT, VILLAGE BOARD OF TRUSTEES AND THE APPEARANCE REVIEW COMMISSION OF THE VILLAGE OF LIBERTYVILLE, LAKE COUNTY, ILLINOIS 60048.

The applicant(s) LIBERTYVILLE LAND LLC represents that they are the OWNER _____, CONTRACT PURCHASER X (please check correct term) of the property commonly known as: (street address) 725-747 NORTH MILWAUKEE AVENUE /· 126-140 LAKE STREET

If someone other than the applicant(s) has the title to the property, please provide a written statement from the owner(s) which acknowledges and consents to this request.

The property is now classified under the Libertyville Zoning Code and is located in the C-1 DOWNTOWN CORE COMMERCIAL District.

DocuSigned by:
Willard Hunter
8267D0B7D16541B...
applicant/representative signature

1259 West Madison Street, Chicago, Illinois
address of applicant/representative

312-450-8421
phone number

s.barnes@gozdel.com
e-mail (*Attorney for Applicant*)

**NOTE!** If several parties are involved with the project (i.e., architect, engineer, consultant, etc.), please attach a list including the names, addresses and phone numbers of such parties. This application must be complete before it will be accepted by the Village.

**Rev. 11.2023**

# APPEARANCE REVIEW APPLICATION

VILLAGE OF LIBERTYVILLE
COMMUNITY DEVELOPMENT DEPARTMENT
200 EAST COOK AVENUE
LIBERTYVILLE, IL 60048
(847) 918-2028
(847) 367-5148 (Fax)

DATE: 10/08/2024

REQUESTED ACTION(S) (check all that apply)

_____ Building Facades _____ Lighting
_____ Landscaping _____ Signage
_____ Other _____

TO THE VILLAGE PRESIDENT, VILLAGE BOARD OF TRUSTEES AND THE APPEARANCE REVIEW COMMISSION OF THE VILLAGE OF LIBERTYVILLE, LAKE COUNTY, ILLINOIS 60048.

The applicant(s) LIBERTYVILLE LAND LLC represents that they are the OWNER _____, CONTRACT PURCHASER X (please check correct term) of the property commonly known as: (street address) 725-747 NORTH MILWAUKEE AVENUE /126-140 LAKE STREET.

If someone other than the applicant(s) has the title to the property, please provide a written statement from the owner(s) which acknowledges and consents to this request.

The property is now classified under the Libertyville Zoning Code and is located in the C-1 DOWNTOWN CORE COMMERCIAL District.

applicant/representative signature

Evan Meador

1259 West Madison Street, Chicago, Illinois
address of applicant/representative

312-450-8421
phone number

s.barnes@gozdel.com
e-mail (*Attorney for Applicant*)

**NOTE!** If several parties are involved with the project (i.e., architect, engineer, consultant, etc.), please attach a list including the names, addresses and phone numbers of such parties. This application must be complete before it will be accepted by the Village.

# VILLAGE OF LIBERTYVILLE
# PROPERTY OWNER'S AUTHORIZATION
# FOR PC/ZBA/ARC/HPC

DATE: 08/30/2024

I, Suydam Limited Partnership, Owner of the
Property Owner

property located at 725/747 N Milwaukee Ave & 126 and 134 Lake St Libertyville, do hereby
Address/Location

authorize Neil Anderson - Attorney to represent me in the following
Authorized Agent

PC/ZBA/ARC/HPC matter(s),

PUD Zoning and Redevelopment Matters
Action(s)

in the Village of Libertyville.

Notary Signature

(SEAL)

OFFICIAL SEAL
STEVEN M. LAWRENCE
Notary Public - State of Illinois
My Commission Expires 8/29/2026

Property Owner Signature

Sandy Miller Managing Partner
Property Owner Printed Name

19569 W. Hawthorne Mundelein, IL 60060
Address

847-721-8943
Phone Number

Rev. 11.2023

# VILLAGE OF LIBERTYVILLE
# PROPERTY OWNER'S AUTHORIZATION
# FOR PC/ZBA/ARC/HPC

DATE: 10/10/2024

I, Casey Wells, Owner of the
Property Owner

property located at 138 Lake St Libertyville, IL 60048, do hereby
Address/Location

authorize Gail Campbell to represent me in the following
Authorized Agent

PC/ZBA/ARC/HPC matter(s),

PUD and Redevelopment of Property
Action(s)

in the Village of Libertyville.

Notary Signature

(SEAL)

OFFICIAL SEAL
STEVEN M. LAWRENCE
Notary Public - State of Illinois
My Commission Expires 8/29/2026

C G Wells
Property Owner Signature

Casey Wells
Property Owner Printed Name

138 Lake St Libertyville, IL 60048
Address

Phone Number

Rev. 11.2023

# VILLAGE OF LIBERTYVILLE
# PROPERTY OWNER'S AUTHORIZATION
# FOR PC/ZBA/ARC/HPC

DATE: 08/30/2024

I, William & Anita Davellis, Owner of the
Property Owner

property located at 140 Lake St Libertyville, IL 60048, do hereby
Address/Location

authorize Gail Campbell to represent me in the following
Authorized Agent

PC/ZBA/ARC/HPC matter(s),

PUD and Redevelopment of property
Action(s)

in the Village of Libertyville.

Notary Signature

(SEAL)

OFFICIAL SEAL
STEVEN M. LAWRENCE
Notary Public - State of Illinois
My Commission Expires 8/29/2026

William Davellis
Anita Davellis
Property Owner Signature

William Davellis
Anita Davellis
Property Owner Printed Name

140 Lake St Libertyville, IL 60048
Address

847-732-1669
Phone Number

Rev. 11.2023

Development Site: 725-747 North Milwaukee Avenue / 126-140 Lake Street
Applicant: Libertyville Land LLC

VILLAGE OF LIBERTYVILLE
LAND USE APPLICATION
PLANNED DEVELOPMENT + SPECIAL USE

# CONTACT LIST

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E: braedy@spacearchplan.com

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Bono Consulting Civil Engineers
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Development Site: 725-747 North Milwaukee Avenue / 126-140 Lake Street
Applicant: Libertyville Land LLC

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**(Continued)**

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Vanderstappen Land Surveying, Inc.
Terry Van Alstine, PLS
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TRAFFIC CONSULTANT
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E: mwerthmann@kloainc.com

Development Site: 745-747 North Milwaukee Avenue / 126-140 Lake Street
Applicant: Libertyville Land LLC

**VILLAGE OF LIBERTYVILLE**
**LAND USE APPLICATION**
**PLANNED DEVELOPMENT + SPECIAL USE**

## PROJECT NARRATIVE

The Applicant – *Libertyville Land LLC,* is seeking a *Planned Development*[1], in conjunction with a Special *Use Permit*[2], which – if approved, will allow for the construction and occupancy of a new multi-unit/multi-family residential building with accessory improvements to be located at the property commonly known as and comprising 745-747 North Milwaukee Avenue / 126-140 Lake Street, Libertyville, Illinois ("subject property" or "site"). The subject property is generally bounded by Brainerd Avenue (west), Lake Street (south), Milwaukee Avenue (east) and the Libertyville Metra Station (north). Accordingly, the new proposed building will encompass the northeast corner / intersection of Lake & Brainerd.

The subject property carries a *C-1 Downtown Core Commercial District* classification yet is situated outside of the *Libertyville Historic District*.

The subject property represents and is comprised of 96,062 square feet of total "Site Area", which is to be sub-divided into individual Parcels A, B, and C, as further described herein. Parcel A (67,641 square feet) will most generally and relevantly involve the proposed new multi-unit residential development, the principal building (with underground garage) for which will represent approximately 137,000 square feet of total floor area.[3] Parcel B (14,041 square feet) will be held and maintained for a future phase of development, not included in the current proposal. Parcel C (14,380 square feet) will serve as a new internal drive, with parallel surface parking, that will functionally connect the development site to Milwaukee Avenue, while providing unencumbered vehicular access and circulation through and around the site. *[*The Applicant will be reusing the existing access point/curb-cut off of Milwaukee Avenue, but restricting movements in and out of the same in an effort to improve traffic conditions at and around the site.*]

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[1] The current C-1 zoning designation establishes generalized *Bulk & Density Standards* controlling standard developments. The Libertyville Zoning Code provides for supplemental *Planned Development* review and approval, to allow the relaxation of otherwise substantive standards and limitations, so to encourage and permit more significant developments. The proposed development contemplates moderated deviations to the following *B&D Standards*: density (minimum lot area per unit), height, off-street parking and loading.

[2] The current C-1 zoning designation allows for *residential* developments – by right, when such development is anchored by a *commercial* use (on the ground floor), while "all residential" developments are allowed pursuant to a *Special Use Permit*.

[3] The allowable FAR for the C-1 zoning district is 3.0. The new building, as designed, has an FAR of +/- 2.0, less than the maximum allowed.

The programming for the proposed development calls for the erection of a new four-story building, with an underground (lower level) parking garage below grade. The building, as rendered, will measure 62 feet in height (*to the top of the rooftop access stair structure*). Due to significant grading inconsistencies affecting the site, the building will "appear" lower along the south side (Lake Street), in consideration of the closest residential improvements.

The new building will be primarily rendered in masonry, with a reinforced concrete foundation and steel column-beam supports at the lower parking level. The above-grade floors will be supported by non-combustible load bearing exterior walls, along with load bearing wood stud interior walls, and wood truss floor/ceiling assemblies. The 4th floor will be rendered in a mansard style, with dormers and a metal standing seam to reflect the traditional character of the neighborhood.

As already briefly described, the new building will introduce a total of ninety-one (91) new rental housing units into the community. The 1st floor will contain twenty-three (23) units, with the 2nd and 3rd floors each containing twenty-four (24) units – as represented by a mix of one-bedroom and two-bedroom units, all with private balconies.[4] The 4th floor is conscientiously inset five feet (5'-0") from the lower floors, with a standing seam mansard roof style. The 4th floor[5] will contain twenty (20) units - similarly representing a mix of one-bedroom and two-bedroom units, all with private walkout terraces. The units will range in size according to functionality and modality – averaged and anticipated, as follows: one-bedroom units at 720 square feet; two-bedroom units at 1,050 square feet and two-bedroom plus den units at 1,200 square feet.

Accessory features of the proposed new development include new surface parking lots along the north end of the site, in addition to an internal garage below the building. The lower-level garage[6] contains a total of eighty-five vehicular parking spaces, with two ADA spaces (with access aisle). Secured parking and designated storage for at least twenty-eight bicycles will also be provided within the lower level. The garage is accessed by two interior stairs, as well as by two elevators, which similarly serve every upper floor of the building. Exterior doors provide direct pedestrian access to the outside from the garage, flanking three overhead garage doors for vehicular access. The outdoor parking lots will boast an additional thirty and eighteen vehicular spaces, respectively, with low-emission affixed lighting to enhance the safety and for the convenience of residents and pedestrians. In sum, therefore, the new development will offer off-street parking accommodations for at least 115 vehicles (1.26 ratio),[7] with the interior parking specifically reserved for residents and the outdoor parking retained for visitors and unanticipated tenant over-flow/demand.

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[4] 1st-3rd Floors = 27,100 gross square feet per floor (footprint).
[5] 4th Floor = 20,500 gross square feet (footprint).
[6] Below ground garage = 35,200 gross square feet
[7] Additional parking data tracked for other of the Applicant's comparable suburban developments is available upon request and further set forth in the corresponding *Special Use Standards*. In sum, all such occupied and operating developments yield an average parking utilization ratio of at or LESS than one to one (1:1).

Utilities, including a designated electrical and water room are located at the lower level, as well as a trash & recycling center for residents.

The afore-mentioned "internal drive" will bisect the site – laterally (east-west) at the north end, with access and circulation to the west from Milwaukee Avenue and to the east through the internal surface parking on to Brainerd Avenue. A secondary outlet will extend to the north, providing access to the Metra parking lot. The programming for the new residential complex also calls for the provision of an off-street u-shaped loading zone at the front of the building – directly accessible from Brainerd Avenue, which is intended and designed to accommodate rideshare and delivery drop-off and pickup for residents of the new development and their guests.[8]

A new outdoor courtyard space will also be introduced at the front of the building, providing a communal oasis for residents and enriching the pedestrian experience along Brainerd Avenue. Of additional attraction and relevance, a new landscaped pedestrian path will be installed along the east side of the building, running the entire length of the site, thereby providing a safer pedestrian route from Lake Street to the Metra Station that may be enjoyed by tenants of the building and other local residents and visitors, alike. Accordingly, above and beyond the physical improvements, the new development will feature over 18,500 square feet of functional and ornamental "open space".

The Applicant – *Libertyville Land LLC*, is under contract to purchase the property, with the intent and desire to introduce transit- served multi-family housing amongst Libertyville's historic single-family dominated neighborhoods and within immediate proximity to the Metra train station and the bustling downtown commercial corridor, thereby expanding the footprint and accessibility of downtown Libertyville. Working in tandem with and represented by - *Space Architects & Planners* (Architects & Designers) and *Gozdecki, Del Guidice, Americus & Brocato LLP* (Zoning & Land Use Counsel), the Applicant strives to provide a new development that conforms to and compliments the well-established character of Libertyville, striking a delicate balance between old-world charm and moderated modern enhancements, as a meaningful modulation between the traditional residential neighborhoods comprising the Historic District and the evolving core Commercial Corridor along Milwaukee Avenue.

[8] *A professional "Traffic Impact Study" has been completed for the new development to consider potential effects the development may have on the existing traffic conditions. Such *Study* is part of the public record for this Land Use Application.

The Applicant and their Development Team spent well over a year at the drawing board, with and in comparison, going feedback from community representatives and stakeholders, creating the programming for the new proposed development, with incredible deference and attention given to scale (height & massing), circulation, density, and materiality – especially as it relates and in comparison to other recent and anticipated developments in the immediate area, so to mitigate any even incidental or perceived undesired impact on the existing framework of the neighborhood and to maximize the broader reaching community benefits being delivered with construction and occupancy of the project. Accordingly, and in furtherance of these collaborative and community-driven efforts, the *Libertyville Committee of the Whole* has been informed of the project and has expressed conditional support for the development and corresponding zoning relief required to permit the same.

Development Site: 725-747 North Milwaukee Avenue / 126-140 Lake Street
Applicant: Libertyville Land LLC

**VILLAGE OF LIBERTYVILLE**
**LAND USE APPLICATION**
**PLANNED DEVELOPMENT + SPECIAL USE**

## FISCAL IMPACT ANALYSIS

1. The proposed development project (*Phase 1*) will include an investment of nearly $40 million to complete the construction of a new four-story, 91-unit, luxury apartment (rental) residential/housing complex at the north end of the Village's Downtown Core Commercial District.

2. The development will improve connectivity between and expand the Downtown Core Commercial District and the Metra train station via:

    a. The installation of a lighted and landscaped pedestrian path connecting the Metra parking lot with Lake Street at a cost of approximately $200,000.

    b. An internal (access/circulation) drive, running east and west at the north end of the development site, providing vehicular connectivity and linkage for and between the new development complex and Brainerd Avenue, Milwaukee Avenue and the Metra train station, at a cost of $600,000. The new private drive will ease the existing and anticipated traffic loads on the abutting public ways (Lake Street, Milwaukee Avenue and Brainerd Avenue) and facilitate more meaningful and unencumbered vehicular circulation at and around the development site. The private drive reduces the amount of buildable land on Parcel B (*Phase 2*) causing an economic loss estimated to be between $250,000 and $850,000, subject to the future viability of the remaining square footage.

    c. Improvements to Brainerd Avenue at a cost of approximately $200,000.

3. The proposed development project (*Phase 1*) will require a significant capital investment of upwards of $300,000 to expand the water main on Brainerd Ave and to add an on-site water main loop at a cost of $350,000.

4. Annual real estate taxes on Parcel A (the proposed multifamily housing development) are estimated to be approximately $800,000.

5. The new proposed rental housing units will attract approximately 150 income producing and contributing tenants, who will shop, dine and be serviced by the local businesses and providers that comprise the Downtown Core Commercial District, which is within immediate walking distance of the development site.

6. The new proposed multi-family residential development and its tenancy will help sustain and enhance the vitality of the Downtown Core Commercial District with the capture of young professionals who may be considering Libertyville as a place to reside permanently and grow their families. Data shows that these residents would otherwise remain in the more urban areas (Chicago) or locate to other suburban multi-family complexes situated within vital commercial and entertainment corridors.

7. Larger, upscale rental units will provide a housing alternative for and attract retirees, empty nesters and "snowbirds" looking to downsize and/or to maintain a footprint in the community where they have friends and family, by removing the cost and responsibility of private home ownership.

8. While the proposed new housing development is not anticipated to be occupied by tenants with children of school age, the project is required to contribute approximately $556,890 in *public impact fees* to the municipal budget, for contribution directly to the Village's public school system.

9. The Applicant is also expected to contribute an *attainable housing* in-lieu fee of approximately $786,500, despite no municipal ordinance mandating such contribution.

10. **In sum, the proposed multi-family housing project (*Phase 1*) will contribute public infrastructure investment and other one-time fees of approximately $2.99 million ($2,999,000), with an estimated expansion in the public real estate tax base, for the Village of Libertyville, of $700,000 (upon completion).**

Land Use Application – Planned Development + Special Use
Development Site: 725-747 North Milwaukee Avenue / 126-140 Lake Street
Applicant: Libertyville Land LLC

## FISCAL IMPACT FEES & CONTRIBUTIONS

## TABLES OF FIGURES AND CALCULATIONS

### TABLE 1.0

| Summary of Investment - Fees & Improvements | |
|---|---|
| **Fee Type** | **Amount** |
| North/South Pedestrian Path | $200,000 |
| East/West Private Road | $600,000 |
| Brainerd Ave Improvements | $200,000 |
| Brainerd Water Main Expansion | $300,000 |
| On-Site Water Main Loop | $350,000 |
| Public Impact Fee | $556,890 |
| ARO In-Lieu Fee | $786,501 |
| **Total** | **$2,993,391** |

### TABLE 2.0

| Public Impact Fee | | | | | | |
|---|---|---|---|---|---|---|
| **Unit Type** | **District #70** | **District #128** | **Parks Total** | **Per Unit** | **# Units** | **Implied Fee** |
| 1 Bedroom | $0 | $0 | $4,462 | $4,462 | 27 | $120,474 |
| 2 Bedroom | $382 | $218 | $6,219 | $6,819 | 64 | $436,416 |
| | | | | | **Project Total** | **$556,890** |

### TABLE 3.0

| ARO In-Lieu Fee | | | | |
|---|---|---|---|---|
| **Total Units** | **% ARO** | **# ARO Units** | **$ / ARO Unit** | **Total In-Lieu Fee** |
| 91 | 15% | 14 | $56,178.62 | **$786,500.68** |

Section 26-13-2. - Perimeter landscaped open space, subsection (b) *R-8 District,* for all multiple-family structures within the R-8 Multiple-Family Residential District, there shall be provided a perimeter landscaped open space with a minimum width of no less than ten (10) feet along every lot line.

**The current zoning of our site in district C-1 has no perimeter landscape requirements. Because the future building use will be Multi-Family Residential we have met the requirements for R-8 Multi-Family Residential District of (10) feet except along the west property line where the building is only 8'-5" away from the property line. We are seeking relief of the approximate 1.5' of the required (10) foot distance in these locations as there is more than (50) foot distance between the building and the back of the Brainerd Avenue curb.**

Section 26-13-3.2. - *Parking lot interior landscaping, subsection* (c) *Tree planting islands.* Interior landscaping shall consist of tree planting islands with a minimum area of one hundred seventy-one (171) square feet and a minimum width of nine (9) feet, measured from back of curb to back of curb. One (1) shade tree having a minimum trunk size of three (3) inches in diameter shall be included for everyone hundred seventy-one (171) square feet of tree planting islands. However, at no time shall a shade tree be planted closer than twenty (20) feet to any other shade tree. The remaining area of such islands shall consist of groundcover or decorative paving material.

**Based on the priority of providing safe and convenient pedestrian access sidewalk to Metra commuter rail, relief is requested for providing parking lot trees in three of internal planting islands of the north parking lot area. In addition to a pedestrian sidewalk connection, landscape urban tolerant groundcover and shrubs will be provided in the three of the parking lot islands. Landscape compensation on the north, west, south and east parking lot perimeter plantings will provide a diversity of shrub hedging, deciduous canopy and ornamental trees, evergreen trees and screen type shrubs.**

Development Site: 725-747 North Milwaukee Avenue / 126-140 Lake Street
Applicant: Libertyville Land LLC

# STANDARDS FOR PLANNED DEVELOPMENTS

16-13.5 Standards for Planned Development Approval.

a. Special Use Permit Standards. No special use permit for a planned development shall be recommended or granted pursuant to this Section 16-13 unless the applicant shall establish that the proposed development will meet each of the standards made applicable to special permit uses pursuant to Section 16-9 of this Code.

**Response: The proposed new development satisfies and conforms to all of the standards for a *Special Use* (§ 16-9), as further set forth and explained herein and in the accompanying *Standards for Special Use* exhibit.**

**By way of additional relevant note, the Applicant is seeking a *Special Use* (i) for *Planned Development* (Concept/Final) and (ii) to allow residential use on the ground floor in the C-1 Downtown Core Commercial District.**

b. Additional Standards for All Planned Developments. No special use permit for a planned development shall be recommended or granted unless the applicant shall establish that the proposed development will meet each of the following additional standards:

1) *Unified Ownership Required*. The entire property proposed for planned development treatment shall be in single ownership or under such unified control as to ensure that the entire property will be developed as a unified whole. All owners of the property shall be included as joint applicants on all applications and all approvals shall bind all owners. The violation of any owner as to any lot shall be deemed a violation as to all owners and all lots.

**Response: Title to the subject property is currently held by *Suydam Limited Partnership* ("Property Owner" or "Seller"). The Applicant – *Libertyville Land LLC*, is under contract to purchase the subject property, which such contract is contingent on approval of this proposed *Planned Development* and corresponding *Special Uses*, by the Village Board of Libertyville and all other recommending bodies. If approved, the Applicant (and its respective "Owners/Members") and/or a subsidiary permitting entity (comprised of the same "Owners/Members") will wholly own and control the subject property and will maintain complete control and oversight on all matters related to the effectuation of the proposed new development.**

**The Applicant is proceeding with the subject petition(s) with the express and informed written consent of the current Property Owner.**

2) *Minimum Area*. The district regulations of this Code establishing standards for particular types of planned development specify the minimum area required for planned developments (See Table 16-1). In addition to meeting that specific standard, the applicant shall have the burden of establishing that the subject property is of sufficient size and shape to be planned and developed as a unified whole capable of meeting the objectives for which planned developments may be established pursuant to this Section 16-13.

**Response: The subject property contains and comprises 96,069 square feet of total *lot area*.[1] The zoning classification for the subject property is C-1 Downtown Core Commercial District. The subject property [*and the Development Site*] exceed(s) the" Minimum Lot Area" - of 20,000, for a Planned Development in the C-1 Zoning District, as set forth in Table 5.1 of the Zoning Ordinance.**

3) *Covenants and Restrictions to be Enforceable by Village*. All covenants, deed restrictions, easements, and similar restrictions to be recorded in connection with the planned development shall provide that they may not be modified, removed, or released without the express consent of the Board of Trustees and that they may be enforced by the Village as well as by future landowners within the proposed development.

**Response: The Applicant has no present intent to execute any covenants, deed restrictions, easements or other similar restrictive land use agreements in furtherance of or in connection with the proposed development. If, however, this intent or necessity changes prior or subsequent to a final determination on the pending and corresponding petition(s), then the Applicant will properly advise the Village and draft and execute any such agreements in full compliance with the applicable rules and procedures adopted by the Village Board and its Trustees.**

4) *Public Open Space and Contributions*. Whenever the Official Comprehensive Plan or Official Map indicates that development of a planned development will create a need for land for public purposes within the proposed planned development, the Board of Trustees may require that such area be designated and, to the extent such need is specifically and uniquely attributable to the proposed development, dedicated to the Village or other appropriate government for such use. In addition, the Board of Trustees may require evidence that all requirements of Village ordinances pertaining to the dedication of land or the contribution of cash in connection with subdivisions or developments of land have been met as respects the proposed planned development, whether or not such proposed development would be otherwise subject to such ordinances.

[1] The "Development Site" – comprised of Parcel A and Parcel C, contains 75,305 square feet of total and combined lot area.

*Public Open Space and Contributions (continued).*

**Response: Not applicable. As prescribed in the Official Comprehensive Plan and pursuant to the uses and allowances codified for the C-1 District, the Applicant is not presently aware of any need or desire to have a any portion of the subject property [*Development Site*] dedicated for public use.**

5) *Common Open Space.*

i) Amount, Location, and Use. The failure of a planned development to provide common open space as follows:

| Districts | Amount of Open Space (Percent of Total Area) |
|---|---|
| All Residential | 30 |
| All Commercial, and Office | 15 |
| IB Institutional Buildings | 20 |
| All Industrial | 10 |

shall be considered to be an indication that it has not satisfied the objectives for which planned developments may be approved pursuant to this Code. When common open space is provided in a planned development, the amount and location of such open space shall be consistent with its intended function as set forth in the application and planned development plans. No such open space shall be used for the construction of any structure or improvement except such structures and improvements as may be approved in the Final Plan as appropriate to the intended leisure and recreational uses for which such open space is intended.

**Response: The proposed new development is yielding over 18,500 square feet of *open space* (on and between Parcels A & C), which meets and exceeds all applicable and minimum standards for the amount, location and use of *open space*, for the C-1 District, as set forth in the Zoning Ordinance.**

ii) Preservation. Adequate safeguards, including recorded covenants or dedication of development rights, shall be provided to prevent the subsequent use of common open space for any use, structure, improvement, or development other than that shown on the approved Final Plan. The restrictions must be permanent and not for a given period of years and must run with the land.

**Response: Noted. The Applicant will maintain ongoing compliance with this standard, accordingly.**

iii) Ownership and Maintenance. The Final Plan shall include such provisions for the ownership and maintenance of common open space, including all improvements thereto, as are reasonably necessary to ensure their continuity, care, conservation, maintenance, and operation in accordance with pre-determined standards and to ensure that remedial measures will be available to the Village if such open space or improvements are permitted to deteriorate or are not maintained in a condition consistent with the best interests of the planned development or the Village.

**Response: The Applicant will be establishing and registering a separate ownership entity that will be wholly responsible for and control the proposed new development at and after the time of occupancy. The newly formed entity will be wholly owned by the Applicant. The Applicant will also be contracting with a reputable and experienced real estate company, which will be the full-time and permanent leasing agent for the proposed new development. Together, the afore-identified parties will establish and adopt a "Plan of Operation" that will specifically recognize the duties of such parties and will mandate procedures and protocol for the ongoing management of the development – including as it relates to all interior and exterior (*open space*) areas within and comprising the Development Site. As part of this initiative, the Applicant – by and through its respective and associated agents, will employ a full-time licensed and bonded building and grounds maintenance technician, and will contract with additional professionals in the landscaping and green space industry to ensure the ongoing inspection, maintenance and care of all *open space* within this planned development.**

iv) Property Owners' Association. When the requirements of Section 16-13.5.b.5.iii are to be satisfied by the ownership or maintenance of such open space or improvements by a property owners' association, such association shall meet each of the following standards:

a) the by-laws and rules of the association and all declarations, covenants, and restrictions to be recorded must be approved as part of the Final Plan prior to becoming effective;

b) the by-laws and rules of the association and all declarations, covenants, and restrictions to be recorded shall each provide that it shall not be amended without the prior written consent of the Board of Trustees;

c) the association must be established and all covenants and restrictions must be recorded prior to the sale of any property within the area of the planned development designated to have use of the proposed open space or improvements;

d) the association must be responsible for property and liability insurance, taxes, and the maintenance of the open space and improvements to be deeded to it;

e) membership in the association must be mandatory for each property owner and any successive owner having a right to the use, enjoyment or benefit of such open space or improvements;

f) every property owner having a right to the use, enjoyment or benefit of such open space or improvements must pay its pro rata share of the cost of the association by means of an assessment to be levied by the association that meets the requirements for becoming a lien on the property in accordance with statutes of the State of Illinois;

g) the association must have the right to adjust the assessment to meet changed needs by a membership vote of not more than a majority of the members voting on the issue;

h) the Village must be given the right to enforce the declarations, covenants, and restrictions; and

i) the Village must be given the right, after ten (10) days' written notice to the association, to perform any maintenance or repair work that the association has neglected to perform, to assess the membership for such work and to have a lien against the property of any member failing to pay such assessment and, for this purpose alone, all the rights and powers of the association and its governing body under the agreements and declarations creating the association.

**Response: The proposed new *residential* development is intended to operate as a "rental" building, with ninety-one (91) "apartments" that will be available on the open market to lease, by and through the Applicant's Property Management and Leasing Teams. This is not a "for-sale" (condominium) development, and – therefore, there will be no transfer of ownership or management rights to a resident association. As explained further in item (iii) – above, the Applicant will be contracting with a reputable and experienced residential real estate company, which will be the full-time and permanent leasing agent for the proposed new development. In addition thereto, the Applicant will be establishing and registering a separate ownership entity that will be wholly responsible for and control the proposed new development at and after the time of occupancy. Together, the afore-identified parties will establish and adopt a "Plan of Operation" that will specifically recognize the duties of such parties and will mandate procedures and protocol for the ongoing management of the development – including as it relates to all interior and exterior (*open space*) areas within and comprising the Development Site.**

**<u>Response (*continued*)</u>: Any subsequent, but unanticipated, changes in ownership and management of the development will be subject to compliance with the express terms and conditions set forth herein, in perpetuity, unless otherwise modified with the informed and expressed consent of the Village Board and its Trustees or other formal act of law or legislation.**

v) <u>Landscaping and Perimeter Treatment</u>. Any area of a planned development not used for structures or circulation elements shall be landscaped. The perimeter of the planned development shall be treated so as to ensure compatibility with surrounding uses by means such as provision of compatible uses and structures, setbacks, screening, or natural or man-made buffers. Every planned development shall provide a perimeter landscaped open space along each of its boundaries; each such open space shall have a minimum depth equal to the minimum front yard required in the district in which it is located or which it abuts, whichever is greater.

**<u>Response</u>: The proposed new development will feature over 18,500 square feet of landscaped *open space* (on and between Parcels A & C), which includes a large outdoor courtyard at the front of the building – along Brainerd Street, as well as several islands (with greenery, grass foliage, plants and trees) situated throughout the impervious portions of the Development Site. Such natural and green enhancements will be implanted around and enveloping the entire perimeter of the site, consistent with the other surrounding uses and improvements and in full compliance with the applicable provisions of the Zoning Ordinance, for planned developments in the C-1 District, including – in relevant part, landscape and building setbacks and coverage area.**

vi) <u>Building Spacing</u>. Building spacing shall be as determined by the Board of Trustees; provided, however, that no part of any building shall be closer to any part of any other building than ten (10) feet.

**<u>Response</u>: The proposed new building, as designed and situated on the Development Site, complies with the ten-foot (10'-0") minimum spacing requirements.**

vii) <u>Private Streets</u>. Private streets are prohibited unless expressly approved by the Board of Trustees. If so approved, they shall meet all construction and right-of-way standards applicable to public streets. No such streets shall be approved except upon the condition that they shall be owned and maintained by a property owners' association meeting the requirements set forth in Section 16-13.5.b.5.iv.

Private Streets (continued).

**Response: The programming for the proposed development includes the introduction of a new internal "access drive" (24 feet wide) that will allow for vehicular movement and circulation into, out of and through the Development Site. The "internal drive" will bisect the site – laterally (east-west), along the south edge of Parcel B, with access and circulation to the west from Milwaukee Avenue and to the east through the internal surface parking on to Brainerd Street. A tributary outlet will extend to the north – intersecting the surface parking lot and Parcel B, providing access to and from the Metra parking lot. The new "internal drive" will remain a part of the Development Site, under the exclusive ownership and control of the Applicant and its successors. It is the intent of the Applicant to have such drive available to residents of the new building, as well as to the general public, for managed shared use and enjoyment. By and through this petition for *Planned Development* and *Special Use*, the Applicant seeks the approval of the Board of Trustees to allow for public use of the "internal drive", while under and pursuant to private ownership by the Applicant and its successors. The Applicant will undertake and effectuate any related land use agreements and/or approvals to ensure compliance with all applicable provisions and standards of the Zoning Ordinance for the construction and maintenance of a vehicular right-of-way.**

viii) Sidewalks. Unless expressly waived by the Board of Trustees, a sidewalk meeting the standards of the Subdivision Code shall be provided along each side of every street in or abutting a planned development.

**Response: The programming for the proposed development complies with this standard. The existing public sidewalks along Milwaukee Avenue, Lake Street and Brainerd Street – which abut and/or border the Development Site will be maintained and/or improved in full compliance with all applicable standards. An additional internal pedestrian walkway will be introduced along the east side of the Development Site (Parcel A), providing a naturally enhanced and functional border between the new proposed development and the independently occupied parcels to the east (with frontage on Milwaukee Avenue). The new proposed internal walkway will also comply with all applicable standards of the Subdivision Code and or other relevant codes and ordinances.**

ix) Utilities. All utility lines shall be installed underground.

**Response: Confirmed. All utilities servicing the proposed development will be installed underground, beneath the subject property.**

6) *Vehicular Trip Reduction Features*. Features for reducing the number of vehicular trips expected by a development shall be incorporated into a planned development. Such features include but are not limited to pedestrian/bicycle linkages within and between land uses, the use of traffic mitigation plans, and the incorporation of elements to encourage and facilitate the use of public transportation.

**Response: The programming for the proposed development complies with this standard. Traffic mitigation was at the core of the programming for the proposed new development. In consideration of the site's immediate proximity to the *Metra Station* and the heart of Downtown Libertyville (Commercial/Retail Corridor), and in a proactive effort to promote local tenancy, walkability and reliance of more sustainable forms of public and private transportation, the programming has moderated the parking-to-unit ratio for the new development to just under 1.3 – with off-street residential parking for 115 vehicles to serve 91 total residential units, which is exclusive of an additional 18 vehicular spaces intended for visitors and guests. Such prudent programming allows for every unit within the new development to be allotted at least one (1) off-street parking space, with larger units having the opportunity to lease two (2) spaces, upon demand and necessity. [2]Such prudent and intentional programming has also been tested and shown to attract tenants who do not own a private motor-vehicle and/or who own one (1) vehicle for the household. In addition to and in furtherance of these considerations and efforts, the programming for the development features onsite storage and parking for bicycles and electric scooters, as well as several new pedestrian and bicycle paths and linkages within, throughout and around the Development Site. Keeping with these same intentions, the Applicant will be introducing an off-street designated standing/loading area to facilitate ride share operations and deliveries without obstructing the abutting public ways.**

c. Additional Standards for Specific Planned Developments. When the district regulations authorizing any planned development use in a particular district impose standards to be met by such planned development in such district, a special permit for such development shall not be recommended or granted unless the applicant shall establish compliance with such special standards.

**Response: Noted. The Applicant will comply with this standard, accordingly.**

[2] The Applicant owns and manages several other residential developments of this typology and density in similar suburban transit-served localities. Parking utilization data and tenant demands has been maintained and evaluated at each of these developments, yielding an average parking utilization ratio of LESS than one to one (1:1), even for buildings with larger units (two-bedroom-plus), with parking vacancies present at almost all of the Applicant's comparable developments.

Development Site: 725-747 North Milwaukee Avenue / 126-140 Lake Street
Applicant: Libertyville Land LLC

STANDARDS FOR SPECIAL USE PERMITS

16 9.5 Standards for Special Use Permits.

a. General Standards. No special use permit shall be recommended or granted pursuant to this Section 16-9 unless the applicant shall establish that:

1) *Code and Plan Purposes*. The proposed use and development will be in harmony with the general and specific purposes for which this Code was enacted and for which the regulations of the district in question were established and with the general purpose and intent of the Official Comprehensive Plan.

**Response**: **Established. The proposed new moderate density, economically modest, rental multi-family residential complex was designed and programmed in harmony with and in consideration of the general and specific purposes of the Libertyville Zoning Ordinance (for developments in the *C-1 Downtown Core Commercial District*), Building Code and corresponding Official Comprehensive Plan, and in compliance with all of the applicable standards and regulations further codified therewithin. The proposed new development will be activating an otherwise idle site, located at the heart of Libertyville's bustling downtown corridor, thereby providing natural and functional connectivity between the single-family residences to the west and the commercial establishments comprising Main Street and Milwaukee Avenue to the east. The proposed development will also introduce ninety-one (91) new housing units to the area, in turn creating new patronage to further support and enhance downtown vibrancy by and through the local businesses, schools, and civic organizations, while – too, increasing the available tax base and diminishing tax burdens for other property owners in the community.**

2) *Adverse Impact*. The proposed use and development will not have a substantial adverse effect upon adjacent property, the character of the area, or the public health, safety, and general welfare.

**Response**: **Established. The proposed new moderate density, economically modest, rental multi-family residential complex was purposefully and conscientiously designed and programmed so to have a beneficial effect on the few adjacent properties that abut the development site, and to retain and strengthen the existing and evolving character of downtown Libertyville, while also promoting the general social welfare, health and safety of the community and the many diverse individuals that comprise the same.**

*Adverse Impact (continued).*

**Response: The development site is bordered by public ways/streets to the west (Brainerd Avenue), east (Milwaukee Avenue), and south (Lake Street), with the Metra Station (parking lot) traversing the property to the north. The only "adjacent" properties, therefore, are a few one-story commercial establishments with frontage on Milwaukee Avenue, which are further separated from the development site by a paved surface parking lot. To even better mitigate any even incidental perceived impact on such adjacent properties/improvements, the programming for the proposed development calls for the installation of a new landscaped pedestrian path running along the entirety of the east side of the site. This part of Downtown Libertyville is comprised of a variety of improvements of diverse architectural representation, scale and function, most ranging from three-story and four-story mixed-use developments enveloping entire blocks, with commercial presence on the ground floor and residential units on the upper floors, in conjunction with some one-story and two-story commercial and office complexes. The Applicant and its Design Team spent many months surveying the improvements in the downtown and immediately surrounding areas, drawing contextual and architectural inspiration for the programming of the proposed development, resulting in a design that captures, reflects and enriches the distinctive character of the community, as is demonstrated in the accompanying exhibits.**

3) *Interference with Surrounding Development*. The proposed use and development will be constructed, arranged, and operated so as not to dominate the immediate vicinity or to interfere with the use and development of neighboring property in accordance with the applicable district regulations.

**Response**: **Established. The proposed new four-story, moderate density, multi-family residential complex was purposefully and conscientiously designed and programmed, and – if approved, will be constructed and managed so to not dominate the land and/or improvements that comprise the immediate vicinity or to otherwise interfere with the use and enhancement of the abutting properties. The proposed development, as purposefully designed and arranged, has the bulk of the physical improvements oriented and moderated in the center of the development site, surrounded by lush landscaped and/or functional "open spaces" on all sides, so that no portion of the physicality of the building will be even incidentally interfering with the surrounding properties and improvements. Moreover, and toward these same ends, the massing/height of the proposed new building actually lowers at the south end, in consideration of the only immediately "adjacent" improvements with their frontage on Milwaukee Avenue and the single-family residences on the other side of Brainerd Avenue.**

*Interference with Surrounding Development (continued)*.

**Response (continued): Further demonstrating these proactive mitigation efforts intended to mitigate any even incidental perceived impact on such adjacent properties/improvements, the programming for the proposed development calls for the installation of a new pedestrian path running along the entirety of the east side of the site, as well as a large landscaped "courtyard" occupying much of the frontage on Brainerd Avenue. A surface parking lot, planned for use by visitors and guests, has been introduced at the north end of the site, providing a functional buffer between the proposed development and the Metra Station.**

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

**Response**: **Established. The proposed new four-story, moderate density, multi-family residential complex will not create a measurable or undue burden on the existing public facilities, conditions and services, as is further set forth and explained in the accompanying "Expert Studies and Reports" and "Development Agreement." In a further effort to mitigate any even incidental or perceived impact on such public improvements and infrastructure, the Applicant will continue to engage with the Village's Community Development Department, in conjunction with the Public Works Department, toward ensuring the provision and maintenance of adequate facilities and services, accordingly.**

5) *Traffic Congestion*. The proposed use and development will not cause undue traffic congestion nor draw significant amounts of traffic through local streets and will, when required by the Board of Trustees, incorporate appropriate vehicular trip reduction features such as, but not limited to, pedestrian/bicycle linkages within and between land uses, the use of traffic mitigation plans, and the incorporation of elements to encourage and facilitate the use of public transportation.

**Response: Evaluated and established. The proposed new four-story, moderate density, multi-family residential complex will not create or cause undue traffic congestion in the neighborhood. The programming for the proposed development complex calls for the introduction and adaptive reuse of new and existing infrastructure improvements specifically intended to mitigate and control vehicular and pedestrian circulation and access to and around the subject property.**

*Traffic Congestion (continued)*.

**Response (continued): By way of relevant example, the programming for the proposed development includes the introduction of a new internal "access drive" that will allow for vehicular movement and circulation into, out of and through the Development Site, with vehicular access effectuated using an existing drive/curb-cut off of Milwaukee Avenue. The "internal drive" will bisect the site – laterally (east-west), along the south edge of Parcel B, with access and circulation to the west from Milwaukee Avenue and to the east through the internal surface parking on to Brainerd Street. A tributary outlet will extend to the north – intersecting the surface parking lot and Parcel B, providing access to and from the Metra parking lot. The new "internal drive" will remain a part of the Development Site, under the exclusive ownership and control of the Applicant and its successors. It is the intent of the Applicant to have such drive available to residents of the new building, as well as to the general public, for managed shared use and enjoyment.**

**Moreover, in consideration of the site's immediate proximity to the *Metra Station* and the heart of Downtown Libertyville, and in a proactive effort to promote local tenancy, walkability and reliance of more sustainable forms of public and private transportation, the programming has moderated the parking-to-unit ratio for the new development to just under 1.3 – with off-street residential parking for 115 vehicles to serve 91 total residential units, which is exclusive of an additional 18 vehicular spaces intended for visitors and guests. Such prudent programming allows for every unit within the new development to be allotted at least one (1) off-street parking space, with larger units having the opportunity to lease two (2) spaces, upon demand and necessity. [1]Such prudent and intentional programming has also been tested and shown to attract tenants who do not own a private motor-vehicle and/or who own one (1) vehicle for the household. In addition to and in furtherance of these considerations and efforts, the programming for the development features onsite storage and parking for bicycles and electric scooters, as well as several new pedestrian and bicycle paths and linkages within, throughout and around the Development Site. Keeping with these same intentions, the Applicant will be introducing an off-street designated standing/loading area to facilitate ride share operations and deliveries without obstructing the abutting public ways.**

[1] The Applicant owns and manages several other residential developments of this typology and density in similar suburban transit-served localities. Parking utilization data and tenant demands has been maintained and evaluated at each of these developments, yielding an average parking utilization ratio of at or LESS than one to one (1:1), even for buildings with larger units (two-bedroom-plus), with parking vacancies present at some of the Applicant's comparable developments.

*Traffic Congestion (continued)*.

**Response (continued)**

**In addition hereto, per the accompanying *Traffic Impact Study* - prepared by *Kenig, Lindgren, O'Hara, Aboona, Inc*., the following conclusions have been made:**

- **The vehicular traffic generated by the proposed development will be reduced due to the proximity and ample availability of multiple modes of public transportation serving the immediate area and the location of the development in the heart of downtown Libertyville.**

- **The new restricted intersection of the proposed internal drive ("circulation road") with Milwaukee Avenue will replace the Liberty Square full-movement access drive, which will reduce the existing turning movement conflicts and backups on Milwaukee Avenue.**

- **The proposed access system will be adequate in accommodating the traffic projected to be generated by the proposed development with limited impact on the external road.**

- **The roadway network has sufficient reserve capacity to accommodate the traffic that will be generated by the proposed development. The projected impact of the proposed development on the area roadway system, particularly the intersections of Lake Street with Milwaukee Avenue and Lake Street with Brainerd Avenue/Metra station access road, will be reduced due to the following:**

    - **With multiple access drives on several different roads the development traffic will be distributed along the roadway system which will reduce the volume development traffic at any one intersection.**

    - **The proposed internal drive (circulation road) will provide direct access between the development and southbound Milwaukee Avenue as well as direct inbound access from southbound Milwaukee Avenue to the Metra train station, all of which will reduce the volume of traffic along the Lake Street corridor.**

6) *Destruction of Significant Features*. The proposed use and development will not result in the destruction, loss, or damage of any natural, scenic, or historic feature of significant importance.

**Response: Evaluated and established. The proposed new multi-family residential complex will not cause or result in the destruction, loss or damage of any natural, scenic or historic improvements of significant importance.**

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

**Response: Evaluated and understood. In order to permit the proposed new multi-family residential complex and in conjunction with the corresponding application for *Planned Development*, the Applicant is seeking deviations from strict compliance with the Zoning Ordinance, for the following bulk and density standards and regulations:**

- **Residential units (*dwellings*) on the ground/first floor, in *C-1 Downtown Core Commercial District.***
- **Reduction in the *minimum lot area* (MLA) per dwelling unit of 1,500 square feet per unit to +/- 901 square feet per unit (Parcel A + Parcel C), resulting in an increase in maximum allowable dwelling unit count from 64 units to 91 units.**
- **Increase in the maximum allowable height – from 45 feet / three-story to 62 feet (*to the top of the rooftop stair access structure*) / four-story.**
- **Reduction in the minimum required off-street vehicular parking – from 166 spaces to 115 spaces.**
- **Reduction in the required *parking lot setback* off of Milwaukee Avenue – from 50 feet to 32 feet.[2]**
- **Reduction and/or waiver from the required exterior parking standards to allow for all of the bicycle parking to be within the interior of the building.**
- **Reduction and/or waiver of the one (1) required off-street *loading space*.**

[2] Please Note: This portion of the subject property is already used for off-street parking, servicing the existing retail establishments. The Applicant will be maintaining the existing surface parking area and corresponding drive isle in the same location as presently exists and has been endorsed by the Illinois Department of Transportation, The Applicant is merely seeking to cure an existing non-conforming condition.

*Compliance with Standards (continued).*

**Response (continued)**:

***Please see: Landscape Narrative, prepared by Teska Associates, Inc., included herewith as "Attachment A."***

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

**Response: Noted.**

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

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

**Response: The proposed new moderate density, economically modest, rental multi-family residential complex was designed and programmed with public convenience and community interest as the core considerations. As already explained herein, the proposed new development will be activating a site that has not been operating at its highest and best use for a very long time, especially in light of the progress and evolution occurring in and around Libertyville's otherwise bustling downtown corridor. Such mindful activation with new infrastructure and tenancy provides natural and functional connectivity between the single-family residences to the west and the commercial establishments comprising Main Street and Milwaukee Avenue to the east. Towards these very same ends, the proposed development will introduce ninety-one (91) new households to the area, in turn creating expanded patronage to further support and enhance downtown vibrancy by and through the local businesses, schools, and civic organizations, while – too, diversifying the available tax base and diminishing tax burdens for other property owners in the community. Such increased density will be filling a persistent demand for "new" larger-format, economically attainable, rental housing units in the downtown, with immediate access to the Metra and the surrounding commercial corridor and establishments comprising the same.**

*Public Benefit (continued)*.

**Response (continued): Moreover, and demonstrating these same communal benefits, the programing for the proposed residential development also calls for the introduction of a new landscaped pedestrian path – from Lake Street up to the Metra Station, providing unencumbered walkability and connectivity for residents and visitors patronizing the downtown business establishments, as well as local parks and recreational facilities. The programming also features multiple new vehicular access and circulation areas, keeping automobiles off of the shared public ways and mitigating traffic congestion in and around the neighborhood accordingly, especially on the abutting arterial streets.**

**The programming and design for the proposed new moderate density, midrise, multi-family rental residential development very adequately meet and advance the needs, goals and progression outlined in the 2030 Comprehensive Plans, as follows – *inter alia*:**

- **Introduction of new housing developments that capitalize on proximity to the Metra train station and which reinforce the pedestrian-oriented character of downtown.**

- **Introduction of new rental housing developments (*apartments*) geared toward young professionals, local workforce and empty nesters.**

- **Creation of pedestrian linkages between residential areas, the Metra train station and the downtown commercial corridor.**

- **Infrastructure and streetscape enhancements that slow traffic to safe speeds, promote walkability and provide intimate public open spaces for managed communal gathering.**

- **Expansion of Downtown's footprint and patronage through the implementation of transit-oriented development,**

2) *Alternative Locations*. Whether, and to what extent, such public goals can be met by the location of the proposed use and development at some other site or in some other area that may be more appropriate than the proposed site.

**Response: This particular development site is ideal the proposed moderate-density multi-family residential complex, in that it is one of the only idle multi-parcel properties that is bordered by both lower density single-family residential districts and the downtown core commercial districts, providing unconditioned connectivity and transition between the two diverse land use patterns. Furthermore, all of the "Conceptual Plans" outlined in the 2030 Comprehensive Plan specifically identify this particular site as being ripe for**

**development and land use substantially similar to and consistent with that proposed by the Applicant by and through this petition, a program that was sensibly and collaboratively vetted with the Village's Community Development Department for well over a year before formal and public advancement.**

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

**Response**: **Noted and already established. The proposed new moderate density, economically modest, rental multi-family residential complex was purposefully and conscientiously designed and programmed so to have a beneficial effect on the immediate vicinity and the diverse individuals and properties that comprise the same. [Please see: Response to 2) *Adverse Impact* - above.]**

# ATTACHMENT A

## LANDSCAPE NARRATIVE

Development Site: 725-747 North Milwaukee Avenue / 126-140 Lake Street
Applicant: Libertyville Land LLC

**VILLAGE OF LIBERTYVILLE**
**LAND USE APPLICATION**
**PLANNED DEVELOPMENT + SPECIAL USE**

## LANDSCAPE NARRATIVE

Section 26-13-2(b) - Perimeter landscaped open space. For all multiple-family structures within the *R-8 Multiple-Family Residential District*, there shall be provided a perimeter landscaped open space with a minimum width of no less than ten (10) feet along every lot line.

**Response: The current zoning classification for the development site is *C-1 Downtown Core Commercial District*, which such District is not identified in the Libertyville Landscape Ordinance for the *perimeter open space* regulations and requirements. As such, and in the exercise of utmost prudence, the Applicant is applying and complying with the requirements for the *R-8 Multiple-Family Residential District*, since the proposed use and development for the subject property is a multi-tenant residential complex. Accordingly, the design for the new improvements, as advanced by the Applicant, generally conforms to the *perimeter landscaped open space* requirements for the *R-8 Multiple-Family Residential District*, in so far as there will be at least (10) feet of landscaped open space around the entire border of the development site - except along the west property line where portions of the building façade are 8 feet-5 inches from the property line. Therefore, the Applicant is seeking a reduction of approximately 1 feet-7 inches from the otherwise required 10-feet *perimeter landscape setback* at these segments since there is more than50-feet of distance between the proposed new building facade and the Brainerd Avenue curbline.**

Section 26-13-3.2(c). – Parking Lots & Structures: *Parking lot interior landscaping - Tree planting islands*. Interior landscaping shall consist of tree planting islands with a minimum area of 171 square feet and a minimum width of 9 feet, measured from back of curb to back of curb. One shade tree having a minimum trunk size of 3 inches in diameter shall be included for every 171 square feet of tree planting islands. However, at no time shall a shade tree be planted closer than 20 feet to any other shade tree. The remaining area of such islands shall consist of groundcover or decorative paving material.

Section 26-13-3.2(c). – Parking Lots & Structures: *Parking lot interior landscaping - Tree planting islands (continued)*.

**Response: Based on the priority of providing a safe and convenient pedestrian access sidewalk to the adjacent Metra train station and parking lot, the Applicant is seeking a waiver for providing parking lot trees in three of the internal planting islands located within and adorning the surface parking lot at the north end of the development site. In consideration of the new pedestrian sidewalk connection, landscape urban tolerant groundcover and shrubs will be provided in the three affected parking lot islands. Landscape compensation on the north, west, south and east parking lot perimeter plantings will provide a diversity of shrub hedging, deciduous canopy and ornamental trees, evergreen trees and screen type shrubs.**

# MILWAUKEE & LAKE

745-47 N MILWAUKEE AVENUE /
126-40 LAKE STREET, LIBERTYVILLE, IL

## ABBREVIATIONS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| A.C.T. | ACOUSTICAL CEILING TILE | E.J. | EXPANSION JOINT | L.F. | LINEAR FOOT | R.C.P | REFLECTED CEILING PLAN |
| A.D. | AREA DRAIN | E.O. | ELECTRICAL OUTLET | L.H. | LEFT HAND | R.D. | ROOF DRAIN |
| A.F.F. | ABOVE FINISHED FLOOR | E.W.C. | ELECTRIC WATER COOLER | L.H.R. | LEFT HAND REVERSE | R.H. | RIGHT HAND |
| A.P. | ACCESS PANEL | EJEC. | EJECTOR | L.P. | LOW POINT | R.H.R. | RIGHT HAND REVERSE |
| A/C | AIR CONDITIONING | ELEC. | ELECTRICAL | LAM. | LAMINATE | R.O. | ROUGH OPENING |
| ACOUS. | ACOUSTICAL | ELEV. | ELEVATOR | LAUN. | LAUNDRY | REC. | RECESSED |
| ADH. | ADHESIVE | EMER. | EMERGENCY | LAV. | LAVATORY | REF. | REFRIGERATOR |
| ADJ. | ADJUSTABLE | ENCL. | ENCLOSURE | LB(S). | POUND(S) | REFR. | REFERENCE |
| ALT. | ALTERNATE | ENGR. | ENGINEER | LKR. | LOCKER | REQ. | REQUIRED |
| ALUM. | ALUMINUM | ENT. | ENTRANCE | LT. | LIGHT | RESIL. | RESILIENT |
| ANCH. | ANCHOR | EQ. | EQUAL | LTWT. | LIGHTWEIGHT | REV. | REVISION |
| ANOD. | ANODIZED | EQUIP. | EQUIPMENT | LVT. | LUXURY VINYL TILE | RFG. | ROOFING |
| APPROX. | APPROXIMATE | EXC. | EXCAVATION | | | RM. | ROOM |
| ARCH. | ARCHITECTURAL | EXH. | EXHAUST | M. | METER | | |
| ASPH. | ASPHALT | EXIST. | EXISTING | M.H. | MANHOLE | S. | SOUTH |
| ASST. | ASSISTANT | EXP. | EXPANSION | M.O. | MASONRY OPENING | S. SK. | SERVICE SINK |
| AUTO | AUTOMATIC | EXPO. | EXPOSED | M.S. | MOP SINK | S.A. | SUPPLY AIR |
| | | EXT. | EXTERIOR | MACH. | MACHINE | S.C. | SOLID CORE |
| B.M. | BENCHMARK | | | MAINT. | MAINTENANCE | S.C.W. | SOLID CORE WOOD |
| B.O. | BY OTHERS | F. BR. | FACE BRICK | MAS. | MASONRY | S.F. | SQUARE FOOT (FEET) |
| B.T.B. | BACK-TO-BACK | F.A. | FIRE ALARM | MATL. | MATERIAL | S.M. | SMOKE DETECTOR |
| B.U.R. | BUILT-UP ROOFING | F.D. | FLOOR DRAIN | MAX. | MAXIMUM | S.P. | STANDPIPE |
| B/ | BOTTOM OF | F.E. | FIRE EXTINGUISHER | MECH. | MECHANICAL | S.S. | STAINLESS STEEL |
| BB. | BASEBOARD | F.T.F. | FACE TO FACE | MEMB. | MEMBRANE | S.T.C. | SOUND TRANSMISSION CLASS |
| BD. | BOARD | F/ | FACE OF | MEZZ. | MEZZANINE | SAN. | SANITARY |
| BITUM. | BITUMINOUS | FAB. | FABRIC | MFR. | MANUFACTURER | SCHED. | SCHEDULE |
| BLDG. | BUILDING | FDN. | FOUNDATION | MIN. | MINIMUM | SECT. | SECTION |
| BLKG. | BLOCKING | FIN. | FINISH | MIR. | MIRROR | SHT. | SHEET |
| BLR. | BOILER | FL. | FLOOR | MISC. | MISCELLANEOUS | SHWR. | SHOWER |
| BM. | BEAM | FLEX. | FLEXIBLE | MOV. | MOVEABLE | SIM. | SIMILAR |
| BOT. | BOTTOM | FLUOR. | FLUORESCENT | MTD. | MOUNTED | SPEC. | SPECIFICATION |
| BRG. | BEARING | FPRF. | FIREPROOF | MTG. | MOUNTING | SPKR. | SPEAKER |
| BSMT. | BASEMENT | FRT. | FIRE RETARDANT TREATED | MTL. | METAL | SPRINK. | SPRINKLER |
| | | FT. | FOOT (FEET) | MUL. | MULLION | SQ. | SQUARE |
| C.B. | CATCH BASIN | FTG. | FOOTING | | | STA. | STATION |
| C.G. | CORNER GUARD | FURN. | FURNACE | N. | NORTH | STD. | STANDARD |
| C.I.P. | CAST IN-PLACE | FURR. | FURRING | N.I.C. | NOT IN CONTRACT | STL. | STEEL |
| C.J. | CONTROL JOINT | FUT. | FUTURE | N.T.S. | NOT TO SCALE | STOR. | STORAGE |
| C.L. | CENTERLINE | | | N/A | NOT APPLICABLE | STRUC. | STRUCTURAL |
| C.M. | CARBON MONOXIDE DETECTOR | G. | GAS | NO. | NUMBER | SUMP. | SUMP PUMP |
| C.M.U | CONCRETE MASONRY UNIT | G.C. | GENERAL CONTRACTOR | NOM. | NOMINAL | SUSP. | SUSPENDED |
| C.O. | CLEANOUT | G.T. | GREASE TRAP | | | SYM. | SYMMETRICAL |
| C.T. | CERAMIC TILE | GA. | GAUGE | O.A. | OVERALL | | |
| C.W. | COLD WATER | GALV. | GALVANIZED | O.C. | ON CENTER | T&B | TOP & BOTTOM |
| CAB. | CABINET | GEN. | GENERAL | O.D. | OUTSIDE DIAMETER | T&G | TONGUE & GROOVE |
| CCTV. | CLOSED CIRCUIT TELEVISION | GL. | GLASS | O.F.D. | OVERFLOW DRAIN | T. | TREAD |
| CIRC. | CIRCULATION | GND. | GROUND | OF/CI. | OWNER FURNISHED / | T.V. | TELEVISION |
| CLG. | CEILING | GR. | GRADE | | CONTRACTOR INSTALLED | T/ | TOP OF |
| CLO. | CLOSET | GYP. | GYPSUM BOARD | OFF. | OFFICE | TEL. | TELEPHONE |
| COL. | COLUMN | | | OPNG. | OPENING | TEMP. | TEMPERED |
| CONC. | CONCRETE | H.B. | HOSE BIBB | OPP. | OPPOSITE | THK. | THICK |
| CONF. | CONFERENCE | H.C. | HOLLOW CORE | OPP. H. | OPPOSITE HAND | TOPO. | TOPOGRAPHY |
| CONN. | CONNECTION | H.M. | HOLLOW METAL | OVHD. | OVERHEAD | TRTD. | TREATED |
| CONST. | CONSTRUCTION | H.O. | HOLD OPEN | | | TYP. | TYPICAL |
| CONT. | CONTINUOUS | H.P. | HIGH POINT | P. LAM | PLASTIC LAMINATE | | |
| CONTR. | CONTRACTOR | H.V.A.C. | HEATING, VENTILATING | P.A. | PUBLIC ACCESS | U.L. | UNDERWRITERS LABORATORIES |
| COORD. | COORDINATE | | & AIR CONDITIONING | P.C. | PRE-CAST | U.N.O. | UNLESS NOTED OTHERWISE |
| CPT. | CARPET | H.W. | HOT WATER | P.F. | PANEL FABRIC | UNEXC. | UNEXCAVATED |
| CTR. | CENTER | H.W.H. | HOT WATER HEATER | P.L. | PROPERTY LINE | UNF. | UNFINISHED |
| | | HDW. | HARDWARE | P.S.F. | POUNDS PER SQUARE FOOT | UR. | URINAL |
| D.F. | DRINKING FOUNTAIN | HDWD. | HARDWOOD | P.S.I. | POUNDS PER SQUARE INCH | UTIL. | UTILITY |
| D.O. | DOOR OPENING | HORIZ. | HORIZONTAL | PAV. | PAVING | | |
| D.P. | DAMPPROOFING | HR. | HOUR | PL. | PLATE | V.C.T. | VINYL COMPOSITION TILE |
| D.S. | DOWNSPOUT | HT. | HEIGHT | PLAS. | PLASTER | V.I.F. | VERIFY IN FIELD |
| DBL. | DOUBLE | HTG. | HEATING | PLUMB. | PLUMBING | V.T. | VINYL TILE |
| DEG. | DEGREE | HYD. | HYDRANT | PLWD. | PLYWOOD | V.W.C. | VINYL WALL COVERING |
| DEMO | DEMOLISH | | | PNL. | PANEL | VENT. | VENTILATION |
| DEPT. | DEPARTMENT | I.D. | INSIDE DIAMETER | PNT. | PAINT | VERT. | VERTICAL |
| DIA. | DIAMETER | ID | INTERIOR DESIGNER | POL. | POLISHED | VEST. | VESTIBULE |
| DIAG. | DIAGONAL | IN. | INCH(ES) | PROP. | PROPERTY | | |
| DIFF. | DIFFUSER | INCAND. | INCANDESCENT | PT. | POINT | W. | WEST |
| DIM. | DIMENSION | INCL. | INCLUDE(D) | PTD. | PAINTED | W.C. | WATER CLOSET |
| DISP. | DISPENSER | INSUL. | INSULATION | PTN. | PARTITION | W.F. | WIDE FLANGE |
| DIV. | DIVISION | INT. | INTERIOR | | | W.I. | WROUGHT IRON |
| DN. | DOWN | INTER. | INTERMEDIATE | QT. | QUARRY TILE | W.I.C. | WALK-IN-CLOSET |
| DR. | DOOR | INV. EL. | INVERT ELEVATION | QTY. | QAUNTITY | W.M. | WIRE MESH |
| DTL. | DETAIL | | | | | W.W.F. | WELDED WIRE FABRIC |
| DW. | DISHWASHER | JAN. | JANITOR | R. | RISER | W/ | WITH |
| DWG. | DRAWING | JST. | JOIST | R.A. | RETURN AIR | W/D | WASHER / DRYER |
| | | JT. | JOINT | R/W. | RIGHT-OF-WAY | W/O | WITHOUT |
| E. | EAST | | | RAD. | RADIUS | WD. | WOOD |
| EA. | EACH | K.D. | KNOCK DOWN | RECEP. | RECEPTION | WGT. | WEIGHT |
| EL. | ELEVATION | K.O. | KNOCK OUT | REF. | REFERENCE | WIN. | WINDOW |
| ELAS. | ELASTOMERIC | KIT. | KITCHEN | REINF. | REINFORCING | WPFG. | WATERPROOFING |
| E.P. | ELECTRICAL PANEL | K.S. | KITCHEN SINK | R.B. | RUBBER BASE | WSCT. | WAINSCOT |

## PROJECT TEAM

**OWNER:**

LIBERTYVILLE LAND, LLC
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708.822.2366

## SHEET LIST - PD


| SHEET # | CONTENTS |
|---|---|
| ARCHITECTURAL | |
| A0.0 | PROJECT DATA |
| A0.1 | SITE PLAN OF PROPOSAL |
| A0.2 | EXTENDED SITE PLAN OF PROPOSAL |
| A1.01 | LOWER LEVEL PARKING PLAN |
| A1.02 | 1ST FLOOR PLAN |
| A1.03 | 2ND FLOOR PLAN |
| A1.04 | 3RD FLOOR PLAN |
| A1.05 | 4TH FLOOR PLAN |
| A2.0 | EXTERIOR ELEVATIONS |
| A2.1 | EXTERIOR ELEVATIONS |
| A2.2 | EXTERIOR ELEVATIONS |
| A4.0 | SHADOW STUDIES |
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| C.16-17 | STANDARD DETAILS - CONTINUED (NOT INCLUDED) |
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| LT.3 | LIGHTING FIXTURE CUTS |
| SURVEYOR | |
| - | ALTA / NSPS LAND TITLE SURVEY |
| -- | PLAT OF SUBDIVISION |


## SYMBOLS & MATERIALS LEGEND

NORTH ARROW

ELEVATION IDENTIFIER (XX / XXXX)

CALLOUT MARKER (1 / AX.XX, SIM)

SECTION LINE (1 / A101, SIM)

LEVEL MARKER (Name / +/- Elevation)

FINISH MATERIAL (MATERIAL)

ELEVATION CHANGE

PARTITION TAG (1i)

DOOR TAG: INSTANCE (1)

DOOR TAG: TYPE (1t)

WINDOW TAG (1t)

KEY NOTE TAG (G)

EQUIPMENT TAG (1t)

REVISION TAG (1)

REVISION

HIDDEN LINE

CENTER LINE

PROPERTY LINE

BREAK LINE

EARTH

GRANULAR FILL

WOOD FRAMING

WOOD BLOCKING

WOOD

PLYWOOD

CONCRETE

BRICK

C.M.U.

STONE

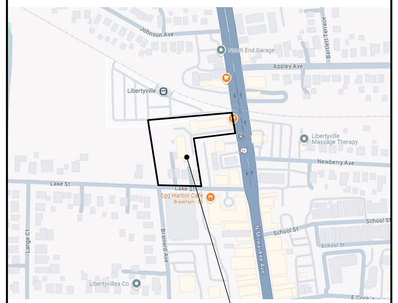
STEEL

BATT INSULATION

RIGID INSULATION

SPRAY INSULATION

## LOCATION MAP/ IMAGE






PERMIT STAMP

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CONSULTANT

PROJECT NAME:
MILWAUKEE & LAKE

PROJECT ADDRESS:
745-47 N MILWAUKEE AVENUE /
126-40 LAKE STREET, LIBERTYVILLE, IL

PROJECT INFO

PROJECT NO. - 24.016
PROJECT TEAM:
ARCH OF RECORD - JK
PROJECT MANAGER - BB
ASSOCIATES - MB, JP

| NO. | DESCRIPTION | DATE |
|---|---|---|
| 1 | ISSUED FOR DEVELOPMENT REVIEW | 10.11.24 |

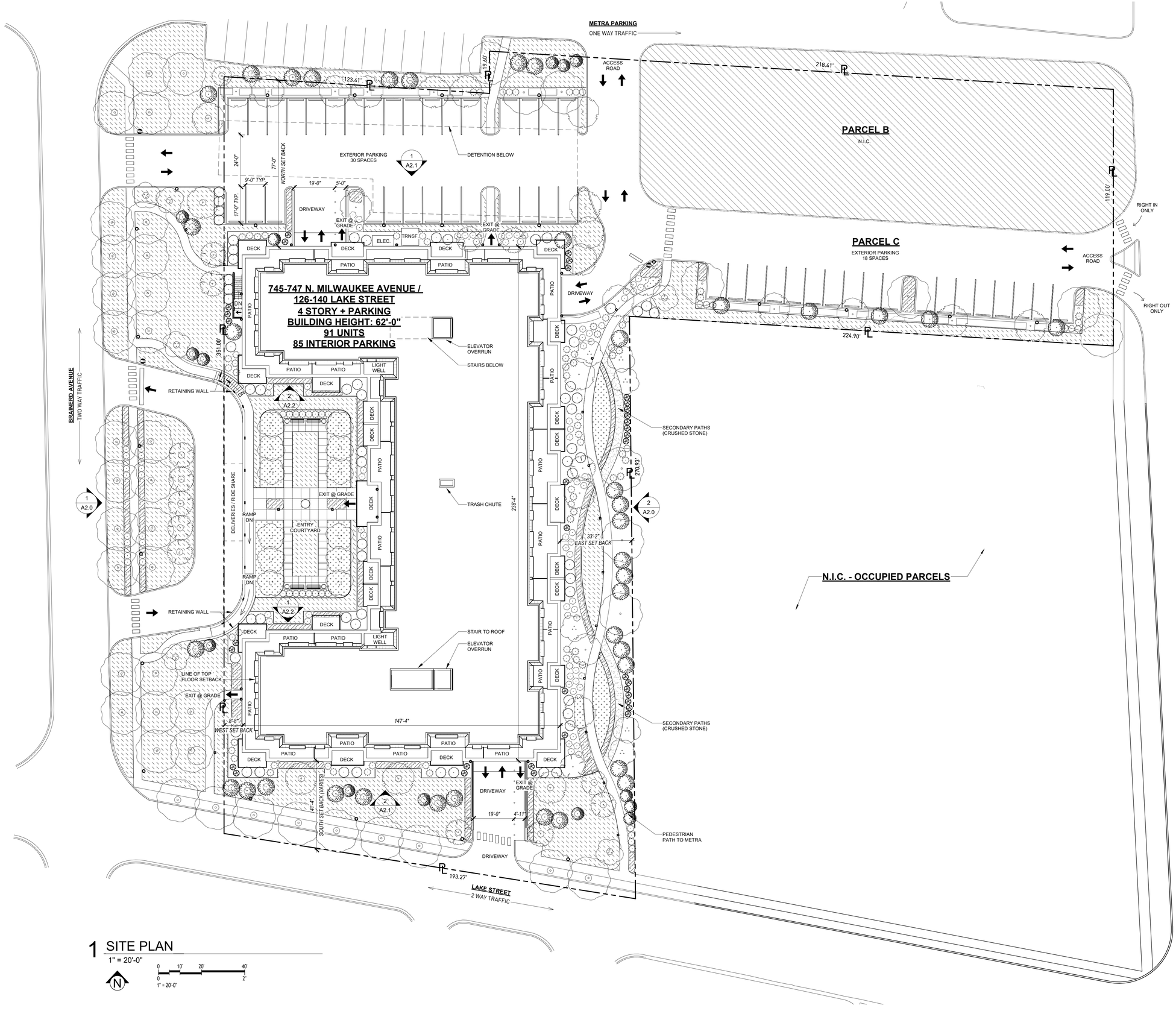
CERTIFICATION

SHEET TITLE

**PROJECT DATA**

SHEET #

A0.0




1 SITE PLAN

1" = 20'-0"

0 10' 20' 40'

0 1" 2"

1" = 20'-0"

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Hugh
LIGHTING DESIGN

PROJECT NAME:
MILWAUKEE & LAKE

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126-40 LAKE STREET, LIBERTYVILLE, IL

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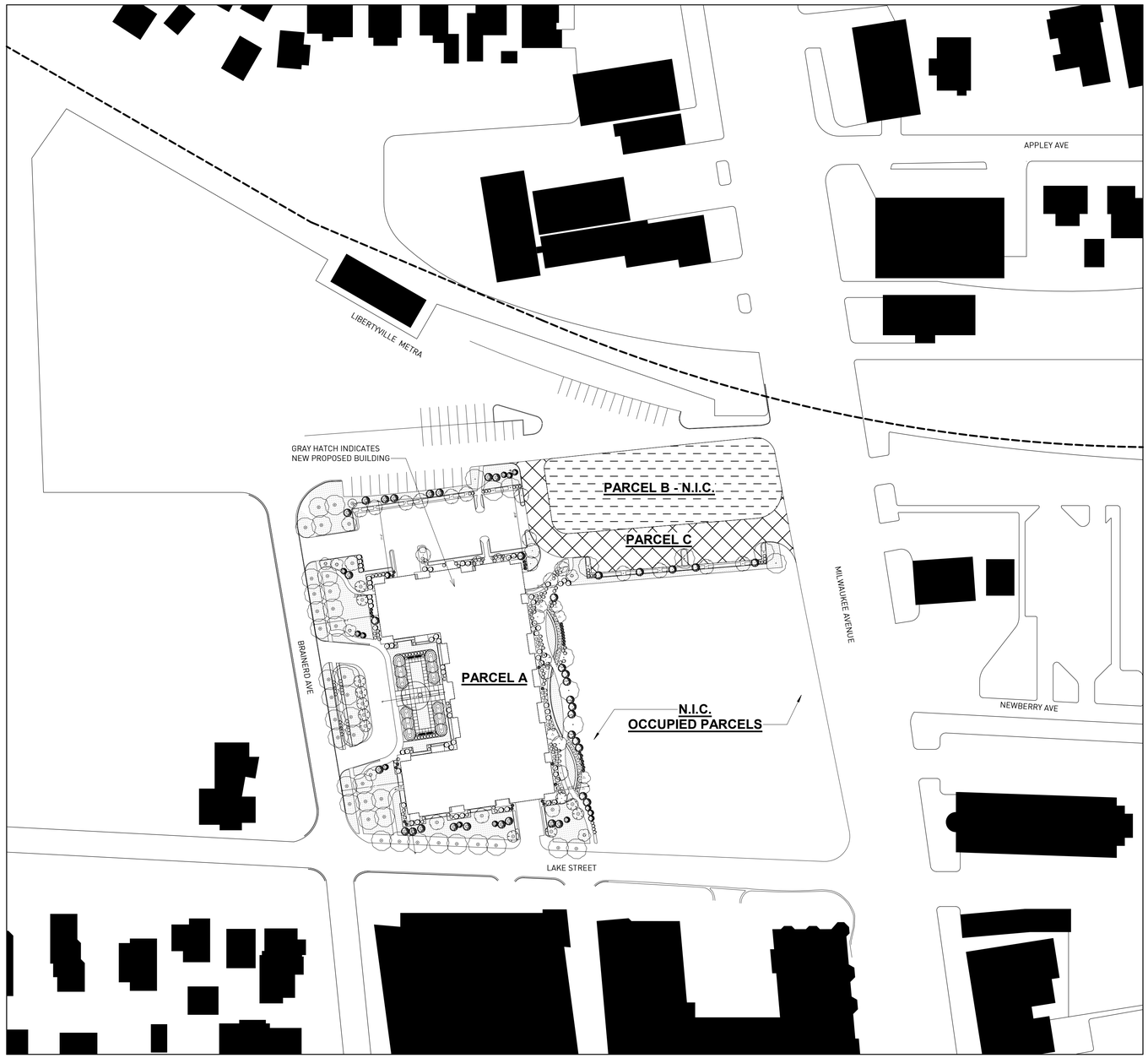
CERTIFICATION

SHEET TITLE

**SITE PLAN OF PROPOSAL**

SHEET #

A0.1




2 EXPANDED SITE PLAN

1" = 60'-0"

0 30' 60' 120'

0 1" = 60'-0" 2"




1 AERIAL IMAGE

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Hugh
LIGHTING DESIGN

PROJECT NAME:
MILWAUKEE & LAKE

PROJECT ADDRESS:
745-47 N MILWAUKEE AVENUE /
126-40 LAKE STREET, LIBERTYVILLE, IL

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| 1 | ISSUED FOR DEVELOPMENT REVIEW | 10.11.24 |

CERTIFICATION

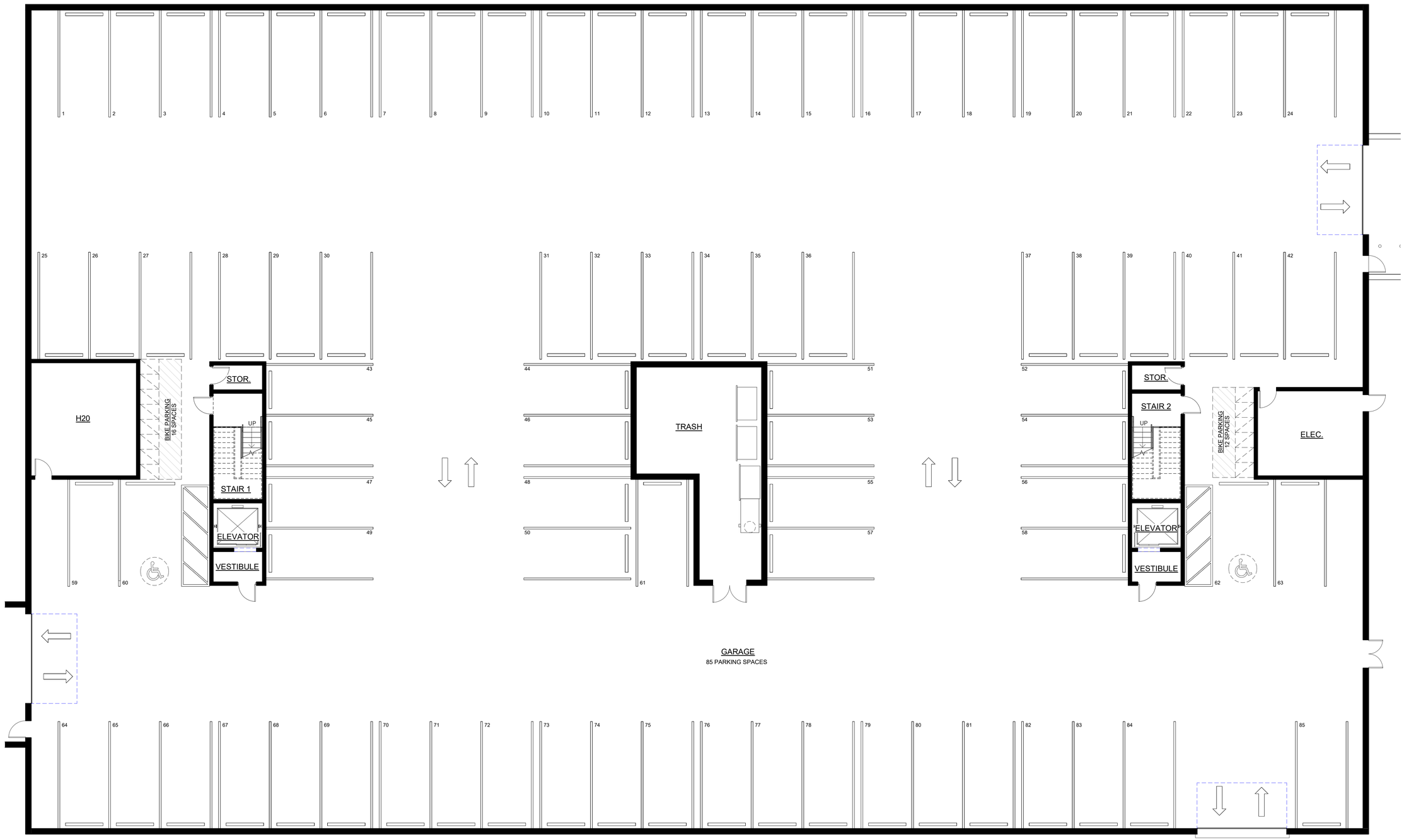
SHEET TITLE

**EXTENDED SITE PLAN OF PROPOSAL**

SHEET #

A0.2

**PARKING SPACE TOTAL: 85**
REGULAR - 83
ADA - 2




GARAGE
85 PARKING SPACES

## 1 PARKING LEVEL PLAN

1/8" = 1'-0"

N

0 4' 8' 16'
0 1/8" = 1'-0" 2'

GARAGE GSF: 35,200 SF

BUILDING HEIGHT: 62' - 0"

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bbono@bonoconsulting.com
Hugh LIGHTING DESIGN


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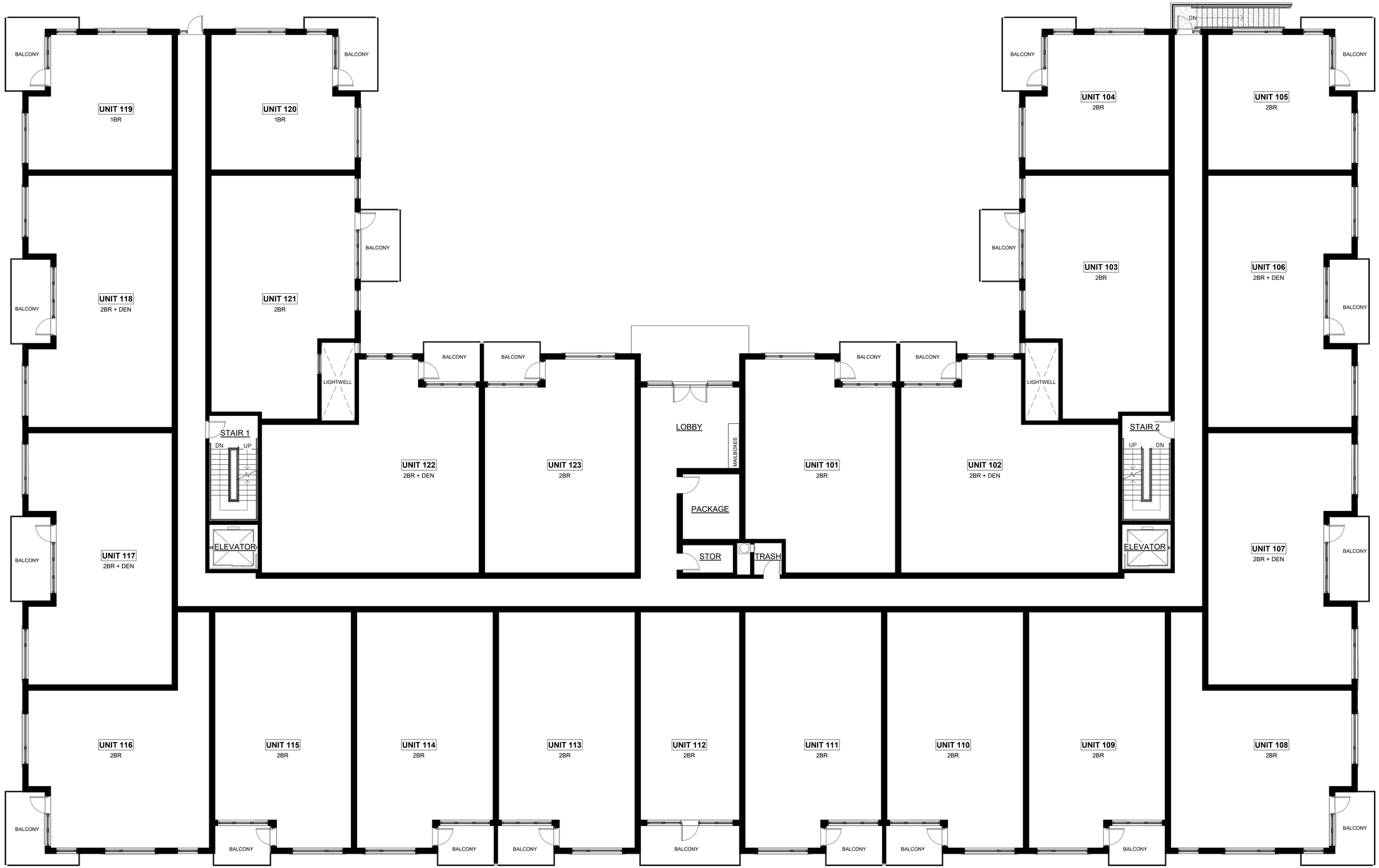
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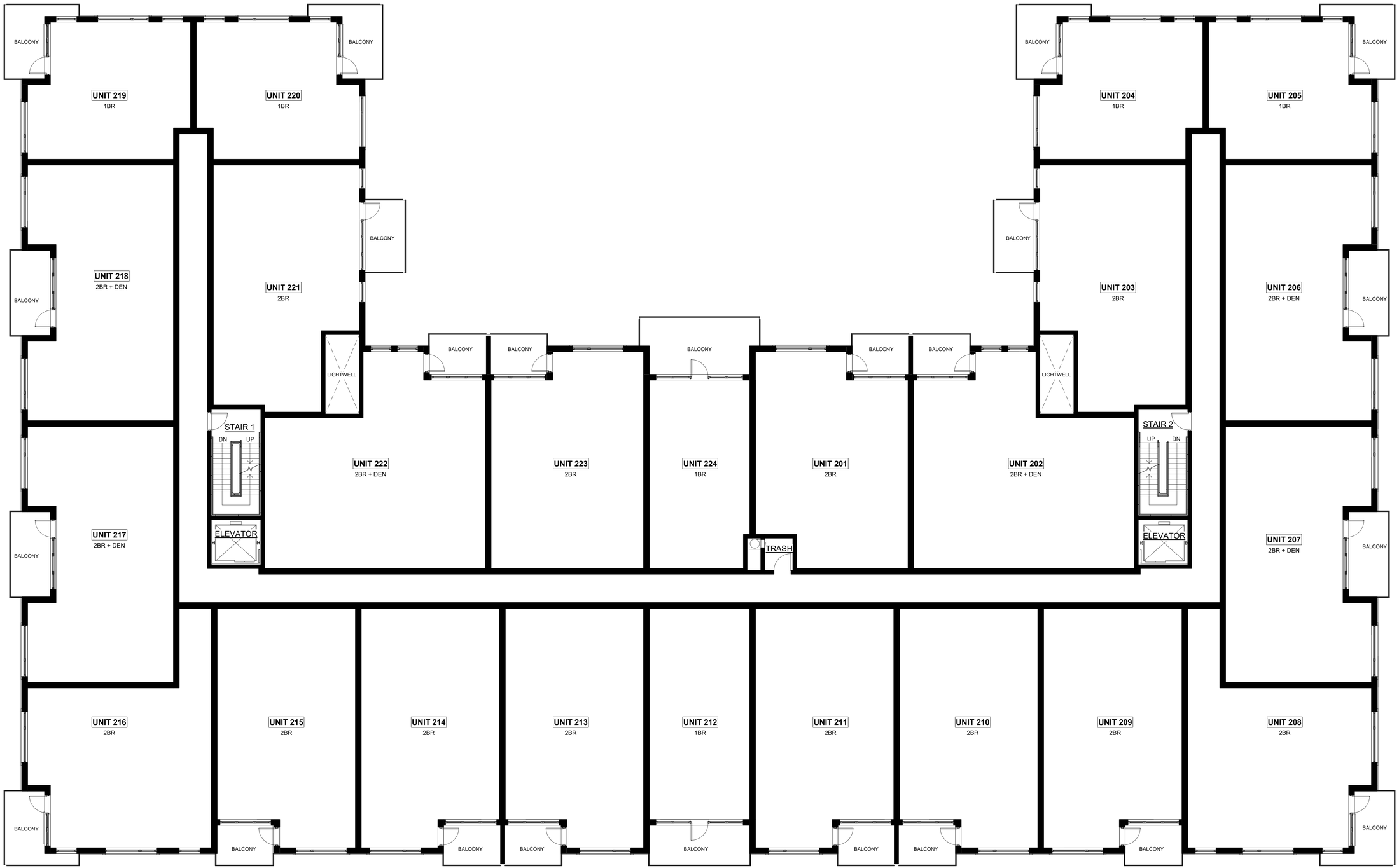
SHEET TITLE

**LOWER LEVEL PARKING PLAN**

SHEET #

A1.01


BALCONY
UNIT 119
1BR
UNIT 120
1BR
BALCONY
BALCONY
UNIT 118
2BR + DEN
UNIT 121
2BR
BALCONY
LIGHTWELL
BALCONY
BALCONY
STAIR 1
DN
UP
LOBBY
MAILBOXES
UNIT 122
2BR + DEN
UNIT 123
2BR
PACKAGE
ELEVATOR
STOR
TRASH
UNIT 117
2BR + DEN
UNIT 116
2BR
UNIT 115
2BR
UNIT 114
2BR
UNIT 113
2BR
UNIT 112
2BR
UNIT 111
2BR
UNIT 110
2BR
UNIT 109
2BR
UNIT 108
2BR
BALCONY
BALCONY
BALCONY




## 1 2ND FLOOR PLAN

1/8" = 1'-0"

0 4' 8' 16'
0 1' 2'
1/8" = 1'-0"

2ND FLOOR GSF: 27,100 SF

BUILDING HEIGHT: 62' - 0"

PERMIT STAMP

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PARK RIDGE, IL. 60068 FAX: (847) 823-3303
bbono@bonoconsulting.com
Hugh
LIGHTING DESIGN

PROJECT NAME:
MILWAUKEE & LAKE

PROJECT ADDRESS:
745-47 N MILWAUKEE AVENUE /
126-40 LAKE STREET, LIBERTYVILLE, IL

PROJECT INFO

PROJECT NO. - 24.016
PROJECT TEAM:
ARCH OF RECORD - JK
PROJECT MANAGER - BB
ASSOCIATES - MB, JP

| NO. | DESCRIPTION | DATE |
|---|---|---|
| 1 | ISSUED FOR DEVELOPMENT REVIEW | 10.11.24 |

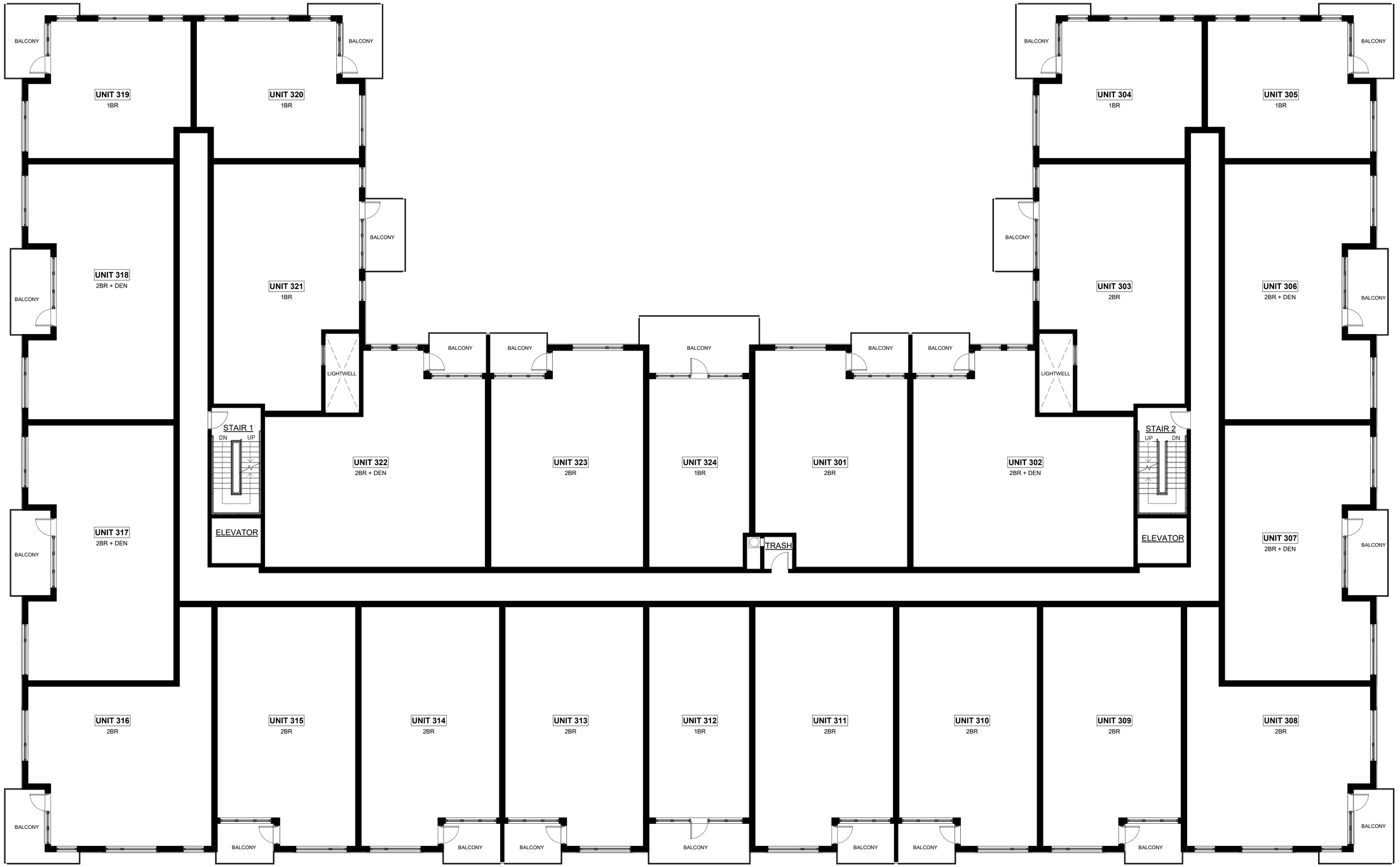
CERTIFICATION

SHEET TITLE

**2ND FLOOR PLAN**

SHEET #

A1.03




## 1 3RD FLOOR PLAN

1/8" = 1'-0"

0 4' 8' 16'
0 1/8" = 1'-0" 2"

3RD FLOOR GSF: 27,100 SF

BUILDING HEIGHT: 62' - 0"

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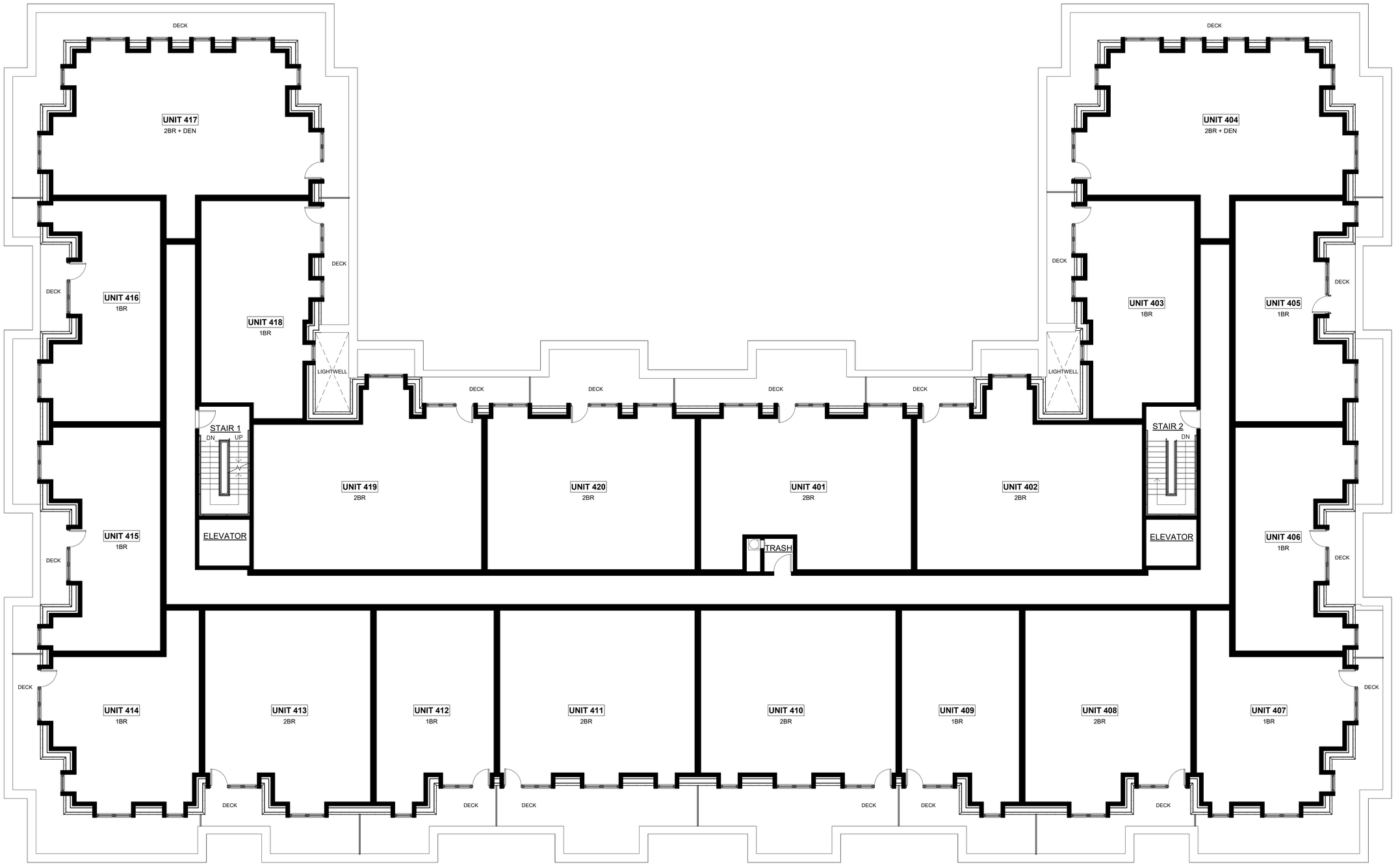
CERTIFICATION

SHEET TITLE

**3RD FLOOR PLAN**

SHEET #

A1.04




# 1 4TH FLOOR PLAN

1/8" = 1'-0"

N

0 4' 8' 16'
0 2'
1/8" = 1'-0"

4TH FLOOR GSF: 20,500 SF

BUILDING HEIGHT: 62' - 0"

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CERTIFICATION

SHEET TITLE

**4TH FLOOR PLAN**

SHEET #

A1.05




## 2 EAST EXTERIOR ELEVATION

1/8" = 1'-0"

0 4' 8' 16'
0 2"
1/8" = 1'-0"




## 1 WEST EXTERIOR ELEVATION

1/8" = 1'-0"

0 4' 8' 16'
0 2"
1/8" = 1'-0"

ARCHITECTURAL 0' - 0" IS EQUAL TO 712' - 0" ON CIVIL DWGS. ARCHITECTURAL AVG. GRADE IS EQUAL TO 708' - 0" ON CIVIL DWGS.

BUILDING HEIGHT IS MEASURED FROM THE AVG. GRADE TO THE T/ STAIR OVERRUN. AVERAGE GRADE IS DEFINED AS "THE AVERAGE ELEVATION OF THE GROUND SURFACE, IN ITS NATURAL STATE, MEASURED AT FIVE-FOOT INTERVALS AROUND THE BASE OF THE STRUCTURE" PER SEC. 26-2-2 OF LIBERTYVILLE ZONING ORDINANCE.

THE MEASURED BUILDING HEIGHT IS 62' - 0".

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CERTIFICATION

SHEET TITLE

**EXTERIOR ELEVATIONS**

SHEET #

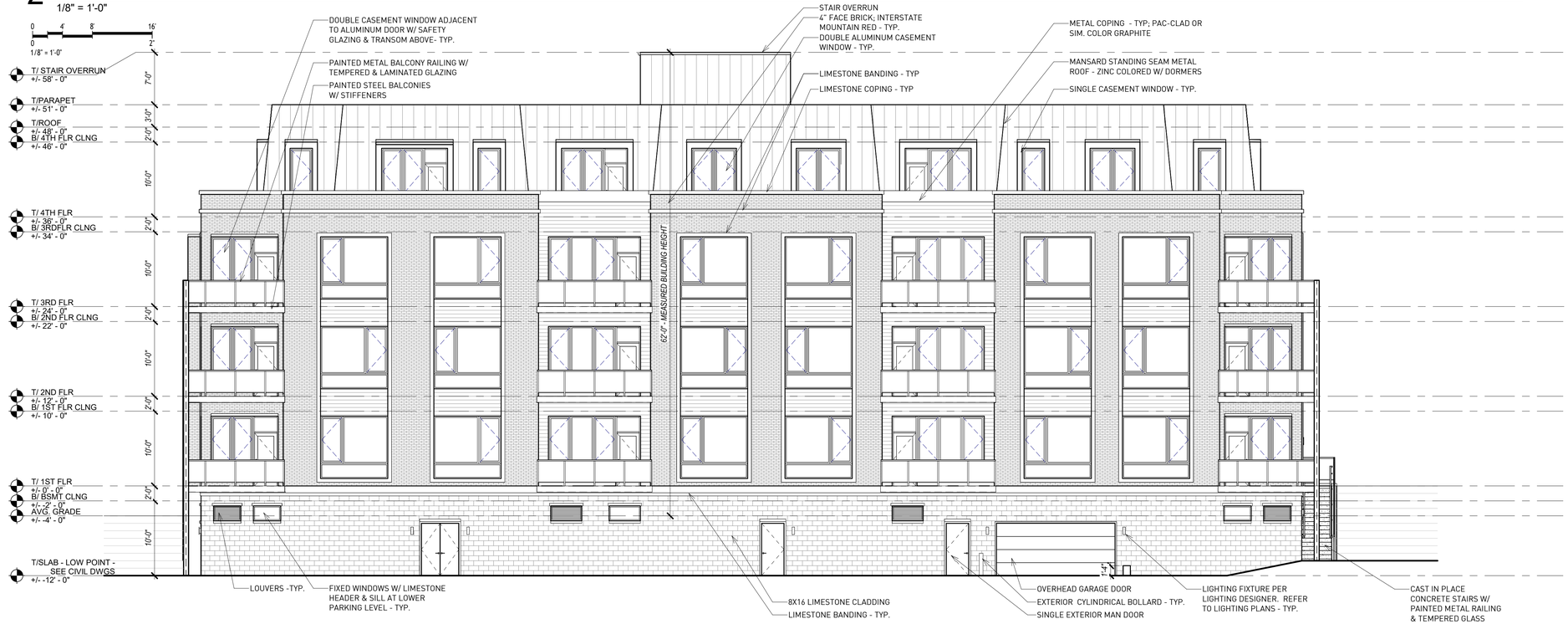
A2.0




## 2 SOUTH EXTERIOR ELEVATION

1/8" = 1'-0"

0 4' 8' 16'
0 1' 2'
1/8" = 1'-0"




## 1 NORTH EXTERIOR ELEVATION

1/8" = 1'-0"

0 4' 8' 16'
0 1' 2'
1/8" = 1'-0"

ARCHITECTURAL 0' - 0" IS EQUAL TO 712' - 0" ON CIVIL DWGS. ARCHITECTURAL AVG. GRADE IS EQUAL TO 708' - 0" ON CIVIL DWGS.

BUILDING HEIGHT IS MEASURED FROM THE AVG. GRADE TO THE T/ STAIR OVERRUN. AVERAGE GRADE IS DEFINED AS "THE AVERAGE ELEVATION OF THE GROUND SURFACE, IN ITS NATURAL STATE, MEASURED AT FIVE-FOOT INTERVALS AROUND THE BASE OF THE STRUCTURE" PER SEC. 26-2-2 OF LIBERTYVILLE ZONING ORDINANCE.

THE MEASURED BUILDING HEIGHT IS 62' - 0".

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SHEET TITLE

**EXTERIOR ELEVATIONS**

SHEET #

A2.1

ARCHITECTURAL 0' - 0" IS EQUAL TO 712' - 0" ON CIVIL DWGS. ARCHITECTURAL AVG. GRADE IS EQUAL TO 708' - 0" ON CIVIL DWGS.

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THE MEASURED BUILDING HEIGHT IS 62' - 0".

SEE 1/A2.0 FOR ANNOTATIONS




## 3 WEST COURTYARD EXTERIOR ELEVATION

1/8" = 1'-0"

0 4' 8' 16'
0 2'
1/8" = 1'-0"




## 1 NORTH COURTYARD EXTERIOR ELEVATION

1/8" = 1'-0"

0 4' 8' 16'
0 2'
1/8" = 1'-0"




## 2 SOUTH COURTYARD EXTERIOR ELEVATION

1/8" = 1'-0"

0 4' 8' 16'
0 2'
1/8" = 1'-0"

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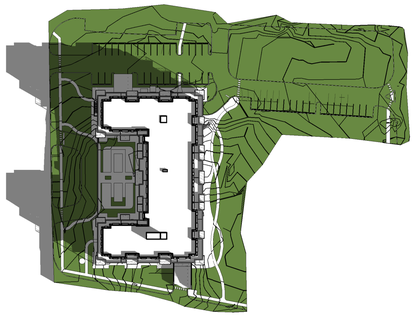
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SHEET TITLE

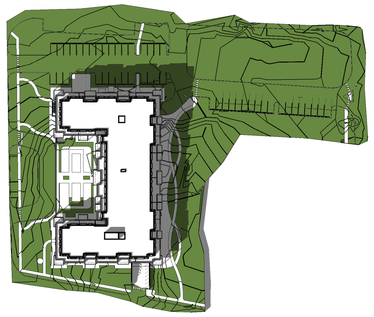
**EXTERIOR ELEVATIONS**

SHEET #

A2.2



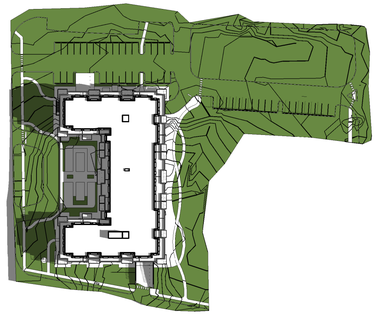
1 MARCH 21ST - 8AM



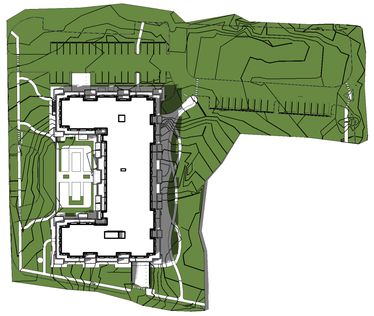
5 MARCH 21ST - 2PM



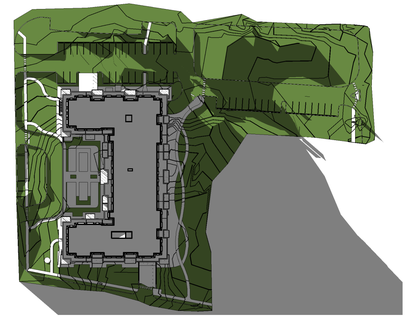
9 MARCH 21ST - 8PM



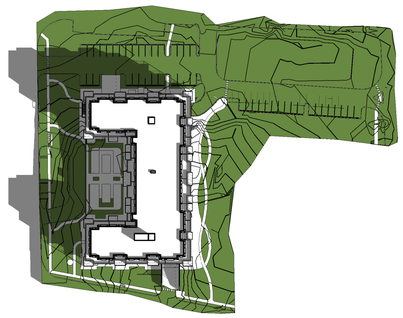
2 JUNE 21ST - 8AM



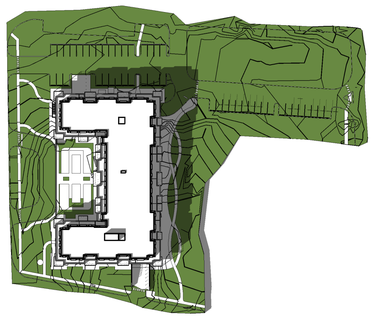
6 JUNE 21ST - 2PM



10 JUNE 21ST - 8PM



3 SEPTEMBER 21ST - 8AM



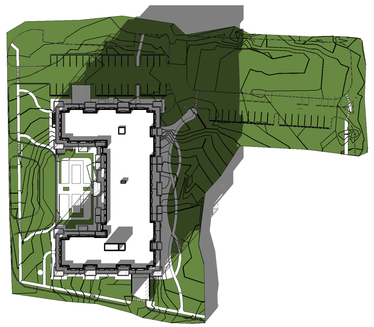
7 SEPTEMBER 21ST - 2PM



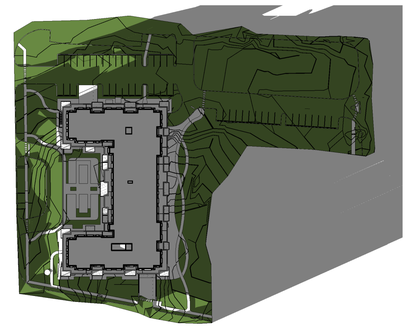
11 SEPTEMBER 21ST - 8PM



4 DECEMBER 21ST - 8AM



8 DECEMBER 21ST - 8PM



12 DECEMBER 21ST - 8PM

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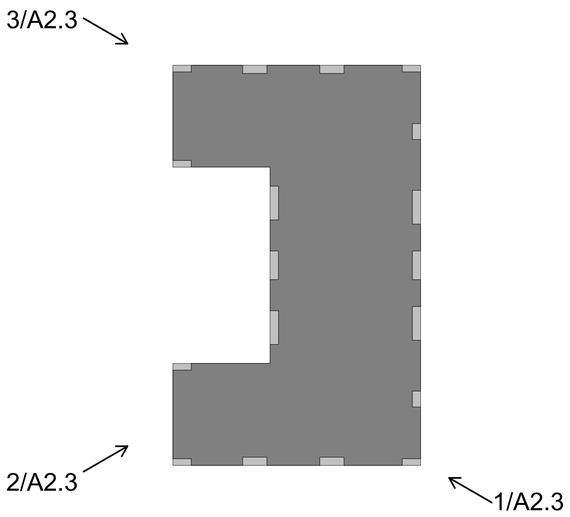
CERTIFICATION

SHEET TITLE

**SHADOW STUDIES**

SHEET #

A4.0




KEY PLAN



3 RENDER NW
12" = 1'-0"



2 RENDER IMAGE SW



1 RENDER IMAGE SE

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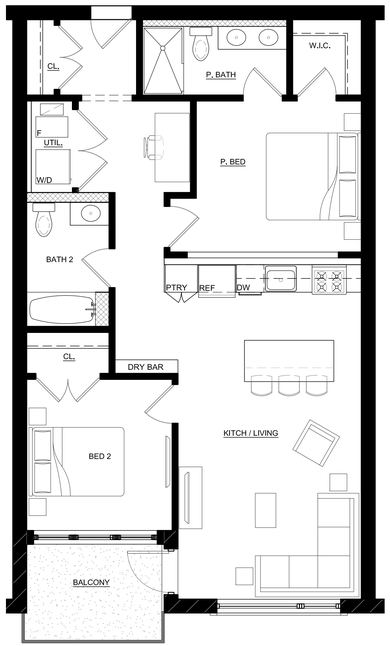
CERTIFICATION

SHEET TITLE

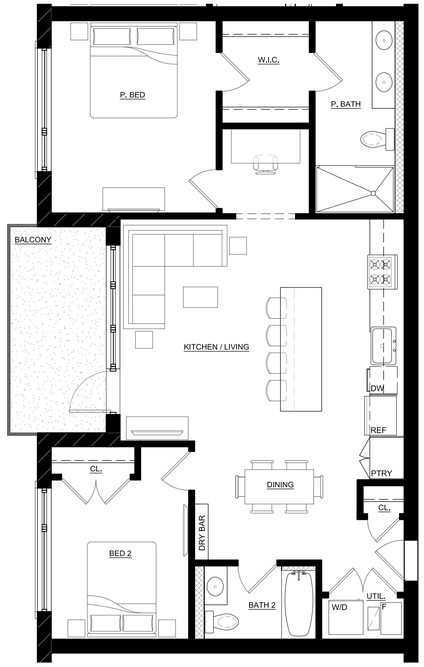
**EXTERIOR RENDERS**

SHEET #

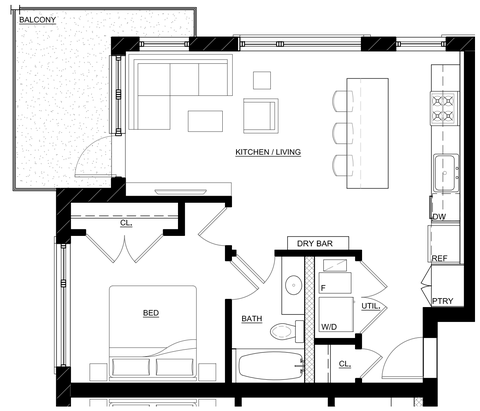
A4.1



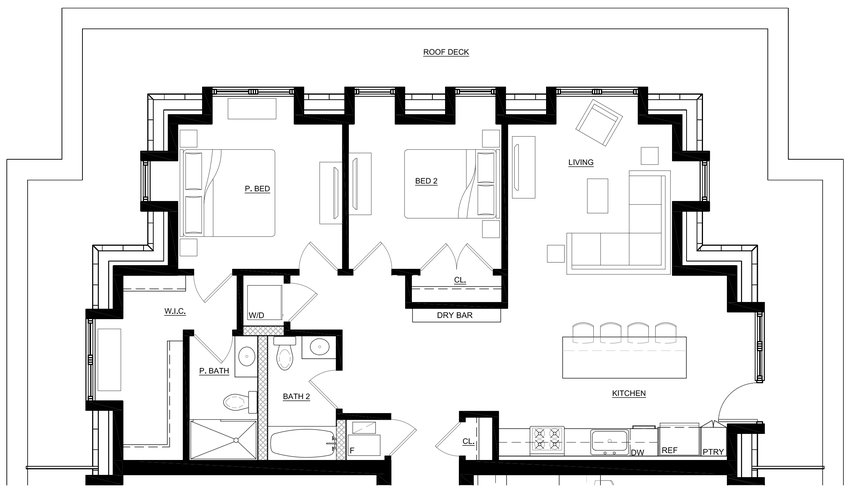

6 UNIT 315
SCALE: 3/16" = 1'-0"



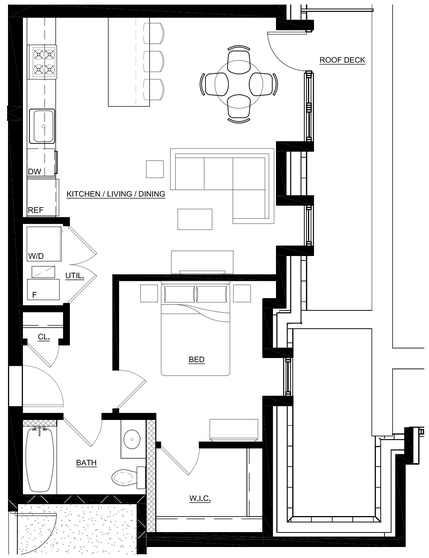

5 UNIT 318
SCALE: 3/16" = 1'-0"



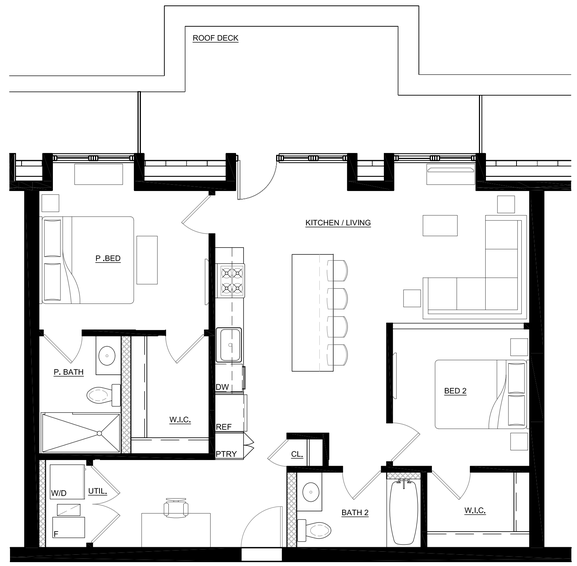

4 UNIT 319
SCALE: 3/16" = 1'-0"




3 UNIT 417
SCALE: 3/16" = 1'-0"




2 UNIT 418
SCALE: 3/16" = 1'-0"




1 UNIT 420
SCALE: 3/16" = 1'-0"

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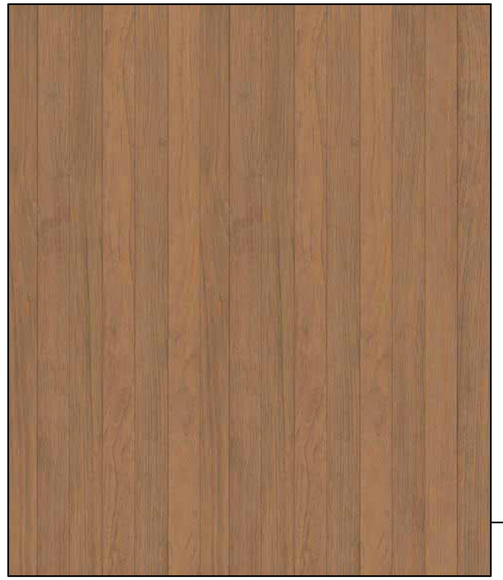
CERTIFICATION

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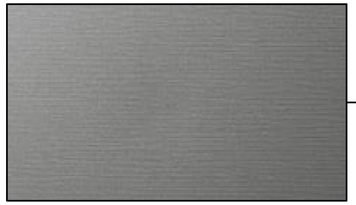
**SAMPLE FLOOR PLANS**

SHEET #

A4.2



COMPOSITE PANELING - WOOD FINISH
MANUFACTURER: MAIBEC
COLOR: JATOBA MEDIUM 204-08



MANSARD ROOF
MANUFACTURER: PAC-CLAD
COLOR: ZINC



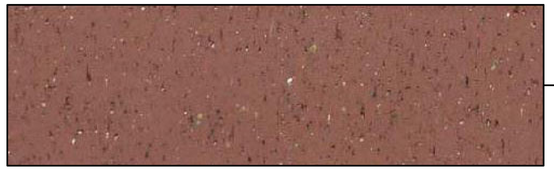
METAL COPING @ WOOD SIDING & BRICK
MANUFACTURER: PAC-CLAD
COLOR: SANDSTONE



EXPOSED PAINTED STEEL
MANUFACTURER: PAC-CLAD
COLOR: CHARCOAL



WINDOW FRAMES, DOORS & MULLIONS
MANUFACTURER: PAC-CLAD
COLOR: MATTE BLACK



FACE BRICK
MANUFACTURER: INTERSTATE BRICK
COLOR: MOUNTAIN RED



LIMESTONE
MANUFACTURER: INDIANA LIMESTONE
COLOR: STANDARD BUFF-1



1 MATERIAL BOARD
12" = 1'-0"

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| NO. | DESCRIPTION | DATE |
|---|---|---|
| 1 | ISSUED FOR DEVELOPMENT REVIEW | 10.11.24 |

CERTIFICATION

SHEET TITLE

**MATERIAL BOARD**

SHEET #

A4.3

BENCHMARK INFO

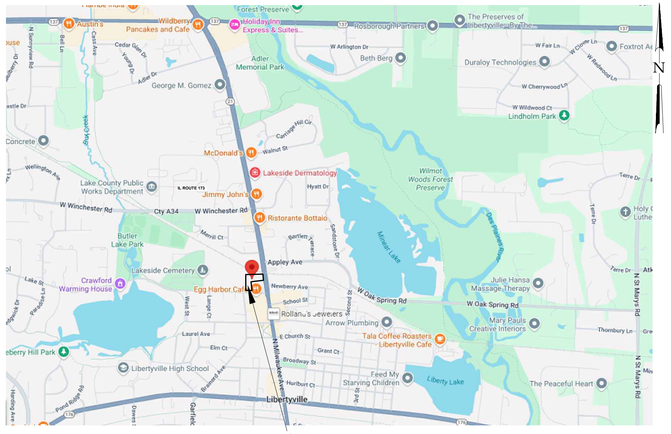
SITE BENCHMARK IS A CROSS CUT ON THE NORTH ARROW BOLT OF A FIRE HYDRANT ON THE NORTH SIDE OF IL-173, APPROXIMATELY 180 FEET EAST OF THE EAST PROPERTY LINE, ELEV 812.752, TRANSFERRED FROM LAKE COUNTY BENCHMARK 2-5A, ELEV 780.63 NAVD 88

# MULTI-FAMILY BUILDING
# SITE DEVELOPMENT PLAN
# 745-747 N. MILWAUKEE AVE / 126-140 LAKE ST., LIBERTYVILLE, LAKE COUNTY, IL

**SECTION: 16**
**TOWNSHIP: 44N**
**RANGE: 11E**

**PIN: 1116300020, 1116300021, 1116300022, 1116300024, 1116300023**

## SITE LOCATION MAP




## PRELIMINARY ENGINEERING

DRAWING INDEX:


1. TITLE SHEET, LEGEND, SITE LOCATION, & AERIAL MAP
2. EXISTING TOPOGRAPHY
3. DEMOLITION PLAN
4. PHASE - I -SOIL EROSION & SEDIMENTATION CONTROL PLAN
5. PHASE - II -SOIL EROSION & SEDIMENTATION CONTROL PLAN
6. SWPPP [NOT INCLUDED]
7. PROPOSED GRADING & DRAINAGE PLAN - OVERALL SITE
8. PROPOSED GRADING & DRAINAGE PLAN - NORTH SECTION
9. PROPOSED GRADING & DRAINAGE PLAN - SOUTH SECTION
10. PROPOSED UTILITIES PLAN - OVERALL SITE
11. PROPOSED UTILITIES PLAN - NORTH SECTION
12. PROPOSED UTILITIES PLAN - SOUTH SECTION
13. SITE PLAN & GEOMETRIC PLAN - OVERALL SITE
13.1 FIRE DEPARTMENT EXHIBIT
14. CONSTRUCTION NOTES [NOT INCLUDED]
15. STANDARD DETAILS [NOT INCLUDED]
16. STANDARD DETAILS - CONTINUED [NOT INCLUDED]
17. HIGHWAY STANDARD DETAILS [NOT INCLUDED]


## AERIAL MAP




PROJECT NARRATIVE

GENERAL: PROPOSED MULTI-FAMILY RESIDENTIAL BUILDING IS PROPOSED ON AT 1.883AC. LOT WHICH IS PART OF 2.205AC. LOT. NEW MULTI-FAMILY BUILDING TO HAVE LOWER LEVEL WITH PARKING AND RESIDENTIAL UNITS ABOVE. AN ACCESS DRIVE IS PROPOSED THROUGH HE SITE FROM MILWAUKEE TO METRA RAILROAD STATION/PARKING LOT.

AREA SUMMARY:
TOTAL AREA OF SITE: 2.205 ACRES
AREA OF THE SITE OT BE DEVELOPED AT PRESENT: 1.883 ACRES
DISTURBED AREA OF SITE: 2.205 ACRES

SPECIAL PROTECTION AREAS: THERE ARE NO FLOODPLAIN OR WETLANDS ON SITE.

UPSTREAM TRIBUTARY: THERE IS NO UPSTREAM TRIBUTARY AREA FOR THE SITE.

COMBINED/SEPARATE SEWER AREA INFO: PROPOSED PROJECT IS LOCATED IN A SEPARATE SEWER AREA. STORM SEWER WILL DISCHARGE TO STORM SEWER IN THE METRA PARKING LOT.

DETENTION/VOLUME CONTROL FACILITY: DETENTION IS REQUIRED PER LOCAL & COUNTY REQUIREMENTS. VOLUME REDUCTION FACILITY IS REQUIRED PER COUNTY REQUIREMENTS. UNDERGROUND DETENTION SYSTEM WITH OPEN BOTTOM IS PROPOSED FOR THE SITE.

SANITARY SEWERS: 6" SANITARY SERVICES FROM THE BUILDING ARE PROPOSED TO CONNECT TO NEW SANITARY MANHOLE ON THE SITE. FROM THE MANHOLE THE SANITARY SERVICE IS PROPOSED TO CONNECT TO THE SANITARY SEWER MAIN LOCATED ON LAKE STREET.
SOILS/INFILTRATION RATE: SILTY CLAYS

GROUNDWATER ELEVATION: N/A

1. I HEREBY CERTIFY THAT THE PROPOSED IMPROVEMENTS WILL NOT ADVERSELY IMPACT THE SUBJECT PROPERTY, THE SURROUNDING PROPERTIES OR THE PUBLIC RIGHT-OF-WAY WITH RESPECT TO STORMWATER DRAINAGE, AND THAT A SAFE OVERFLOW ROUTE HAS BEEN ESTABLISHED.

ASHIJIT VEER 062-067076 REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS

EXP. 11-30-25

ENGINEER

10/10/2024
DATE

NOTE

The location of existing underground utilities, such as water mains, sewers, gas lines, etc., as shown on the plans, has been determined from the best available information and is given for the convenience of the Contractor. However, the Owner and the Engineer do not assume responsibility in the event that during construction, utilities other than those shown may be encountered, and that the actual location of those which are shown may be different from the location as shown on the plans.

Bono Consulting, Inc. is not responsible for the safety of any party at or on the construction site. Safety is the sole responsibility of the contractor and any other person or entity performing work or services. Neither the owner nor engineer assumes any responsibility for the job site safety of persons engaged in the work or the means or methods of construction.

Current Standard Specifications of the Judicial Authority shall apply to the construction on this project.

*Note: The exact location of all utilities shall be verified by the contractor prior to construction activities. For utility locations call:*
*J.U.L.I.E. 1 (800) 892-0123*

**LEGEND:**

| | EXISTING | PROPOSED |
|---|---|---|
| PROPERTY LINE | | |
| SANITARY SEWER LINE | | |
| WATER LINE | | |
| STORM SEWER LINE | | |
| STORM MANHOLE | | |
| SANITARY MANHOLE | | |
| COMBINED SEWER | | |
| COMBINED MANHOLE | | |
| CATCH BASIN | | |
| INLET | | |
| WATER VALVE VAULT | | |
| WATER VALVE | | |
| GRADE | 100.12 | 597.55 |
| DRAINAGE DIVIDE | | |
| CURB & GUTTER | | |
| CLEANOUT | | CO |
| DOWNSPOUT (ROOF DRAINS) | DS | DS |
| WATER B. BOX | | BB |
| TREE PROTECTION FENCE | | |
| CONSTRUCTION FENCE | | CF |
| INLET FILTER BASKET | | |
| TRAFFIC DIRECTION PAVEMENT MARKING | | |
| FIRE HYDRANT | | |
| RETAINING WALL W/RAILING | | |
| TOP OF CURB<br>BOTTOM OF CURB | | T/C XXX.XX<br>B/C XXX.XX |
| TOP OF CURB<br>BOTTOM OF GUTTER | | T/C XXX.XX<br>B/G XXX.XX |
| WALK<br>BOTTOM OF WALK | | W XXX.XX<br>B/W XXX.XX |
| DESPRESSED CURB<br>BOTTOM OF GUTTER | | D/C XXX.XX<br>B/G XXX.XX |
| MOUNTABLE CURB | | M/C XXX.XX<br>B/C XXX.XX |

| DATE | ISSUE | REVISIONS |
|---|---|---|
| 10-09-2024 | A | PRELIMINARY PLAN |

PROJECT STAFF
PROJECT MANAGER: B. BONO P.E.
ENGINEER: A. VEER P.E.
ENGINEER:
TECHNICIAN:


BCI
BONO CONSULTING CIVIL ENGINEERS
A Severe & Maher Engineers company
1018 BUSSE HIGHWAY PH : (847) 823-3300
PARK RIDGE, IL 60068 FAX: (847) 823-3303
bbono@bonoconsulting.com


ASHIJIT VEER 062-067076 REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS
EXP. 11-30-25

TITLE SHEET, LEGEND, SITE LOCATION MAP, & AERIAL MAP
MULTI-FAMILY BUILDING
745-747 N. MILWAUKEE AVE / 126-140 LAKE ST., LIBERTYVILLE, LAKE COUNTY, IL

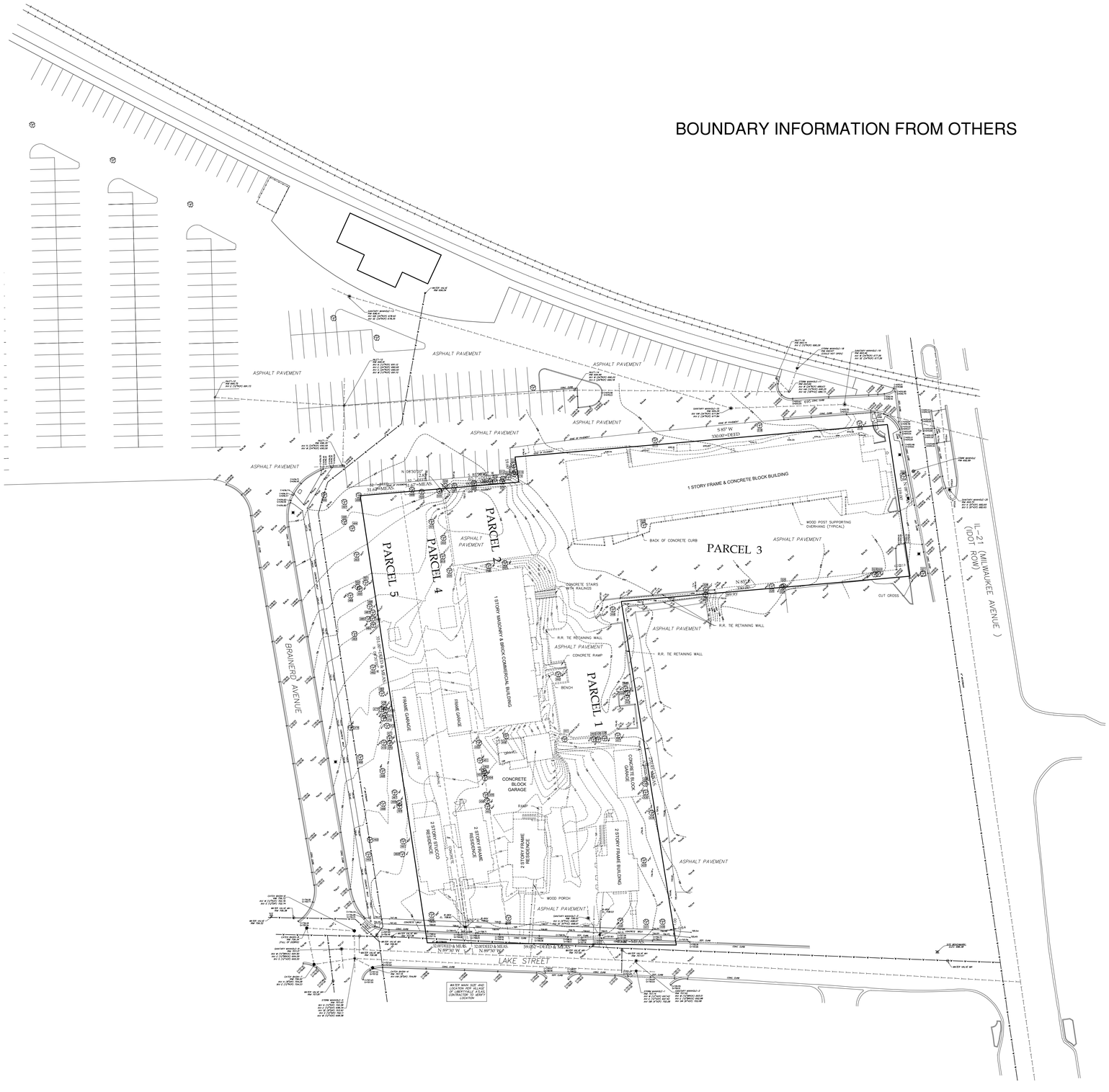
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PROJECT NUMBER: 240973
START DATE: AUG. 01, 2024
GRAPHIC SCALE
0
SCALE: NTS

*COMMONLY KNOWN AS: NO. STREET, VILLAGE, ILLINOIS.*

## BOUNDARY INFORMATION FROM OTHERS




LEGEND

- 630 — EXISTING CONTOUR
- 630 — PROPOSED CONTOUR
- × — EXISTING ELEVATION
- 630.65 — PROPOSED ELEVATION
- EXISTING SANITARY
- COMBINATION SEWER
- PROPOSED SANITARY SEWER
- PROPOSED COMBINATION SEWER
- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- PROPOSED PERFORATED PIPE
- EXISTING WATERMAIN
- PROPOSED WATERMAIN
- GAS — EXISTING GAS LINE
- COMED — EXISTING UNDERGROUND ELECTRIC
- ATT — EXISTING UNDERGROUND TELEPHONE
- CABLE — EXISTING UNDERGROUND CABLE
- EXISTING TREE
- REMOVE TREE
- TEMPORARY TREE FENCE
- CF/SF — TEMPORARY SILT / CONSTRUCTION FENCE
- SUMP PUMP [PROPOSED/EXISTING]
- EJECTOR PUMP [PROPOSED/EXISTING]
- DS DSD — DOWNSPOUT (IN-GROUND) [PROPOSED]
- SWALE [PROPOSED]
- OUTLET / POP-UP EMITTER
- CATCH BASIN
- STORM MANHOLE
- SANITARY MANHOLE
- CLEANOUT
- B BOX
- WOOD UTILITY POLE
- LIGHT POLE
- FLARED END SECTION (F.E.S.)
- INLET / DRAIN
- WATER VALVE VAULT / WATER METER
- SIGN
- MANHOLE (UNCLASSIFIED)
- FIRE HYDRANT
- 10 — TREE TAG NO.
- STOP LIGHT
- GAS VALVE
- ROOT PRUNE
- AUGERING
- PATCHING
- TOP OF GARAGE SLAB
- TOP OF FOUNDATION
- FINISH FLOOR
- TOP OF WALL
- TOP OF WINDOW WELL
- CURB AND GUTTER ELEVATIONS

PARCEL 1:

THAT PART OF LOT 4 OF SCHOOL TRUSTEE'S SUBDIVISION OF SECTION 16, TOWNSHIP 44 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDAN, DESCRIBED AS FOLLOWS, TO WIT; BEGINNING AT A POINT ON THE SOUTH LINE OF SAID LOT 4, 5.078 CHAINS WEST OF THE SOUTHEAST CORNER THEREOF; THENCE NORTH 8.5 DEGREES WEST, 4 CHAINS; THENCE NORTH 85 DEGREES EAST, 1.01 CHAINS; THENCE SOUTHERLY TO A POINT 4.014 CHAINS WEST OF SAID SOUTHEAST CORNER OF LOT 4; THENCE WEST TO THE PLACE OF BEGINNING, IN LAKE COUNTY, ILLINOIS

PARCEL 2:

THAT PART OF LOT 4 IN SCHOOL TRUSTEE'S SUBDIVISION OF SECTION 16, TOWNSHIP 44 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS, TO WIT: COMMENCING AT A POINT ON THE SOUTH LINE OF SAID LOT 4 LOCATED NORTH 89.5 DEGREES WEST 394.2 FEET FROM THE SOUTHEAST CORNER OF SAID LOT 4; THENCE NORTH 8.5 DEGREES WEST 356.9 FEET; THENCE NORTH 95 DEGREES EAST 64.7 FEET; THENCE SOUTH 8.5 DEGREES EAST 99 FEET; THENCE SOUTHERLY 264 FEET TO A POINT ON THE SOUTH LINE OF SAID LOT 4, 59.052 FEET EASTERLY OF THE PLACE OF BEGINNING; THENCE NORTH 89.5 DEGREES WEST 59.052 FEET TO THE PLACE OF BEGINNING, IN LAKE COUNTY, ILLINOIS.

PARCEL 3

THAT PART OF LOT 4 IN SCHOOL TRUSTEE'S SUBDIVISION OF SECTION 16, TOWNSHIP 44 NORTH RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: COMMENCING IN THE CENTER OF MILWAUKEE AVENUE IN THE VILLAGE OF LIBERTYVILLE, AT A POINT NORTH 8 ½ DEGREES WEST 414.35 FEET FROM THE SOUTHEAST CORNER OF SAID LOT 4; AND RUNNING THENCE SOUTH 85 DEGREES WEST 330 FEET; THENCE SOUTH 8 ½ DEGREES EAST 119 FEET; THENCE NORTH 85 DEGREES EAST 330 FEET TO THE CENTER OF SAID AVENUE AND THENCE NORTH 8 ½ DEGREES WEST 119 FEET TO THE PLACE OF BEGINNING (EXCEPT THAT PART THEREOF DESCRIBED AS FOLLOWS: COMMENCING IN THE CENTER OF MILWAUKEE AVENUE AT A POINT NORTH 8 ½ DEGREES WEST 414.35 FEET FROM THE SOUTHEAST CORNER OF SAID LOT 4; THENCE SOUTH 85 DEGREES WEST TO A POINT 40 FEET WESTERLY OF THE CENTER OF SAID MILWAUKEE AVENUE, MEASURED AT RIGHT ANGLES TO SAID CENTER LINE; THENCE SOUTH 8 ½ DEGREES EAST PARALLEL WITH THE CENTER LINE OF SAID MILWAUKEE AVENUE, 119 FEET; THENCE NORTH 85 DEGREES EAST TO SAID CENTER LINE OF MILWAUKEE AVENUE AND THENCE NORTHERLY ALONG THE CENTER OF SAID MILWAUKEE AVENUE, 119 FEET TO THE PLACE OF BEGINNING), IN LAKE COUNTY, ILLINOIS.

PARCEL 4

THAT PART OF LOT 4 IN SCHOOL TRUSTEE'S SUBDIVISION OF SECTION 16, TOWNSHIP 44 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN DESCRIBED AS FOLLOWS: COMMENCING AT A POINT IN THE SOUTHERLY LINE OF SAID LOT 4 WHICH IS NORTH 89 ½ DEGREES WEST 426.2 FEET FROM THE SOUTHEAST CORNER OF SAID LOT 4; THENCE NORTH 8 ½ DEGREES WEST 351 FEET; THENCE NORTH 85 DEGREES EAST 32 FEET; THENCE SOUTH 8 ½ DEGREES EAST TO A POINT IN THE SOUTHERLY LINE OF SAID LOT 4 WHICH IS 32 FEET EASTERLY FROM THE POINT OF BEGINNING; THENCE NORTH 89 ½ DEGREES WEST 32 FEET TO THE PLACE OF BEGINNING, IN LAKE COUNTY, ILLINOIS.

PARCEL 5

THAT PART OF LOT 4 IN SCHOOL TRUSTEE'S SUBDIVISION OF SECTION 16, TOWNSHIP 44 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: COMMENCING ON THE SOUTHERLY LINE OF SAID LOT 4, AT A POINT NORTH 89 ½ DEGREES WEST 458.2 FEET FROM THE SOUTHEAST CORNER OF SAID LOT 4; THENCE NORTH 8 ½ DEGREES WEST, 351 FEET; THENCE NORTH 85 DEGREES EAST, 32 FEET; THENCE SOUTH 8-1/2 DEGREES EAST TO A POINT IN THE SOUTHERLY LINE OF SAID LOT 4 WHICH IS 32 FEET EASTERLY FROM THE POINT OF BEGINNING; THENCE 89 ½ DEGREES WEST 32 FEET TO THE POINT OF BEGINNING, IN LAKE COUNTY, ILLINOIS.

N

| ISSUE | DATE |
|---|---|
| A — PRELIMINARY PLAN | 10-09-2024 |

REVISIONS

PROJECT STAFF

PROJECT MANAGER: B. BONO P.E.
ENGINEER: A. WEBER P.E.
ENGINEER:
TECHNICIAN:


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bbono@bonoconsulting.com


# EXISTING TOPOGRAPHY

MULTI-FAMILY BUILDING
745-747 N. MILWAUKEE AVE / 126-140 LAKE ST. ,
LIBERTYVILLE, LAKE COUNTY, IL

NOT FOR CONSTRUCTION


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PROJECT NUMBER: 240973

START DATE: AUG. 01, 2024

GRAPHIC SCALE
40 0 40

SCALE: 1"=40'-0

SHEET NUMBER
2 OF 17

| Tag # | Common Name | Scientific Name | Size | Cond. | Form | Notes |
|---|---|---|---|---|---|---|
| 430 | Silver Maple | *Acer saccharinum* | 36 | 2 | 3 | Codominant stems, included bark. SE corner 126 Lake. |
| 431 | Sugar Maple | *Acer saccharum* | 8 | 2 | 3 | Overtopped. |
| 432 | Norway Maple | *Acer platanoides* | 21 | 3 | 3 | Heavy dieback, decay, girdling roots. |
| 433 | Magnolia | *Magnolia spp.* | 16 | 3 | 3 | Trunk decay, one sided. |
| 434 | Norway Maple | *Acer platanoides* | 15,13,14 | 2 | 4 | Codominant stems, included bark, trunk decay. |
| 435 | Boxelder | *Acer negundo* | 22,30 | 5 | 5 | Trunk decay, heavy dieback. |
| 436 | Boxelder | *Acer negundo* | 19 | 4 | 5 | Decay, broken top, dieback. |
| 437 | Lacebark Elm | *Ulmus parvifolia* | 21 | 3 | 4 | Dieback, codominant stems, included bark, girdling roots. |
| 438 | Eastern Redcedar | *Juniperus virginiana* | 6 | 2 | 3 | One sided. |
| 439 | Eastern Redcedar | *Juniperus virginiana* | 7 | 2 | 3 | One sided. |
| 440 | Eastern Redcedar | *Juniperus virginiana* | 7 | 2 | 3 | One sided. |
| 441 | Amur Maple | *Acer ginnala* | 10,5,6,7,8,10 | 3 | 3 | Dieback, decay. |
| 442 | River Birch | *Betula nigra* | 8,8,7,7 | 1 | 1 | By 105 office entry. |
| 443 | Black Walnut | *Juglans nigra* | 30 | 4 | 4 | Heavy dieback, decay, in raised planter. |
| 444 | Hackberry | *Celtis occidentalis* | 5 | 2 | 4 | Overtopped. |
| 445 | Eastern Redcedar | *Juniperus virginiana* | 6 | 2 | 3 | Overtopped. |
| 446 | Colorado Spruce | *Picea pungens* | 16 | 2 | 3 | Dieback. |
| 447 | Crabapple | *Malus spp.* | 8 | 3 | 3 | Decay, dieback. |
| 448 | Crabapple | *Malus spp.* | 8 | 3 | 3 | Decay, dieback. |
| 449 | American Elm | *Ulmus americana* | 17 | 3 | 4 | Dieback, codominant stems, included bark. |
| 450 | Boxelder | *Acer negundo* | 15,16 | 3 | 4 | Dieback, codominant stems, included bark. |
| 451 | American Elm | *Ulmus americana* | 9 | 2 | 4 | Overtopped. |
| 452 | Black Walnut | *Juglans nigra* | 15 | 2 | 3 | Codominant stems. |
| 453 | Boxelder | *Acer negundo* | 9 | 2 | 4 | Overtopped. |
| 454 | Boxelder | *Acer negundo* | 11 | 2 | 3 | |
| 455 | Boxelder | *Acer negundo* | 6 | 3 | 4 | Broken top. |
| 456 | Boxelder | *Acer negundo* | 9 | 3 | 4 | Dieback, overtopped. |
| 457 | American Elm | *Ulmus americana* | 24 | 6 | 6 | Dead. |
| 458 | Sugar Maple | *Acer saccharum* | 38 | 4 | 2 | Heavy dieback, codiminant stems, decay. In front of 134 Lake. |
| 459 | Norway Maple | *Acer platanoides* | 29 | 4 | 3 | Codominant stems, girdling roots. In front of 140 Lake. |
| 460 | Mulberry | *Morus alba* | 7 | 2 | 3 | |
| 461 | Boxelder | *Acer negundo* | 25 | 3 | 3 | Dieback, one sided. |
| 462 | White Pine | *Pinus strobus* | 25 | 3 | 2 | Heavy dieback. |
| 463 | Douglas Fir | *Pseudotsuga menziesii* | 15 | 3 | 3 | Dieback. |
| 464 | Buckthorn | *Rhamnus cathartica* | 5 | 3 | 3 | |
| 465 | Norway Maple | *Acer platanoides* | 6 | 2 | 3 | |
| 466 | Norway Spruce | *Picea abies* | 24 | 2 | 1 | |
| 467 | Norway Maple | *Acer platanoides* | 5 | 2 | 3 | One sided. |
| 468 | Boxelder | *Acer negundo* | 8 | 3 | 3 | Dieback. |
| 469 | Sugar Maple | *Acer saccharum* | 24 | 2 | 3 | Codominant stems, included bark. |
| 470 | Sugar Maple | *Acer saccharum* | 12 | 3 | 3 | Dieback, overtopped. |
| 471 | Norway Maple | *Acer platanoides* | 9 | 2 | 3 | Overtopped. |
| 472 | White Pine | *Pinus strobus* | 16 | 6 | 6 | Dead. |
| 473 | Boxelder | *Acer negundo* | 11 | 5 | 5 | Trunk decay, leaning. |
| 474 | Boxelder | *Acer negundo* | 6 | 4 | 4 | Trunk decay, dieback. |
| 475 | Black Walnut | *Juglans nigra* | 25 | 3 | 2 | Broken limbs, dieback. |
| 476 | Sugar Maple | *Acer saccharum* | 14 | 2 | 3 | |
| 477 | Boxelder | *Acer negundo* | 13 | 3 | 3 | Dieback, leaning. |
| 478 | Boxelder | *Acer negundo* | 15 | 3 | 4 | Dieback, leaning. |
| 479 | Larch | *Larix decidua* | 9 | 5 | 5 | Half dead. |
| 480 | Black Cherry | *Prunus serotina* | 16 | 2 | 3 | Dieback. NW of garage. |
| 481 | Norway Spruce | *Picea abies* | 7 | 3 | 3 | Dieback, thin crown. |
| 482 | Black Walnut | *Juglans nigra* | 17 | 1 | 1 | |
| 483 | Norway Spruce | *Picea abies* | 30 | 2 | 1 | Dieback. |
| 484 | Buckthorn | *Rhamnus cathartica* | 4,3,2,2,2 | 5 | 5 | Half dead. |
| 485 | Boxelder | *Acer negundo* | 36 | 5 | 5 | Trunk decay, heavy dieback. |
| 486 | American Elm | *Ulmus americana* | 13 | 2 | 4 | Overtopped. |
| 487 | Buckthorn | *Rhamnus cathartica* | 3,3,2 | 3 | 3 | |
| 488 | American Elm | *Ulmus americana* | 13 | 2 | 4 | Overtopped, codominant stems. |
| 489 | Mulberry | *Morus alba* | 28 | 5 | 5 | Basal decay, heavy dieback, codominant stems. |
| 490 | Boxelder | *Acer negundo* | 5 | 3 | 4 | Broken leader. |
| 491 | Buckthorn | *Rhamnus cathartica* | 4,2 | 3 | 3 | |
| 492 | Boxelder | *Acer negundo* | 4 | 3 | 3 | Dieback. |
| 493 | Sugar Maple | *Acer saccharum* | 37 | 4 | 2 | Trunk decay, heavy dieback. |
| 494 | Black Walnut | *Juglans nigra* | 20 | 2 | 4 | Overtopped, leaning, dieback. |
| 495 | Buckthorn | *Rhamnus cathartica* | 3,2,1 | 2 | 3 | |
| 496 | Boxelder | *Acer negundo* | 22,16 | 5 | 5 | Trunk decay, heavy dieback. NW corner of site. |
| 497 | Honeylocust | *Gleditsia triacanthos* | 24 | 3 | 3 | Heavy dieback. |
| 498 | American Elm | *Ulmus americana* | 8 | 2 | 4 | Overtopped. |
| 499 | Black Walnut | *Juglans nigra* | 15 | 2 | 3 | Codominant stems. |
| 500 | Mulberry | *Morus alba* | 8,8 | 3 | 4 | Codominant stems, included bark, dieback. |
| 501 | Colorado Spruce | *Picea pungens* | 24 | 6 | 6 | Dead. |
| 502 | Black Walnut | *Juglans nigra* | 11 | 1 | 3 | Overtopped. |
| 503 | Norway Maple | *Acer platanoides* | 17,11 | 4 | 4 | Codominant stems, trunk decay, included bark, dieback. |
| 504 | Black Walnut | *Juglans nigra* | 14 | 2 | 3 | Trunk decay, conflict with #503. |
| 505 | Hackberry | *Celtis occidentalis* | 10 | 1 | 2 | |
| 506 | Boxelder | *Acer negundo* | 6,6 | 4 | 4 | Decay, overtopped, dieback. |
| 507 | Buckthorn | *Rhamnus cathartica* | 8,5,7,5,4 | 4 | 4 | Trunk decay, dieback. |
| 508 | Buckthorn | *Rhamnus cathartica* | 4,5,2 | 4 | 4 | Trunk decay, dieback. |
| 509 | Green Ash | *Fraxinus pennsylvanica* | 12 | 6 | 6 | Dead. |
| 510 | Buckthorn | *Rhamnus cathartica* | 2,3,2,3 | 3 | 3 | |
| 511 | Buckthorn | *Rhamnus cathartica* | 3,4,3,2 | 2 | 3 | |
| 512 | Silver Maple | *Acer saccharinum* | 18 | 3 | 3 | Dieback. |
| 513 | Buckthorn | *Rhamnus cathartica* | 3,3,3,2 | 4 | 4 | |
| 514 | American Elm | *Ulmus americana* | 8 | 2 | 4 | Overtopped. |
| 515 | Buckthorn | *Rhamnus cathartica* | 3,3,3,2,1 | 3 | 4 | |
| 516 | Boxelder | *Acer negundo* | 10 | 5 | 5 | Half dead. |
| 517 | American Elm | *Ulmus americana* | 20,19 | 3 | 4 | Codominant stems, sap ooze. |
| 518 | Siberian Elm | *Ulmus pumila* | 29,28 | 5 | 5 | Heavy dieback, codiminant stems, trunk decay. Included bark, sap ooze. |
| 519 | Colorado Spruce | *Picea pungens* | 16 | 2 | 3 | Dieback, one sided. NE corner of site. |
| 520 | Honeylocust | *Gleditsia triacanthos* | 2 | 2 | 2 | Dieback, in planter on Milwaukee Ave. |
| 521 | Hybrid Elm | *Ulmus spp.* | 4 | 2 | 2 | In planter on Milwaukee Ave. |
| 522 | Crabapple | *Malus spp.* | 9 | 5 | 5 | Half dead, between parking lots. |
| 523 | Boxelder | *Acer negundo* | 8,8,9 | 3 | 3 | Dieback, codominant stems, between parking lots. |
| 524 | American Elm | *Ulmus americana* | 7 | 2 | 3 | |
| 525 | Buckthorn | *Rhamnus cathartica* | 2,2,2,1 | 2 | 3 | |
| 526 | American Elm | *Ulmus americana* | 4,2 | 2 | 3 | |
| 527 | Black Walnut | *Juglans nigra* | 7,6,5 | 2 | 3 | Between parking lots. |
| 528 | Boxelder | *Acer negundo* | 3,2 | 3 | 3 | Dieback, between parking lots. |
| 529 | River Birch | *Betula nigra* | 10,8,6 | 2 | 3 | Dieback, codiminant stems, included bark. Near 741 office entry. |

**Tree Condition.** A visual assessment and rating of the overall health and vigor of the tree, as follows:

1 – Excellent
2 - Very Good
3 – Good
4 – Below Average
5 - Poor
6 - Dead

**Tree Form**. A visual assessment and rating of the form of the tree, as follows:

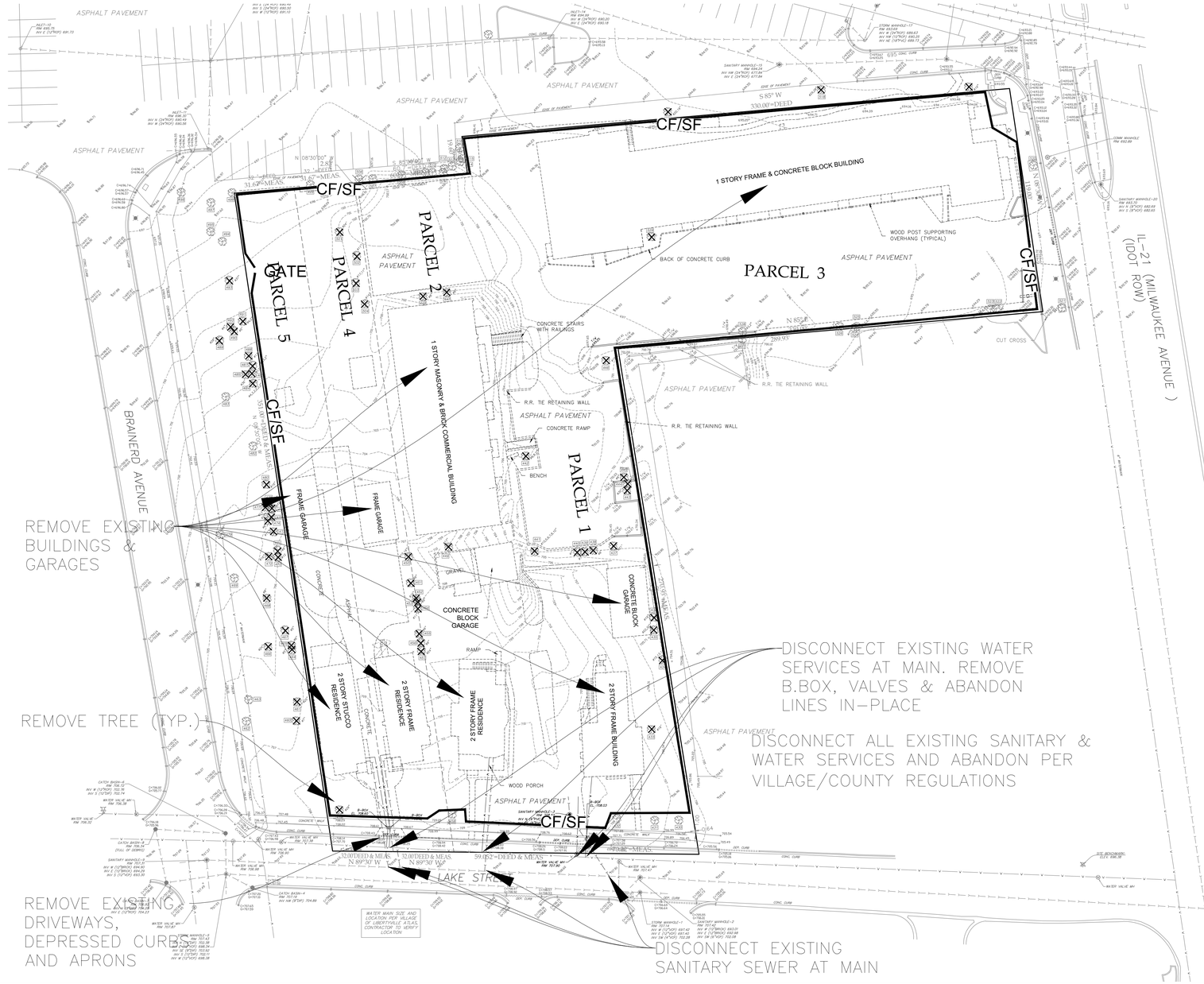
1 – Excellent
2 - Very Good
3 – Good
4 – Below Average
5 - Poor
6 - Dead

**Prepared by: David Coulter, Osage Inc.**
**ISA Certifed Arborist #IL-0094 (Exp. 12/31/25)**

N

## DEMOLITION NOTES

1. Install temporary tree protection fencing (if shown) prior to any demolition work..
2. Install temporary 6' high chain link fence around the proposed work area as shown on the drawing.
3. Contractor to call JULIE at 1-800-892-0123. minimum of 48 hours prior to initiating any excavation or demolition.
4. Contractor shall verify the exact elevation and location of all existing utilities and appurtenances prior to construction, to avoid interferences.
5. Appropriate precautions shall be taken to avoid damage to and to protect existing utilities and appurtenances in the vicinity of work. Contractor shall be responsible for the protection of all underground or overhead utilities even though they may not be shown on the plans. any utility that is damaged during construction shall be repaired to the satisfaction of the AHJ and the owner, or replaced.
6. Any open excavations, or potentially dangerous areas shall be fenced or guarded in an acceptable manner at the end of each day for the protection of the contractor's employees and general public safety.
7. **Bono Consulting Inc is not liable for any construction site safety**. Contractor to take all OSHA regulated and applicable local safety precautions to safe gaurd all potentially hazard sites/work.
8. Contractor is responsible for keeping roads free of excessive debris at all times.
9. Any soil, mud or debris that is washed, tracked, or deposited onto the street shall be removed before the end of each day.
10. Topographic survey by Bono Consulting.
11. All excavation shall be tapered, or, shored and maintained pumped dry.
12. Do not create dust or other nuisance to neighboring properties during construction
13. "No trespassing" signs shall be mounted on the fencing in conspicuous locations until construction is completed and approved
14. Any gate in the perimeter fence shall be adequately hinged to prevent entry, except to allow ingress and egress to and from site, such gate must be looked at all times, other than permitted hours of construction.




| DATE | REVISIONS | ISSUE |
|---|---|---|
| 10-09-2024 | PRELIMINARY PLAN | A |

PROJECT STAFF
PROJECT MANAGER: B. BONO P.E.
ENGINEER: A. VEER P.E.
ENGINEER:
TECHNICIAN:


BCI
BONO CONSULTING CIVIL ENGINEERS
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1018 BUSSE HIGHWAY PH : (847) 823-3300
PARK RIDGE, IL 60068 FAX: (847) 823-3303
bbono@bonoconsulting.com


# DEMOLITION & TREE PRESERVATION PLAN

MULTI-FAMILY BUILDING
745-747 N. MILWAUKEE AVE / 126-140 LAKE ST. ,
LIBERTYVILLE, LAKE COUNTY, IL

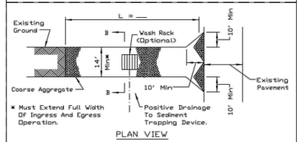
NOT FOR CONSTRUCTION


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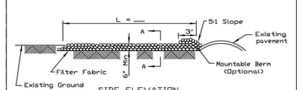

PROJECT NUMBER: 240973
START DATE: AUG. 01, 2024
GRAPHIC SCALE 30 0 30
SCALE: 1"=30'-0

SHEET NUMBER
3 OF 17

## STABILIZED CONSTRUCTION ENTRANCE PLAN




PLAN VIEW

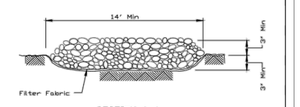



SIDE ELEVATION

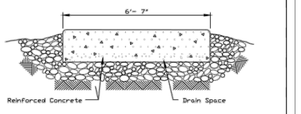
NOTES:
1. Filter fabric shall meet the requirements of material specification 592 GEOTEXTILE, Table 1 or 2, Class 1, II or IV and shall be placed over the cleared area prior to the placing of rock.
2. Rock or reclaimed concrete shall meet one of the following IDOT coarse aggregate gradation, CA-1, CA-2, CA-3 or CA-4 and be placed according to construction specification 25 ROCKFILL using placement Method 1 and Class III compaction.
3. Any drainage facilities required because of washing shall be constructed according to manufacturers specifications.
4. If wash racks are used they shall be installed according to the manufacturer's specifications.

| REFERENCE | | STANDARD SVG. NO. |
|---|---|---|
| Project | NRCS Natural Resources Conservation Service | IL-630 |
| Designed ____ Date ____ | | SHEET 1 OF 2 |
| Checked ____ Date ____ | | DATE 8-18-94 |
| Approved ____ Date ____ | | |

## STABILIZED CONSTRUCTION ENTRANCE PLAN

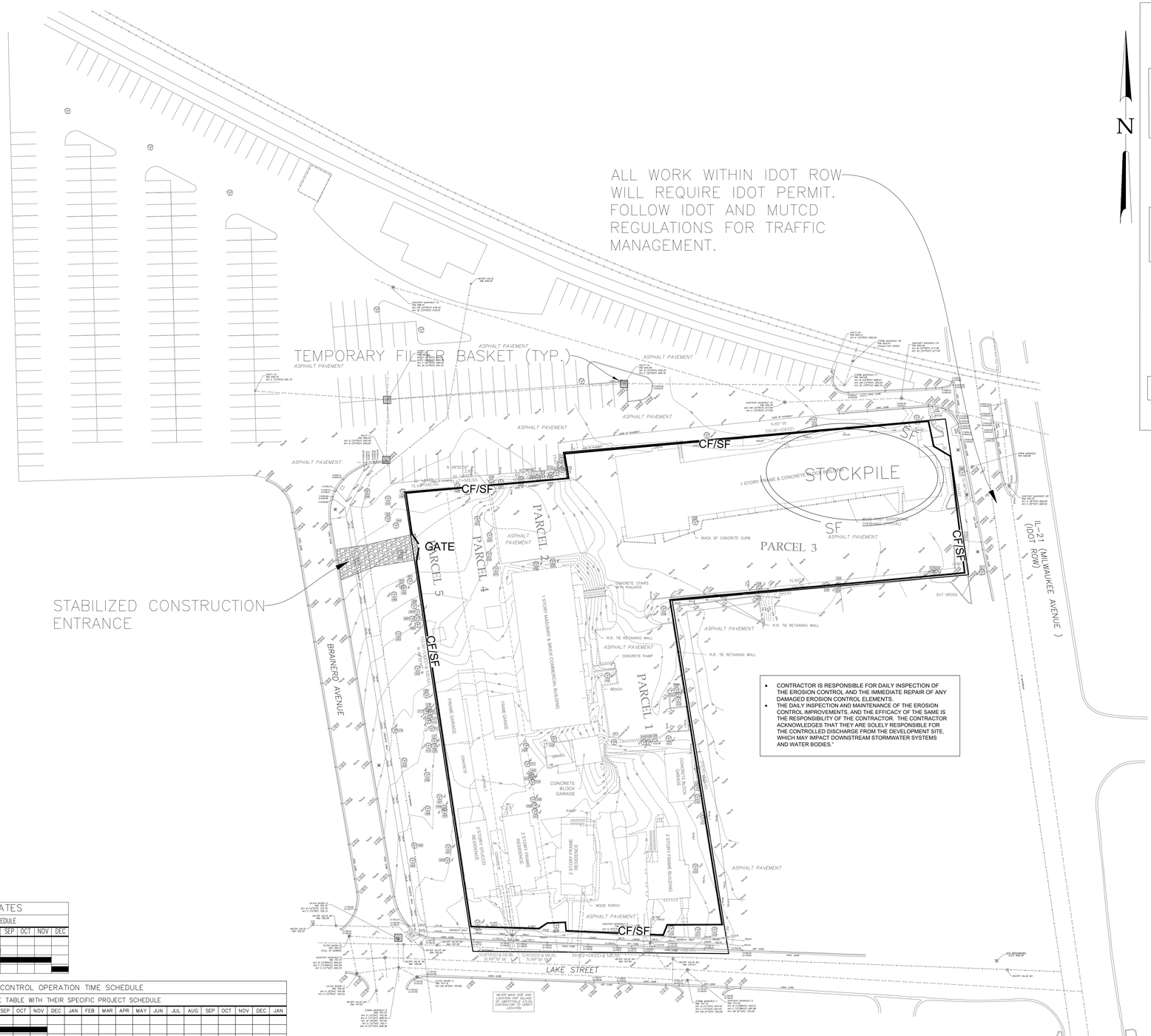



SECTION A-A




SECTION B-B

| REFERENCE | | STANDARD SVG. NO. |
|---|---|---|
| Project | NRCS Natural Resources Conservation Service | IL-630 |
| Designed ____ Date ____ | | SHEET # OF # |
| Checked ____ Date ____ | | DATE 8-18-94 |
| Approved ____ Date ____ | | |




- CONTRACTOR IS RESPONSIBLE FOR DAILY INSPECTION OF THE EROSION CONTROL AND THE IMMEDIATE REPAIR OF ANY DAMAGED EROSION CONTROL ELEMENTS.
- THE DAILY INSPECTION AND MAINTENANCE OF THE EROSION CONTROL IMPROVEMENTS, AND THE EFFICACY OF THE SAME IS THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR ACKNOWLEDGES THAT THEY ARE SOLELY RESPONSIBLE FOR THE CONTROLLED DISCHARGE FROM THE DEVELOPMENT SITE, WHICH MAY IMPACT DOWNSTREAM STORMWATER SYSTEMS AND WATER BODIES."

## BEST MANAGEMENT PRACTICES SEQUENCE

NOTE: UPON IMPLEMENTATION AND INSTALLATION OF THE FOLLOWING AREAS: TRAILER, PARKING, LAY DOWN, PORTA-POTTY, WHEEL WASH, CONCRETE WASHOUT, MASON'S AREA, FUEL AND MATERIAL STORAGE CONTAINERS, SOLID WASTE CONTAINERS, ETC., IMMEDIATELY DENOTE THEM ON THE SITE MAPS AND NOTE ANY CHANGES IN LOCATION AS THEY OCCUR THROUGHOUT THE CONSTRUCTION PROCESS. IN ADDITION, NOTE ANY OFF-SITE AREAS WHERE FILL IS IMPORTED FROM OR SOIL IS EXPORTED TO ON THE SITE MAPS.

PHASE - I
1. INSTALL TREE PROTECTION FENCING AND EROSION CONTROL SILT FENCE, INLET FILTER BASKETS, MAINTAIN THROUGH OUT PROJECT.
2. USE BRAINERD FOR CONSTRUCTION ACCESS DRIVEWAY FOR CONSTRUCTION. INSTALL STABILIZED CONSTRUCTION ENTRANCE, OBSERVE ALL APPROPRIATE MUTCD/IDOT TRAFFIC CONTROL MEASURES FOR CONSTRUCTION TRAFFIC ENTERING HIGHWAY. CONTRACTOR IS RESPONSIBLE FOR KEEPING ROADS FREE OF MUD AND DEBRIS.
3. PROTECT TREES THAT ARE SHOWN TO BE PROTECTED.
4. CLEAR AND REMOVE BRUSH AND TREES.
5. CONSTRUCT DETENTION FACILITY WITHIN 30DAYS OF TREE REMOVAL/BRUSH CLEARING.
6. INSTALL UTILITIES AND PERFORM MASS GRADING.

HALT ALL ACTIVITIES AND CONTACT THE VILLAGE TO PERFORM INSPECTION AND CERTIFICATION OF BMPs. GENERAL CONTRACTOR SHALL SCHEDULE AND CONDUCT THE STORMWATER PRE-CONSTRUCTION MEETING WITH THE CONSTRUCTION MANAGER, AGENCY(IES) AND GROUND-DISTURBING CONTRACTORS BEFORE PROCEEDING WITH CONSTRUCTION.

ALL EXCEPTIONS NOTED ON THE BMP CERTIFICATION FORM MUST BE ADDED TO THE FIRST DAILY REPORT AS A DEFICIENCY OR DEFICIENCIES AND RESOLVED WITHIN 24-HOURS. BMPs CAN NOT BE CERTIFIED IF ANY EXCEPTION REQUIRES GREATER THAN 24-HOURS TO RESOLVE.

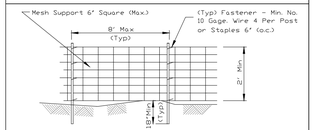
DAILY INSPECTIONS AND REPORTING USING THE SWPPP MANAGEMENT TOOL MUST START THE DAY OF OR IMMEDIATELY AFTER BMP CERTIFICATION.

7. CONSTRUCT AND STABILIZE SEDIMENT BASIN(S) AND SEDIMENT TRAP(S) WITH APPROPRIATE OUTFALL STRUCTURES (CLEAR ONLY THOSE AREAS NECESSARY TO INSTALL BASINS AND TRAPS).
8. INSTALL AND STABILIZE HYDRAULIC CONTROL STRUCTURES (DIKES, SWALES, CHECK DAMS, ETC.).
9. BEGIN CLEARING AND GRUBBING THE SITE.
10. BEGIN GRADING THE SITE.

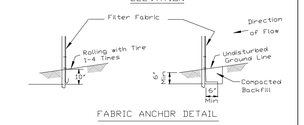
PHASE - II
1. TEMPORARILY SEED, THROUGHOUT CONSTRUCTION, DENUDED AREAS THAT WILL BE INACTIVE FOR 7 DAYS OR MORE. IF ACTIVITY WILL RESUME WITHIN 14 DAYS, TEMPORARY SEEDING IS NOT REQUIRED.
2. INSTALL UTILITIES, UNDERDRAINS, STORM SEWERS, CURBS AND GUTTERS.
3. INSTALL RIP RAP AROUND OUTLET STRUCTURES AS EACH OUTLET STRUCTURE IS INSTALLED.
4. INSTALL INLET PROTECTION AT ALL STORM SEWER STRUCTURES AS EACH INLET STRUCTURE IS INSTALLED.
5. PERMANENTLY STABILIZE AREAS TO BE VEGETATED AS THEY ARE BROUGHT TO FINAL GRADE.
6. PREPARE SITE FOR PAVING.
7. PAVE SITE.
8. INSTALL APPROPRIATE INLET PROTECTION DEVICES FOR PAVED AREAS AS WORK PROGRESSES.
9. COMPLETE GRADING AND INSTALLATION OF PERMANENT STABILIZATION OVER ALL AREAS.
10. CONTINUE DAILY INSPECTION REPORTS UNTIL THE FINAL DAILY INSPECTION REPORT, MARKED 'READY TO TERMINATE PERMIT', IS SIGNED BY THE CONSTRUCTION MANAGER AND SUBMITTED VIA THE SWPPP MANAGEMENT TOOL.
11. STABILIZE SITE AND INSTALL ALL FENCES CONCURRENTLY.

NOTE: THE GENERAL CONTRACTOR MAY COMPLETE CONSTRUCTION-RELATED ACTIVITIES CONCURRENTLY ONLY IF ALL PRECEDING BMPs HAVE BEEN COMPLETELY INSTALLED.

## SILT FENCE WITH WIRE SUPPORT PLAN




ELEVATION

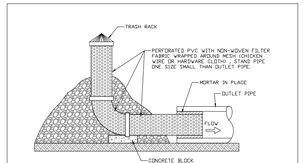


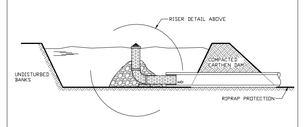

FABRIC ANCHOR DETAIL

STATIC SLICE INSTALLATION TRENCH INSTALLATION

NOTES:
1. Silt Fence shall be installed prior to any grading work in the area to be protected. They shall be maintained throughout the construction period and removed in conjunction with the final grading and site stabilization. Silt fence shall be placed on the flattest area available.
2. Filter fabric shall meet the requirements of material specification 592 Geotextile Table 1, Class 2 with equivalent opening size of at least 30 for nonwoven and 40 for woven.
3. Fence posts shall be either standard steel post or wood post with a minimum cross-sectional area of 3.0 sq. in.

| REFERENCE | | STANDARD SVG NO. |
|---|---|---|
| Project | | IUM-SCSW(V) |
| Designed ____ Date ____ | | SHEET 1 OF 2 |
| Checked ____ Date ____ | | DATE 3-16-2012 |
| Approved ____ Date ____ | | |




TO BE INSTALLED IN SEDIMENTATION BASINS

NOT TO SCALE

SEDIMENTATION BASIN & PERFORATED RISER DISCHARGE SYSTEM

SEEDING INFORMATION
CONTRACTOR TO SEED ALL DISTURBED AREA.
TURF GRASS SEED MIX:
FURNISH AND APPLY SUNNY TURF GRASS SEED MIX (TIMOTHY-33.3% / ORCHARDGRASS-33.3% / KENTUCKY BLUEGRASS-33.3%, SEEDING RATE=70 LBS./ACRE AND COMMON OATS=30 LBS./ACRE FOR A TOTAL 100 LBS./ACRE. OVERSEED WITH 10 LBS./ACRE ANNUAL RYE.
SEEDING MUST COMMENCE WITHIN 1 WEEK OF THE COMPLETION OF FINAL GRADING.

### TEMPORARY SEEDING, SPECIES, RATES, & DATES

NOTE: GENERAL CONTRACTOR TO COMPLETE TABLE WITH THEIR SPECIFIC PROJECT SCHEDULE

| SPECIES | LBS/ ACRE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OATS | 90 | | | | | | | | | | | | |
| CEREAL RYE | 90 | | | | | | | | | | | | |
| WINTER WHEET | 90 | | | | | | | | | | | | |
| WINTER MULCH | 25 | | | | | | | | | | | | |

### SOIL EROSION/SEDIMENTATION CONTROL OPERATION TIME SCHEDULE

NOTE: GENERAL CONTRACTOR TO COMPLETE TABLE WITH THEIR SPECIFIC PROJECT SCHEDULE

| CONSTRUCTION SEQUENCE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | JAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TEMPORARY CONSTRUCTION EXITS | | | | | | | | | | | | | | | | | | | | | | | | | |
| TEMPORARY CONTROL MEASURES | | | | | | | | | | | | | | | | | | | | | | | | | |
| SEDIMENT CONTROL BASINS | | | | | | | | | | | | | | | | | | | | | | | | | |
| STRIP & STOCKPILE TOPSOIL | | | | | | | | | | | | | | | | | | | | | | | | | |
| ROUGH GRADE | | | | | | | | | | | | | | | | | | | | | | | | | |
| STORM FACILITIES | | | | | | | | | | | | | | | | | | | | | | | | | |
| SITE CONSTRUCTION | | | | | | | | | | | | | | | | | | | | | | | | | |
| PERMANENT CONTROL STRUCTURES | | | | | | | | | | | | | | | | | | | | | | | | | |
| FOUNDATION / BUILDING CONSTRUCTION | | | | | | | | | | | | | | | | | | | | | | | | | |
| FINISH GRADING | | | | | | | | | | | | | | | | | | | | | | | | | |
| LANDSCAPING/SEED/FINAL STABILIZATION | | | | | | | | | | | | | | | | | | | | | | | | | |

1) CONTRACTOR SHALL UPDATE THE TABLE BY DATING THE APPLICABLE ACTIVITIES AS PROJECT PROGRESSES.
2) TIME SCHEDULE MUST COINCIDE WITH SEQUENCE OF CONSTRUCTION.

| DATE | ISSUE | REVISIONS |
|---|---|---|
| 10-09-2024 | A | PRELIMINARY PLAN |

PROJECT STAFF
PROJECT MANAGER: B. BONO P.E.
ENGINEER: A. VEER P.E.
ENGINEER:
TECHNICIAN:


BCI
BONO CONSULTING CIVIL ENGINEERS
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PARK RIDGE, IL 60068 FAX: (847) 823-3303
bono@bonoconsulting.com


# PHASE - I -SOIL EROSION & SEDIMENTATION CONTROL PLAN

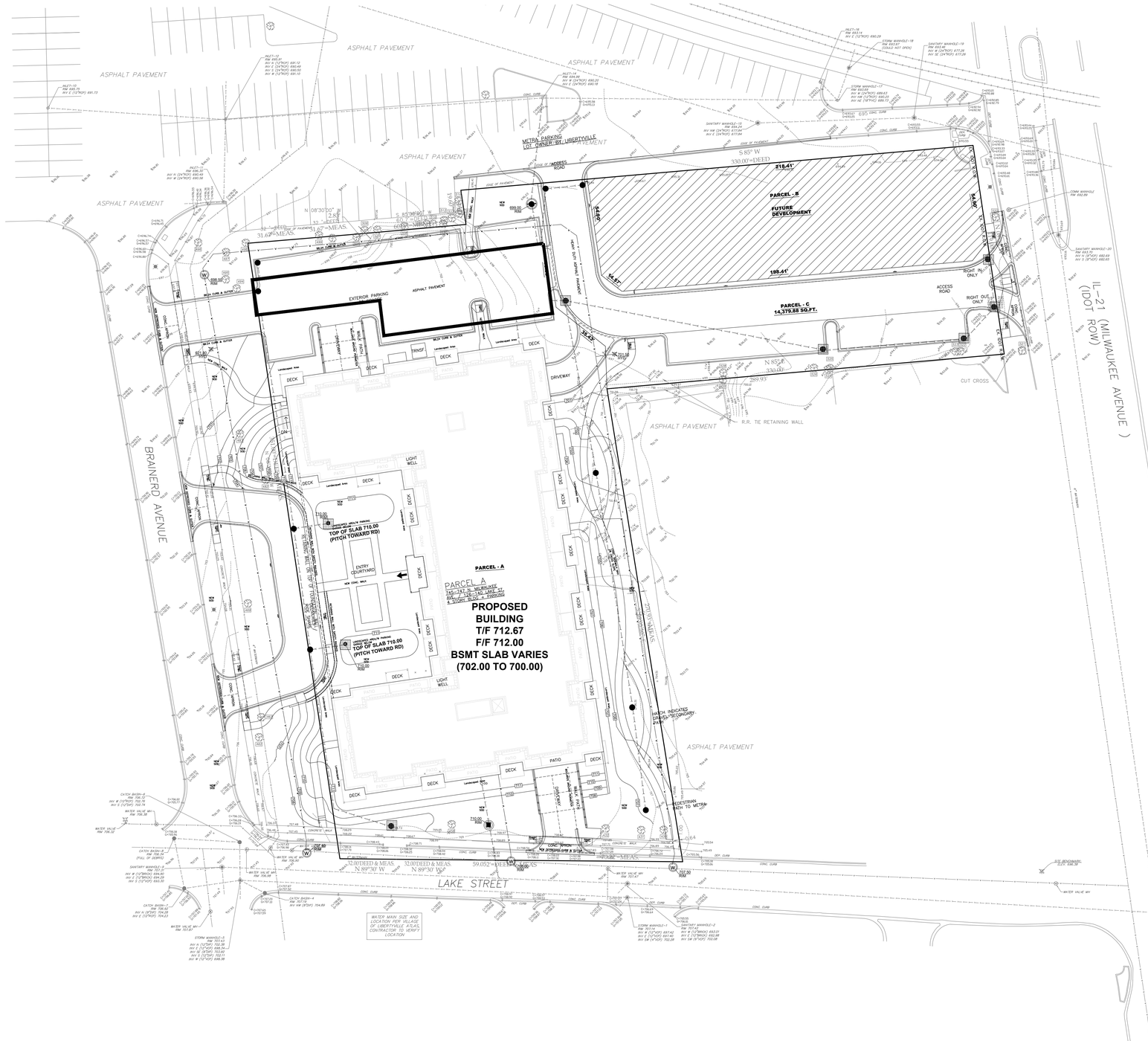
MULTI-FAMILY BUILDING
745-747 N. MILWAUKEE AVE / 126-140 LAKE ST. ,
LIBERTYVILLE, LAKE COUNTY, IL

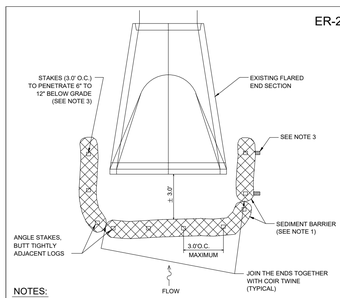
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PROJECT NUMBER: 240973
START DATE: AUG. 01, 2024
GRAPHIC SCALE
20 0 20
SCALE: 1"=20'-0

SHEET NUMBER
4 OF 17




ER-2

NOTES:

1. COIR LOGS, GRAVEL BAGS (OR APPROVED BY THE ENGINEER EQUAL) EROSION CONTROL AND SEDIMENT BARRIER MATERIAL SHALL BE USED.
2. SEDIMENT BARRIERS SHALL BE PLACED WITH ENDS TIGHTLY ABUTTING THE ADJACENT SEDIMENT BARRIERS TO CREATE A CONTINUOUS BARRIER.
3. WOODEN WEDGES AND/OR STAPLES AS PER MANUFACTURER'S PRODUCT SPECIFICATIONS MAY BE USED FOR SEDIMENT BARRIER STABILIZATION.
4. INSPECTION OF SEDIMENT BARRIERS SHALL BE AT LEAST ONCE PER WEEK AND AFTER RAIN EVENTS IN EXCESS OF HALF INCH (1/2") PER DAY OR EQUAL SNOW MELT. REPAIR OR REPLACEMENT OF SEDIMENT BARRIER SHALL BE MADE PROMPTLY AS NEEDED.
5. REMOVE ACCUMULATED SEDIMENT WHEN SEDIMENT DEPTH AT THE BARRIER IS APPROXIMATELY EQUAL TO ONE-HALF OF BARRIERS HEIGHT.
6. SEDIMENT BARRIERS SHALL BE REMOVED UPON COMPLETION OF CONSTRUCTION AND ONLY WHEN DIRECTED BY VILLAGE ENGINEERING.

REVISED: 1-1-20

NOT TO SCALE

FLARED END SECTION EROSION CONTROL DETAIL

EROSION CONTROL BLANKET

FILTER BASKET

N

| REVISIONS | DATE |
|---|---|
| PRELIMINARY PLAN | 10-09-2024 |

PROJECT STAFF

| | | ISSUE |
|---|---|---|
| PROJECT MANAGER: | B. BONO P.E. | A |
| ENGINEER: | A. VEER P.E. | |
| ENGINEER: | | |
| TECHNICIAN: | | |

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BONO CONSULTING CIVIL ENGINEERS
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PARK RIDGE, IL 60068 FAX: (847) 823-3303
bbono@bonoconsulting.com

# PHASE II - SOIL EROSION & SEDIMENTATION CONTROL PLAN

MULTI-FAMILY BUILDING
745-747 N. MILWAUKEE AVE / 126-140 LAKE ST. ,
LIBERTYVILLE, LAKE COUNTY, IL

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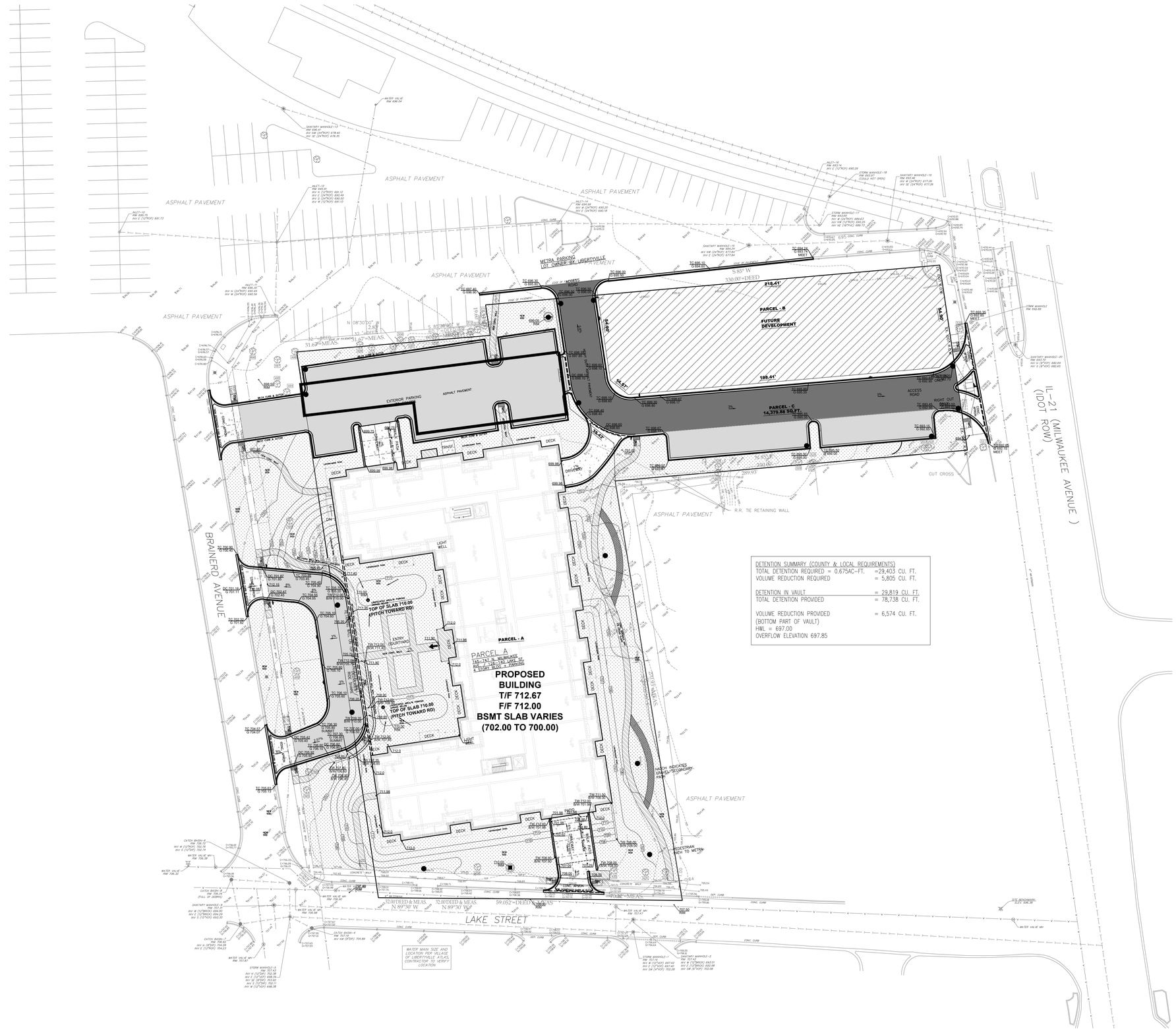
PROJECT NUMBER: 240973

START DATE: AUG. 01, 2024

GRAPHIC SCALE
30 0 30

SCALE: 1"=30'-0

SHEET NUMBER
5 OF 17




DETENTION SUMMARY (COUNTY & LOCAL REQUIREMENTS)

| | |
|---|---|
| TOTAL DETENTION REQUIRED = 0.675AC-FT. | =29,403 CU. FT. |
| VOLUME REDUCTION REQUIRED | = 5,805 CU. FT. |
| DETENTION IN VAULT | = 29,819 CU. FT. |
| TOTAL DETENTION PROVIDED | = 78,738 CU. FT. |
| VOLUME REDUCTION PROVIDED | = 6,574 CU. FT. |
| (BOTTOM PART OF VAULT) | |
| HWL = 697.00 | |
| OVERFLOW ELEVATION 697.85 | |

**GRADING NOTES:**

1. RETAINING WALL DESIGN TO BE PROVIDED BY OTHERS.
2. PAVEMENT SLOPES THROUGH HANDICAP ACCESSIBLE PARKING AREAS SHALL BE 2.00% MAXIMUM IN ANY DIRECTION.
3. ALL HANDICAP RAMPS SHALL BE CONSTRUCTED WITH A MAXIMUM CROSS SLOPE OF 2.00% OR LESS.
4. MEET EXISTING GRADE AT PROPERTY LIMITS UNLESS NOTED OTHERWISE.
5. CONTRACTOR SHALL REFER TO THE SOIL EROSION AND SEDIMENT CONTROL PLAN AND DETAILS FOR CONSTRUCTION SCHEDULING AND EROSION CONTROL MEASURES TO BE INSTALLED PRIOR TO BEGINNING GRADING OPERATIONS.
6. THE CONTRACTOR SHALL CONTACT J.U.L.I.E. (1-800-892-0123) PRIOR TO ANY WORK TO LOCATE UTILITIES AND SHALL CONTACT THE OWNER SHOULD UTILITIES APPEAR TO BE IN CONFLICT WITH THE PROPOSED IMPROVEMENT.
7. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
8. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITION OR BETTER.
9. TOPOGRAPHIC INFORMATION IS TAKEN FROM A TOPOGRAPHIC SURVEY BY OTHERS.
10. ALL UNSURFACED AREAS DISTURBED BY GRADING OPERATION SHALL RECEIVE 4 INCHES OF TOPSOIL. CONTRACTOR SHALL APPLY STABILIZATION FABRIC TO ALL SLOPES 4H:1V OR STEEPER. CONTRACTOR SHALL STABILIZE DISTURBED AREAS IN ACCORDANCE WITH GOVERNING SPECIFICATIONS UNTIL A HEALTHY STAND OF VEGETATION IS OBTAINED.

| DATE | REVISIONS | ISSUE |
|---|---|---|
| 10-09-2024 | PRELIMINARY PLAN | A |

PROJECT STAFF

PROJECT MANAGER: B. BONO P.E.
ENGINEER: A. KEER P.E.
ENGINEER:
TECHNICIAN:

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BONO CONSULTING CIVIL ENGINEERS
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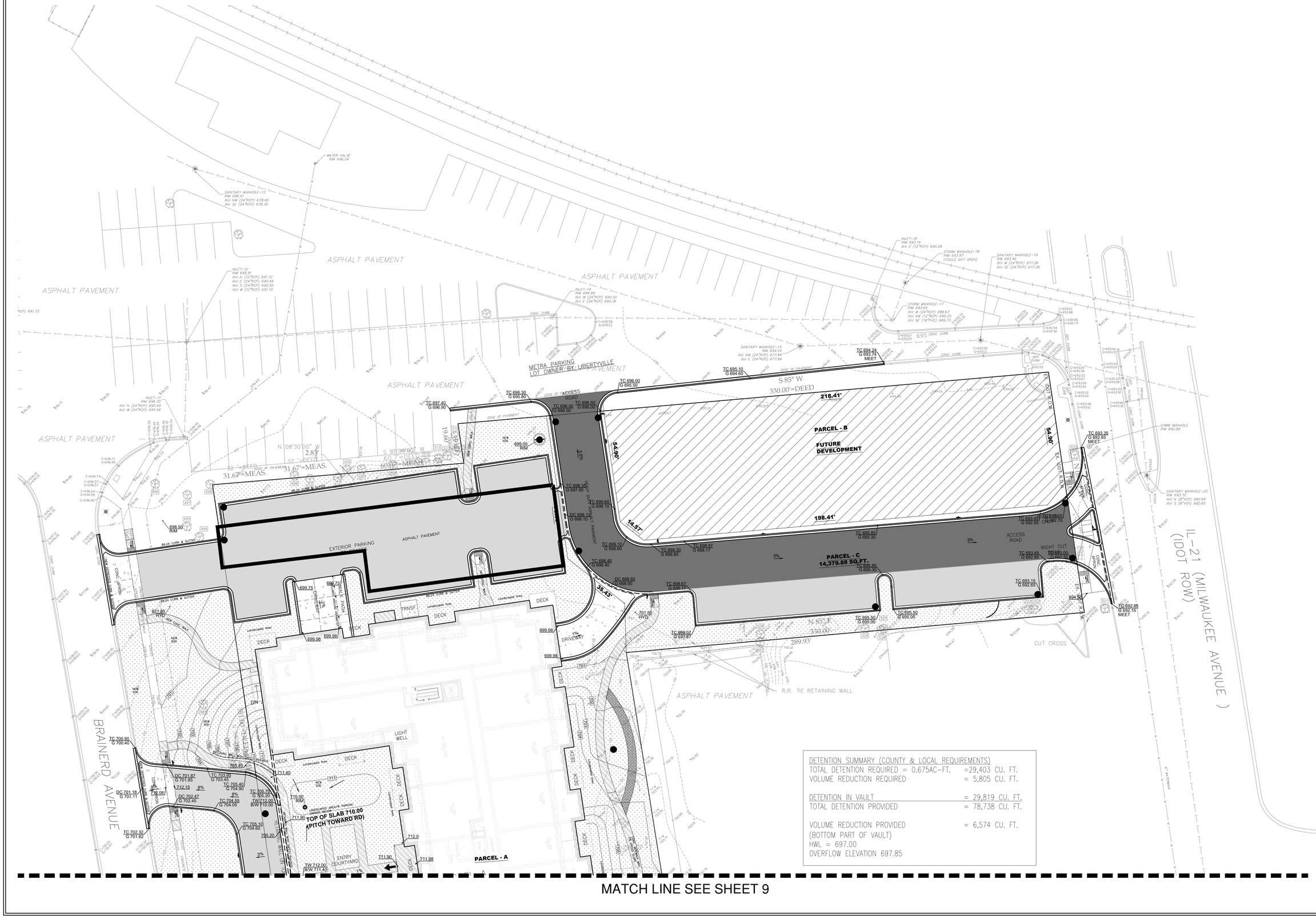
# PROPOSED GRADING, & DRAINAGE PLAN
## OVERALL SITE
MULTI-FAMILY BUILDING
745-747 N. MILWAUKEE AVE / 126-140 LAKE ST. ,
LIBERTYVILLE, LAKE COUNTY, IL

NOT FOR CONSTRUCTION

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PROJECT NUMBER: 240973
START DATE: AUG. 01, 2024
GRAPHIC SCALE
30 0 30
SCALE: 1"=30'-0

SHEET NUMBER
7 OF 17




| DETENTION SUMMARY (COUNTY & LOCAL REQUIREMENTS) | |
|---|---|
| TOTAL DETENTION REQUIRED = 0.675AC-FT. | =29,403 CU. FT. |
| VOLUME REDUCTION REQUIRED | = 5,805 CU. FT. |
| DETENTION IN VAULT | = 29,819 CU. FT. |
| TOTAL DETENTION PROVIDED | = 78,738 CU. FT. |
| VOLUME REDUCTION PROVIDED (BOTTOM PART OF VAULT) | = 6,574 CU. FT. |
| HWL = 697.00 | |
| OVERFLOW ELEVATION 697.85 | |

PROJECT STAFF

| | | ISSUE | REVISIONS | DATE |
|---|---|---|---|---|
| PROJECT MANAGER: | B. BONO P.E. | A | PRELIMINARY PLAN | 10-09-2024 |
| ENGINEER: | A. VEER P.E. | | | |
| ENGINEER: | | | | |
| TECHNICIAN: | | | | |

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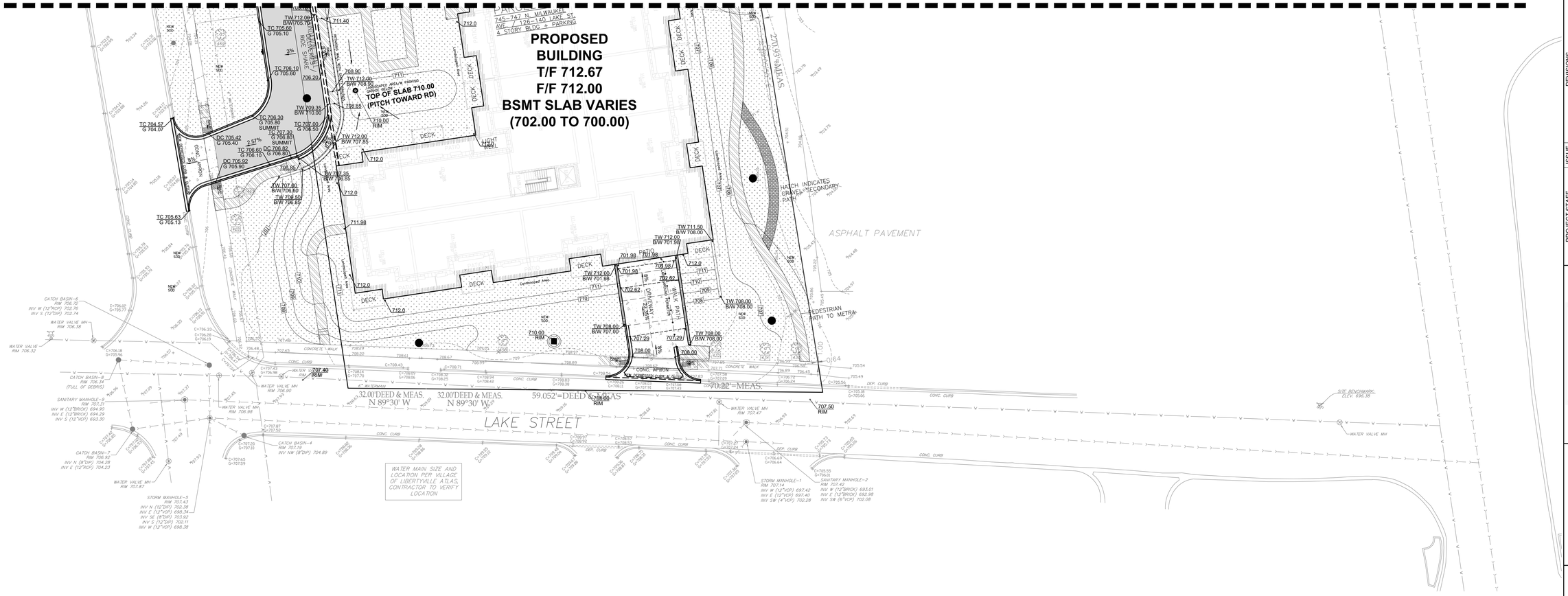
# PROPOSED GRADING, & DRAINAGE PLAN
## NORTH SECTION
MULTI-FAMILY BUILDING
745-747 N. MILWAUKEE AVE / 126-140 LAKE ST. ,
LIBERTYVILLE, LAKE COUNTY, IL

NOT FOR CONSTRUCTION

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PROJECT NUMBER: 240973
START DATE: AUG. 01, 2024
GRAPHIC SCALE
20 0 20
SCALE: 1"=20'-0

MATCH LINE SEE SHEET 8




| PROJECT STAFF | | ISSUE | REVISIONS | DATE |
|---|---|---|---|---|
| PROJECT MANAGER: | B. BONO P.E. | A | PRELIMINARY PLAN | 10-09-2024 |
| ENGINEER: | A. VEER P.E. | | | |
| ENGINEER: | | | | |
| TECHNICIAN: | | | | |


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# PROPOSED GRADING, & DRAINAGE PLAN

## SOUTH SECTION

MULTI-FAMILY BUILDING
745-747 N. MILWAUKEE AVE / 126-140 LAKE ST. ,
LIBERTYVILLE, LAKE COUNTY, IL

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PROJECT NUMBER: 240973

START DATE: AUG. 01, 2024

GRAPHIC SCALE
20 0 20

SCALE: 1"=20'-0

SHEET NUMBER
9 OF 17

Lake & Brainard, Libertyville, IL

Date: 10.7.24

| | Existing Sq. Ft. | Existing Acres | Proposed Sq. Ft. | Proposed Acres |
|---|---|---|---|---|
| **Total Site Area** | 96,062 | 2.205 | | |
| **Parcel A+ Parcel C Area** | 82,021 | 1.883 | | |
| **Project Area of Site** | 82,021 | 1.883 | | |
| **Building (included Bsmt.)** | 0 | 0.000 | 34,300 | 0.787 |
| **Walks, Decks, Patio** | 0 | 0.000 | 10,675 | 0.245 |
| **Access & Parking** | 0 | 0.000 | 18,349 | 0.421 |
| **Impervious Area** | 0 | 0.000 | 63,324 77.20% | 1.454 |
| **Pervious Area** | 0 | 0.000 | 18,698 | 0.429 |
| **Disturbed area of Site** | 1.883 | Ac. | | |
| **Increase in Impervious Area** | 1.454 | | | |

**BEST MANAGEMENT PRACTICES**

| | | |
|---|---|---|
| Impervious Area (Net New) | 63,324 s.f. | |

**VOLUME REDUCTION BEST MANAGEMENT PRACTICES**

| | | |
|---|---|---|
| Volume Control Requirements | 1.1 | Inches Rainfall |
| Volume Control Storage Required | 5,805 | Cu. Ft. |
| **PROPOSED** | | |
| Size of the infiltration Vault= V = 5259X1.25 | 5259 6574 | Cu. Ft. |
| Propososed Volume | 6,574 | |
| **Total Volume Reduction Storage Provided =** | **6,574** | Cu. Ft. |

## Release Rate Calculation (Qr) and Restrictor Sizing Calculation

**RELEASE RATE CALCULATION**

| | | | |
|---|---|---|---|
| Area of Site | = | 1.883 | Ac. |
| Release Rate | = | 0.150 | CFS/Ac. |
| Release Rate | = | **0.282** | CFS |

**RESTRICTOR SIZE CALCULATION**

Orifice Design

| | | | |
|---|---|---|---|
| Require Q = | 0.282 cfs | Det. HWL = | 697.00 |
| Cd = | 0.61 | Orifice Invert: | 691.00 |
| Max. Head = | 5.92 | Orifice Cent. | 691.08 |
| Orifice Area: | 0.0218 | | |
| Calculated Max. Restrictor Discharge: | | 0.260 | |

***Restrictor Diameter =*** ***2 inches***

**USE 2" PLATE RESTRICTOR**

**MODIFIED RATIONAL METHOD: BULLETIN 75 RAINFALL DATA**

**PROJECT:** Multi-Family Residence — **PERMIT NUMBER:**

**LOCATION:** Brainerd Ave. & Lake Street, Libertyville — **DATE:** 10.8.24

**DEVELOPMENT INFORMTION**

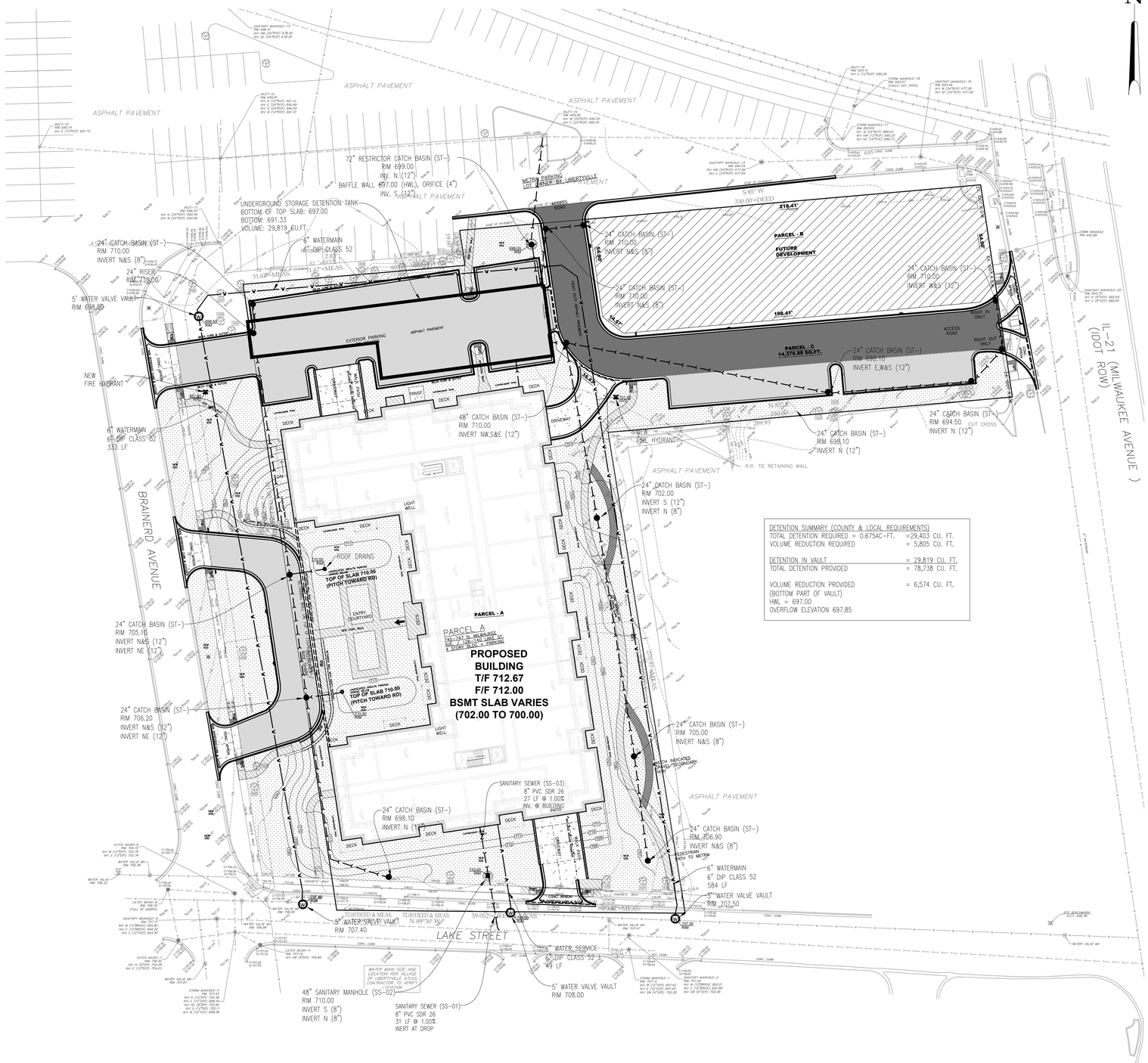
| | | |
|---|---|---|
| 1. Detained Area | 1.883 | acres |
| 2. Composite Runoff Coefficient | 0.800 | |
| 3. Actual Release Rate | 0.282 | cfs |

**REQUIRED DETENTION VOLUME**

| | | |
|---|---|---|
| 4. Required Detention Volume | **0.675** | ac-ft |

**CALCULATION TABLE**

| Storm Duration | Rainfall Intensity (in/hr) | Inflow Rate (cfs) | Stored Rate (cfs) | Required Storage (ac-ft) | |
|---|---|---|---|---|---|
| 5 min | 12.36 | 18.62 | 18.34 | 0.126 | |
| 10 min | 10.80 | 16.27 | 15.99 | 0.220 | |
| 15 min | 9.28 | 13.98 | 13.70 | 0.283 | |
| 20 min | 8.04 | 12.11 | 11.83 | 0.326 | |
| 30 min | 6.34 | 9.55 | 9.27 | 0.383 | |
| 40 min | 5.28 | 7.95 | 7.67 | 0.423 | |
| 50 min | 4.55 | 6.85 | 6.57 | 0.453 | |
| 1 hr | 4.03 | 6.07 | 5.79 | 0.478 | |
| 1.5 hr | 3.03 | 4.56 | 4.28 | 0.531 | |
| 2 hr | 2.49 | 3.75 | 3.47 | 0.573 | |
| 3 hr | 1.83 | 2.76 | 2.47 | 0.613 | |
| 4 hr | 1.48 | 2.23 | 1.95 | 0.644 | |
| 5 hr | 1.25 | 1.88 | 1.60 | 0.661 | |
| 6 hr | 1.07 | 1.61 | 1.33 | 0.659 | |
| 7 hr | 0.96 | 1.45 | 1.16 | 0.673 | |
| 8 hr | 0.86 | 1.30 | 1.01 | 0.670 | |
| 9 hr | 0.79 | 1.19 | 0.91 | 0.675 | <- |
| 10 hr | 0.72 | 1.08 | 0.80 | 0.663 | |
| 11 hr | 0.67 | 1.01 | 0.73 | 0.661 | |
| 12 hr | 0.62 | 0.94 | 0.65 | 0.648 | |
| 18 hr | 0.45 | 0.67 | 0.39 | 0.583 | |
| 24 hr | 0.36 | 0.54 | 0.26 | 0.507 | |




DETENTION SUMMARY (COUNTY & LOCAL REQUIREMENTS)

| | |
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| DETENTION IN VAULT | = 29,819 CU. FT. |
| TOTAL DETENTION PROVIDED | = 78,738 CU. FT. |
| VOLUME REDUCTION PROVIDED | = 6,574 CU. FT. |
| (BOTTOM PART OF VAULT) | |
| HWL = 697.00 | |
| OVERFLOW ELEVATION 697.85 | |

**UTILITY NOTES:**

1. ALL UTILITY DIMENSIONS ARE TO CENTER OF PIPE OR CENTER OF STRUCTURE UNLESS OTHERWISE NOTED.
2. BUILDING DIMENSIONS AND ADJACENT UTILITY LAYOUT HAVE BEEN PREPARED BASED UPON ARCHITECTURAL INFORMATION CURRENT AT THE DATE OF THIS DRAWING. SUBSEQUENT ARCHITECTURAL CHANGES MAY EXIST. THEREFORE CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR PRECISE BUILDING DIMENSIONS AND EXACT UTILITY ENTRANCE LOCATIONS AND NOTIFY THE ARCHITECT AND ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
3. THE CONTRACTOR SHALL CONTACT J.U.L.I.E. (1-800-892-0123) PRIOR TO ANY WORK TO LOCATE UTILITIES AND SHALL CONTACT THE OWNER SHOULD UTILITIES APPEAR TO BE IN CONFLICT WITH THE PROPOSED IMPROVEMENT.
4. ROUTING OF GAS, ELECTRIC AND TELEPHONE SERVICES IF SHOWN ARE APPROXIMATE ONLY AND SUBJECT TO CHANGE BASED UPON FINAL REVIEW AND APPROVAL BY RESPECTIVE UTILITY COMPANIES AND OWNER. CONTRACTOR SHALL CONTACT EACH UTILITY COMPANY AND COORDINATE FINAL LOCATIONS FOR ALL UTILITY SERVICES PRIOR TO START OF CONSTRUCTION.
5. CONTRACTOR SHALL EXCAVATE AND VERIFY ALL EXISTING SEWER OR WATER MAIN LOCATIONS, SIZES, CONDITIONS & ELEVATIONS AT PROPOSED POINTS OF CONNECTION AND CROSSINGS PRIOR TO ANY UNDERGROUND CONSTRUCTION AND NOTIFY THE OWNER OF ANY DISCREPANCIES OR CONFLICTS.
6. LIGHTING AND UNDERGROUND CABLE IF SHOWN ON PLANS ARE FOR APPROXIMATE LOCATION ONLY. REFER TO ARCHITECTURAL PLANS FOR SPECIFICATIONS AND DETAILS.
7. THE CONTRACTOR SHALL ADJUST RIM ELEVATIONS OF ALL EXISTING STRUCTURES TO PROPOSED FINISH GRADES.
8. CONTRACTOR TO VERIFY LOCATION, SIZES, AND ELEVATION OF ALL BUILDING SERVICE LOCATIONS WITH ARCHITECTURAL PLANS.
9. AT LOCATIONS WHERE WATER MAIN CROSSES BENEATH OR LESS THAN 18" ABOVE A SEWER, PROVIDE WATER MAIN PROTECTION PER STANDARD SPECIFICATIONS FOR SEWER AND WATER MAIN CONSTRUCTION IN ILLINOIS, LATEST EDITION.
10. ELEVATIONS GIVEN FOR STORM SEWER STRUCTURES LOCATED IN CURB LINE ARE PAVEMENT ELEVATIONS.
11. ALL WATER MAIN SHALL BE 5'-6" BELOW FINISHED GRADE TO TOP OF MAINS UNLESS NOTED OTHERWISE.
12. ALL EXISTING UTILITIES SHOWN ARE NOT TO BE INTERPRETED AS THE EXACT ELEVATION OR LOCATION, OR AS THE ONLY OBSTACLES THAT MAY OCCUR ON THE SITE. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND PROCEED WITH CAUTION AROUND ANY ANTICIPATED FEATURES.
13. ALL SANITARY AND STORM SEWER LENGTHS SHOWN ARE CENTER OF MANHOLE TO CENTER OF MANHOLE OR STORM MANHOLE TO FES.
14. PROVIDE CONCRETE COLLAR AT ALL NEW STORM STRUCTURE IN PAVEMENT, NOT ADJACENT TO CURB. SEE CONCRETE COLLAR DETAIL ON DETAIL SHEET.
15. CONTRACTOR SHALL CORE AND BOOT ALL PIPE ENTRANCES TO SANITARY MANHOLES.
16. EXTERNAL CHIMNEY SEALS ARE REQUIRED ON PROPOSED AND ADJUSTED EXISTING SANITARY MANHOLES.
17. SOME EXISTING ITEMS TO BE REMOVED HAVE BEEN DELETED FROM THIS PLAN FOR CLARITY. SEE DEMOLITION PLAN FOR ITEMS DELETED.
18. ALL STORM MANHOLES IN PAVEMENT SHALL BE OPEN LID UNLESS OTHERWISE NOTED.
19. ALL UNDERGROUND IMPROVEMENTS SHALL BE CONSTRUCTED AND TESTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS AND STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, DEPARTMENT OF TRANSPORTATION, STATE OF ILLINOIS. IN THE EVENT OF CONFLICTING GUIDELINES, THE MORE RESTRICTIVE SHALL GOVERN.

| REVISIONS | DATE |
|---|---|
| PRELIMINARY PLAN | 10-09-2024 |

| ISSUE |
|---|
| A |

PROJECT STAFF

| | |
|---|---|
| PROJECT MANAGER: | B. BONO P.E. |
| ENGINEER: | A. VEER P.E. |
| ENGINEER: | |
| TECHNICIAN: | |


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# PROPOSED UTILITY PLAN
## OVERALL SITE
MULTI-FAMILY BUILDING
745-747 N. MILWAUKEE AVE / 126-140 LAKE ST., LIBERTYVILLE, LAKE COUNTY, IL

NOT FOR CONSTRUCTION


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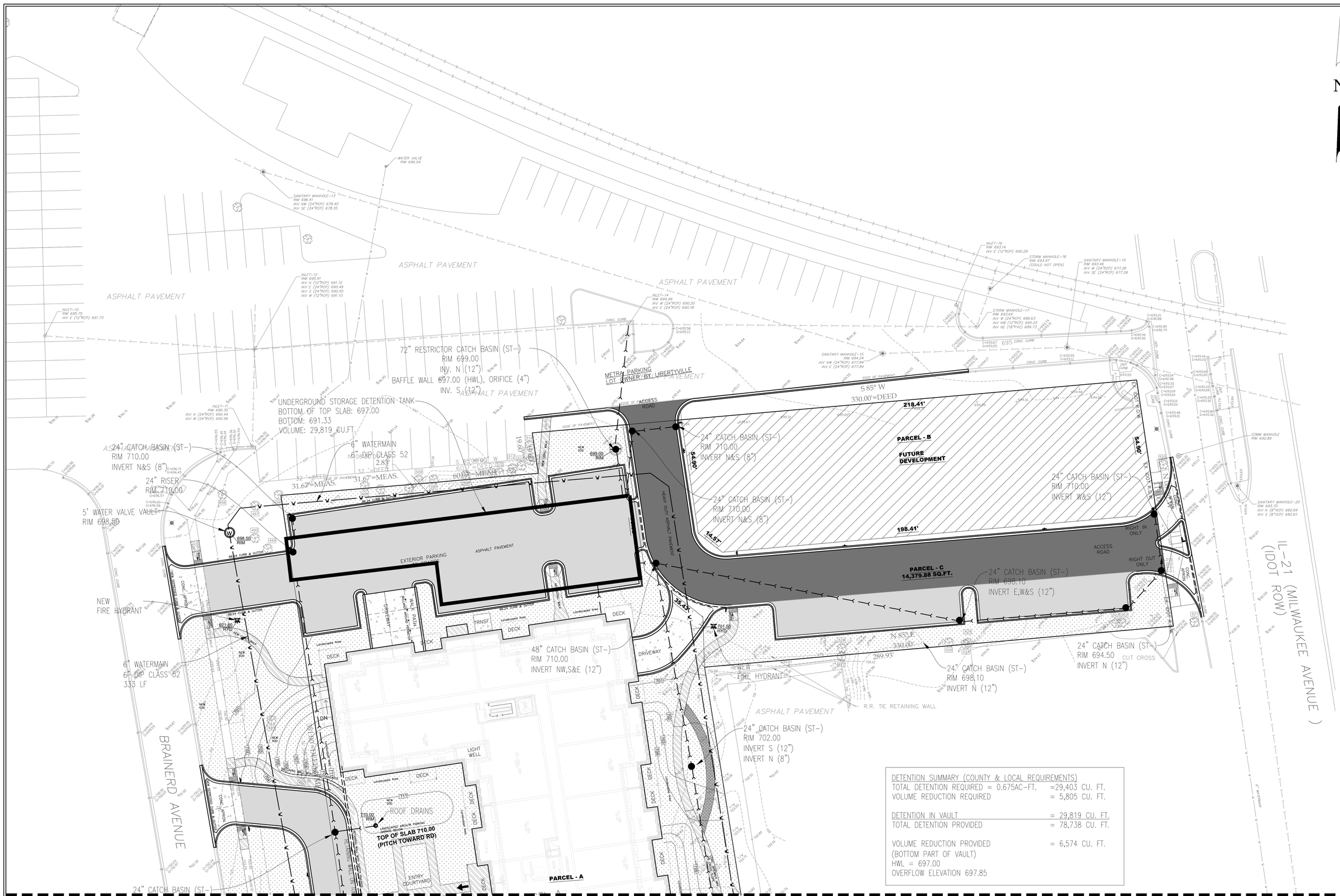

PROJECT NUMBER: 240973

START DATE: AUG. 01, 2024

GRAPHIC SCALE
30 0 30

SCALE: 1"=30'-0

SHEET NUMBER
10 OF 17




| DETENTION SUMMARY (COUNTY & LOCAL REQUIREMENTS) | |
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| (BOTTOM PART OF VAULT) | |
| HWL = 697.00 | |
| OVERFLOW ELEVATION 697.85 | |

MATCH LINE SEE SHEET 12

N

| PROJECT STAFF | | ISSUE | REVISIONS | DATE |
|---|---|---|---|---|
| PROJECT MANAGER: | B. BONO P.E. | A | PRELIMINARY PLAN | 10-09-2024 |
| ENGINEER: | A. VEER P.E. | | | |
| ENGINEER: | | | | |
| TECHNICIAN: | | | | |

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bbono@bonoconsulting.com

# PROPOSED UTILITY PLAN
## NORTH SECTION
MULTI-FAMILY BUILDING
745-747 N. MILWAUKEE AVE / 126-140 LAKE ST. ,
LIBERTYVILLE, LAKE COUNTY, IL

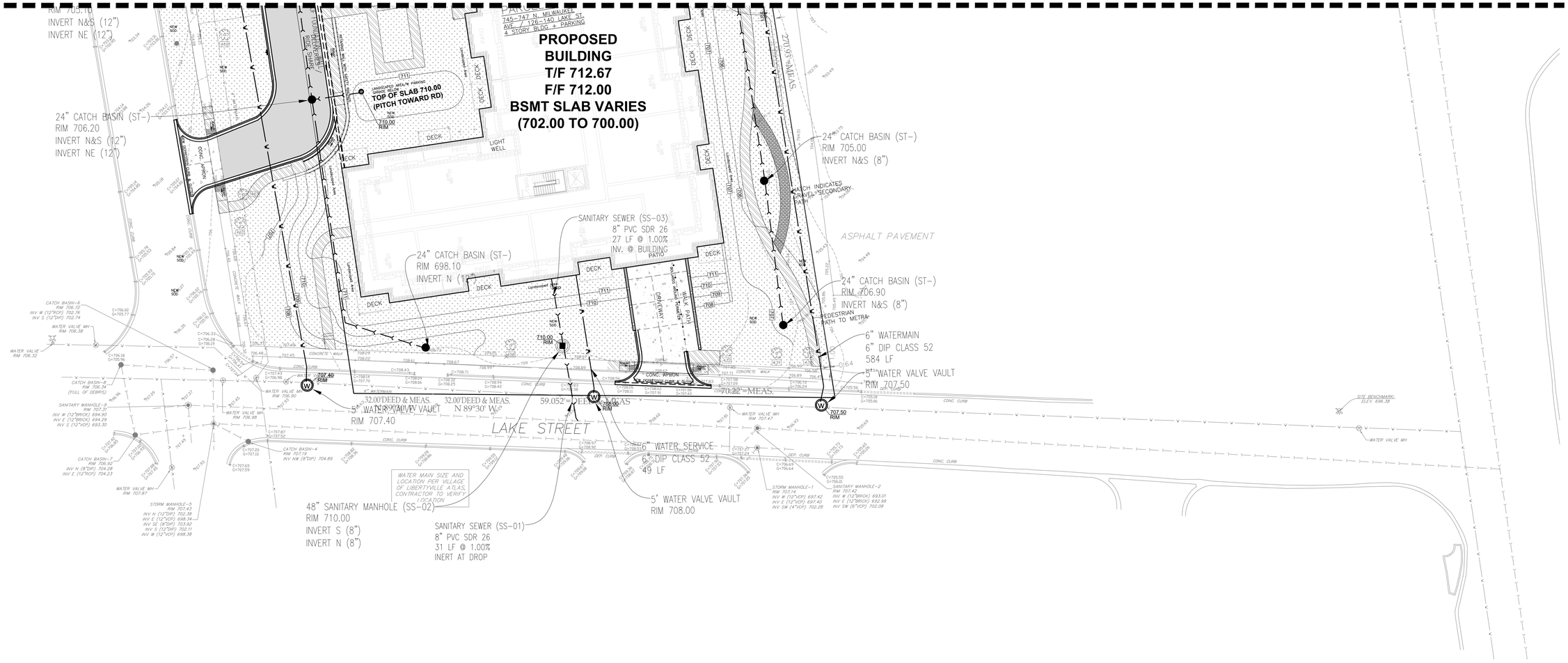
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PROJECT NUMBER: 240973
START DATE: AUG. 01, 2024
GRAPHIC SCALE
20 0 20
SCALE: 1"=20'-0

SHEET NUMBER
11 OF 17

MATCH LINE SEE SHEET 11




| PROJECT STAFF | | ISSUE | REVISIONS | DATE |
|---|---|---|---|---|
| PROJECT MANAGER: | B. BONO P.E. | A | PRELIMINARY PLAN | 10-09-2024 |
| ENGINEER: | A. VEER P.E. | | | |
| ENGINEER: | | | | |
| TECHNICIAN: | | | | |


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# PROPOSED UTILITY PLAN

## SOUTH SECTION

MULTI-FAMILY BUILDING
745-747 N. MILWAUKEE AVE / 126-140 LAKE ST.,
LIBERTYVILLE, LAKE COUNTY, IL

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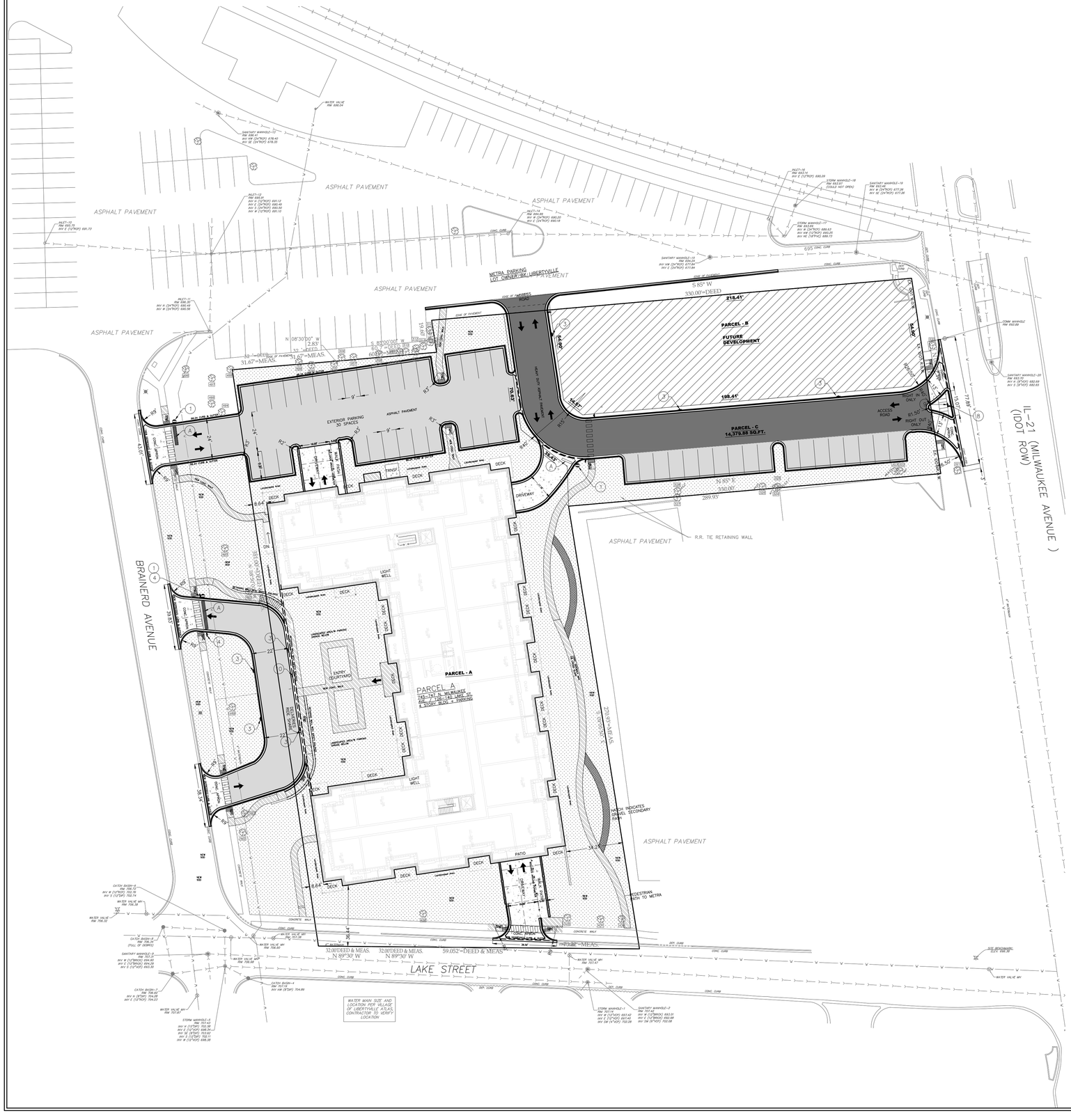

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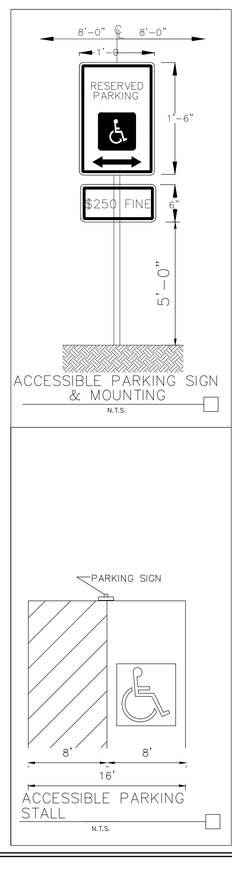
SHEET NUMBER
12 OF 17




## SITE PLAN NOTES:

A. ALL WORK AND MATERIALS SHALL COMPLY WITH ALL CITY /COUNTY REGULATIONS AND CODES AND O.S.H.A. STANDARDS.
B. ALL DISTURBED AREAS ARE TO RECEIVE FOUR INCHES OF TOPSOIL, SEED, MULCH AND WATER UNTIL HEALTHY STAND OF GRASS IS ESTABLISHED UNLESS OTHERWISE NOTED.
C. ALL CURBED RADII ARE TO BE 3' MEASURED TO FACE OF CURB UNLESS OTHERWISE NOTED. STRIPED RADII ARE TO BE 5' UNLESS OTHERWISE NOTED.
D. ALL DIMENSIONS ARE FACE OF CURB TO FACE OF CURB AND RADII ARE BACK OF CURB OR BUILDING FOUNDATION UNLESS OTHERWISE NOTED.
E. BUILDING DIMENSIONS AND ADJACENT PARKING AND UTILITY LAYOUT HAVE BEEN PREPARED BASED UPON ARCHITECTURAL INFORMATION CURRENT AT THE DATE OF THIS DRAWING. SUBSEQUENT ARCHITECTURAL CHANGES MAY EXIST, THEREFORE CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR PRECISE BUILDING DIMENSIONS AND EXACT UTILITY ENTRANCE LOCATIONS AND NOTIFY THE ARCHITECT AND ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
F. ALL PROPOSED CURB AND GUTTER SHALL BE B6.12 UNLESS OTHERWISE NOTED.
G. EXISTING TOPOGRAPHY SHOWN REPRESENTS SITE CONDITION AS PREPARED BY OTHERS, BONO CONSULTING INC. IS NOT LIABLE FOR OMISSIONS OR ERRORS IN SURVEY. CONTRACTOR SHALL FIELD CHECK EXISTING ELEVATIONS AND CONDITIONS PRIOR TO CONSTRUCTION AND NOTIFY ARCHITECT AND ENGINEER OF ANY DISCREPANCIES PRIOR TO STARTING CONSTRUCTION.
H. THE CONTRACTOR SHALL CONTACT J.U.L.I.E. (1-800-892-0123) PRIOR TO ANY WORK TO LOCATE UTILITIES AND SHALL CONTACT THE OWNER SHOULD UTILITIES APPEAR TO BE IN CONFLICT WITH THE PROPOSED IMPROVEMENT.
I. EXISTING STRUCTURES WITHIN CONSTRUCTION LIMITS ARE TO BE REMOVED UNDER PROPOSED BUILDINGS AND ABANDONED ELSEWHERE AS NECESSARY. ALL COST SHALL BE INCLUDED IN BASE BID.
J. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RELOCATIONS, (UNLESS OTHERWISE NOTED ON PLANS) INCLUDING BUT NOT LIMITED TO, ALL UTILITIES, STORM DRAINAGE, SIGNS, TRAFFIC SIGNALS AND POLES, ETC. AS REQUIRED. ALL WORK SHALL BE IN ACCORDANCE WITH GOVERNING AUTHORITIES REQUIREMENTS AND PROJECT SITEWORK SPECIFICATIONS AND SHALL BE APPROVED BY SUCH. ALL COST SHALL BE INCLUDED IN BASE BID.
K. SITE BOUNDARY, TOPOGRAPHY, UTILITY AND ROAD INFORMATION TAKEN FROM A SURVEY BY OTHERS.
L. IMPROVEMENTS ADJACENT TO BUILDING IF SHOWN SUCH AS TRUCK DOCK, RETAINING WALLS, SIDEWALKS, CURBING, CANOPIES, RAMPS, HANDICAP ACCESS, PLANTERS, DUMPSTERS AND TRANSFORMERS ETC. HAVE BEEN SHOWN FOR APPROXIMATE LOCATION ONLY. CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF VESTIBULES, SLOPE PAVING, SIDEWALKS, EXIT PORCHES, TRUCK DOCKS, PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.
M. THE CONTRACTOR SHALL ADJUST RIM ELEVATIONS OF ALL EXISTING STRUCTURES TO PROPOSED GRADES AS INDICATED ON PLANS.
N. CONTRACTOR TO VERIFY LOCATION, SIZES, AND ELEVATIONS OF ALL BUILDING SERVICE LOCATIONS WITH ARCHITECTURAL PLANS.
O. TOTAL LAND AREA IS 4.738+/- ACRES.
P. NO WETLANDS WERE PRESENT ON THIS SITE.
Q. THE SITE WORK FOR THIS PROJECT SHALL MEET OR EXCEED THE "SITE SPECIFIC SPECIFICATIONS."
R. MONUMENT AND/OR PYLON SIGNS SHALL BE CONSTRUCTED BY OWNER ASSIGNED CONTRACTOR.
S. ALL GENERAL CONTRACTOR WORK TO BE COMPLETED (EARTHWORK, FINAL UTILITIES, AND FINAL GRADING) BY THE MILESTONE DATE IN PROJECT DOCUMENTS. OUTLOT AREA TO BE KEPT FREE OF JOB TRAILERS AND STORAGE AFTER THE CONTRACT MILESTONE DATE FOR THE OUTLOT. PURCHASER OF OUTLOT TO PROVIDE PERMIT DOCUMENTS AND SWPPP REQUIRED BY STATE/LOCAL REQUIREMENTS FOR SPECIFIC OUTLOT.
T. ALL ROADWAY AND PARKING LOT IMPROVEMENTS SHALL BE COMPLETED IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, DEPARTMENT OF TRANSPORTATION, STATE OF ILLINOIS, LATEST EDITION.
U. ROUTING OF GAS, ELECTRIC AND TELEPHONE SERVICES IF SHOWN ARE APPROXIMATE ONLY AND SUBJECT TO CHANGE BASED UPON FINAL REVIEW AND APPROVAL BY RESPECTIVE UTILITY COMPANIES AND OWNER. CONTRACTOR SHALL CONTACT EACH UTILITY COMPANY AND COORDINATE FINAL LOCATIONS FOR ALL UTILITY SERVICES PRIOR TO START OF CONSTRUCTION.
V. CONTRACTOR SHALL ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS GRADE

B6.12 CURB & GUTTER
B6.12 CURB & GUTTER (REVERSE PITCH)
DEPRESSED CURB
DEPRESSED CURB (REVERSE PITCH)



ACCESSIBLE PARKING SIGN & MOUNTING
N.T.S.



ACCESSIBLE PARKING STALL
N.T.S.

## SIGNAGE LEGEND

| | |
|---|---|
| 1 | STOP SIGN (R1-1) |
| 2 | ACCESSIBLE PARKING SIGN (R7-8) |
| 3 | NO PARKING SIGN FIRE LANE (R8-31) |
| 4 | DO NOT ENTER (R5-1) |
| 5 | PEDESTRIAN CROSSING SIGN |
| 6 | ~~NO OUTLET SIGN~~ |
| 7 | ~~NO PARKING TO CORNER SIGN~~ |
| 8 | NO LEFT TURN SIGN |
| 9 | RIGHT TURN ONLY SIGN |
| 10 | ONE WAY SIGN |

## PAVEMENT MARKING LEGEND

| | |
|---|---|
| A | 24" WHITE SOLID STOP BAR |
| B | 4" YELLOW SOLID LINE |
| C | ~~8" SOLID WHITE LINE~~ |
| D | ~~LETTERS & SYMBOLS PAVEMENT MARKINGS~~ |
| E | ~~TRAFFIC FLOW DIRECTIONAL ARROWS~~ |
| F | ACCESSIBLE PARKING SPACE PAVEMENT MARKINGS-SEE DETAIL |
| G | 4" YELLOW DIAGONAL AT 45° SPACED 3' O.C. |
| H | ~~4" SOLID WHITE LINE~~ |

## PAVEMENT LEGEND

HEAVY DUTY PAVEMENT (20 YEAR SERVICE LIFE) [NOT USED]
1-1/2" BITUMINOUS SURFACE COURSE, HOT-MIX ASPHALT, MIX D, N50
2-1/2" BITUMINOUS BINDER COURSE, HOT-MIX ASPHALT, IL-19, N50
12" AGGREGATE BASE COURSE CA-6, TYPE B

STANDARD DUTY PAVEMENT
2" BITUMINOUS SURFACE COURSE, HOT-MIX ASPHALT, MIX D, N50
2" BITUMINOUS BINDER COURSE, HOT-MIX ASPHALT, IL-19, N50
8" AGGREGATE BASE COURSE CA-6, TYPE B

CONCRETE APRON
8" CONCRETE PAVEMENT (W/6X6 W/1.4 WWF, IF ALLOWED IN ROW)*
4" COMPACTED AGGREGATE BASE CA-6, TYPE B

CONCRETE PADS - TRASH CORAL & UTILITY PADS
8" CONCRETE PAVEMENT W/6X6 W/1.4 WWF*
4" COMPACTED AGGREGATE BASE CA-6, TYPE B

SIDEWALKS/PATIO
5" PORTLAND CEMENT CONCRETE (8" PCC THROUGH DRIVEWAYS)
4" COMPACTED AGGREGATE BASE COURSE, TYPE B

DETECTABLE WARNING AND DEPRESSED CURB
REPLACEABLE RED POLYMER COMPOSITE PLATES

*REFER TO CONCRETE JOINT DETAILS (IF ANY).

| ISSUE | DATE |
|---|---|
| A PRELIMINARY PLAN | 10-09-2024 |

REVISIONS

PROJECT STAFF
PROJECT MANAGER: B. BONO P.E.
ENGINEER: A. VEER P.E.
ENGINEER:
TECHNICIAN:

BCI
BONO CONSULTING CIVIL ENGINEERS
A Sewer & Maher Engineers company
1018 BUSSE HIGHWAY PH : (847) 823-3300
PARK RIDGE, IL 60068 FAX: (847) 823-3303
bbono@bonoconsulting.com

SITE PLAN & GEOMETRIC PLAN

MULTI-FAMILY BUILDING
745-747 N. MILWAUKEE AVE / 126-140 LAKE ST. ,
LIBERTYVILLE, LAKE COUNTY, IL

NOT FOR CONSTRUCTION

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THIS DRAWING SHALL NOT BE USED, REPRODUCED, MODIFIED OR SOLD EITHER WHOLLY OR IN PART, EXCEPT WHEN AUTHORIZED IN WRITING BY THE ENGINEER.

PROJECT NUMBER: 240973
START DATE: AUG. 01, 2024
GRAPHIC SCALE
40 0 40
SCALE: 1"=40'-0

SHEET NUMBER
13 OF 17

BCI
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| PROJECT STAFF | | ISSUE | REVISIONS | DATE |
|---|---|---|---|---|
| PROJECT MANAGER: | B. BONO P.E. | A | PRELIMINARY PLAN | 10-09-2024 |
| ENGINEER: | A. VEER P.E. | | | |
| ENGINEER: | | | | |
| TECHNICIAN: | | | | |

# FIRE DEPARTMENT EXHIBIT

## MULTI-FAMILY BUILDING
745-747 N. MILWAUKEE AVE / 126-140 LAKE ST. ,
LIBERTYVILLE, LAKE COUNTY, IL

NOT FOR CONSTRUCTION

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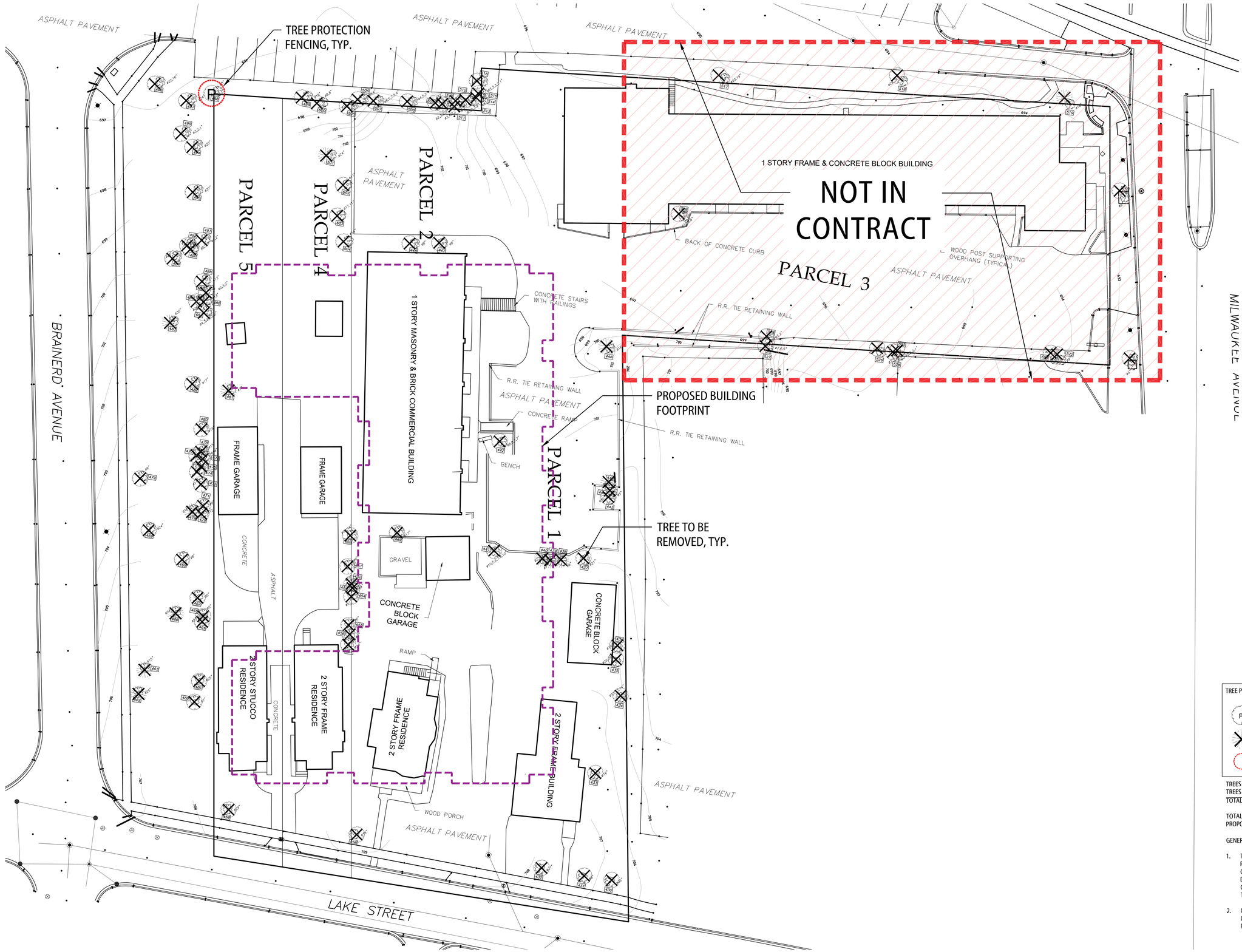
PROJECT NUMBER: 240973

START DATE: AUG. 01, 2024

GRAPHIC SCALE
40 0 40

SCALE: 1"=40'-0

SHEET NUMBER
13.1 OF 17




1 TREE SURVEY AND PRESERVATION PLAN
1" = 20'-0"

TREE PROTECTION KEY

- P — EXISTING TREE TO BE PRESERVED
- EXISTING TREE TO BE REMOVED
- CRITICAL ROOT ZONE

TREES TO BE PRESERVED: 1
TREES TO BE REMOVED: 98
TOTAL TREES TAGGED: 99

TOTAL QUANTITIES (IN VICINITY OF DISTURBANCE AND PROPOSED IMPROVEMENTS)

GENERAL NOTES

1. THE INTENT IS TO KEEP THE EXISTING TREES TO BE PRESERVED IN TACT THROUGHOUT THE DURATION OF CONSTRUCTION ON-SITE. IF THE TREES ARE DAMAGED DURING CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR REPLACING PER THE MUNICIPALITY'S ORDINANCE.
2. CONTRACTOR IS RESPONSIBLE FOR THE HAUL-OFF OF ALL TREES AND OTHER VEGETATION TO BE REMOVED.

0 20' 40' 60' 80' feet
1" = 20'

PERMIT STAMP

SPACE
ARCHITECTS + PLANNERS
2149 N. TALMAN AVENUE
CHICAGO, IL 60647
312.829.9666
www.spacearchplan.com

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CONSULTANTS

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bono@bonoconsulting.com
Hugh LIGHTING DESIGN

PROJECT NAME:
MILWAUKEE & LAKE

PROJECT ADDRESS:
745-47 N MILWAUKEE AVENUE /
126-40 LAKE STREET, LIBERTYVILLE, IL

PROJECT INFO

PROJECT NO. - 24.016
PROJECT TEAM:
ARCH OF RECORD - JK
PROJECT MANAGER - BB
ASSOCIATES - MB, JP

| NO. | DESCRIPTION | DATE |
|---|---|---|
| 1 | ISSUED FOR DEVELOPMENT REVIEW | 10.11.24 |

CERTIFICATION

SHEET TITLE

TREE SURVEY & PRESERVATION PLAN

SHEET #

L-1

October 9, 2024

| Species Group | Tag # | Common Name | Scientific Name | Size | Cond. | Form | Notes | Action | Tree Replacement Rate |
|---|---|---|---|---|---|---|---|---|---|
| B | 430 | Silver Maple | *Acer saccharinum* | 36 | 2 | 3 | Codominant stems, included bark. SE corner 126 Lake. | Remove | 2 |
| B | 431 | Sugar Maple | *Acer saccharum* | 8 | 2 | 3 | Overtopped. | Remove | 2 |
| B | 432 | Norway Maple | *Acer platanoides* | 21 | 3 | 3 | Heavy dieback, decay, girdling roots. | Remove | 2 |
| B | 433 | Magnolia | *Magnolia spp.* | 16 | 3 | 3 | Trunk decay, one sided. | Remove | 2 |
| B | 434 | Norway Maple | *Acer platanoides* | 15,13,14 | 2 | 4 | Codominant stems, included bark, trunk decay. | Remove | 2 |
| C | 435 | Boxelder | *Acer negundo* | 22,30 | 5 | 5 | Trunk decay, heavy dieback. | Remove | Not Required |
| C | 436 | Boxelder | *Acer negundo* | 19 | 4 | 5 | Decay, broken top, dieback. | Remove | Not Required |
| B | 437 | Lacebark Elm | *Ulmus parvifolia* | 21 | 3 | 4 | Dieback, codominant stems, included bark, girdling roots. | Remove | 2 |
| B | 438 | Eastern Redcedar | *Juniperus virginiana* | 6 | 2 | 3 | One sided. | Remove | 2 |
| B | 439 | Eastern Redcedar | *Juniperus virginiana* | 7 | 2 | 3 | One sided. | Remove | 2 |
| B | 440 | Eastern Redcedar | *Juniperus virginiana* | 7 | 2 | 3 | One sided. | Remove | 2 |
| A | 441 | Amur Maple | *Acer ginnala* | 10,5,6,7, 8,10 | 3 | 3 | Dieback, decay. | Remove | 3 |
| B | 442 | River Birch | *Betula nigra* | 8,8,7,7 | 1 | 1 | By 105 office entry. | Remove | 2 |
| B | 443 | Black Walnut | *Juglans nigra* | 30 | 4 | 4 | Heavy dieback, decay, in raised planter. | Remove | 2 |
| A | 444 | Hackberry | *Celtis occidentalis* | 5 | 2 | 4 | Overtopped. | Remove | 3 |
| B | 445 | Eastern Redcedar | *Juniperus virginiana* | 6 | 2 | 3 | Overtopped. | Remove | 2 |
| B | 446 | Colorado Spruce | *Picea pungens* | 16 | 2 | 3 | Dieback. | Remove | 2 |
| A | 447 | Crabapple | *Malus spp.* | 8 | 3 | 3 | Decay, dieback. | Remove | 3 |
| A | 448 | Crabapple | *Malus spp.* | 8 | 3 | 3 | Decay, dieback. | Remove | 3 |
| C | 449 | American Elm | *Ulmus americana* | 17 | 3 | 4 | Dieback, codominant stems, included bark. | Remove | 1 |
| C | 450 | Boxelder | *Acer negundo* | 15,16 | 3 | 4 | Dieback, codominant stems, included bark. | Remove | 1 |
| C | 451 | American Elm | *Ulmus americana* | 9 | 2 | 4 | Overtopped. | Remove | 1 |
| B | 452 | Black Walnut | *Juglans nigra* | 15 | 2 | 3 | Codominant stems. | Remove | 2 |
| C | 453 | Boxelder | *Acer negundo* | 9 | 2 | 4 | Overtopped. | Remove | 1 |
| C | 454 | Boxelder | *Acer negundo* | 11 | 2 | 3 | | Remove | 1 |
| C | 455 | Boxelder | *Acer negundo* | 6 | 3 | 4 | Broken top. | Remove | 1 |
| C | 456 | Boxelder | *Acer negundo* | 9 | 3 | 4 | Dieback, overtopped. | Remove | 1 |
| C | 457 | American Elm | *Ulmus americana* | 24 | 6 | 6 | Dead. | Remove | Not Required |
| B | 458 | Sugar Maple | *Acer saccharum* | 38 | 4 | 2 | Heavy dieback, codiminant stems, decay. In front of 134 Lake. | Remove | 2 |
| B | 459 | Norway Maple | *Acer platanoides* | 29 | 4 | 3 | Codominant stems, girdling roots. In front of 140 Lake. | Remove | 2 |
| D | 460 | Mulberry | *Morus alba* | 7 | 2 | 3 | | Remove | Not Required |
| C | 461 | Boxelder | *Acer negundo* | 25 | 3 | 3 | Dieback, one sided. | Remove | 4 |
| B | 462 | White Pine | *Pinus strobus* | 25 | 3 | 2 | Heavy dieback. | Remove | 4 |
| B | 463 | Douglas Fir | *Pseudotsuga menziesii* | 15 | 3 | 3 | Dieback. | Remove | 4 |
| D | 464 | Buckthorn | *Rhamnus cathartica* | 5 | 3 | 3 | | Remove | Not Required |
| B | 465 | Norway Maple | *Acer platanoides* | 6 | 2 | 3 | | Remove | 4 |
| B | 466 | Norway Spruce | *Picea abies* | 24 | 2 | 1 | | Remove | 4 |
| B | 467 | Norway Maple | *Acer platanoides* | 5 | 2 | 3 | One sided. | Remove | 4 |
| C | 468 | Boxelder | *Acer negundo* | 8 | 3 | 3 | Dieback. | Remove | 4 |
| B | 469 | Sugar Maple | *Acer saccharum* | 24 | 2 | 3 | Codominant stems, included bark. | Remove | 4 |
| B | 470 | Sugar Maple | *Acer saccharum* | 12 | 3 | 3 | Dieback, overtopped. | Remove | 4 |
| B | 471 | Norway Maple | *Acer platanoides* | 9 | 2 | 3 | Overtopped. | Remove | 4 |
| B | 472 | White Pine | *Pinus strobus* | 16 | 6 | 6 | Dead. | Remove | Not Required |
| C | 473 | Boxelder | *Acer negundo* | 11 | 5 | 5 | Trunk decay, leaning. | Remove | Not Required |
| C | 474 | Boxelder | *Acer negundo* | 6 | 4 | 4 | Trunk decay, dieback. | Remove | 4 |
| B | 475 | Black Walnut | *Juglans nigra* | 25 | 3 | 2 | Broken limbs, dieback. | Remove | 4 |
| B | 476 | Sugar Maple | *Acer saccharum* | 14 | 2 | 3 | | Remove | 4 |
| C | 477 | Boxelder | *Acer negundo* | 13 | 3 | 3 | Dieback, leaning. | Remove | 4 |
| C | 478 | Boxelder | *Acer negundo* | 15 | 3 | 4 | Dieback, leaning. | Remove | 4 |
| D | 479 | Larch | *Larix decidua* | 9 | 5 | 5 | Half dead. | Remove | Not Required |
| C | 480 | Black Cherry | *Prunus serotina* | 16 | 2 | 3 | Dieback. NW of garage. | Remove | 4 |
| B | 481 | Norway Spruce | *Picea abies* | 7 | 3 | 3 | Dieback, thin crown. | Remove | 2 |
| B | 482 | Black Walnut | *Juglans nigra* | 17 | 1 | 1 | | Protect | 4 |
| B | 483 | Norway Spruce | *Picea abies* | 30 | 2 | 1 | Dieback. | Remove | 4 |
| D | 484 | Buckthorn | *Rhamnus cathartica* | 4,3,2,2,2 ,2 | 5 | 5 | Half dead. | Remove | Not Required |
| C | 485 | Boxelder | *Acer negundo* | 36 | 5 | 5 | Trunk decay, heavy dieback. | Remove | Not Required |
| C | 486 | American Elm | *Ulmus americana* | 13 | 2 | 4 | Overtopped. | Remove | 4 |
| D | 487 | Buckthorn | *Rhamnus cathartica* | 3,3,2 | 3 | 3 | | Remove | Not Required |
| C | 488 | American Elm | *Ulmus americana* | 13 | 2 | 4 | Overtopped, codominant stems. | Remove | 4 |
| D | 489 | Mulberry | *Morus alba* | 28 | 5 | 5 | Basal decay, heavy dieback, codominant stems. | Remove | Not Required |
| C | 490 | Boxelder | *Acer negundo* | 5 | 3 | 4 | Broken leader. | Remove | 4 |
| D | 491 | Buckthorn | *Rhamnus cathartica* | 4,2 | 3 | 3 | | Remove | Not Required |
| C | 492 | Boxelder | *Acer negundo* | 4 | 3 | 3 | Dieback. | Remove | 4 |
| B | 493 | Sugar Maple | *Acer saccharum* | 37 | 4 | 2 | Trunk decay, heavy dieback. | Remove | 4 |
| B | 494 | Black Walnut | *Juglans nigra* | 20 | 2 | 4 | Overtopped, leaning, dieback. | Remove | 4 |
| D | 495 | Buckthorn | *Rhamnus cathartica* | 3,2,1 | 2 | 3 | | Remove | Not Required |
| C | 496 | Boxelder | *Acer negundo* | 22,16 | 5 | 5 | Trunk decay, heavy dieback. NW corner of site. | Remove | Not Required |
| B | 497 | Honeylocust | *Gleditsia triacanthos* | 24 | 3 | 3 | Heavy dieback. | Remove | 4 |
| C | 498 | American Elm | *Ulmus americana* | 8 | 2 | 4 | Overtopped. | Protect | - |
| B | 499 | Black Walnut | *Juglans nigra* | 15 | 2 | 3 | Codominant stems. | Remove | 4 |
| D | 500 | Mulberry | *Morus alba* | 8,8 | 3 | 4 | Codominant stems, included bark, dieback. | Remove | Not Required |
| B | 501 | Colorado Spruce | *Picea pungens* | 24 | 6 | 6 | Dead. | Remove | Not Required |
| B | 502 | Black Walnut | *Juglans nigra* | 11 | 1 | 3 | Overtopped. | Remove | 2 |
| B | 503 | Norway Maple | *Acer platanoides* | 17,11 | 4 | 4 | Codominant stems, trunk decay, included bark, dieback. | Remove | 2 |
| B | 504 | Black Walnut | *Juglans nigra* | 14 | 2 | 3 | Trunk decay, conflict with #503. | Remove | 2 |
| A | 505 | Hackberry | *Celtis occidentalis* | 10 | 1 | 2 | | Remove | 3 |
| C | 506 | Boxelder | *Acer negundo* | 6,6 | 4 | 4 | Decay, overtopped, dieback. | Remove | 4 |
| D | 507 | Buckthorn | *Rhamnus cathartica* | 8,5,7,5,4 | 4 | 4 | Trunk decay, dieback. | Remove | Not Required |
| D | 508 | Buckthorn | *Rhamnus cathartica* | 4,5,2 | 4 | 4 | Trunk decay, dieback. | Remove | Not Required |
| D | 509 | Green Ash | *Fraxinus pennsylvanica* | 12 | 6 | 6 | Dead. | Remove | Not Required |
| D | 511 | Buckthorn | *Rhamnus cathartica* | 3,4,3,2 | 2 | 3 | | Remove | Not Required |
| B | 512 | Silver Maple | *Acer saccharinum* | 18 | 3 | 3 | Dieback. | Remove | 4 |
| D | 513 | Buckthorn | *Rhamnus cathartica* | 3,3,3,2 | 4 | 4 | | Remove | Not Required |
| C | 514 | American Elm | *Ulmus americana* | 8 | 2 | 4 | Overtopped. | Remove | 4 |
| D | 515 | Buckthorn | *Rhamnus cathartica* | 3,3,3,2,1 | 3 | 4 | | Remove | Not Required |
| C | 516 | Boxelder | *Acer negundo* | 10 | 5 | 5 | Half dead. | Remove | Not Required |
| | | | | | | | | | 178 |

**TREES ON PARCEL 3**

| Species Group | Tag # | Common Name | Scientific Name | Size | Cond. | Form | Notes | Action | Tree Replacement Rate |
|---|---|---|---|---|---|---|---|---|---|
| C | 517 | American Elm | *Ulmus americana* | 20,19 | 3 | 4 | Codominant stems, sap ooze. | Remove | 4 |
| D | 518 | Siberian Elm | *Ulmus pumila* | 29,28 | 5 | 5 | Heavy dieback, codiminant stems, trunk decay. Included bark, sap ooze. | Remove | Not Required |
| B | 519 | Colorado Spruce | *Picea pungens* | 16 | 2 | 3 | Dieback, one sided. NE corner of site. | Remove | 4 |
| B | 520 | Honeylocust | *Gleditsia triacanthos* | 2 | 2 | 2 | Dieback, in planter on Milwaukee Ave. | Remove | 4 |
| B | 521 | Hybrid Elm | *Ulmus spp.* | 4 | 2 | 2 | In planter on Milwaukee Ave. | Remove | 4 |
| A | 522 | Crabapple | *Malus spp.* | 9 | 5 | 5 | Half dead, between parking lots. | Remove | Not Required |
| C | 523 | Boxelder | *Acer negundo* | 8,8,9 | 3 | 3 | Dieback, codominant stems, between parking lots. | Remove | 1 |
| C | 524 | American Elm | *Ulmus americana* | 7 | 2 | 3 | | Remove | 1 |
| D | 525 | Buckthorn | *Rhamnus cathartica* | 2,2,2,1 | 2 | 3 | | Remove | Not Required |
| C | 526 | American Elm | *Ulmus americana* | 4,2 | 2 | 3 | | Remove | 1 |
| B | 527 | Black Walnut | *Juglans nigra* | 7,6,5 | 2 | 3 | Between parking lots. | Remove | 4 |
| C | 528 | Boxelder | *Acer negundo* | 3,2 | 3 | 3 | Dieback, between parking lots. | Remove | 1 |
| B | 529 | River Birch | *Betula nigra* | 10,8,6 | 2 | 3 | Dieback, codiminant stems, included bark. Near 741 office entry. | Remove | 2 |
| | | | | | | | | | 26 |

**KEY**

| | |
|---|---|
| | Tree to be Protected |
| | Tree to be Removed |
| | Public Tree to be Removed |

**Tree Condition.** A visual assessment and rating of the overall health and vigor of the tree, as follows:

| |
|---|
| 1 – Excellent |
| 2 - Very Good |
| 3 – Good |
| 4 – Below Average |
| 5 - Poor |
| 6 - Dead |

**Tree Form**. A visual assessment and rating of the form of the tree, as follows:

| |
|---|
| 1 – Excellent |
| 2 - Very Good |
| 3 – Good |
| 4 – Below Average |
| 5 - Poor |
| 6 - Dead |

**Prepared by: David Coulter, Osage Inc.**
**ISA Certifed Arborist #IL-0094 (Exp. 12/31/25)**

## TREE REPLACEMENT SUMMARY

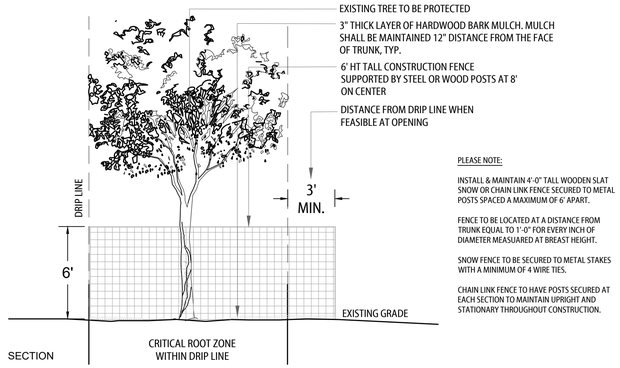
TOTAL NUMBER OF TREES TO BE REMOVED = 98
TOTAL NUMBER OF TREES TO BE PROTECTED = 1
REQUIRED NUMBER OF TREES TO BE REPLACED = 204
CREDIT FOR PROTECTED TREES = 3

TOTAL NUMBER OF TREES REQUIRED = 201
TOTAL NUMBER OF TREES PROVIDED = 202
(SEE SHEETS L-3 FOR PLANTING PLAN & SHEET L-5 FOR ORDINANCE SUMMARY)

## TREE PRESERVATION NOTES:

1. PROTECT EXISTING TREES IN ACCORDANCE WITH VILLAGE OF LIBERTYVILLE TREE ORDINANCE.
2. CALL J.U.L.I.E. AT (800) 892-0123 FOR UTILITY LOCATIONS BEFORE DIGGING.
3. ALL WORK MUST BE PERFORMED ACCORDING TO THE APPROVED TREE PRESERVATION PLAN.
4. NO GRADING/FILLING IS ALLOWED WITHIN THE PROTECTED CRITICAL ROOT ZONE.
5. NO VEHICLES OR EQUIPMENT CAN BE DRIVEN OVER OR MATERIAL STORED ON THE CRITICAL ROOT ZONES OF PROTECTED TREES OR ON THE PUBLIC RIGHT-OF-WAY. TREE, SILT, AND PERIMETER FENCING MUST BE PROPERLY MAINTAINED THROUGHOUT CONSTRUCTION. TREE FENCE FOR UNPROTECTED TREES SHOULD REMAIN IN PLACE THROUGHOUT CONSTRUCTION EXCEPT WHEN DIRECT ACCESS IS NECESSARY. BEFORE ENTERING CRITICAL ROOT ZONE AREA, CHECK WITH FORESTRY CONSULTANT.
6. ALL REQUIRED TREE, SILT, AND PERIMETER FENCING MUST REMAIN IN PLACE UNTIL THE TIME OF FINAL GRADING AND LANDSCAPING AND CAN ONLY BE REMOVED UPON REVIEW AND APPROVAL BY THE FORESTRY CONSULTANT.
7. ATTACHMENTS (WIRES, FENCES, ETC.) OTHER THAN THOSE APPROVED FOR GUYING, BRACING OR WRAPPING MUST NOT BE ATTACHED TO PROTECTED TREES.

PLAN




SECTION

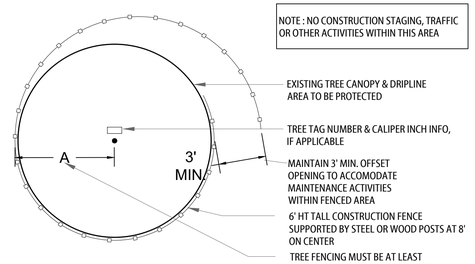
PLEASE NOTE:

INSTALL & MAINTAIN 4'-0" TALL WOODEN SLAT SNOW OR CHAIN LINK FENCE SECURED TO METAL POSTS SPACED A MAXIMUM OF 6' APART.

FENCE TO BE LOCATED AT A DISTANCE FROM TRUNK EQUAL TO 1'-0" FOR EVERY INCH OF DIAMETER MEASUARED AT BREAST HEIGHT.

SNOW FENCE TO BE SECURED TO METAL STAKES WITH A MINIMUM OF 4 WIRE TIES.

CHAIN LINK FENCE TO HAVE POSTS SECURED AT EACH SECTION TO MAINTAIN UPRIGHT AND STATIONARY THROUGHOUT CONSTRUCTION.




2 TREE INVENTORY & PRESERVATION NOTES & DETAILS


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teska

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FAX: (847) 803-3200
bonoi@bonoconsulting.com

Hugh
LIGHTING DESIGN

PERMIT STAMP

PROJECT NAME: MILWAUKEE & LAKE

PROJECT ADDRESS: 745-47 N MILWAUKEE AVENUE / 126-40 LAKE STREET, LIBERTYVILLE, IL

PROJECT INFO

PROJECT NO. - 24.016
PROJECT TEAM:
ARCH OF RECORD - JK
PROJECT MANAGER - BB
ASSOCIATES - MB, JP

| NO. | DESCRIPTION | DATE |
|---|---|---|
| | | |
| 1 | ISSUED FOR DEVELOPMENT REVIEW | 10.11.24 |

CERTIFICATION

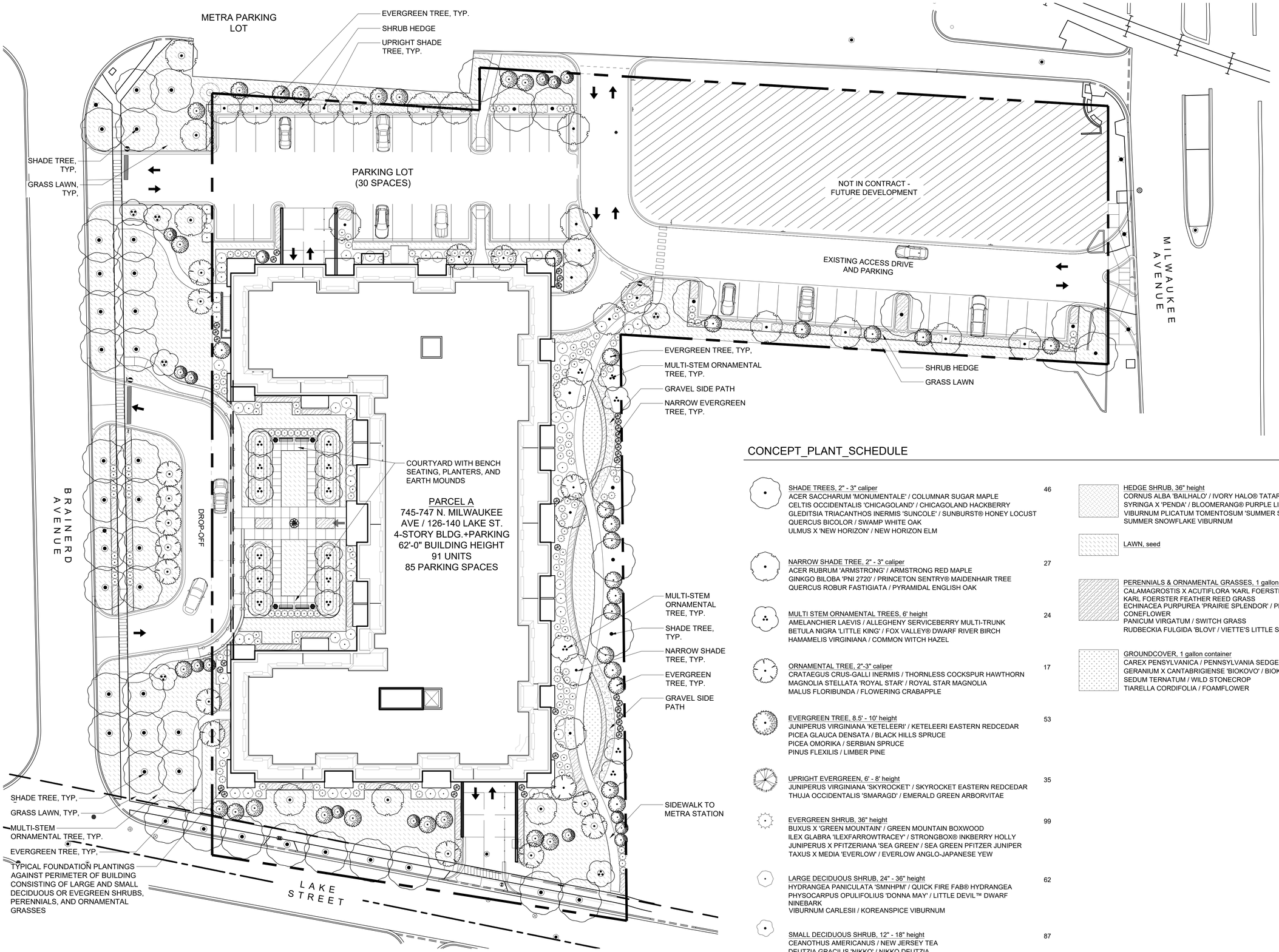
SHEET TITLE

TREE INVENTORY, NOTES, & DETAILS

SHEET #

L-2

October 9, 2024




3 PRELIMINARY LANDSCAPE PLAN
1" = 20'-0"

## CONCEPT_PLANT_SCHEDULE

| | | |
|---|---|---|
| SHADE TREES, 2" - 3" caliper<br>ACER SACCHARUM 'MONUMENTALE' / COLUMNAR SUGAR MAPLE<br>CELTIS OCCIDENTALIS 'CHICAGOLAND' / CHICAGOLAND HACKBERRY<br>GLEDITSIA TRIACANTHOS INERMIS 'SUNCOLE' / SUNBURST® HONEY LOCUST<br>QUERCUS BICOLOR / SWAMP WHITE OAK<br>ULMUS X 'NEW HORIZON' / NEW HORIZON ELM | 46 | |
| NARROW SHADE TREE, 2" - 3" caliper<br>ACER RUBRUM 'ARMSTRONG' / ARMSTRONG RED MAPLE<br>GINKGO BILOBA 'PNI 2720' / PRINCETON SENTRY® MAIDENHAIR TREE<br>QUERCUS ROBUR FASTIGIATA / PYRAMIDAL ENGLISH OAK | 27 | |
| MULTI STEM ORNAMENTAL TREES, 6' height<br>AMELANCHIER LAEVIS / ALLEGHENY SERVICEBERRY MULTI-TRUNK<br>BETULA NIGRA 'LITTLE KING' / FOX VALLEY® DWARF RIVER BIRCH<br>HAMAMELIS VIRGINIANA / COMMON WITCH HAZEL | 24 | |
| ORNAMENTAL TREE, 2"-3" caliper<br>CRATAEGUS CRUS-GALLI INERMIS / THORNLESS COCKSPUR HAWTHORN<br>MAGNOLIA STELLATA 'ROYAL STAR' / ROYAL STAR MAGNOLIA<br>MALUS FLORIBUNDA / FLOWERING CRABAPPLE | 17 | |
| EVERGREEN TREE, 8.5' - 10' height<br>JUNIPERUS VIRGINIANA 'KETELEERI' / KETELEERI EASTERN REDCEDAR<br>PICEA GLAUCA DENSATA / BLACK HILLS SPRUCE<br>PICEA OMORIKA / SERBIAN SPRUCE<br>PINUS FLEXILIS / LIMBER PINE | 53 | |
| UPRIGHT EVERGREEN, 6' - 8' height<br>JUNIPERUS VIRGINIANA 'SKYROCKET' / SKYROCKET EASTERN REDCEDAR<br>THUJA OCCIDENTALIS 'SMARAGD' / EMERALD GREEN ARBORVITAE | 35 | |
| EVERGREEN SHRUB, 36" height<br>BUXUS X 'GREEN MOUNTAIN' / GREEN MOUNTAIN BOXWOOD<br>ILEX GLABRA 'ILEXFARROWTRACEY' / STRONGBOX® INKBERRY HOLLY<br>JUNIPERUS X PFITZERIANA 'SEA GREEN' / SEA GREEN PFITZER JUNIPER<br>TAXUS X MEDIA 'EVERLOW' / EVERLOW ANGLO-JAPANESE YEW | 99 | |
| LARGE DECIDUOUS SHRUB, 24" - 36" height<br>HYDRANGEA PANICULATA 'SMNHPM' / QUICK FIRE FAB® HYDRANGEA<br>PHYSOCARPUS OPULIFOLIUS 'DONNA MAY' / LITTLE DEVIL™ DWARF NINEBARK<br>VIBURNUM CARLESII / KOREANSPICE VIBURNUM | 62 | |
| SMALL DECIDUOUS SHRUB, 12" - 18" height<br>CEANOTHUS AMERICANUS / NEW JERSEY TEA<br>DEUTZIA GRACILIS 'NIKKO' / NIKKO DEUTZIA<br>SPIRAEA JAPONICA 'NEON FLASH' / NEON FLASH JAPANESE SPIREA | 87 | |
| HEDGE SHRUB, 36" height<br>CORNUS ALBA 'BAILHALO' / IVORY HALO® TATARIAN DOGWOOD<br>SYRINGA X 'PENDA' / BLOOMERANG® PURPLE LILAC<br>VIBURNUM PLICATUM TOMENTOSUM 'SUMMER SNOWFLAKE' / SUMMER SNOWFLAKE VIBURNUM | 797 SF | |
| LAWN, seed | 21 877 SF | |
| PERENNIALS & ORNAMENTAL GRASSES, 1 gallon container<br>CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER' / KARL FOERSTER FEATHER REED GRASS<br>ECHINACEA PURPUREA 'PRAIRIE SPLENDOR' / PRAIRIE SPLENDOR CONEFLOWER<br>PANICUM VIRGATUM / SWITCH GRASS<br>RUDBECKIA FULGIDA 'BLOVI' / VIETTE'S LITTLE SUZY CONEFLOWER | 1 786 SF | |
| GROUNDCOVER, 1 gallon container<br>CAREX PENSYLVANICA / PENNSYLVANIA SEDGE<br>GERANIUM X CANTABRIGIENSE 'BIOKOVO' / BIOKOVO CRANESBILL<br>SEDUM TERNATUM / WILD STONECROP<br>TIARELLA CORDIFOLIA / FOAMFLOWER | 2 179 SF | |

0 20' 40' 60' 80' feet
1" = 20'

N

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Hugh LIGHTING DESIGN

PROJECT NAME:
MILWAUKEE & LAKE

PROJECT ADDRESS:
745-47 N MILWAUKEE AVENUE /
126-40 LAKE STREET, LIBERTYVILLE, IL

PROJECT INFO

PROJECT NO. - 24.016
PROJECT TEAM:
ARCH OF RECORD - JK
PROJECT MANAGER - BB
ASSOCIATES - MB, JP

| NO. | DESCRIPTION | DATE |
|---|---|---|
| 1 | ISSUED FOR DEVELOPMENT REVIEW | 10.11.24 |

CERTIFICATION

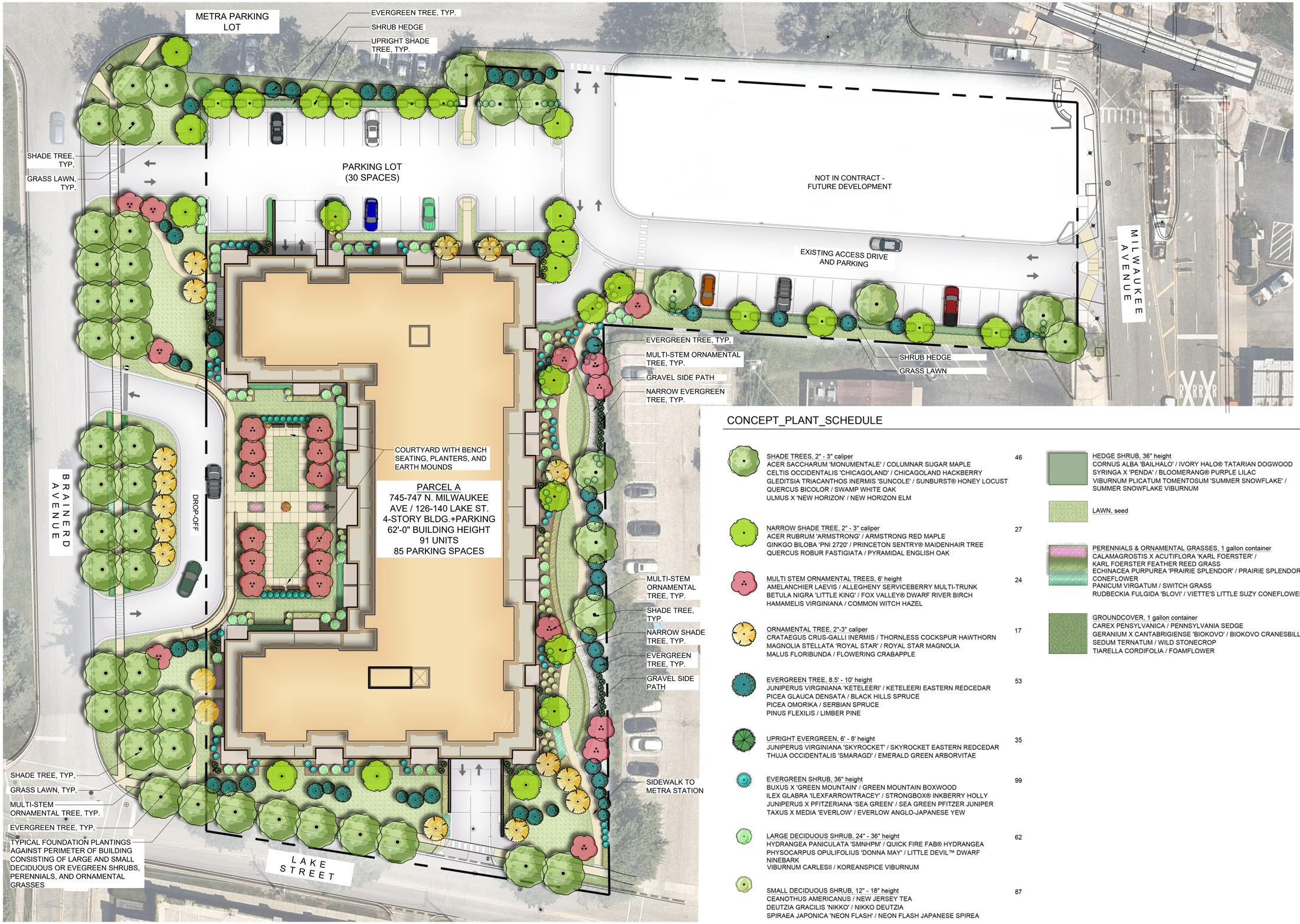
SHEET TITLE

PRELIMINARY LANDSCAPE PLAN

SHEET #

L-3

October 9, 2024




## 3.1 ILLUSTRATIVE LANDSCAPE PLAN

1" = 20'-0"

## CONCEPT_PLANT_SCHEDULE

| | | | |
|---|---|---|---|
| SHADE TREES, 2" - 3" caliper<br>ACER SACCHARUM 'MONUMENTALE' / COLUMNAR SUGAR MAPLE<br>CELTIS OCCIDENTALIS 'CHICAGOLAND' / CHICAGOLAND HACKBERRY<br>GLEDITSIA TRIACANTHOS INERMIS 'SUNCOLE' / SUNBURST® HONEY LOCUST<br>QUERCUS BICOLOR / SWAMP WHITE OAK<br>ULMUS X 'NEW HORIZON' / NEW HORIZON ELM | 46 | HEDGE SHRUB, 36" height<br>CORNUS ALBA 'BAILHALO' / IVORY HALO® TATARIAN DOGWOOD<br>SYRINGA X 'PENDA' / BLOOMERANG® PURPLE LILAC<br>VIBURNUM PLICATUM TOMENTOSUM 'SUMMER SNOWFLAKE' / SUMMER SNOWFLAKE VIBURNUM | 797 SF |
| | | LAWN, seed | 21 877 SF |
| NARROW SHADE TREE, 2" - 3" caliper<br>ACER RUBRUM 'ARMSTRONG' / ARMSTRONG RED MAPLE<br>GINKGO BILOBA 'PNI 2720' / PRINCETON SENTRY® MAIDENHAIR TREE<br>QUERCUS ROBUR FASTIGIATA / PYRAMIDAL ENGLISH OAK | 27 | PERENNIALS & ORNAMENTAL GRASSES, 1 gallon container<br>CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER' / KARL FOERSTER FEATHER REED GRASS<br>ECHINACEA PURPUREA 'PRAIRIE SPLENDOR' / PRAIRIE SPLENDOR CONEFLOWER<br>PANICUM VIRGATUM / SWITCH GRASS<br>RUDBECKIA FULGIDA 'BLOVI' / VIETTE'S LITTLE SUZY CONEFLOWER | 1 786 SF |
| MULTI STEM ORNAMENTAL TREES, 6' height<br>AMELANCHIER LAEVIS / ALLEGHENY SERVICEBERRY MULTI-TRUNK<br>BETULA NIGRA 'LITTLE KING' / FOX VALLEY® DWARF RIVER BIRCH<br>HAMAMELIS VIRGINIANA / COMMON WITCH HAZEL | 24 | | |
| ORNAMENTAL TREE, 2"-3" caliper<br>CRATAEGUS CRUS-GALLI INERMIS / THORNLESS COCKSPUR HAWTHORN<br>MAGNOLIA STELLATA 'ROYAL STAR' / ROYAL STAR MAGNOLIA<br>MALUS FLORIBUNDA / FLOWERING CRABAPPLE | 17 | GROUNDCOVER, 1 gallon container<br>CAREX PENSYLVANICA / PENNSYLVANIA SEDGE<br>GERANIUM X CANTABRIGIENSE 'BIOKOVO' / BIOKOVO CRANESBILL<br>SEDUM TERNATUM / WILD STONECROP<br>TIARELLA CORDIFOLIA / FOAMFLOWER | 2 179 SF |
| EVERGREEN TREE, 8.5' - 10' height<br>JUNIPERUS VIRGINIANA 'KETELEERI' / KETELEERI EASTERN REDCEDAR<br>PICEA GLAUCA DENSATA / BLACK HILLS SPRUCE<br>PICEA OMORIKA / SERBIAN SPRUCE<br>PINUS FLEXILIS / LIMBER PINE | 53 | | |
| UPRIGHT EVERGREEN, 6' - 8' height<br>JUNIPERUS VIRGINIANA 'SKYROCKET' / SKYROCKET EASTERN REDCEDAR<br>THUJA OCCIDENTALIS 'SMARAGD' / EMERALD GREEN ARBORVITAE | 35 | | |
| EVERGREEN SHRUB, 36" height<br>BUXUS X 'GREEN MOUNTAIN' / GREEN MOUNTAIN BOXWOOD<br>ILEX GLABRA 'ILEXFARROWTRACEY' / STRONGBOX® INKBERRY HOLLY<br>JUNIPERUS X PFITZERIANA 'SEA GREEN' / SEA GREEN PFITZER JUNIPER<br>TAXUS X MEDIA 'EVERLOW' / EVERLOW ANGLO-JAPANESE YEW | 99 | | |
| LARGE DECIDUOUS SHRUB, 24" - 36" height<br>HYDRANGEA PANICULATA 'SMNHPM' / QUICK FIRE FAB® HYDRANGEA<br>PHYSOCARPUS OPULIFOLIUS 'DONNA MAY' / LITTLE DEVIL™ DWARF NINEBARK<br>VIBURNUM CARLESII / KOREANSPICE VIBURNUM | 62 | | |
| SMALL DECIDUOUS SHRUB, 12" - 18" height<br>CEANOTHUS AMERICANUS / NEW JERSEY TEA<br>DEUTZIA GRACILIS 'NIKKO' / NIKKO DEUTZIA<br>SPIRAEA JAPONICA 'NEON FLASH' / NEON FLASH JAPANESE SPIREA | 87 | | |

0 20' 40' 60' 80' feet

1" = 20'

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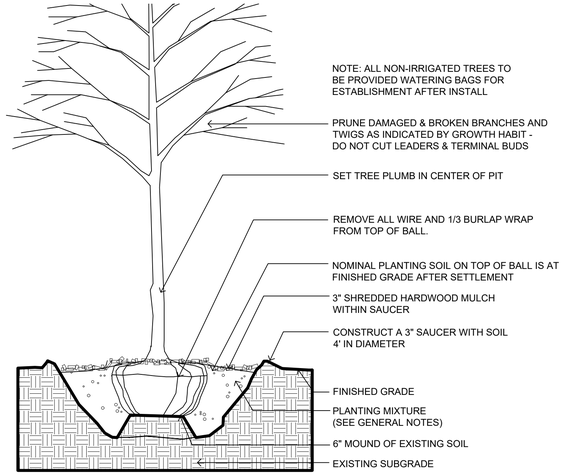
SHEET TITLE

ILLUSTRATIVE LANDSCAPE PLAN

SHEET #

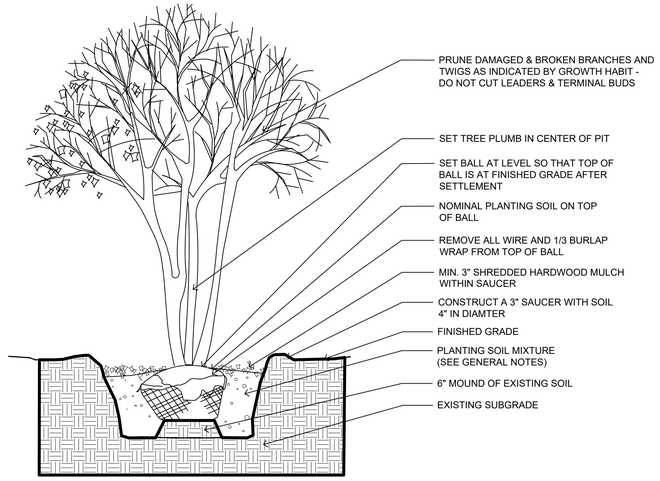
L-3.1

October 9, 2024



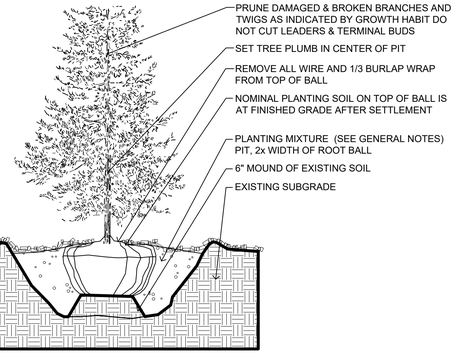

1 TYP. DECIDUOUS TREE PLANTING DETAIL

SCALE: NTS



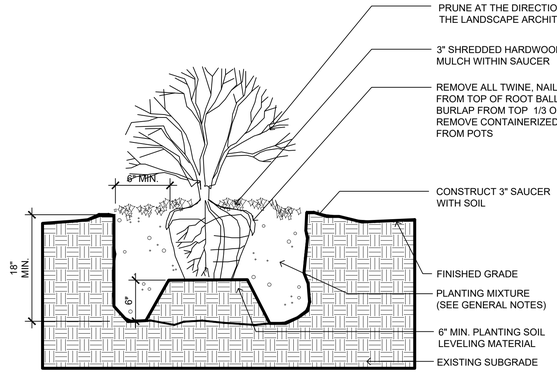

2 TYP. ORNAMENTAL TREE PLANTING DETAIL

SCALE: NTS



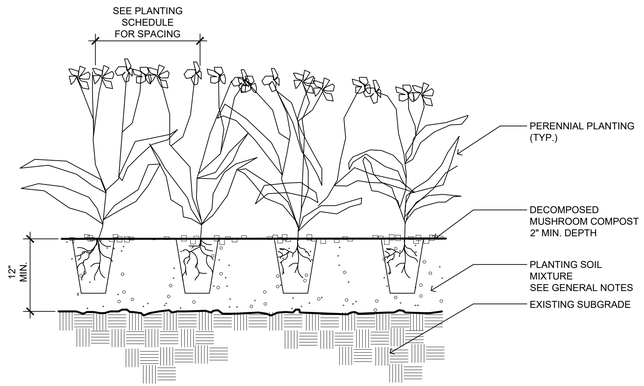

3 TYP. EVERGREEN TREE PLANTING DETAIL

SCALE: NTS



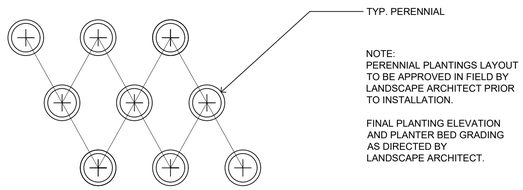

4 TYP. SHRUB PLANTING DETAIL

SCALE: NTS




5 TYP. PERENNIAL PLANTING DETAIL

SCALE: NTS




# 4 LANDSCAPE NOTES & DETAILS

LANDSCAPE GENERAL NOTES:

1. PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES, CONTRACTOR SHALL NOTIFY J.U.L.I.E. (811) OR (800) 892.0123 TO DETERMINE THE LOCATION OF ANY UNDERGROUND UTILITIES, WHICH MAY AFFECT PROPOSED SITE WORK. CONTRACTOR SHALL NOTIFY THE OWNER/LANDSCAPE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES, OBSTACLES AND/OR PROBLEMS.
2. VERIFICATION OF DIMENSIONS AND GRADES, BOTH EXISTING AND PROPOSED, SHALL BE THE CONTRACTOR'S RESPONSIBILITY PRIOR TO COMMENCEMENT OF WORK. THE CONTRACTOR SHALL NOTIFY THE OWNER/LANDSCAPE ARCHITECT OF ANY DISCREPANCIES.
3. ALL SURFACE DRAINAGE SHALL BE DIRECTED AWAY FROM STRUCTURES. SURFACE DRAINAGE SHALL BE DIRECTED TO EXISTING CATCH BASINS DESIGNATED FOR THE COLLECTION OF SURFACE RUN-OFF.
4. PLANT MATERIAL SIZES SHOWN ON PLANT SCHEDULE ARE MINIMUM ACCEPTABLE SIZES. ALL PLANT MATERIAL SHALL BE OF SPECIMEN QUALITY. NO 'PARK GRADE' MATERIAL WILL BE ACCEPTED.
5. ALL PLANT MATERIAL SHALL BE OBTAINED FROM AN APPROVED NORTHERN ILLINOIS NURSERY WITH HEAVY CLAY SOILS.
6. ALL PLANT MATERIAL SHALL CONFORM TO AMERICAN STANDARD FOR NURSERY STOCK AS SPONSORED BY THE AMERICAN ASSOCIATION OF NURSERYMEN AND APPROVED BY THE AMERICAN NATIONAL STANDARDS INSTITUTE, INC. (ANSI)
7. IF SPECIFIED SPECIES AND/ OR QUALITY OF PLANTS ARE NOT AVAILABLE AT THE TIME OF ORDERING, THE LANDSCAPE ARCHITECT, AT HIS/HER DISCRETION, MAY SUBSTITUTE SIMILAR PLANTS WITH THE SAME WHOLESALE VALUE.
8. ALL PLANTS TO BE BALLED IN BURLAP (B&B) OR CONTAINER GROWN (CG) AS SPECIFIED IN PLANT SCHEDULE. ALL NYLON/PLASTIC/BURLAP ROOT WRAPPING MATERIAL AND METAL WIRE BASKETS SHALL BE REMOVED.
9. SOIL TO BE USED FOR THE PLANTING MEDIUM FOR THE PROJECT SHALL BE FERTILE, WELL-DRAINED, OF UNIFORM QUALITY, FREE OF STONES OVER 1" IN DIAMETER, STICKS, OILS, CHEMICALS, PLASTER, CONCRETE AND OTHER DELETERIOUS MATERIAL.
10. ALL LANDSCAPE MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE CODES AND ORDINANCES.
11. ALL LANDSCAPE MATERIALS SHALL BE INSTALLED IN CONFORMANCE WITH THE ACCEPTED INDUSTRY'S STANDARD 'BEST MANAGEMENT PRACTICE' TECHNIQUES AS IDENTIFIED BY THE ILLINOIS LANDSCAPE CONTRACTORS ASSOCIATION (ILCA).
12. THE OWNER AND/OR LANDSCAPE ARCHITECT RESERVES THE RIGHT TO REJECT ANY PLANT MATERIAL IN POOR CONDITION/FORM OR NOT INSTALLED ACCORDING TO 'BEST MANAGEMENT PRACTICE' TECHNIQUES.
13. THE LANDSCAPE CONTRACTOR SHALL PREPARE PLANTING BEDS BY ADDING SOIL AMENDMENTS TO TOPSOIL MIX IN THE FOLLOWING QUANTITIES: TOPSOIL MIX FOR TREES & SHRUBS SHALL BE THREE (3) PARTS TOPSOIL, ONE (1) PART PEAT, AND ONE (1) PART SAND. TOPSOIL MIX FOR PERENNIALS & GROUNDCOVER SHALL BE THREE (3) PARTS TOPSOIL, ONE (1) PART SAND, AND TWO (2) PARTS COMPOST.
14. ALL WOODY PLANTINGS TO RECEIVE 3" OF SHREDDED HARDWOOD MULCH. ALL HERBACEOUS PLANTINGS TO RECEIVE 2" OF LEAF COMPOST.
15. CONTRACTOR SHALL WATER PLANTS IMMEDIATELY AFTER PLANTING. FLOODING PLANTS TWICE DURING FIRST TWENTY-FOUR HOURS AFTER PLANTING.
16. ALL ROAD AND WALK SURFACES SHALL BE KEPT CLEAR OF MUD AND DEBRIS AT ALL TIMES.
17. CONTRACTOR SHALL REPAIR IN KIND ANY AREAS DAMAGED AS A RESULT OF LANDSCAPE OPERATIONS.
18. GUARANTEE SPECIFICATIONS ARE AS FOLLOWS: THE CONTRACTOR SHALL PROVIDE THE OWNER WITH A BONDED WRITTEN ONE-YEAR WARRANTY AGREEMENT BEGINNING ON THE FIRST DAY OF THE OWNER'S POSSESSION. THIS AGREEMENT SHALL PROVIDE FOR THE REPLACEMENT OF DEAD OR DYING PLANT MATERIAL. THE CONTRACTOR SHALL PROVIDE THE OWNER WITH A TYPEWRITTEN LIST OF SPECIFIC MAINTENANCE INSTRUCTIONS FOR EACH TYPE OF PLANT INSTALLED WITH THE WRITTEN AGREEMENT AND BOND.
19. EROSION CONTROL BLANKETS REQUIRED ON ALL SLOPES GREATER THAN 3:1.

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ASSOCIATES - MB, JP

| NO. | DESCRIPTION | DATE |
|---|---|---|
| 1 | ISSUED FOR DEVELOPMENT REVIEW | 10.11.24 |

CERTIFICATION

SHEET TITLE

LANDSCAPE
NOTES & DETAILS

SHEET #

L-4

October 9, 2024

# SUMMARY OF LANDSCAPE REQUIREMENTS

## PERIMETER LANDSCAPED OPEN SPACE (SEC. 26-13-2)

REQUIREMENT

FOR ALL MULTIPLE-FAMILY STRUCTURES WITHIN THE R-8 MULTIPLE-FAMILY RESIDENTIAL DISTRICT, THERE SHALL BE PROVIDED A PERIMETER LANDSCAPED OPEN SPACE WITH A MINIMUM WIDTH OF NO LESS THAN TEN (10) FEET ALONG EVERY LOT LINE.

PROPOSED

CURRENT ZONING OF THE SITE IS C-1 AND HAS NO PERIMETER LANDSCAPE REQUIREMENTS. BECAUSE FUTURE USE OF THE SITE WILL BE MULTI-FAMILY RESIDENTIAL WE HAVE MET THE R-8 MULTI-FAMILY RESIDENTIAL DISTRICT REQUIREMENTS WHERE POSSIBLE . DISTANCE FROM BUILDING TO PROPERTY LINE MEETS 10' REQUIREMENT ALONG ALL LOT LINES EXCEPT FOR PORTIONS OF THE BUILDING ALONG THE NORTHWEST AND SOUTHWEST SECTIONS WHERE THERE IS ONLY 8'-5".
DISTANCE FROM BUILDING TO BACK OF CURB ALONG THE NORTHWEST PORTION IS APPROXIMATELY 64'-6" AND ON THE SOUTHWEST PORTION IS APPROXIMATELY 61'-0".

WE ARE SEEKING RELIEF OF THE APPROXIMATE 1.5' OF THE REQUIRED (10) FOOT DISTANCE IN THESE LOCATIONS AS THERE IS MORE THAN (50) FOOT DISTANCE BETWEEN THE BUILDING AND THE BACK OF THE BRAINERD AVENUE CURB.

## PARKING LOTS AND STRUCTURES (SEC. 26-13-3)

26-13-3.1.PARKING LOT SCREENING

REQUIREMENT

EVERY PARKING LOT SHALL BE BUFFERED AND SCREENED WITH APPROPRIATE SCREENING DEVICES. THE LANDSCAPING AND SCREENING TREATMENT SHALL BE DESIGNED AND MAINTAINED TO A HEIGHT OF AT LEAST THREE (3) FEET ALONG EVERY LOT LINE.

PROPOSED

CONTINUOUS HEDGE ROW ALONG NORTH SIDE OF PARKING LOT (ADJACENT TO METRA PARKING LOT) MAINTAINED AT A HEIGHT OF 3 FEET

26-13-3.2.PARKING LOT INTERIOR LANDSCAPING.

*(A)* *REQUIRED INTERIOR LANDSCAPING* INTERIOR LANDSCAPING SHALL BE PROVIDED FOR ALL PARKING LOTS CONTAINING FIFTEEN (15) OR MORE SPACES.

PROPOSED SITE PLANS AND LANDSCAPE PLANS COMPLY.

*(B)* *AREA* INTERIOR LANDSCAPING SHALL CONSTITUTE AT LEAST TEN (10) PERCENT OF THE AREA OF THE PARKING LOT.

PROPOSED PARKING LOT APPROXIMATELY 8,720 SF., 10% OF 8,745 = 874.5 SF.
PROPOSED INTERIOR LANDSCAPE APPROXIMATELY 946 SF.

*(C)* *TREE PLANTING ISLANDS* INTERIOR LANDSCAPING SHALL CONSIST OF TREE PLANTING ISLANDS WITH A MINIMUM AREA OF ONE HUNDRED SEVENTY-ONE (171) SQUARE FEET AND A MINIMUM WIDTH OF NINE (9) FEET.

PROPOSED SITE PLANS AND LANDSCAPE PLANS SEEK RELIEF FROM REQUIREMENT C.

*(D)* *DISPERSAL* WHEN MORE THAN ONE (1) TREE PLANTING ISLAND IS PROVIDED, SUCH ISLANDS SHALL BE SPACED THROUGHOUT THE PARKING LOT.

PROPOSED SITE PLANS AND LANDSCAPE PLANS COMPLY.

## TREE REPLACEMENT (SEC. 9-32)

REQUIREMENT

(1)THE FOLLOWING TABLE SPECIFIES THE NUMBER OF TREES REQUIRED FOR REPLACEMENT ACCORDING TO THE SPECIES OF TREE REMOVED:

| PROTECTED TREE REMOVED | REPLACEMENT TREES RATE PER TREE REMOVED |
|---|---|
| ALL PUBLIC TREES (ALL) | 4 TREES |
| GROUP A | 3 TREES (GROUP A) |
| GROUP B | 2 TREES (GROUP A OR B) |
| GROUP C | 1 TREE (GROUP A OR B) |
| TREES SUBJECT TO APPROVED LANDSCAPE PLAN | 1 TREE (MATCH EXISTING GROUP AND TYPE) |

PROPOSED

TREE REPLACEMENT REQUIREMENT SUMMARY:
TOTAL NUMBER OF TREES TO BE REMOVED = 98
TOTAL NUMBER OF TREES TO BE PROTECTED = 1
REQUIRED NUMBER OF TREES TO BE REPLACED = 204
CREDIT FOR PROTECTED TREES = 3
TOTAL NUMBER OF TREES REQUIRED = 201
TOTAL NUMBER OF TREES PROVIDED = 202
(SEE SHEETS L-1 & L-2 FOR TREE PRESERVATION PLANS AND TREE INVENTORY LIST)

## LANDSCAPE MATERIALS (SEC. 26-13-2.2)

REQUIREMENT

EVERY REQUIRED PERIMETER LANDSCAPED OPEN SPACE SHALL CONSIST OF A COMBINATION OF SHADE AND ORNAMENTAL TREES, EVERGREEN TREES AND SHRUBS (SEE FIGURE 26-13-1). AREAS NOT PLANTED WITH TREES OR SHRUBS SHALL BE MAINTAINED AS A COMBINATION OF GROUNDCOVER AND DECORATIVE PAVING MATERIAL.

*(A)* *QUANTITY.* THE MINIMUM NUMBER OF SHADE AND ORNAMENTAL TREES, EVERGREEN TREES AND SHRUBS REQUIRED IN A PERIMETER LANDSCAPED OPEN SPACE SHALL BE BASED ON THE TOTAL LINEAR LENGTH OF THE SUBJECT OPEN SPACE, AS MEASURED ALONG THE RELEVANT LOT LINE, AS SPECIFIED IN THE FOLLOWING TABLE:

QUANTITY OF TREES AND SHRUBS

| TYPE OF TREE/SHRUB | NUMBER OF TREES/SHRUBS REQUIRED |
|---|---|
| SHADE OR ORNAMENTAL TREES | 1 FOR EVERY 50 LINEAR FEET OR MAJOR FRACTION THEREOF (MEASURED AT THE LOT LINE) |
| EVERGREEN TREES | 1 FOR EVERY 25 LINEAR FEET OR MAJOR FRACTION THEREOF (MEASURED AT THE LOT LINE) |
| EVERGREEN SHRUBS | 1 FOR EVERY 25 LINEAR FEET OR MAJOR FRACTION THEREOF (MEASURED AT THE LOT LINE) |

PROPOSED

NORTH PROPERTY LINE ADJACENT TO METRA PARKING LOT (208 LF):

| | |
|---|---|
| SHADE TREE/ORNAMENTAL TREE REQUIREMENT (AT 1 TREE PER 50 LF) | = 4 SHADE TREES |
| EVERGREEN TREE REQUIREMENT (AT 1 TREE PER 25 LF) | = 8 TREES |
| EVERGREEN SHRUB REQUIREMENT (AT 1 PER 25 LF) | = 8 SHRUBS |
| *PROPOSED SHADE/ ORNAMENTAL TREES* | *= 10 SHADE TREES* |
| *PROPOSED EVERGREEN TREES* | *= 10 TREES* |
| *PROPOSED EVERGREEN SHRUBS* | *= 8 SHRUBS* |

SOUTH PROPERTY LINE ADJACENT TO LAKE STREET (193 LF):

| | |
|---|---|
| SHADE TREE/ORNAMENTAL TREE REQUIREMENT (AT 1 TREE PER 50 LF) | = 3 TREES |
| EVERGREEN TREE REQUIREMENT (AT 1 TREE PER 25 LF) | = 7 TREES |
| EVERGREEN SHRUB REQUIREMENT (AT 1 PER 25 LF) | = 7 SHRUBS |
| *PROPOSED SHADE/ ORNAMENTAL TREES* | *= 12 SHADE TREES* |
| *PROPOSED EVERGREEN TREES* | *= 12 TREES* |
| *PROPOSED EVERGREEN SHRUBS* | *= 8 SHRUBS* |

EAST PROPERTY LINE WITH PATH TO METRA (351LF):

| | |
|---|---|
| SHADE TREE/ORNAMENTAL TREE REQUIREMENT (AT 1 TREE PER 50 LF) | = 7 TREES |
| EVERGREEN TREE REQUIREMENT (AT 1 TREE PER 25 LF ) | = 14 TREES |
| EVERGREEN SHRUB REQUIREMENT (AT 1 PER 25 LF) | = 14 SHRUBS |
| *PROPOSED SHADE/ ORNAMENTAL TREES* | *= 3 SHADE TREES + 7 ORNAMENTAL TREES* |
| *PROPOSED EVERGREEN TREES* | *= 15 TREES* |
| *PROPOSED EVERGREEN SHRUBS* | *= 14 SHRUBS* |

WEST PROPERTY LINE ADJACENT TO BRAINERD AVENUE (270 LF):

| | |
|---|---|
| SHADE TREE/ORNAMENTAL TREE REQUIREMENT (AT 1 TREE PER 50 LF) | = 5 TREES |
| EVERGREEN TREE REQUIREMENT (AT 1 TREE PER 25 LF) | = 10 TREES |
| EVERGREEN SHRUB REQUIREMENT (AT 1 PER 25 LF) | = 10 SHRUBS |
| *PROPOSED SHADE/ ORNAMENTAL TREES* | *= 24 SHADE TREES* |
| *PROPOSED EVERGREEN TREES* | *= 15 TREES* |
| *PROPOSED EVERGREEN SHRUBS* | *= 10 SHRUBS* |

PARCEL 3 - PROPOSED

SOUTH PROPERTY LINE ADJACENT TO NEIGHBORING PARCEL (225 LF):

| | |
|---|---|
| SHADE TREE/ORNAMENTAL TREE REQUIREMENT (AT 1 TREE PER 50 LF) | = 4 TREES |
| EVERGREEN TREE REQUIREMENT (AT 1 TREE PER 25 LF) | = 9 TREES |
| EVERGREEN SHRUB REQUIREMENT (AT 1 PER 25 LF) | = 9 SHRUBS |
| *PROPOSED SHADE/ ORNAMENTAL TREES* | *= 4 SHADE TREES* |
| *PROPOSED EVERGREEN TREES* | *= 5 TREES* |
| *PROPOSED EVERGREEN SHRUBS* | *= 10 SHRUBS* |

*NOTE: NORTH, EAST, & WEST PROPERTY LINES FOR PARCEL 3 NOT INCLUDED*

5 ORDINANCE SUMMARY

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2149 N. TALMAN AVENUE
CHICAGO, IL 60647
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CONSULTANTS


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CIVIL ENGINEERS
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PARK RIDGE, IL 60068 FAX: (847) 823-3200
bbono@bonoconsulting.com
Hugh LIGHTING DESIGN


PROJECT NAME:
MILWAUKEE & LAKE

PROJECT ADDRESS:
745-47 N MILWAUKEE AVENUE /
126-40 LAKE STREET, LIBERTYVILLE, IL

PROJECT INFO

PROJECT NO. : 24.016
PROJECT TEAM:
ARCH OF RECORD - JK
PROJECT MANAGER - BB
ASSOCIATES - MB, JP

| NO. | DESCRIPTION | DATE |
|---|---|---|
| | | |
| 1 | ISSUED FOR DEVELOPMENT REVIEW | 10.11.24 |

CERTIFICATION

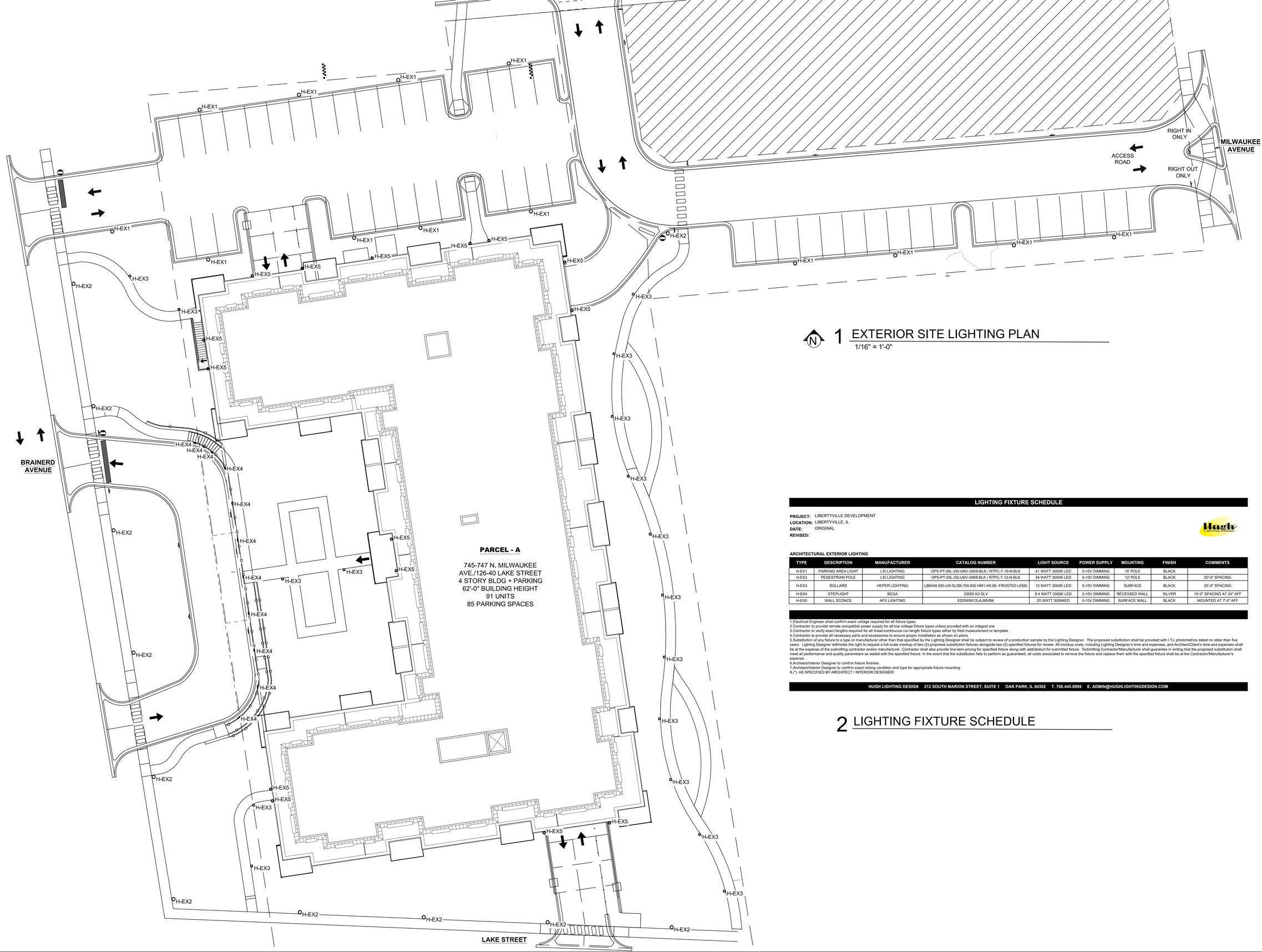
SHEET TITLE

ORDINANCE SUMMARY

SHEET #

L-5

October 9, 2024




N

# 1 EXTERIOR SITE LIGHTING PLAN

1/16" = 1'-0"

## LIGHTING FIXTURE SCHEDULE

**PROJECT:** LIBERTYVILLE DEVELOPMENT
**LOCATION:** LIBERTYVILLE, IL
**DATE:** ORIGINAL
**REVISED:**

**ARCHITECTURAL EXTERIOR LIGHTING**

| TYPE | DESCRIPTION | MANUFACTURER | CATALOG NUMBER | LIGHT SOURCE | POWER SUPPLY | MOUNTING | FINISH | COMMENTS |
|---|---|---|---|---|---|---|---|---|
| H-EX1 | PARKING AREA LIGHT | LSI LIGHTING | OPS-PT-06L-3W-UNV-30K8-BLK / RTPC-T-16-N-BLK | 41 WATT 3000K LED | 0-10V DIMMING | 16' POLE | BLACK | |
| H-EX2 | PEDESTRIAN POLE | LSI LIGHTING | OPS-PT-05L-5Q-UNV-30K8-BLK / RTPC-T-12-N-BLK | 34 WATT 3000K LED | 0-10V DIMMING | 12' POLE | BLACK | 50'-0" SPACING |
| H-EX3 | BOLLARD | HEPER LIGHTING | LB6048.585-US-SLSB-700-830 HM1-H0.80 -FROSTED LENS | 10 WATT 3000K LED | 0-10V DIMMING | SURFACE | BLACK | 25'-0" SPACING |
| H-EX4 | STEPLIGHT | BEGA | 33055 K3 SLV | 8.4 WATT 3000K LED | 0-10V DIMMING | RECESSED WALL | SILVER | 15'-0" SPACING AT 24" AFF |
| H-EX5 | WALL SCONCE | AFX LIGHTING | EDDW0612LAJMVBK | 25 WATT 3000KED | 0-10V DIMMING | SURFACE WALL | BLACK | MOUNTED AT 7'-0" AFF |

1.Electrical Engineer shall confirm exact voltage required for all fixture types.
2.Contractor to provide remote compatible power supply for all low voltage fixture types unless provided with an integral one
3.Contractor to verify exact lengths required for all linear/continuous run length fixture types either by field measurement or template
4.Contractor to provide all necessary parts and accessories to ensure proper installation as shown on plans
5.Substitution of any fixture to a type or manufacturer other than that specified by the Lighting Designer shall be subject to review of a production sample by the Lighting Designer. The proposed substitution shall be provided with I.T.L photometrics dated no older than five years. Lighting Designer withholds the right to request a full-scale mockup of two (2) proposed substitution fixtures alongside two (2) specified fixtures for review. All mockup costs, including Lighting Designer's time and expenses, and Architect/Client's time and expenses shall be at the expense of the submitting contractor and/or manufacturer. Contractor shall also provide line-item pricing for specified fixture along with add/deduct for submitted fixture. Submitting Contractor/Manufacturer shall guarantee in writing that the proposed substitution shall meet all performance and quality parameters as stated with the specified fixture. In the event that the substitution fails to perform as guaranteed, all costs associated to remove the fixture and replace them with the specified fixture shall be at the Contractor/Manufacturer's expense.
6.Architect/Interior Designer to confirm fixture finishes.
7.Architect/Interior Designer to confirm exact ceiling condition and type for appropriate fixture mounting.
8.(*) AS SPECIFIED BY ARCHITECT / INTERIOR DESIGNER

HUGH LIGHTING DESIGN 212 SOUTH MARION STREET, SUITE 1 OAK PARK, IL 60302 T. 708.445.0995 E. ADMIN@HUGHLIGHTINGDESIGN.COM

# 2 LIGHTING FIXTURE SCHEDULE

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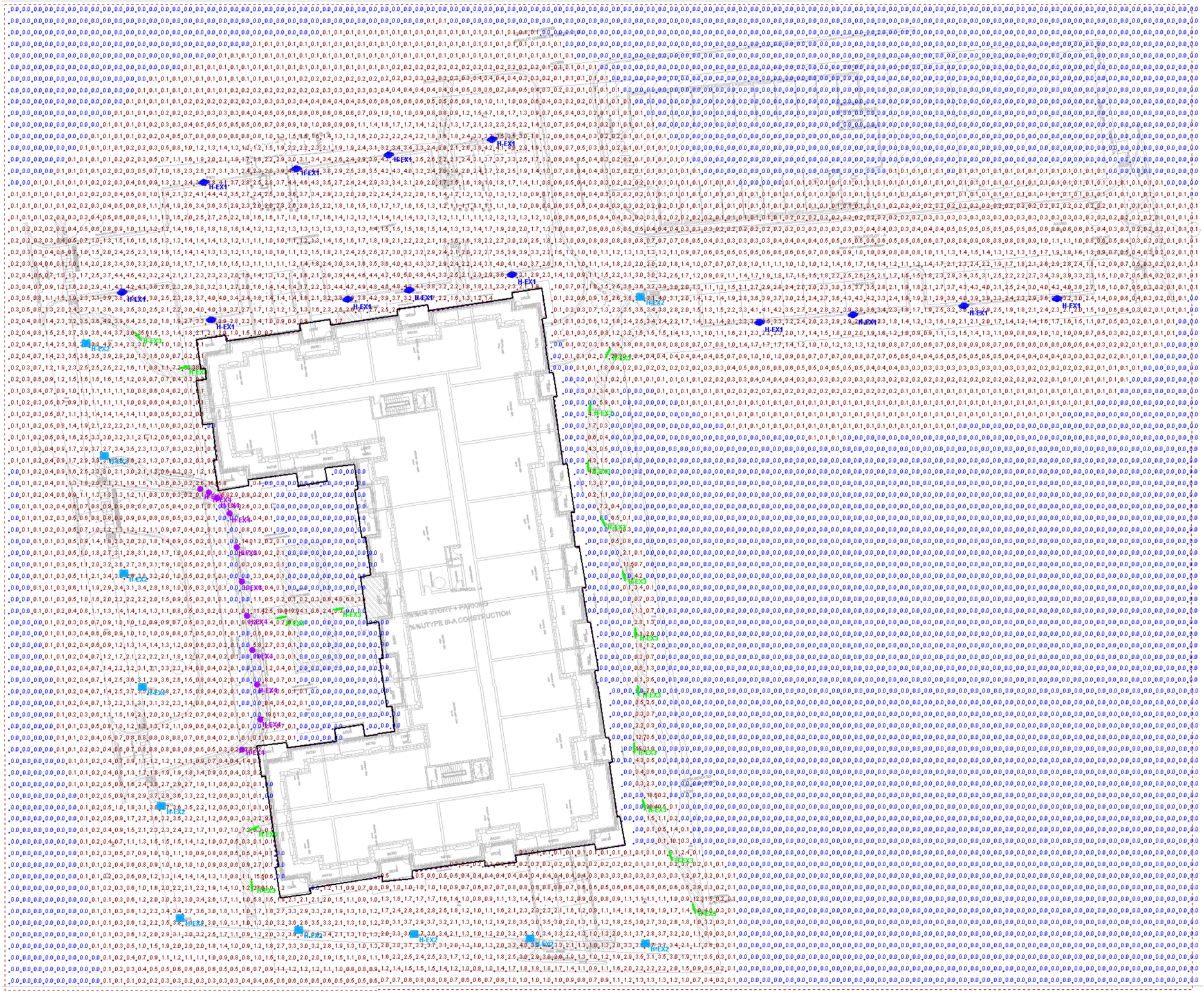
CERTIFICATION

SHEET TITLE

EXTERIOR SITE LIGHTING PLAN

SHEET #

LT.1


H-EX1
H-EX2
H-EX3
H-EX4
H-EX5
H-EX6
H-EX7
H-EX8
H-EX9
H-EX10
H-EX11
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H-EX31
H-EX32
H-EX33
H-EX34
H-EX35
H-EX36
H-EX37
H-EX38
H-EX39
H-EX40
H-EX41

Catalog # : _____
Prepared By : _____

H-EX1
OPS-PT-06L-3W-UNV-30K8-BLK / RTPC-T-16-N-BLK

H-EX2
OPS-PT-05L-5Q-UNV-30K8-BLK / RTPC-T-12-N-BLK

# Opulence Small Post Top (OPS)

Outdoor Decorative Post Top

IP66



| OVERVIEW | |
|---|---|
| Lumen Package (lm) | 3,000 - 14,000 |
| Wattage Range (W) | 20 - 100 |
| Efficacy Range (LPW) | 120 - 155 |
| Weight lbs (kg) | 25 (11.3) |
| Control Options | IMSBT, ALBCS, 7-Pin |

**QUICK LINKS**

Ordering Guide | Performance | Photometrics | Dimensions

## FEATURES & SPECIFICATIONS

### Construction

- Rugged die-cast aluminum housing.
- Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling. Other standard LSI finishes available. Consult factory.

### Optical System

- High density LED optical system delivers industry leading optical performance and visual comfort.
- 7 distribution types 3W, 4F, 5Q, 5C, 5R, 5D & AD
- Diffused lens version provides maximum visual comfort with reduced brightness and LED pixelization
- Available in 5000K, 4000K, 3500K, 3000K and 2700K color temperatures per ANSI C78.377. Also available in Phosphor Converted Amber with Peak intensity at 610nm.
- Minimum CRI of 80
- External Shield available for field installation (see accessory ordering information and dimensions for details).

### Electrical

- High-performance driver features overvoltage, under-voltage, short-circuit and over temperature protection (6kV surge standard).
- 0-10V dimming driver (optional extended leads).
- Standard Universal Voltage (120-277 VAC) Input 50/60 Hz or optional High Voltage (347-480 VAC).
- Total harmonic distortion (THD): <20%
- Operating temperature: -40°C to +40°C (-40°F to +104°F).
- Power factor (PF): >.90
- Input power stays constant over life.
- Field replaceable 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).
- Driver is fully encased in potting material for moisture resistance and complies with FCC standards. Driver and key electronic components can easily be accessed.

### Controls

- Integral passive infrared Bluetooth™ motion and photocell sensor options. Fixtures operate independently and can be commissioned via an iOS or Android configuration app.
- LSI's AirLink™ Blue lighting control system is a simple feature rich wireless Bluetooth mesh network. The integrated fixture sensor module provides wireless control of grouped fixtures based on motion sensors, daylight or a fully customizable schedule. Updates and modifications to the control strategy are easily implemented via an intuitive iOS app.

### Installation

- Designed to mount directly to a 2 3/8" - 3" outer diameter tenon (4" tall).
- Optional flush mount accessory slips inside the top of a 4" round pole for a virtually seamless transition from pole to luminaire.

### Warranty

- LSI luminaires carry a 5-year limited warranty. Refer to https://www.lsicorp.com/resources/terms-conditions-warranty/ for more information.

### Listings

- Listed to UL 1598 and UL 8750.
- Meets Buy American Act requirements.
- IDA compliant; with 3000K and warmer color temperature selection.
- Title 24 Compliant; see local ordinance for qualification information.
- Suitable for wet locations.
- IP66 rated Luminaire per IEC 60598-1.
- 3G rated for ANSI C136.31 high vibration applications.
- DesignLights Consortium® (DLC) Premium qualified product. Not all versions of this product may be DLC Premium qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.


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Catalog # : _____
Prepared By : _____

H-EX1
OPS-PT-06L-3W-UNV-30K8-BLK / RTPC-T-16-N-BLK

H-EX2
OPS-PT-05L-5Q-UNV-30K8-BLK / RTPC-T-12-N-BLK

# Aluminum Poles

Contemporary RTP



**QUICK LINKS**

Ordering Guide | Configurations | Dimensions | EPA

## FEATURES & SPECIFICATIONS

### Pole Shaft

- The post shaft is spun from seamless 6000 series aluminum alloy.
- A post top plate and tenon can be provided for top mount luminaire and/or bracket.
- A removable finial is available for posts receiving drilling patterns for side-mount luminaire arm assemblies.

### Structural Base

- The structural base is cast from 356 alloy aluminum and provided with an access door that is 4.25" wide at the top, 9.38" wide at the base, and 8" tall.
- The post shaft is inserted and welded into the structural base casting.
- The completed assembly is heattreated to a T6 temper.

### Anchor Bolts

- Anchor bolts conform to ASTM F1554 Grade 55 and are provided with two hex nuts and two flat washers.
- Bolts have an "L" bend on one end and are galvanized a minimum of 12" on the threaded end.

### Ground Lug

- Ground lug is standard.

### Finishes

- The standard finish for the post assembly and components is polyester powder applied coating.
- Additional finish options available upon request.

### Determining The Luminaire/Pole Combination For Your Application:

- Select luminaire from luminaire ordering information
- Select bracket configuration if required
- Determine EPA value from luminaire/bracket EPA chart
- Select pole height
- Select MPH to match wind speed in the application area (See windspeed maps).
- Confirm pole EPA equal to or exceeding value of luminaire/bracket EPA
- Consult factory for special wind load requirements and banner brackets


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H-EX4
33055 K3 SLV
**BEGA**

Recessed wall luminaire · Directed light

Type:
BEGA Product:
Project:
Modified:

**Application**
Recessed wall luminaire with asymmetric light distribution that is ideal for the illumination of ground surfaces, building entrances, stairs and footpaths. Separate installation housing allows for seamless coordination into construction and easy maintenance.

**Materials**
BEGA Tricoat ®, a 3-layer finishing technology for increased corrosion protection
Composite installation housing
Pure anodized aluminum reflector

**NRTL** listed to North American Standards, suitable for wet locations
Protection class IP 65

**Weight:** 2.1 lbs.

**Electrical**

| | |
|---|---|
| Operating voltage | 120-277V AC |
| Minimum start temperature | -30°C |
| LED module wattage | 8.4 W |
| System wattage | 11.0 W |
| Controllability | 0-10V, TRIAC, and ELV dimmable |
| Color rendering index | Ra > 80 |
| Luminaire lumens | 480lm |
| LED service life (L70) | 60000 hrs |

**LED color temperature**
☐ 4000K (K4)
☐ 3500K (K35)
☐ 3000K (K3)
☐ 2700K (K27)

**BEGA** can supply you with suitable LED replacement modules for up to 20 years after the purchase of LED luminaires - see website for details

**Finish**
All BEGA standard finishes are matte, textured powder coat with minimum 3 mil thickness. BEGA Unidure® finish provides superior fade protection in Black, Bronze, and Silver. BEGA standard White is a super durable polyester powder. Optionally available RAL and custom color finishes provided in either polyester powder or liquid paint.

**Available colors**
☐ Black (BLK)
☐ Silver (SLV)
☐ RAL:
☐ Bronze (BRZ)
☐ White (WHT)
☐ CUS:

**Available options**
☐ AMB Amber LED
☐ CUS Custom finish
☐ FSC Fusing
☐ MGU Marine grade undercoat
☐ RAL RAL finish

**Included (available for pre-shipment)**
☐ BB24065 Installation housing






**Recessed wall luminaire** · Directed light

| | LED | A | B | C |
|---|---|---|---|---|
| **B33055** | 8.4W | 12 1/4" | 2 3/4" | 5 |

**BEGA** 1000 BEGA Way, Carpinteria, CA 93013 (805) 684-0533 info@bega-us.com
Due to the dynamic nature of lighting products and the associated technologies, luminaire data on this sheet is subject to change at the discretion of BEGA North America. For the most current technical data, please refer to bega-us. com
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Updated 08/27/24

H-EX3
LB6048.585-US-SLSB-700-830 HM1-H0.80 -FROSTED LENS

IK08 IP65

heper USA

## DRAGO Side

LB6048.585-US



180 mm
7 3/32"
133 mm
5 15/64"
50 mm
1 31/32"
H
H
250 mm
9 27/32"
800 mm
31 1/2"



**[SLSB]**
Special linear, Side throw - 145x45°

### Configurations

| | |
|---|---|
| **Light distribution** | [SLSB] 145x45° |
| **Delivered lumens flux** | 360 - 994 lm |
| **Rated input power** | 5 - 10 W |
| **Color temperature** | 2200 K CRI 80, 2700 K CRI 80, 3000 K CRI 80, 4000 K CRI 80 |
| **BUG rating** | B0-U0-G0, B1-U0-G1 |
| **Lifetime L90 (hour)** | >42, 000 |
| **Lifetime L80 (hour)** | >42, 000 |

### Options

| | |
|---|---|
| **Control** | On/Off, 0-10V * |
| **Product colors** | |
| **Height** | 0.8', 2.6', |

### Extras

| | |
|---|---|
| **Consult the factory Luminaire body options** | Emergency kit, Motion sensor<br>Double powder coating |

### Technical information

| | |
|---|---|
| **Listings and Ratings** | Product is NRTL listed suitable for wet locations in US and Canada in accordance with UL1598. Luminaire performance tests have been conducted in accordance with IES LM-79-08 standards., DarkSky Friendly |
| **Mounting** | Surface mountable |
| **Housing** | Corrosion resistant, extruded, marine grade aluminum housing |
| **Finishing** | Chromate conversion pretreatment followed by electrostatic powder coating |
| **Fasteners** | Stainless steel (AISI 304 / EN 1.4301 grade) |
| **Gasket** | Liquid silicone |
| **Lens / Reflector** | High reflectance aluminium coating, multifaceted micro reflector |
| **Glass / Diffusor** | Tempered safety glass |
| **Impact protection** | IK08 |
| **Ingress protection** | IP65 |
| **Input voltage** | 120-277V 50/60Hz |
| **Insulation class** | Class I |
| **Weight** | 7.76 lbs (0.8'), 9.9 lbs (2.6') |
| **LED module** | High power LEDs on metal-core PCB |
| **Driver** | Integral LED driver |
| **Driver surge protection** | 3/3 kV |
| **Power factor** | > 0.90 |
| **Through wiring** | Single power cord entry |
| **Operating temperature** | -40...50°C |
| **Power cord** | 20" of outdoor use rated flexible power cord |
| **Notes** | 3000K CCT or warmer must be selected to be |

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infoUS@hepergroup.com

We reserve the right to change specifications without prior written notice. Edition: 24.07.2024. For current version visit heperlighting.com. All flux (±%7 tolerance) and power values (±%10 tolerance) are derived following appropriate IES, CIE, and applicable standards.

1/5

AFX

H-EX5
EDDW0612LAJMVBK

| | | | |
|---|---|---|---|
| **LOCATION** | | | |
| **PREPARED BY** | | **QUANTITY** | |
| **COMMENTS** | | **FIXTURE TYPE** | |
| **CATALOG NUMBER** | | | |

3in1 CCT | TITLE 24 JA8 COMPLIANT

## Edmund LED Outdoor Sconce
## EDDW Series

### Features
This outdoor LED light is ideal for security and general lighting.
Up illumination (1-Light) or Up/down-light illumination (2-Light) for outdoor or indoor residential, commercial, and hospitality applications. Fixture mounts to a standard junction box (not included).

### Construction
Die-cast aluminum construction. Standard mounting holes and hardware are included. Power supply connections must be made inside a junction box (not included).

### Finish
Black powder coated finish.

### Diffuser
Solid acrylic diffuser.

### Electrical
Input 120-277 VAC / 60 Hz.
Minimum starting temp -4° F/ -20°C.

### LED
Integrated LED modules capable of producing:
1-LIGHT - 13W = 1200 source lumens, 1036 delivered lumens
2-LIGHT - 25W = 2400 source lumens, 2043 delivered lumens
Adjustable Choice 3000K, 3500K, 4000K (CCT).
Rated for 50,000 Hrs., 90 CRI.

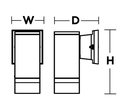
### Certification
All fixtures are cETLus listed for wet locations.
Title 24/JA8 Compliant (outdoor only).

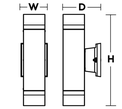
### Warranty
Limited warranty: This fixture is free from defects in materials and workmanship for a period of 5 years from date of purchase.

**Specifications and dimensions subject to change without notice.**








## Ordering Information:

| | LED | Source Lumens | Delivered Lumens | Adjustable CCT | H | W | D |
|---|---|---|---|---|---|---|---|
| **Black** | | | | | | | |
| EDDW0608LAJMVBK (1-LIGHT) | 13W | 1200 | 1036 | 3000K/3500K/4000K | 8" | 3-1/2" | 6-1/4" |
| EDDW0612LAJMVBK (2-LIGHT) | 25W | 2400 | 2043 | 3000K/3500K/4000K | 11-7/8" | 3-1/2" | 6-1/4" |

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R1/21

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bkono@bonoconsulting.com

Hugh LIGHTING DESIGN

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CERTIFICATION

SHEET TITLE

LIGHTING FIXTURE CUTS

SHEET #

LT.3

1 LIGHTING FIXTURE CUTS

ZAHN & ASSOCIATES
LAND SURVEYORS
7514 BEVERLY WAY
SPRING GROVE, IL 60081
(815)675-2774
D F P R #184003386

# ALTA/NSPS LAND TITLE SURVEY

## AND TOPOGRAPHY

PARCEL 1

THAT PART OF LOT 4 OF SCHOOL TRUSTEE'S SUBDIVISION OF SECTION 16, TOWNSHIP 44 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS, TO WIT, BEGINNING AT A POINT ON THE SOUTH LINE OF SAID LOT 4, 5 078 CHAINS WEST OF THE SOUTHEAST CORNER THEREOF, THENCE NORTH 8 5 DEGREES WEST, 4 CHAINS, THENCE NORTH 85 DEGREES EAST, 1 01 CHAINS, THENCE SOUTHERLY TO A POINT 4 014 CHAINS WEST OF SAID SOUTHEAST CORNER OF LOT 4, THENCE WEST TO THE PLACE OF BEGINNING, IN LAKE COUNTY, ILLINOIS

PARCEL 2

THAT PART OF LOT 4 IN SCHOOL TRUSTEE'S SUBDIVISION OF SECTION 16, TOWNSHIP 44 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS, TO WIT COMMENCING AT A POINT ON THE SOUTH LINE OF SAID LOT 4 LOCATED NORTH 89 5 DEGREES WEST 394 2 FEET FROM THE SOUTHEAST CORNER OF SAID LOT 4, THENCE NORTH 8 5 DEGREES WEST 356 9 FEET, THENCE NORTH 95 DEGREES EAST 64 7 FEET, THENCE SOUTH 8 5 DEGREES EAST 99 FEET, THENCE SOUTHERLY 264 FEET TO A POINT ON THE SOUTH LINE OF SAID LOT 4, 59 052 FEET EASTERLY OF THE PLACE OF BEGINNING, THENCE NORTH 89 5 DEGREES WEST 59 052 FEET TO THE PLACE OF BEGINNING, IN LAKE COUNTY, ILLINOIS

PARCEL 3

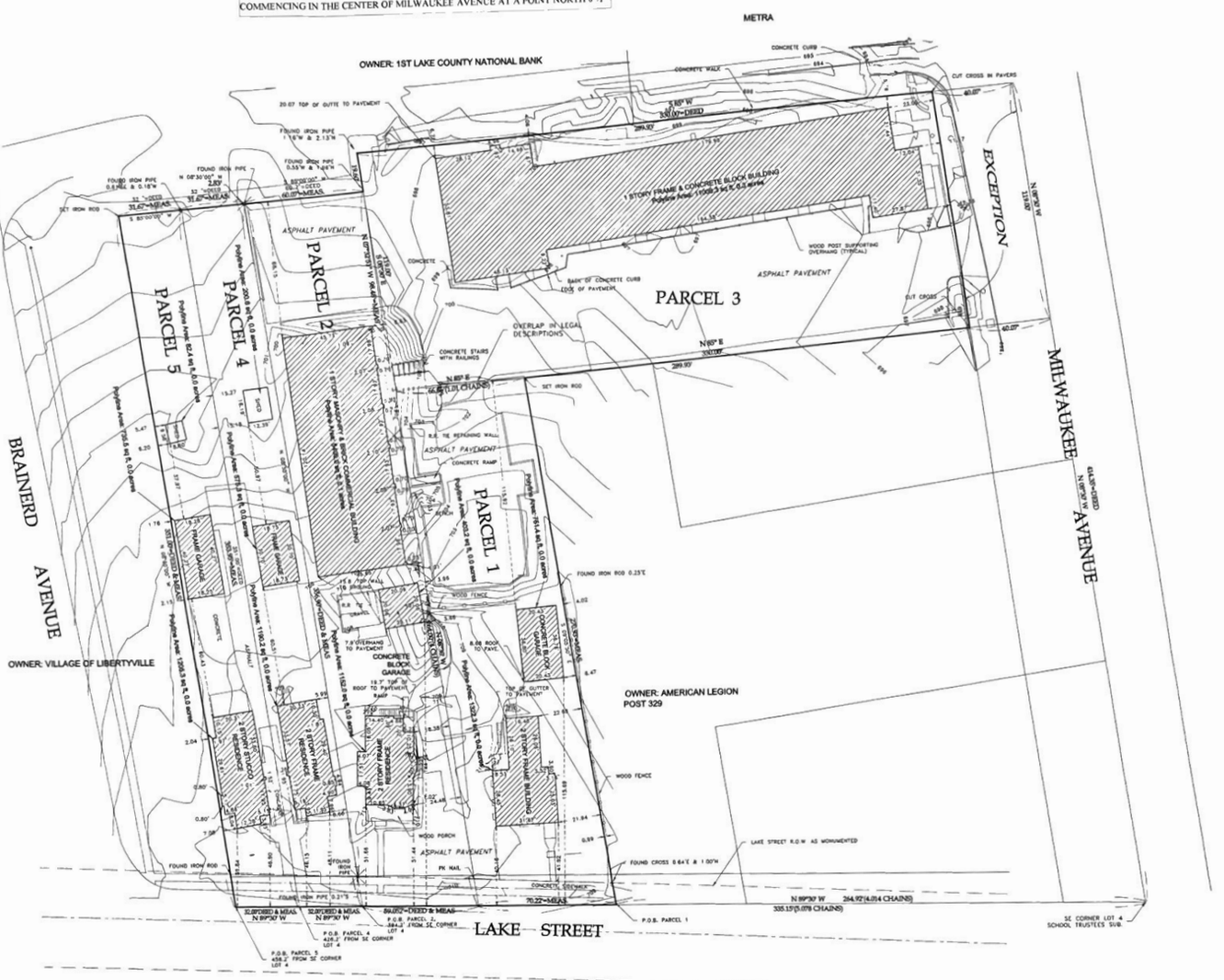
THAT PART OF LOT 4 IN SCHOOL TRUSTEE'S SUBDIVISION OF SECTION 16, TOWNSHIP 44 NORTH RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS COMMENCING IN THE CENTER OF MILWAUKEE AVENUE IN THE VILLAGE OF LIBERTYVILLE, AT A POINT NORTH 8 ½ DEGREES WEST 414 35 FEET FROM THE SOUTHEAST CORNER OF SAID LOT 4, AND RUNNING THENCE SOUTH 85 DEGREES WEST 330 FEET, THLNCE SOUTH 8 ½ DEGREES EAST 119 FEET, THENCE NORTH 85 DEGREES EAST 330 FEET TO THE CENTER OF SAID AVENUE AND THENCE NORTH 8 ½ DEGREES WEST 119 FEET TO THE PLACE OF BEGINNING (EXCEPT THAT PART THEREOF DESCRIBED AS FOLLOWS COMMENCING IN THE CENTER OF MILWAUKEE AVENUE AT A POINT NORTH 8 ½ DEGREES WEST 414 35 FEET FROM THE SOUTHEAST CORNER OF SAID LOT 4, THENCE SOUTH 85 DEGREES WEST TO A POINT 40 FEET WESTERLY OF THE CENTER OF SAID MILWAUKEE AVENUE, MEASURED AT RIGHT ANGLES TO SAID CENTER LINE, THENCE SOUTH 8 ½ DEGREES EAST PARALLEL WITH THE CENTER LINE OF SAID MILWAUKEE AVENUE, 119 FEET, THENCE NORTH 85 DEGREES EAST TO SAID CENTER LINE OF MILWAUKEE AVENUE AND THENCE NORTHERLY ALONG THE CENTER OF SAID MILWAUKEE AVENUE, 119 FEET TO THE PLACE OF BEGINNING), IN LAKE COUNTY, ILLINOIS

PARCEL 4

THAT PART OF LOT 4 IN SCHOOL TRUSTEE'S SUBDIVISION OF SECTION 16, TOWNSHIP 44 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN DESCRIBED AS FOLLOWS COMMENCING AT A POINT IN THE SOUTHERLY LINE OF SAID LOT 4 WHICH IS NORTH 89 ½ DEGREES WEST 426 2 FEET FROM THE SOUTHEAST CORNER OF SAID LOT 4, THENCE NORTH 8 ½ DEGREES WEST 351 FEET, THENCE NORTH 85 DEGREES EAST 32 FEET, THENCE SOUTH 8 ½ DEGREES EAST TO A POINT IN THE SOUTHERLY LINE OF SAID LOT 4 WHICH IS 32 FEET EASTERLY FROM THE POINT OF BEGINNING, THENCE NORTH 89 ½ DEGREES WEST 32 FEET TO THE PLACE OF BEGINNING, IN LAKE COUNTY, ILLINOIS

PARCEL 5

THAT PART OF LOT 4 IN SCHOOL TRUSTEE'S SUBDIVISION OF SECTION 16, TOWNSHIP 44 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS COMMENCING ON THE SOUTHERLY LINE OF SAID LOT 4, AT A POINT NORTH 89 ½ DEGREES WEST 458 2 FEET FROM THE SOUTHEAST CORNER OF SAID LOT 4, THENCE NORTH 8 ½ DEGREES WEST, 351 FEET, THENCE NORTH 85 DEGREES EAST, 32 FEET, THENCE SOUTH 8-1/2 DEGREES EAST TO A POINT IN THE SOUTHERLY LINE OF SAID LOT 4 WHICH IS 32 FEET EASTERLY FROM THE POINT OF BEGINNING, THENCE 89 ½ DEGREES WEST 32 FEET TO THE POINT OF BEGINNING, IN LAKE COUNTY, ILLINOIS




**PARCEL 4:**
HOUSE HEIGHT AT SOUHEAST CORNER 11.37' FROM CONCRETE TO ROOF OVERHANG
GARAGE HEIGHT AT SOUTHEAST CORNER 8.54 FROM CONCRETE TO ROOF OVERHANG
SHED HEIGHT AT NORTHEAST CORNER 5.56' FROM GROUND TO ROOF

**PARCEL 5:**
HOUSE HEIGHT AT SOUTHWEST CORNER 11.83 FROM CONCRETE TO ROOF OVERHANG
GARAGE HEIGHT AT SOUTHWEST CORNER 7.86' FROM PAVEMENT TO ROOF OVERHANG
SHED HEIGHT AT SOUTHEAST CORNER OF ROOF 5.32' FROM GROUND TO ROOF CORNER

*BENCH MARK*
*LAND 1D- STATION IS LOCATED IN VERNON HILLS 3 65 MILES SOUTHEAST OF LIBERTYVILLE IN SECTION 3, T43N, R11E ON IL RTE 21, STATION LOCATED 37 FEET WEST OF THE BACK OF CURB OF IL RTE 21 & 216' S OF SANITARY MH MARKED WITH ORANGE FIBERGLASS WITNESS POST*
*ELEVATION 667 82*

**SURVEY NOTES:**
ONLY THOSE BUILDING LINE RESTRICTIONS OR EASEMENTS SHOWN ON A RECORDED SUBDIVISION PLAT ARE SHOWN HEREON UNLESS THE DESCRIPTION ORDERED TO BE SURVEYED CONTAINS A PROPER DESCRIPTION OF THE REQUIRED BUILDING LINES OR EASEMENTS
*NO DISTANCE SHOULD BE ASSUMED BY SCALING
*NO UNDERGROUND IMPROVEMENTS HAVE BEEN LOCATED UNLESS OTHERWISE NOTED
*COMPARE DESCRIPTION, MEASUREMENTS AND BOUNDARY CORNERS BEFORE BUILDING AND IMMEDIATELY REPORT ANY APPARENT DISCREPANCY TO THE SURVEYOR
*THIS SURVEY AND PLAT OF SURVEY ARE VOID WITHOUT EMBOSSED SEAL AND SIGNATURE
*LINEAR AND ANGULAR MEASUREMENTS WERE OBTAINED USING A LEICA TCP1203 ROBOTIC TOTAL STATION.
*BASIS OF BEARINGS _____

**LEGEND**
R=RECORD
D=DEED
M=MEASURED
FIP=FOUND IRON PIPE
FIR=FOUND IRON ROD
SQ. FT.=SQUARE FEET
P.O.C.=POINT OF COMMENCEMENT
P.O.B.=POINT OF BEGINNING
BSL=BUILDING SETBACK LINE
SRL=SEPTIC RESTRICTION LINE
ELEV=ELEVATION
O=IRON PIPE FOUND
O IRON PIPE SET
●=IRON BAR FOUND
⊗=IRON PIN SET

0 30 60 90

CLIENT: NEIL J. ANDERSON, P.C.
DRAWN BY: CAD CHECKED BY: FWZ
SCALE: 1" = 30'
JOB NUMBER: 2022-073
PIN: 06-36-101-003, 06-36-101-004

PROFESSIONAL LAND SURVEYOR — STATE OF ILLINOIS — 35-2623
EXPIRES 11-30-2022
THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY

## SURVEYOR'S CERTIFICATE

To GLPE, LLC:

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2021 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes Items 1, 2, 3, 4, 5, 7a, 7b1, 7c, 8, 13, 16, 17, 18 AND 19, of Table A thereof. The fieldwork was completed on *AUGUST 31ST, 2022.*

*Date of Plat or Map: SEPTEMBER 1, 2022*

Frederick W Zahn

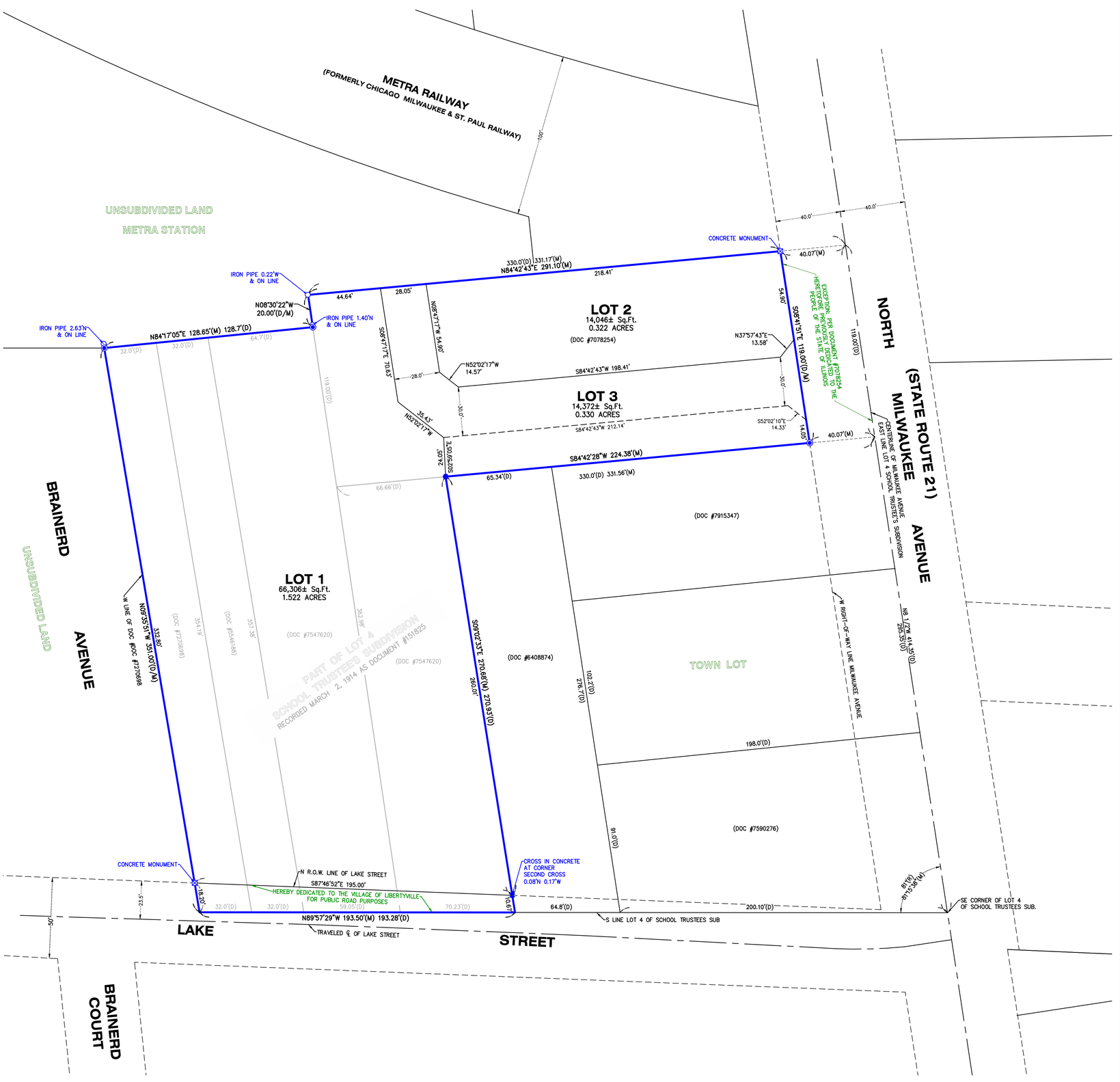
*ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 2623*

Vanderstappen
Land Surveying, Inc.
www.vandersinc.com
1316 N. Madison St.
Woodstock, Illinois 60098
ph. 815-337-8310 fax 815-337-8314
"always faithful to the property line"

# FINAL PLAT OF SUBDIVISION
# LAKE -MILWAUKEE DEVELOPMENT

**BEING A RE-SUBDIVISION OF LOT 3 OF SCHOOL TRUSTEE'S SUBDIVISION OF PART OF SOUTHWEST QUARTER OF SECTION 16, TOWNSHIP 44 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, VILLAGE OF LIBERTYVILLE, LAKE COUNTY, IIIINOIS.**

**ZONED C-1 DOWNTOWN CORE COMMERCIAL**




| LEGEND | |
|---|---|
| □ | FOUND BOLT |
| ✖ | FOUND CROSS |
| ● | FOUND IRON BAR |
| ○ | FOUND IRON PIPE |
| ⊘ | FOUND MAG NAIL |
| ⊠ | SET MONUMENT |
| ⊕ | FOUND RR SPIKE |
| ⊛ | SANITARY MANHOLE |
| ⊗ | SET CROSS |
| ◉ | SET IRON BAR |

30' 0' 30' 60'
SCALE: 1" = 30'

**PRELIMINARY**
**DATE: 10/08/24**

CLIENT: SPACE ARCHITECTS & PLANNERS
DRAWN BY: PJD CHECKED BY:
SCALE: 1"=30' SEC. 16 T. 44 R. 11 E.
BASIS OF BEARING: IL EAST ZONE NAD83 (2011)
P.I.N.: 11-16-300-020, 021, 022, 023, 024
JOB NO.: 240551 I.D. FPS
FIELDWORK COMP.: 8/01/24 BK. ___ PG. ___
ALL DISTANCES SHOWN IN FEET AND DECIMAL PARTS THEREOF CORRECTED TO 68° F. REF: 240114

POST OFFICE – LIBERTYVILLE, IL

TAXING DISTRICTS:
LIBERTYVILLE TOWNSHIP
VILLAGE OF LIBERTYVILLE
COUNTY OF LAKE
LIBERTYVILLE FIRE PROTECTION DISTRICT
LIBERTYVILLE SCHOOL DISTRICT 70
COMMUNITY HIGH SCHOOL DISTRICT 128
COLLEGE OF LAKE COUNTY 532 (CLC)
COOK MEMORIAL PUBLIC LIBRARY DISTRICT
CENTRAL LAKE COUNTY JOINT ACTION WATER AGENCY
LAKE COUNTY FOREST PRESERVE DISTRICT

Developer & Owner:
Jay Keller
Space Architects & Planners
2149 N. Talman Avenue
Chicago, Illinois 60647
Phone: 312-829-6666

Mail To:
Jay Keller
Space Architects & Planners
2149 N. Talman Avenue
Chicago, Illinois 60647

**REVISIONS**

| NO. | DATE | DESCRIPTION | BY |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |

**LAKE - MILWAUKEE DEVELOPMENT** SHEET NO. 1 OF 2

Y:\PLATS\2024\0400-0599\240551_V-240551\240551-FPS-GRD.dwg-Layout1-10/9/2024 3:09 PM

Vanderstappen
Land Surveying, Inc.
www.vandersinc.com
1316 N. Madison St.
Woodstock, Illinois 60098
ph. 815-337-8310 fax 815-337-8314
*Always faithful to the property line*

# FINAL PLAT OF SUBDIVISION
# LAKE -MILWAUKEE DEVELOPMENT

**BEING A RE-SUBDIVISION OF LOT 3 OF SCHOOL TRUSTEE'S SUBDIVISION OF PART OF SOUTHWEST QUARTER OF SECTION 16, TOWNSHIP 44 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, VILLAGE OF LIBERTYVILLE, LAKE COUNTY, IIIINOIS.**

## ZONED C-1 DOWNTOWN CORE COMMERCIAL

### CORPORATE OWNER'S CERTIFICATE

STATE OF ILLINOIS )
) S.S.
COUNTY OF LAKE )

This is to certify, that _____ is the owner of the lands described on this Plat of Subdivision as drawn and described hereon, and that they have caused said land to be surveyed and platted as shown hereon, for the purpose of having this plat recorded provided by law; that they hereby certify that to the best of our knowledge and belief that the drainage of surface waters will not be changed by any of the construction in aforesaid easement of any part thereof, or, if such changes occur, adequate provisions have been made for the collection and diversion of such surface waters into public areas or drains which the grantor has a right to use, and that such surface waters will not be deposited on adjoining land owners in such concentration as may cause damage to the adjoining property because of the platting of this consolidation as shown hereon.

Owners mailing address:

_____
_____
_____

In witness where I, (we) have hereunder set my (our) hand (s) of

Seal (s) this _____ day of _____, 20___ A.D.

_____ _____
President (print name)

_____ _____
Secretary (print name)

### NOTARY CERTIFICATE

STATE OF ILLINOIS )
) SS
COUNTY OF _____ )

I, _____, a notary public in and for the county in the state aforesaid, do hereby certify that _____, President of _____ personally known to me to be the same person whose name is subscribed to the foregoing instrument as such Manager, appeared before me this day in person and acknowledged that he signed and delivered the said instrument as his own free and voluntary act and as the free and voluntary act of said limited liability company, pursuant to authority granted by the members of the limited liability company, for the uses and purposes therein set forth.

Given under my hand and Notarial Seal this _____ day of _____, 20___ A.D.

_____ _____
Notary Public (print name)

### SCHOOL DISTRICT CERTIFICATE

STATE OF ILLINOIS )
) SS
COUNTY OF LAKE )

This is to certify that _____ as owner , hereby certify that to the best of our knowledge that the above described property is located in Libertyville Elementary School District 70 and High School District 128:

Dated at _____, Illinois, this _____ day of _____, 20___ A.D.

By: _____

By: _____

### DRAINAGE CERTIFICATE

STATE OF ILLINOIS )
) S.S.
COUNTY OF _____ )

To the best of our knowledge and belief, reasonable provision has been made for collection and diversion of such surface waters will be planned for in accordance with general accepted Engineering practices so as to reduce the likelihood of damage to the adjoining property because of the Construction of the consolidation, further, as Engineer, I hereby certify that the property which is the subject of this consolidation or any part thereof is not located within a special flood hazard area as identified by the Federal Emergency Management Agency.

Dated this __ day of _____ 20___ A.D.

_____
Registered Professional Engineer of Illinois

Property Owner's Signature

_____ By: _____
Owner or Attorney Owner or Attorney

_____ _____
Print Name Print Name

### VILLAGE PRESIDENT CERTIFICATE

STATE OF ILLINOIS )
) SS
COUNTY OF LAKE )

Approved and Accepted by the Village Board of Trustees of the Village of Libertyville, Lake County Illinois. at a meeting held this the _____ day of_____, 20___ A.D.

By: _____ Attest: _____
Village President Village Clerk

_____ _____
(print name) (print name)

### VILLAGE ENGINEER'S CERTIFICATE

STATE OF ILLINOIS )
) S.S.
COUNTY OF LAKE )

I, the undersigned, as Village Engineer of the Village of Libertyville, Lake County, Illinois, do hereby certify that this document is approved by my office this _____ day of _____, 20___ A.D.

_____ _____
Village Engineer (print name)

### PUBLIC UTILITY EASEMENT PROVISION

An easement for serving the subdivision and other property with electric and communications services is hereby reserved for and granted to:
Commonwealth Edison Company,
Cable Television Company or Franchisee
and
AT&T, Grantees

their respective successors and assigns, jointly and severally, to install, operate, maintain, and remove, from time to time, facilities used in connection with overhead and underground transmission and distribution of electricity and sounds and signals in, over, under, across, along and upon the surface of the property shown within the dotted or dashed lines on the plat and marked "Easement" or "PUE", the property designated in the Declaration of Condominium and/or on this plat as "Common Elements", and the property designated on the plat as a "Common area or areas", 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 and roots 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 dotted lines marked "Easement" or "PUE" 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.
The term "Common Elements" shall have that meaning set forth for such term in Section 2(e) of "An act in relation to condominiums" (Illinois Revised Statutes, Ch. 30, par. 302(e)), as amended from time to time.
The term "common area or areas" is defined as a lot, parcel, or area of real property, the beneficial use and enjoyment of which is reserved in whole as an appurtenance to the separately owned lots, parcels or areas within the planned development, even though such areas may be otherwise designated on the plat by terms such as "outlots", "common elements", "open space", "open area", "common ground", "parking and common area". The terms "common area or areas" and "Common Elements" includes real property surfaced with interior driveways and walkways, but excludes real property physically occupied by a building, Service Business District or structures such as a pool or retention pond, or mechanical equipment.
Relocation of facilities will be done by Grantees at cost of Grantor/Lot Owner, upon written request.

An easement is hereby reserved for and granted to NICOR, its successors and assigns to install, operate, maintain, repair, replace and remove facilities used in connection with the transmission and distribution of natural gas in, over, under, across, along and upon the surface of the property shown within the dotted or dashed lines on the plat and marked "Easement", "Common Area or Areas", and streets and alleys, whether public or private, and the property designated in the Declaration of Condominium and/or on this plat as "Common Elements", 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, and to serve other property, adjacent or otherwise, and the right to remove obstructions, including but not limited to, trees, bushes, roots and fences, as may be reasonably required incident to the rights herein given, and the right to enter upon the property for all such purposes. Obstructions shall not be placed over NICOR's facilities or in, upon or over the property identified on this plat for utility purposes without prior written consent of NICOR. After installation of any such facilities, the grade of the property shall not be altered in a manner so as to interfere with the proper operation and maintenance thereof.
The term "Common Elements" shall have that meaning set forth for such term in Section 605/2(e) of the "Condominium Property Act" (Illinois Compiled Statutes, Ch. 765, Sec. 605/2(e)), as amended from time to time.
The term "common area or areas" is defined as a lot, parcel, or area of real property, including real property surfaced with interior driveways and walkways, the beneficial use and enjoyment of which is reserved in whole as an appurtenance to the separately owned lots, parcels or areas within the property, even though such areas may be designated on this plat by other terms.

### NICOR GAS EASEMENT PROVISION

An easement is hereby reserved for and granted to NORTHERN ILLINOIS GAS COMPANY, an Illinois Corporation, doing business as NICOR GAS COMPANY, its successors and assigns (hereafter "Nicor") to install, operate, maintain, repair, replace and remove, facilities used in connection with the transmission and distribution of nature gas in, over, across, along and upon the surface of the property shown on this plat marked "Easements", "Utility Easement", "Public Utility Easement" "P.U.E.", Public Utility & Drainage Easement", "P.U. & D.E.", "Common Areas or Areas" (or similar designations), street and alleys, whether public or private, and the property designated in the Declaration of Condominium and/or on this Plat as "Common Elements" 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, and to serve other property, adjacent or otherwise, and the right to remove obstructions, including but not limited to, trees, bushes, roots and fences, as may be reasonably required incident to the right herein given, and the right to enter upon the property for all such purposes. Obstructions shall not be placed over Nicor facilities or in, upon or over the property identified on this plat for utility purposes without the prior written consent of Nicor. After installation of any such facilities, the grade of the property shall not be altered in a manner, so as to, interfere with the proper operation and maintenance thereof.

The term "Common Elements" shall have the meaning set forth for such term in Section 605/2(e) of the Condominium Property Act" (Illinois Compiled Statutes, Ch. 765, Sec. 605/2(e)), as amended from time to time.

The term "Common Area or Areas" is defined as a lot, parcel or area of real property, including real property surfaced with interior driveways and walkways, the beneficial use and enjoyment of which is reserved in whole as an appurtenance to the separately owned lots, parcels or areas within the property, even though such areas may be designated on this plat by other terms.

### COUNTY CLERKS CERTIFICATE

STATE OF ILLINOIS )
) S.S.
COUNTY OF LAKE )

I, _____, County Clerk of Lake County, Illinois, do hereby certify that there are no delinquent general taxes, no unpaid current taxes or special assessments, no unpaid forfeited taxes, and no redeemable tax sales against any of the land included in the plat. I further certify that I have received all statutory fees in connection with this plat.

Given under my hand and seal at Waukegan, Illinois,

This _____ day of _____, 20___ A.D.

_____
Lake County Clerk

### LAKE COUNTY RECORDERS CERTIFICATE

STATE OF ILLINOIS )
) S.S.
COUNTY OF LAKE )

This instrument _____ was filed for record in the Recorder's Office of Lake County, Illinois, on the _____ day of _____, 20___ A.D., at _____ o'clock _____.m.

_____
Lake County Recorder of Deeds

### PLAN COMMISSION CERTIFICATE

STATE OF ILLINOIS )
) S.S.
COUNTY OF LAKE )

Approved and accepted by the Planning Commission of the Village of Libertyville, Lake County, Illinois, do hereby certify that this document has been approved by said Plan Commission this the _____ day of _____, 20___ A.D.

_____ _____
Chairperson (print name)

### VILLAGE TREASURER CERTIFICATE

STATE OF ILLINOIS )
) S.S.
COUNTY OF LAKE )

I, _____, Treasurer of the Village of Libertyville, Lake County Illinois, do hereby certify that I find no deferred installments of outstanding unpaid special Assessments against any of the Real Estate included in the Plat hereon drawn.

dated this _____ day of _____, 20___ A.D.

_____
Village Treasurer, Libertyville, IL.

### SURVEYORS CERTIFICATE

STATE OF ILLINOIS )
) S.S.
COUNTY OF McHENRY )

We, Vanderstappen Land Surveying, Inc., Illinois Professional Land Surveyors have surveyed and subdivided the following described property, as shown, platted and legally described as follows:

That part of Lot 4 in School Trustee's Subdivision of Section 16, Township 44 North, Range 11 East of the Third Principal Meridian, described as follows: Commencing on the Southerly line of said Lot 4 at a point North 89 ½ degrees West, 458.2 feet from the Southeast corner of said Lot 4; thence North 8 ½ degrees West, 351.0 feet; thence North 85 degrees East, 32.0 feet; thence South 8 ½ degrees East to a point in the Southerly line of said Lot 4 which is 32.0 feet Easterly from the Place of Beginning; thence North 89 ½ degrees West, 32.0 feet to the Place of Beginning, in Lake County, Illinois, and also;

That part of Lot 4 in School Trustee's Subdivision of Section 16, Township 44 North, Range 11 East of the Third Principal Meridian, described as follows: Commencing at a point in the Southerly line of said Lot 4 which is North 89 ½ degrees West, 426.2 feet from the Southeast corner of said Lot 4; thence North 8 ½ degrees West, 351.0 feet; thence North 85 degrees East, 32.0 feet; thence South 8 ½ degrees East to a point in the Southerly line of said Lot 4 which is 32.0 feet Easterly from the Place of Beginning; thence North 89 ½ degrees West, 32.0 feet to the Place of Beginning, in Lake County, Illinois, and also;

That part of Lot 4 of School Trustee's Subdivision of Section 16, Township 44 North, Range 11 East of the Third Principal Meridian, described as follows, to wit: Beginning at a point on the South line of said Lot 4, 5.078 chains West of the Southeast corner thereof; thence North 8.5 degrees West, 4 chains; thence North 85 degrees East, 1.01 chains; thence Southerly to a point 4.014 chains West of said Southeast corner of Lot 4; thence West to the Place of Beginning, in Lake County, Illinois, and also;

That part of Lot 4 in School Trustee's Subdivision of Section 16, Township 44 North, Range 11, East of the Third Principal Meridian, described as follows: Commencing in the center of Milwaukee Avenue in the Village of Libertyville, at a point North 8 ½ degrees West, 414.35 feet from the Southeast corner of said Lot 4; and running thence South 85 degrees West, 330.0 feet; thence South 8 ½ degrees East, 119.0 feet; thence North 85 degrees East, 330.0 feet to the center of said Avenue and thence North 8 ½ degrees West, 119.0 feet to the Place of Beginning (except that part thereof described as follows: Commencing in the center of Milwaukee Avenue at a point North 8 ½ degrees West, 414.35 feet from the Southeast corner of said Lot 4; thence South 85 degrees West to a point 40.0 feet Westerly of the center of said Milwaukee Avenue, measured at right angles to said centerline; thence South 8 ½ degrees East parallel with the centerline of said Milwaukee Avenue, 119.0 feet; thence North 85 degrees East to said centerline of Milwaukee Avenue and thence Northerly along the center of said Milwaukee Avenue, 119.0 feet to the Place of Beginning, in Lake County, Illinois.

We, further certify, that all regulations enacted by the Mayor and Board of Trustees of the Village of Libertyville relative to annexed parcels have been complied with in preparation of this Final Plat of Subdivision.

We, further certify, that the land is within the Village of Libertyville, which has adopted a Village Comprehensive Plan and Map, and is exercising the special powers authorized by Division 12 of Article 11 of the Illinois Municipal Code, as amended.

We, further certify, that based upon a review of the Flood Insurance Rate Map (F.I.R.M.) Community Panel Number 17097C0162K with effective date September 18, 2013 that subject property lies in Zone "X" an area determined to be outside the 0.2% chance of annual flooding, as identified by said F.I.R.M. prepared by the Federal Emergency Management Agency.

We, further certify, that the total area surveyed contains 2.238± Acres (97,480 Square Feet).

We, further certify, that iron stakes or appropriate monumentation, marks all lot corners and point of changes in alignment as required by the Plat Act (Illinois Revised Statutes 765ILCS 205/1).
All distances are shown in feet and decimals thereof.

Given under my hand and seal this 20th., day of September, 2024 A.D.

_____
Terry L. Van Alstine, PLS No. 35-3055
VANDERSTAPPEN LAND SURVEYING, INC.
DESIGN FIRM #184-002792
Expires April 30, 2025

### ILLINOIS DEPARTMENT OF TRANSPORTATION CERTIFICATE

This plat has been approved by the Illinois Department of Transportation with respect to roadway access pursuant to Paragraph 2 of "An Act to revise the law in relation to plats," as amended. A plan that meets the requirements contained in the Department's "Policy on Permits for Access Driveways to State Highways" will be required by the Department.

This _____ day of _____, 20___ A.D.

_____
JOSE RIOS, P.E.,
REGION 1 ENGINEER

SURVEYOR'S PERMISSION TO RECORD:

Authorization to record this Plat of Consolidation is hereby granted to the Village of Libertyville, Illinois, through an appointed or designated Village official thereof,

Signed: _____ (Seal)

Name: _____

Address: _____

City & State_____

After recordation of this document please return to:

Mailing address:
Village of Libertyville
118 W. Cook Avenue
Libertyville, Illinois 60048
Phone #847-362-2430

CLIENT: SPACE ARCHITECTS & PLANNERS
DRAWN BY: PJD CHECKED BY:
SCALE: N/A SEC. 16 T. 44 R. 11 E.
BASIS OF BEARING: IL EAST ZONE NAD83 (2011)
P.I.N.: 11-16-300-020, 021, 022, 023, 024
JOB NO.: 240551 I.D. FPS
FIELDWORK COMP.: 8/01/24 BK. ___ PG. ___
ALL DISTANCES SHOWN IN FEET AND DECIMAL PARTS THEREOF CORRECTED TO 68° F. REF: 240114

| REVISIONS | | | |
|---|---|---|---|
| NO. | DATE | DESCRIPTION | BY |
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LAKE - MILWAUKEE DEVELOPMENT | SHEET NO. 2 OF 2

Y:\PLATS\2024\0400-0599\240551_V-240551-FPS-GRD.dwg-Sheet 2-10/9/2024 3:09 PM

Libertyville Development Lighting Design Intent Narrative

October 9, 2024

The following narrative is meant to provide an overlay of the lighting design intent for the property. It will cover a synopsis of the design philosophy and types of fixtures, but is not meant to act as a final direction. This would involve further coordination with other design disciplines.

Lighting at the Brainerd Ave entry point would consist of lower level steplight type fixtures to orient people safely to/from the entry. We would coordinate and account for any street lighting on Brainerd that would contribute to the sidewalk and grounds in front of the building. The light fixtures would be selected so as not to cast brightness or glare to the building units.

The courtyard would be considered for special lighting pending the landscaping or any feature that may be placed here. Non-internally illuminated signage would be lighted as required with fixtures selected to control undue uplight or glare.

The exterior parking to the North will be lighted via post lights with full cutoff optics. This ensures no light pollution nor glare from windows. The color temperature would typically be 3000K. Ideally, the lights would be controlled via a method to allow them to be dimmed at a predetermined time (midnight?) to help with guest comfort as well as energy use considerations.

The pedestrian path on the East side of Parcel A will be lighted with low level bollards to safely light the path from the Access Road to Lake Street.

Building egress would be lighted as code requires with building mounted fixtures above the doors that cast light out along the emergency path of egress. These shall be low glare cut off type fixtures.

We shall endeavor to use a single manufacturer source as appropriate to assist fewer points of contact should the maintenance need arise in the future. The selected fixtures shall have a proven track record of value and performance for their deemed use.

# Traffic Impact Study
# **Mixed-Use Development**

Libertyville, Illinois




Prepared For:

## Continuum Development, LLC

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

October 8, 2024

# 1. Introduction

This report summarizes the results of a traffic impact study conducted by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) for a proposed mixed-use development to be located in Libertyville, Illinois. The L-shaped site, which is currently occupied by Liberty Square and several residential houses, is generally bounded by the Village of Libertyville Metra station and parking lot to the north, Milwaukee Avenue (IL 21) and a commercial building to the east, Lake Street and a commercial building to the south, and Brainerd Avenue to the west. As proposed, the mixed-use development is to contain an apartment building with 91 dwelling units, 85 below-grade interior parking spaces, and 30 surface parking spaces located on the west part of the site and an approximately 3,500 square-foot sit-down restaurant with approximately 18 parking spaces located on the northeast corner of the site. As part of the development, a circulation road is proposed to extend around the south and west sides of the restaurant parcel between Milwaukee Avenue and the Metra station parking lot. Access to the development will be provided via a full-movement access drive on Lake Street, a full-movement access drive on the Metra station access road, and via several access drives located on the proposed circulation road.

The purpose of this study was to examine background traffic conditions, assess the impact that the proposed development will have on traffic conditions in the area, and determine if any roadway or access improvements are necessary to accommodate traffic generated by the proposed development. **Figure 1** shows the location of the site in relation to the area roadway system. **Figure 2** shows an aerial view of the site. The sections of this report present the following:

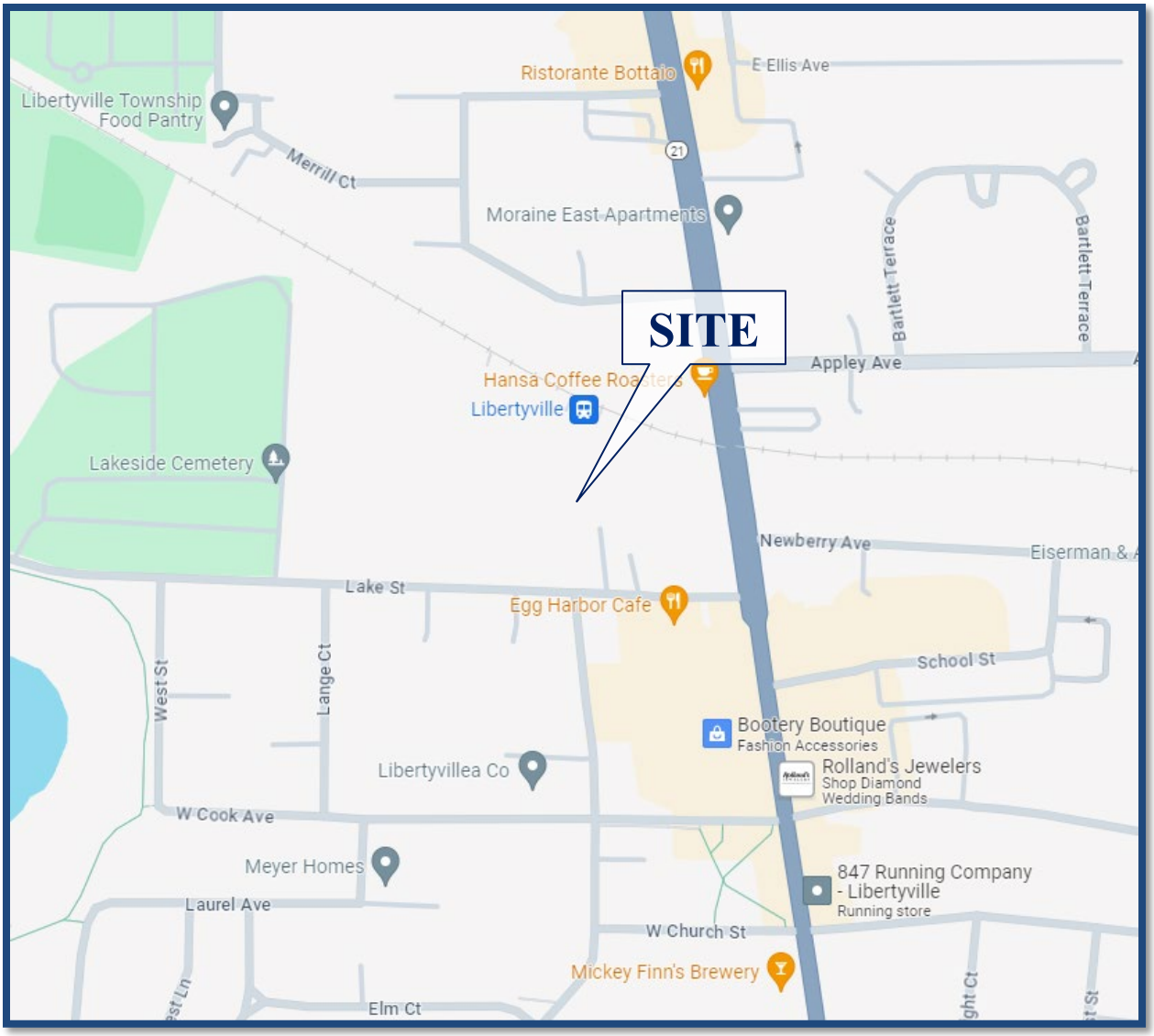
- Existing roadway conditions including vehicle, pedestrian, and bicycle traffic volumes for the weekday morning and weekday evening peak hours
- A detailed description of the proposed development
- Vehicle trip generation for the proposed development
- Directional distribution of development-generated traffic
- Regional growth in traffic and background development traffic for Year 2030 no-build conditions
- Future transportation conditions including access to and from the development
- Parking evaluation

Traffic capacity analyses were conducted for the weekday morning and weekday evening peak hours for the following three conditions:

1. Existing Conditions – Analyzes the capacity of the existing roadway system using existing peak hour traffic volumes in the surrounding area.

2. Year 2030 No-Build Conditions – Analyzes the capacity of the existing roadway system using the existing traffic volumes increased by an ambient growth factor (growth not attributable to any particular development).

3. Year 2030 Total Projected Conditions – The total projected traffic volumes include the existing traffic volumes increased by an ambient growth factor and the traffic estimated to be generated by the proposed subject development.




**Site Location** **Figure 1**




**Aerial View of Site** **Figure 2**

# 2. Existing Conditions

Existing traffic and roadway conditions were documented, and traffic counts conducted by KLOA, Inc. The following provides a detailed description of the physical characteristics of the roadways including geometry and traffic control, adjacent land uses, and peak hour traffic flows along area roadways.

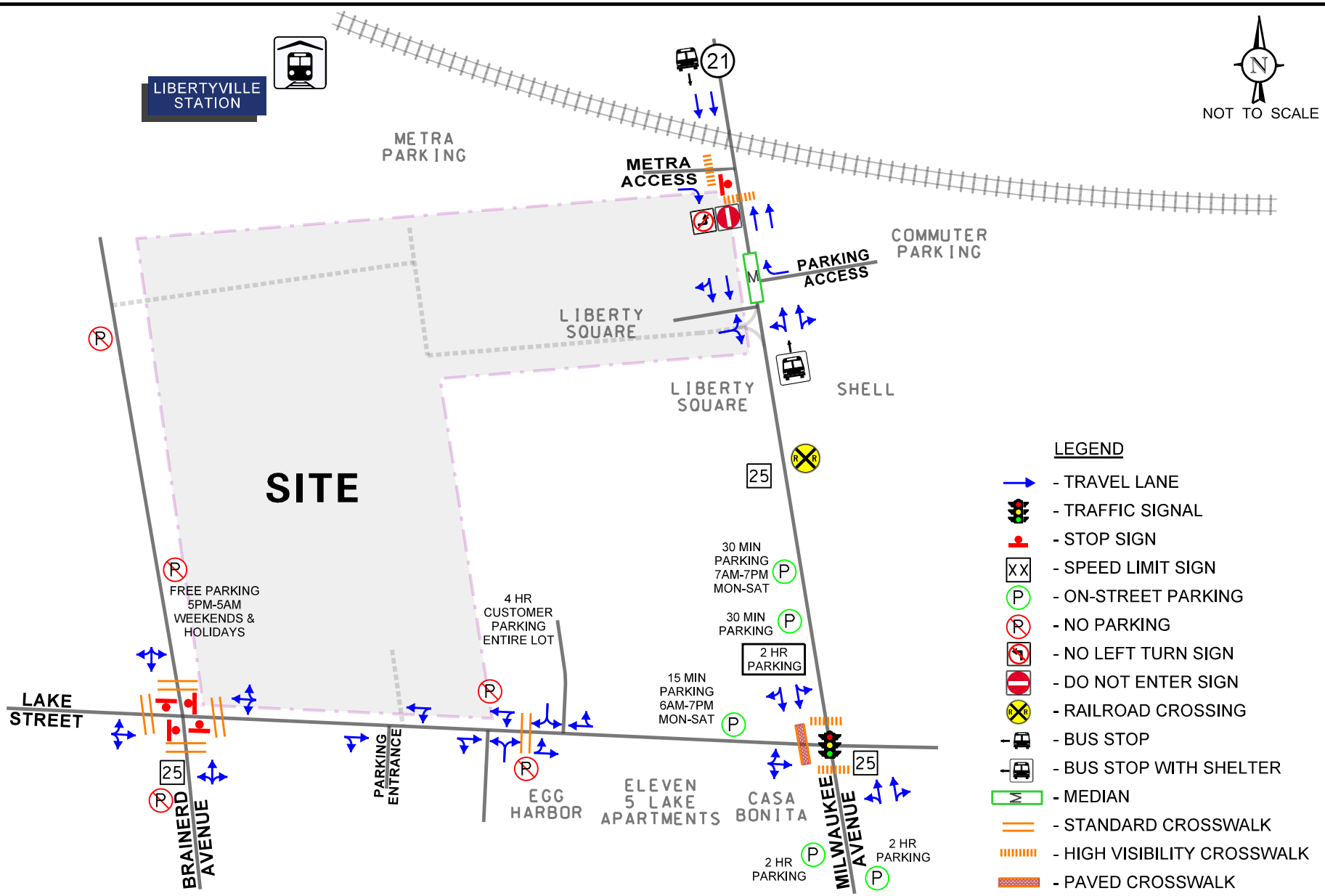
## Site Location

The site, which is currently occupied by Liberty Square and several residential houses, is generally bounded by the Village of Libertyville Metra station and parking lot to the north, Milwaukee Avenue (IL 21) and a commercial building to the east, Lake Street and a commercial building to the south, and Brainerd Avenue to the west. Land uses in the vicinity of the site are primarily residential to the west and commercial/retail uses to the east and south, which include the following: Egg Harbor Café, Casa Bonita Mexican Restaurant, Lazzaretto Construction Company, North Shore Pro-Active Health, Liberty Cleaners, and Parkside Liquors. It should be noted that the Libertyville Metra station and its parking lot are located directly north of the site. A Libertyville parking garage and a surface parking lot are located south of the site in the southeast quadrant of the intersection of Lake Street with Brainerd Avenue.

## Existing Roadway Characteristics

The characteristics of the existing roadways near the development are described below and illustrated in **Figure 3.**

*Milwaukee Avenue (IL Route 21)* is a north-south, other principal arterial roadway. Within the vicinity of the site, Milwaukee Avenue provides two travel lanes in each direction with on-street parking generally allowed on both sides of the road. At its signalized intersection with Lake Street, Milwaukee Avenue provides a shared left-turn/through lane and a shared through/right-turn lane on both approaches. High visibility crosswalks are provided on the north and south legs of this intersection and a paved crosswalk is provided on the west leg of this intersection. Pedestrian countdown traffic signals are provided on all legs of this intersection. At its unsignalized intersection with Liberty Square access drive, Milwaukee Avenue provides a shared left-turn/through lane and a through lane on the northbound approach and a shared through/right-turn lane and a through lane on the southbound approach. At its unsignalized intersection with Libertyville Metra station outbound only access drive, Milwaukee Avenue provides two through lanes on the northbound and southbound approaches. Milwaukee Avenue has a posted speed limit of 25 mph in the vicinity of the site and is under the jurisdiction of the Illinois Department of Transportation (IDOT). Milwaukee Avenue is designated as a Strategic Regional Arterial (SRA) route by IDOT and carries an Annual Average Daily Traffic (AADT) volume of 24,100 vehicles (IDOT 2023).




Mixed-Use Development
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Existing Roadway Characteristics

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Job No: 22-217 Figure: 3

*Lake Street* is an east-west, major collector roadway that provides one lane in each direction extending from Butterfield Road east to its terminus at Milwaukee Avenue. where the east leg is. At its signalized intersection with Milwaukee Avenue, Lake Street is aligned opposite the inbound-only access drive to the Liberty movie theater parking lot and provides a shared left-turn/through/right-turn lane on the eastbound approach. At its unsignalized intersection with Brainerd Avenue, Lake Street provides a shared left-turn/through/right-turn lane on both approaches. At its unsignalized intersections with the various access drives between Brainerd Avenue and Milwaukee Avenue, Lake Street does not provide any exclusive lanes. On-street parking is not allowed on either side of the road in the vicinity of the site with the exception of on the north side of Lake Street immediately west of Milwaukee Avenue where short-term on-street parking spaces are provided. Lake Street has a posted speed limit of 25 mph, is under the jurisdiction of the Village of Libertyville, and carries an AADT volume of 4,300 vehicles (IDOT 2023).

*Brainerd Avenue* is a north-south roadway that provides one lane in each direction. North of Lake Street, Brainerd Avenue serves as the access road to the Metra station. Brainerd Avenue is classified as a major collector roadway and a local roadway north of Lake Street. At its all-way stop controlled intersection with Lake Street, Brainerd Avenue/Metra station access road provides a shared left-turn/through/right-turn lane on both approaches. Standard style crosswalks are provided on all four legs of this intersection. On-street parking is prohibited on both sides of the road. Brainerd Avenue has a posted speed limit of 25 mph, is under the jurisdiction of the Village of Libertyville, and carries an AADT volume of 3,850 vehicles (IDOT 2023).

## Public Transportation

The area is served by the Metra commuter rail and the Pace bus system as summarizes below:

- The Libertyville Metra station and parking lot are located directly north of the site and are served via the Metra Milwaukee District/North Line which provides service from Fox Lake to Union Station in Chicago. The line provides 24 inbound trains and 23 outbound trains daily.

- *Pace Bus Route 574 - CLC Hawthorn Mall* runs along U.S. Route 45 and IL 21 with a stop in both directions on IL 21 at Newberry Avenue (approximately 550 feet east of the site). This line provides weekday and Saturday service between the College of Lake County in Grayslake and Hawthorn Mall in Vernon Hills. The Libertyville Metra station and Carmel High School are also served by this route.

All the roads within the immediate area generally have sidewalks on both sides of the road. Crosswalks and pedestrian countdown traffic signals are provided at the intersection of Milwaukee Avenue with Lake Street and crosswalks are provided at the intersection of Lake Street with Brainerd Avenue.

## Existing Traffic Volumes

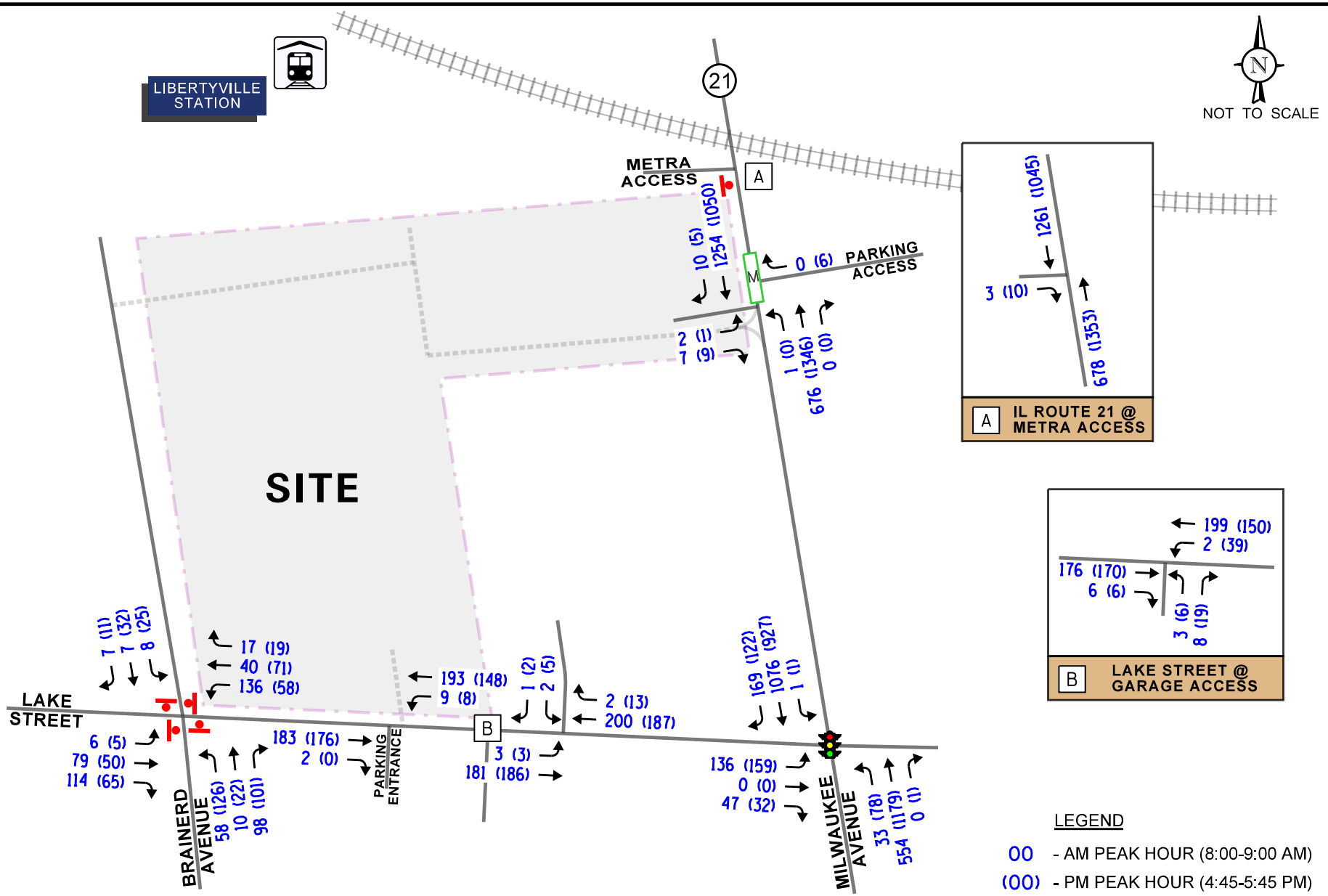
In order to determine current vehicle, pedestrian, and bicycle conditions within the study area, KLOA, Inc. conducted peak period traffic, pedestrian, and bicycle counts during the morning (7:00 A.M. to 9:00 A.M.) and evening (2:00 P.M. to 6:00 P.M.) peak periods on Thursday, May 23, 2024, at the following intersections:

- Milwaukee Avenue with Lake Street
- Milwaukee Avenue with the Metra station access road
- Milwaukee Avenue with the Liberty Square access drive
- Lake Street with Brainerd Avenue
- Lake Street with the parking garage access drive
- Lake Street with the access drive to the parking lot south of Lake Street
- Lake Street with the access drive to the parking lot north of Lake Street

The results of the traffic counts show that the peak hours generally occur between:

- 8:00 A.M. and 9:00 A.M. during the weekday morning peak period
- 4:45 P.M. and 5:45 P.M. during the weekday evening peak period

**Figure 4** illustrates the existing peak hour vehicle traffic volumes and **Figure 5** illustrates the existing peak hour bicycle and pedestrian volumes. Summaries of the traffic counts are included in the Appendix.

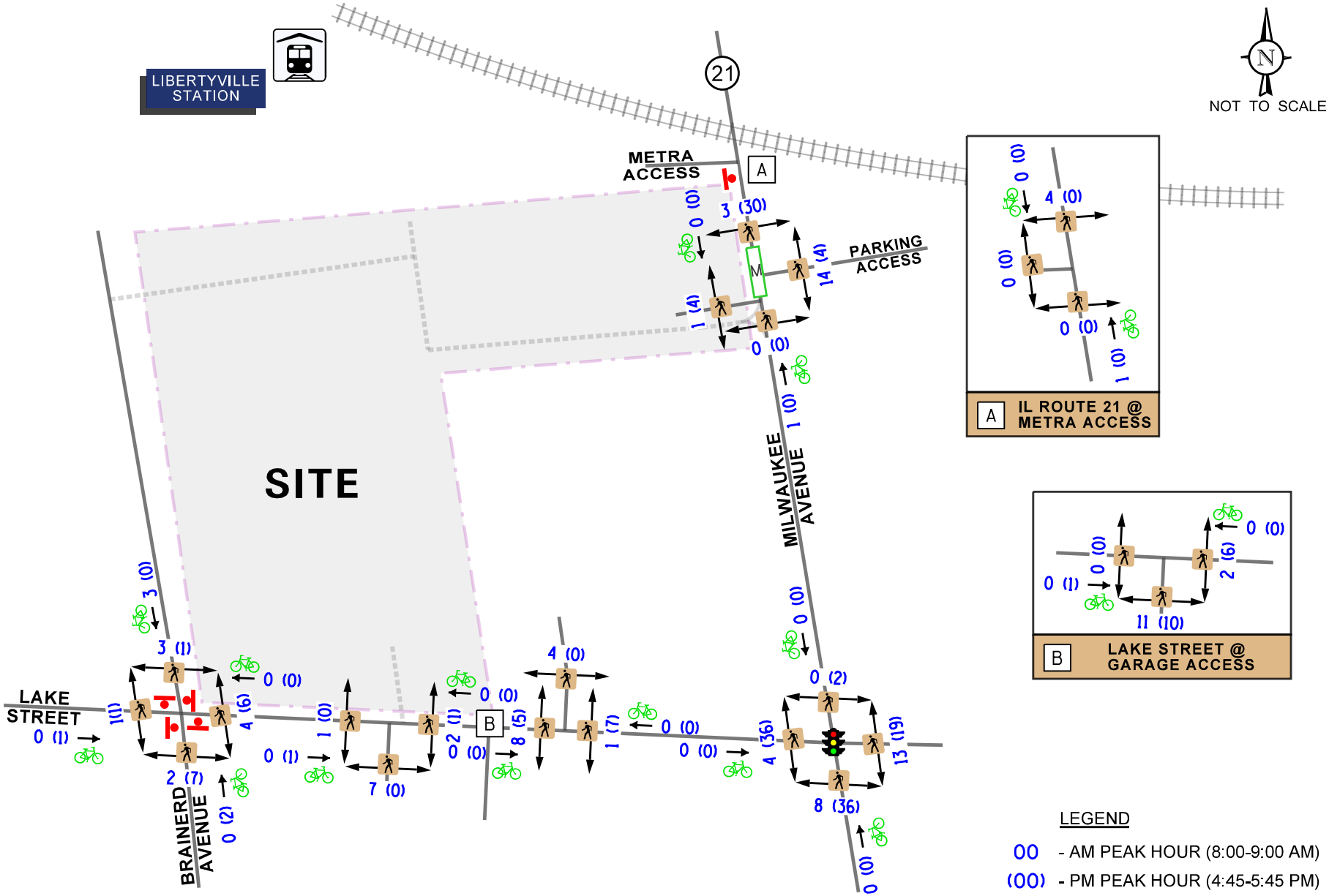



Mixed-Use Development
Libertyville, Illinois

Existing Traffic Volumes

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Existing Pedestrian and Bicycle Traffic Volumes

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Figure: 5

## Crash Data Summary

KLOA, Inc. obtained crash data[1] from IDOT for the most recent available past five years (2018 to 2022) for the intersections of Lake Street with Milwaukee Avenue, Brainerd Avenue, and the surface parking lot access drive. A review of the crash data indicated that no crashes were reported at the intersection of Lake Street with the surface parking lot access drive. The crash data for the intersections of Lake Street with Milwaukee Avenue and Brainerd Avenue are summarized in **Tables 1** and **2**. No fatal crashes were reported at any of the intersections during the study period.

Table 1
LAKE STREET WITH MILWAUKEE AVENUE – CRASH SUMMARY

| Year | Type of Crash Frequency | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Angle | Head On | Object | Rear End | Sideswipe | Turning | Other | Total |
| 2018 | 1 | 0 | 0 | 2 | 1 | 1 | 0 | 5 |
| 2019 | 0 | 0 | 0 | 4 | 1 | 0 | 0 | 5 |
| 2020 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 2 |
| 2021 | 0 | 0 | 0 | 0 | 1 | 3 | 1 | 5 |
| 2022 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| **Total** | **1** | **0** | **0** | **9** | **4** | **4** | **1** | **19** |
| **Average** | **<1.0** | **--** | **--** | **1.8** | **<1.0** | **<1.0** | **<1.0** | **3.8** |

Table 2
LAKE STREET WITH BRAINERD AVENUE – CRASH SUMMARY

| Year | Type of Crash Frequency | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Angle | Head On | Object | Rear End | Sideswipe | Turning | Other | Total |
| 2018 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| 2019 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2020 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 2021 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 2022 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **0** | **0** | **0** | **1** | **0** | **0** | **2** | **3** |
| **Average** | **--** | **--** | **--** | **<1.0** | **--** | **--** | **<1.0** | **<1.0** |

[1] IDOT DISCLAIMER: The motor vehicle crash data referenced herein was provided by the Illinois Department of Transportation. Any conclusions drawn from analysis of the aforementioned data are the sole responsibility of the data recipient(s).

# 3. Traffic Characteristics of the Proposed Development

To evaluate the impact of the subject development on the area roadway system, it was necessary to quantify the number of vehicle trips the overall development will generate during the weekday morning and weekday evening peak hours and determine the directions from which the proposed traffic will approach and depart the development, given the proposed access points that will serve the overall development.

## Proposed Site and Land-Use Plan

As proposed, the site will be redeveloped with a mixed-use development that is to contain an apartment building with 91 dwelling units and 115 parking spaces located on the west part of the site and an approximately 3,500 square-foot sit-down restaurant with approximately 18 parking spaces located in the northeast corner of the site. Parking for the residential building will be provided via 85 below-grade parking spaces and 30 surface parking spaces located on the north side of the building.

As part of the development, a circulation road is proposed to extend around the south and west sides of the restaurant parcel between Milwaukee Avenue and the Metra station parking lot. As proposed, the circulation road will provide two-way circulation with access to/from Milwaukee Avenue restricted to right-turn movements only via a channelized (pork chop) median and via signage. It should be noted that the circulation road's intersection with Milwaukee Avenue will replace the Liberty Square full-movement access drive, which will reduce the turning movement conflicts along Milwaukee Avenue. Access to the apartment building and the restaurant will be provided via the circulation road. In addition, the circulation will provide direct inbound access to the Metra station parking lot from southbound Milwaukee Avenue. Currently, southbound Milwaukee Avenue traffic must traverse Lake Street and Brainard Avenue/Metra station access road to access the Metra station parking lot.

Access to the development will be provided via the following access drives:

- A proposed full-movement access drive located on the north side of Lake Street approximately 79 feet east of Brainerd Avenue. This access drive will provide one inbound lane and one outbound lane to/from the proposed apartment building below-grade parking. The outbound movements at this access drive should be under stop sign control.

- A proposed full-movement access drive located on the east side of Brainerd Avenue/Metra station access road approximately 325 feet north of Lake Street. This access drive will provide one inbound lane and one outbound lane to/from the proposed apartment building surface parking lot. The outbound movements at this access drive should be under stop sign control.

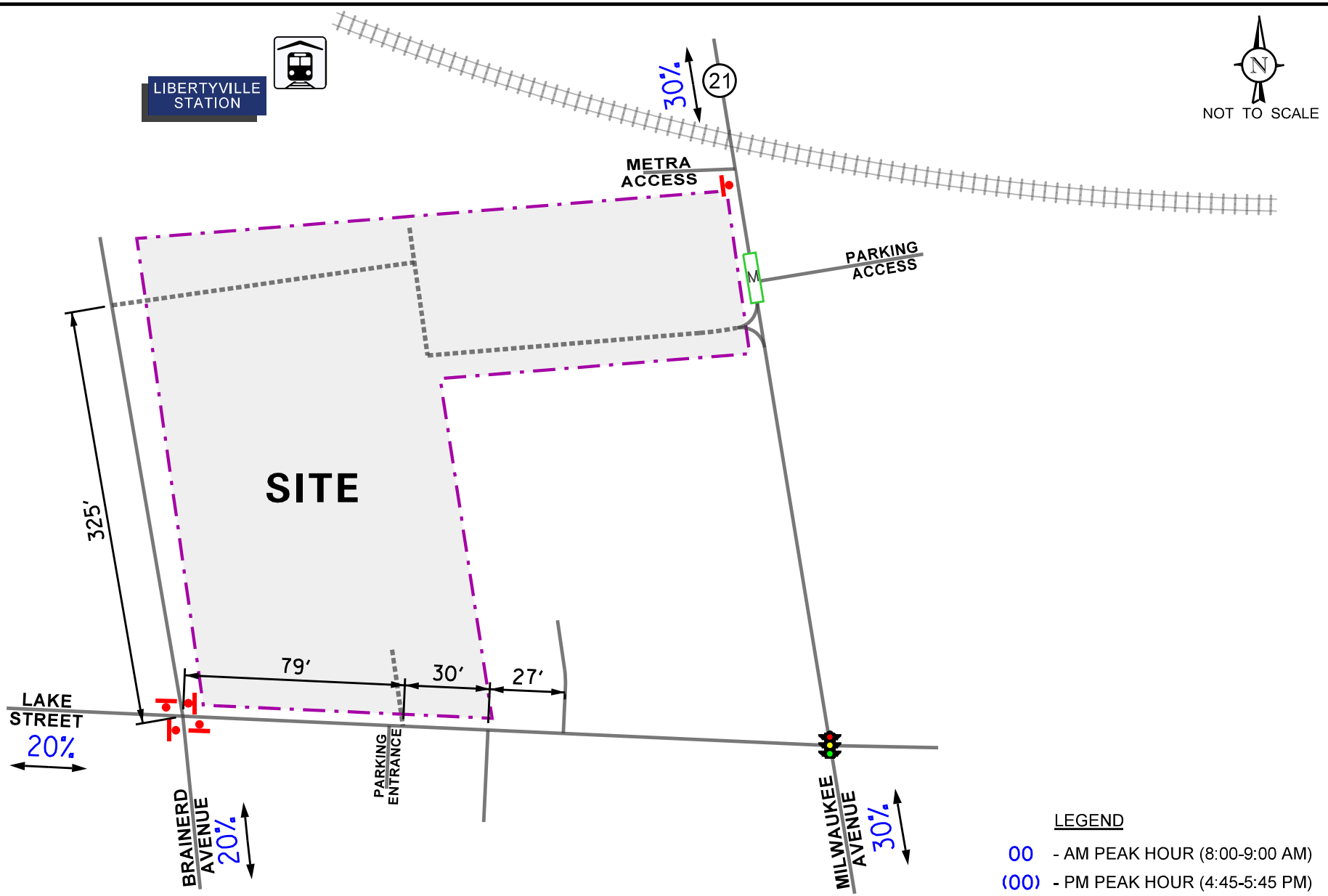
- Full-movement access drives to the apartment building below-grade parking, the apartment building surface parking lot, and the proposed restaurant parking lot will be located along the proposed circulation road. All the access drives will provide one inbound lane and one outbound lane with the outbound lanes under stop sign control.

- A drop-off/pick-up lane located on the east side of Brainerd Avenue/Metra station access road at approximately the midpoint of the site. The drop-off/pick-up lane will provide one-way, northbound traffic flow with the south access drive restricted to inbound access only and the north access drive restricted to outbound access only.

A copy of the proposed site plan included in the Appendix.

## Directional Distribution of Development Traffic

The directional distribution of how traffic will approach and depart the site was estimated based on the general travel patterns through the study area derived from the peak hour traffic volumes and the operation of the roadway system. **Figure 6** shows the directional distribution established for this development. Further, Figure 6 shows the distance, in feet, between the existing and proposed intersections analyzed in this study.




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Directional Distribution

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## Development Traffic Generation

The number of peak hour trips estimated to be generated by the proposed development was based on vehicle trip generation rates contained in *Trip Generation Manual*, 11th Edition, published by the Institute of Transportation Engineers (ITE). The "Multifamily Housing – Mid-Rise" (Land-Use Code 221) rate was used for the apartment building and the "Sit-Down Restaurant" (Land-Use Code 932) rate was used for the proposed restaurant. It should be noted that given the proximity of the site to the Metra station and downtown Libertyville, it is anticipated that the trips generated by the proposed development will be reduced to account for the public transportation and/or alternative modes of transportation serving the area. Based on a review of Census data, approximately 15 percent of residents in the area use public transportation to commute to and from work. As such, the estimated trips generated by the apartment building were reduced accordingly. Additionally, considering the location of the proposed restaurant within the well-established downtown area, a ten percent reduction was applied to the estimated trips for the proposed restaurant accounting for the walkable area within downtown. Copies of the ITE trip generation sheets are included in the Appendix.

**Table 3** tabulates the vehicle trips anticipated for this development for the weekday morning and weekday evening peak hours as well as the daily traffic volumes.

Table 3
ESTIMATED SITE-GENERATED TRIPS

| ITE Land-Use Code | Type/Size | Weekday Morning Peak Hour | | | Weekday Evening Peak Hour | | | Daily Trips | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | In | Out | Total | In | Out | Total | In | Out | Total |
| 221 | Multifamily Housing – Mid-Rise (91 Units) | 7 | 21 | 28 | 22 | 14 | 36 | 194 | 194 | 388 |
| | *15% Reduction* | *-1* | *-3* | *-4* | *-3* | *-2* | *-5* | *-29* | *-29* | *-58* |
| | Subtotal | 6 | 18 | 24 | 19 | 12 | 31 | 165 | 165 | 330 |
| 932 | Sit-Down Restaurant (3,500 s.f.) | 18 | 15 | 33 | 19 | 13 | 32 | 188 | 187 | 375 |
| | *10% Reduction* | -2 | -2 | -4 | -2 | -1 | -3 | -18 | -18 | -36 |
| | Subtotal | 16 | 13 | 29 | 17 | 12 | 29 | 170 | 169 | 339 |
| | **Total** | **22** | **31** | **53** | **36** | **24** | **60** | **335** | **334** | **669** |

# 4. Projected Traffic Conditions

The total projected traffic volumes include the existing traffic volumes, increase in background traffic due to growth, and the traffic estimated to be generated by the proposed development.

## Development Traffic Assignment

The peak hour traffic volumes projected to be generated by the proposed development were assigned to the area roadways based on the directional distribution analysis (Figure 6). **Figure 7** shows the assignment of the new vehicle trips.

## Year 2030 Background (No-Build) Traffic Conditions

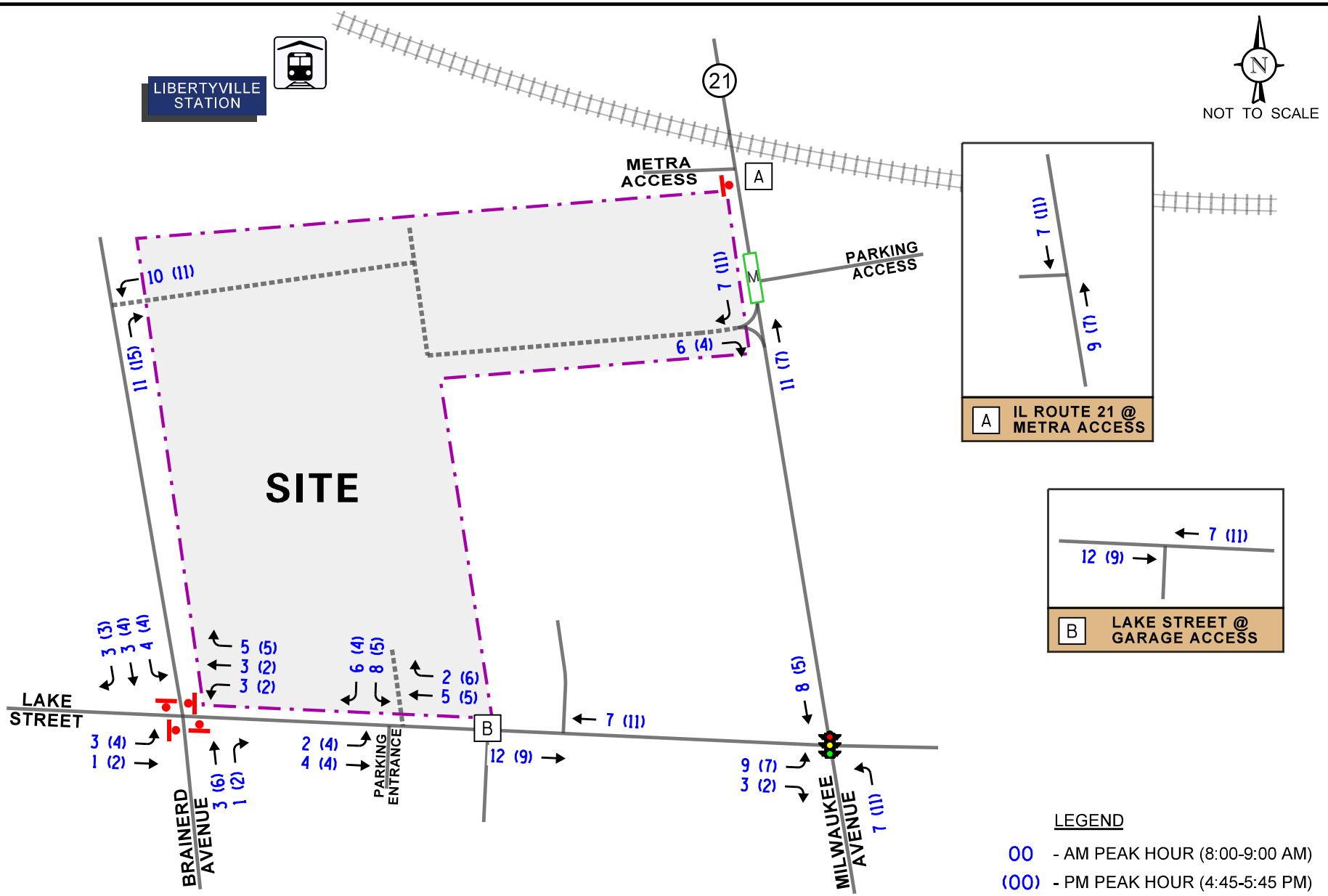
The existing traffic volumes (Figure 4) were increased by a regional growth factor to account for the increase in existing traffic related to regional growth in the area (i.e., not attributable to any particular planned development). Based on Annual Average Daily Traffic (AADT) projections provided by the Chicago Metropolitan Agency for Planning (CMAP) in a letter, the existing traffic volumes are projected to increase by a total of approximately four percent (0.59 percent compounded annually) to represent Year 2030 no-build conditions (one-year buildout plus five years). A copy of the CMAP projections letter is included in the Appendix. The Year 2030 no-build traffic volumes are illustrated in **Figure 8**.

## Redistribution of the Inbound Metra Station Traffic Volumes

As mentioned earlier, with the construction of the circulation road between Milwaukee Avenue and the Metra station, southbound Milwaukee Avenue traffic will have direct inbound access to the Metra station parking lot. Currently, southbound Milwaukee Avenue traffic must traverse Lake Street and Brainard Avenue/Metra station access road to access the Metra station parking lot. As such, approximately 50 percent of the right-turn traffic volumes on the westbound approach of Lake Street at Brainerd Avenue were redistributed to the circulation road to access the Metra station parking lot. Additionally, the traffic volumes that are currently being generated by Liberty Square were removed from the roadway system. **Figure 9** shows the redistribution of the traffic volumes.

## Year 2030 Total Projected Traffic Volumes

The Year 2030 total projected traffic volumes include the Year 2030 no-build traffic volumes plus the traffic estimated to be generated by the proposed subject development and the redistribution of the traffic volume due to the construction of the proposed development. **Figure 10** shows the Year 2030 total projected traffic volumes.

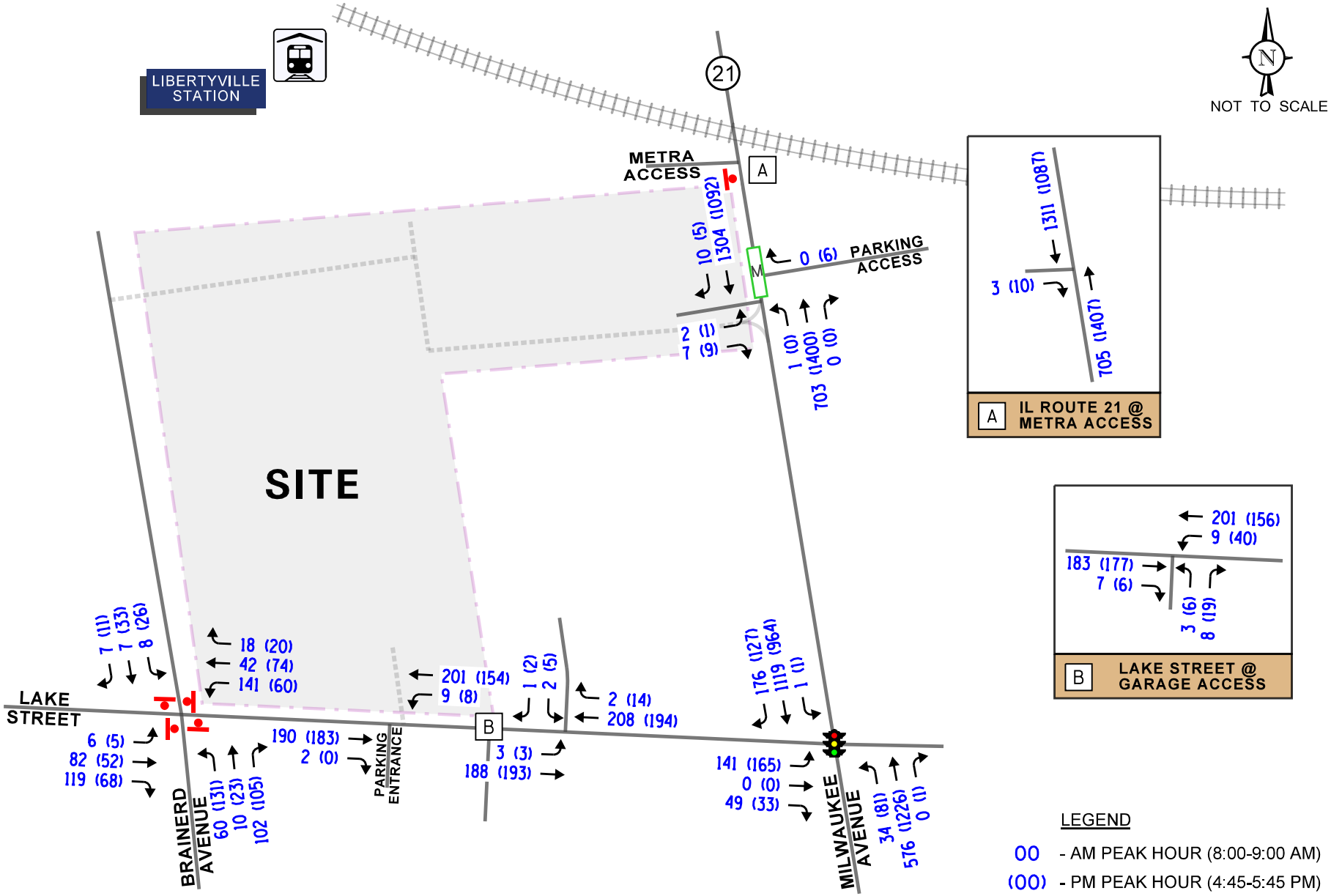



Mixed-Use Development
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Site-Generated Traffic Volumes

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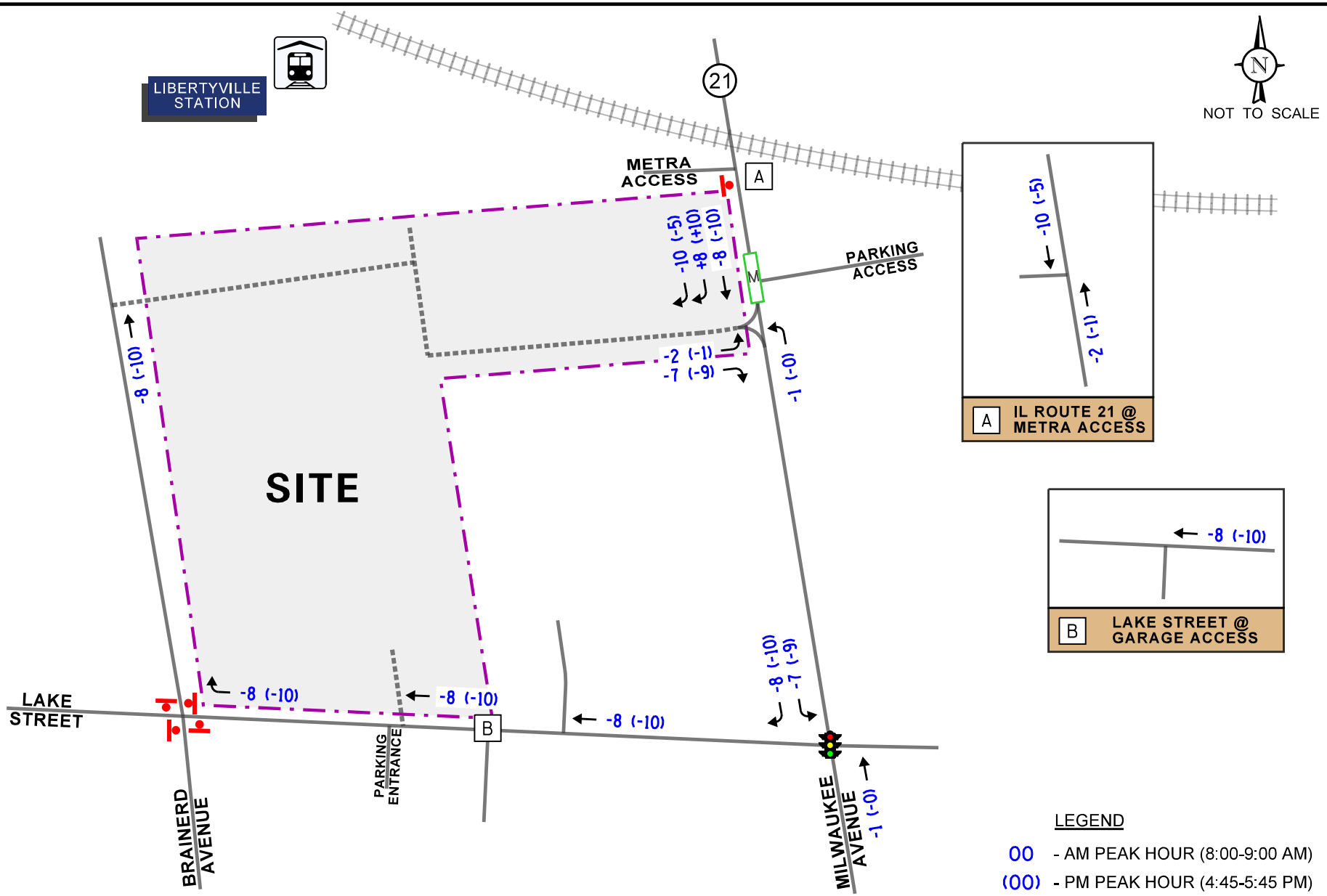



Mixed-Use Development
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Year 2030 No-Build Traffic Volumes

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Job No: 22-217 Figure: 8

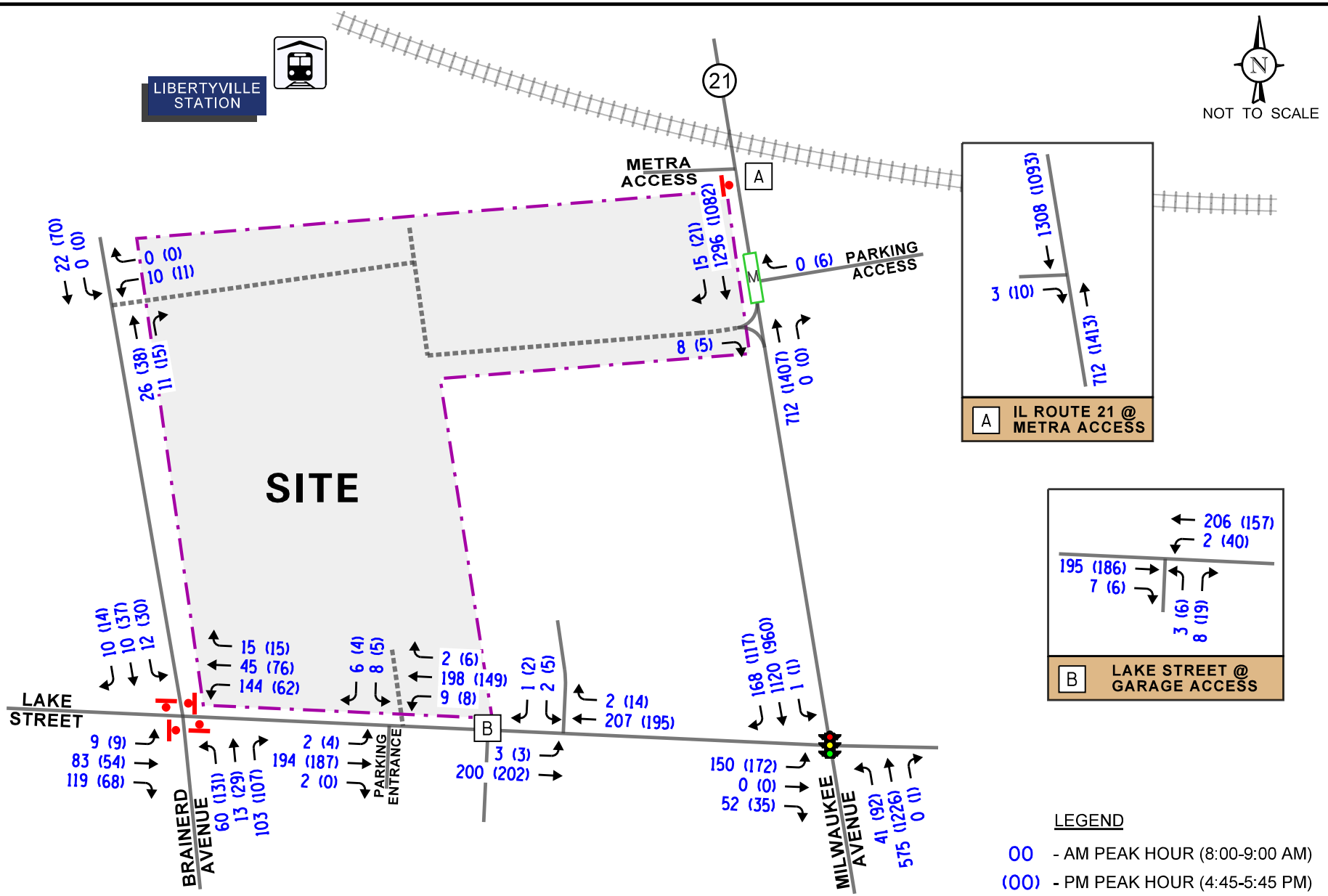



Mixed-Use Development
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Redistribution of Traffic Volumes

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Libertyville, Illinois

Year 2030 Total Traffic Volumes

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Job No: 22-217 Figure: 9

# 5. Traffic Analysis and Recommendations

The following provides an evaluation conducted for the weekday morning and weekday evening peak hours. The analysis includes conducting capacity analyses to determine how well the roadway system and access drives are projected to operate and whether any roadway improvements or modifications are required.

## Traffic Analyses

Intersection analyses were performed for the weekday morning and weekday evening for the existing, Year 2030 no-build, and Year 2030 total projected traffic volumes.

The traffic analyses were performed using the methodologies outlined in the Transportation Research Board's *Highway Capacity Manual (HCM),* 6th Edition and analyzed using Synchro/SimTraffic 11 software. The analysis for the traffic-signal controlled intersection was accomplished using existing cycle lengths and phasings to determine the average overall vehicle delay and levels of service.

The analyses for the unsignalized intersections determine the average control delay to vehicles at an intersection. Control delay is the elapsed time from a vehicle joining the queue at a stop sign (includes the time required to decelerate to a stop) until its departure from the stop sign and resumption of free flow speed. The methodology analyzes each intersection approach controlled by a stop sign and considers traffic volumes on all approaches and lane characteristics.

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

Summaries of the traffic analysis results showing the level of service and overall intersection delay (measured in seconds) for the existing, Year 2030 no-build, and Year 2030 total projected conditions are presented in **Tables 4** through **7**. A discussion of the intersections follows. Summary sheets for the capacity analyses are included in the Appendix.

Table 4
CAPACITY ANALYSIS RESULTS – SIGNALIZED – MILWAUKEE AVENUE WITH LAKE STREET

| | Peak Hour | Eastbound | Northbound | Southbound | Overall |
|---|---|---|---|---|---|
| | | L/R | L/T | T/R | |
| **Existing Conditions** | **Weekday Morning** | E – 59.6 | A – 5.8 | B – 19.9 | B 19.4 |
| | **Weekday Evening** | D – 54.1 | A – 9.5 | B – 17.7 | B 16.3 |
| **No-Build Conditions** | **Weekday Morning** | E – 59.5 | A – 6.0 | C – 20.9 | C 20.1 |
| | **Weekday Evening** | D – 54.6 | B – 10.5 | B – 18.1 | B 17.1 |
| **Projected Conditions** | **Weekday Morning** | E – 59.4 | A – 6.4 | C – 21.2 | C 20.5 |
| | **Weekday Evening** | D – 55.0 | B – 11.6 | B – 17.9 | B 17.7 |

Letter denotes Level of Service L – Left Turn R – Right Turn
Delay is measured in seconds. T – Through

Table 5
CAPACITY ANALYSIS RESULTS – EXISTING CONDITIONS – UNSIGNALIZED

| Intersection | Weekday Morning Peak Hour | | Weekday Evening Peak Hour | |
|---|---|---|---|---|
| | LOS | Delay | LOS | Delay |
| **Brainerd Avenue with Lake Street[1]** | | | | |
| • Overall | A | 9.3 | B | 11.2 |
| • Eastbound Approach | A | 9.0 | A | 9.8 |
| • Westbound Approach | A | 9.9 | B | 10.8 |
| • Northbound Approach | A | 9.2 | B | 12.6 |
| • Southbound Approach | A | 8.3 | A | 9.4 |
| **Lake Street with Access Drive to Parking Lot on North Side of Lake Street[2]** | | | | |
| • Southbound Approach | B | 10.3 | B | 10.2 |
| • Eastbound Left Turn | A | 7.6 | A | 7.6 |
| **Lake Street with Access Drive to Parking Lot on South Side of Lake Street[22]** | | | | |
| • Northbound Approach | A | 9.9 | B | 10.1 |
| • Westbound Left Turn | A | 7.9 | A | 7.9 |
| **Lake Street with Parking Garage Access Drive[2]** | | | | |
| • Westbound Left Turn | A | 7.7 | A | 7.7 |
| **Milwaukee Avenue with Liberty Square Access Drive/Parking Lot Access Drive[3]** | | | | |
| • Eastbound Approach | C | 21.0 | B | 14.7 |
| • Westbound Approach | A | 0.1 | B | 12.2 |
| • Northbound Left Turn | B | 12.0 | A | 0.1 |
| **Milwaukee Avenue with Metra Access Road[2]** | | | | |
| • Eastbound Approach | B | 14.0 | B | 12.9 |

LOS = Level of Service
Delay is measured in seconds.

1- All-way stop control
2- One-way stop control
3- Two-way stop control

Table 6
CAPACITY ANALYSIS RESULTS – YEAR 2030 NO-BUILD CONDITIONS
UNSIGNALIZED

| Intersection | Weekday Morning Peak Hour | | Weekday Evening Peak Hour | |
|---|---|---|---|---|
| | LOS | Delay | LOS | Delay |
| **Brainerd Avenue with Lake Street[1]** | | | | |
| • Overall | A | 9.5 | B | 11.6 |
| • Eastbound Approach | A | 9.2 | A | 10.0 |
| • Westbound Approach | A | 10.0 | B | 11.2 |
| • Northbound Approach | A | 9.4 | B | 13.2 |
| • Southbound Approach | A | 8.4 | A | 9.6 |
| **Lake Street with Access Drive to Parking Lot on South Side of Lake Street[22]** | | | | |
| • Southbound Approach | B | 10.5 | B | 10.4 |
| • Eastbound Left Turn | A | 7.7 | A | 7.6 |
| **Lake Street with Access Drive to Parking Lot on North Side of Lake Street[22]** | | | | |
| • Northbound Approach | B | 10.0 | B | 10.2 |
| • Westbound Left Turn | A | 7.9 | A | 8.0 |
| **Lake Street with Parking Garage Access Drive[2]** | | | | |
| • Westbound Left Turn | A | 7.7 | A | 7.7 |
| **Milwaukee Avenue with Liberty Square Access Drive/Parking Lot Access Drive[3]** | | | | |
| • Eastbound Approach | C | 22.2 | C | 15.3 |
| • Westbound Approach | A | 0.1 | B | 12.7 |
| • Northbound Left Turn | B | 12.3 | A | 0.1 |
| **Milwaukee Avenue with Metra Access Road[2]** | | | | |
| • Eastbound Approach | B | 14.4 | B | 13.2 |

LOS = Level of Service
Delay is measured in seconds.

1- All-way stop control
2- One-way stop control
3- Two-way stop control

Table 7
CAPACITY ANALYSIS RESULTS – YEAR 2030 TOTAL CONDITIONS – UNSIGNALIZED

| Intersection | Weekday Morning Peak Hour | | Weekday Evening Peak Hour | |
|---|---|---|---|---|
| | LOS | Delay | LOS | Delay |
| **Brainerd Avenue with Lake Street[1]** | | | | |
| • Overall | A | 9.6 | B | 12.1 |
| • Eastbound Approach | A | 9.4 | B | 10.4 |
| • Westbound Approach | B | 10.2 | B | 11.4 |
| • Northbound Approach | A | 9.5 | B | 13.9 |
| • Southbound Approach | A | 8.5 | A | 9.9 |
| **Lake Street with Access Drive to Parking Lot on South Side of Lake Street[22]** | | | | |
| • Southbound Approach | B | 10.6 | B | 10.4 |
| • Eastbound Left Turn | A | 7.7 | A | 7.6 |
| **Lake Street with Middle Parking Access Drive to Parking Lot on North Side of Lake Street[2]** | | | | |
| • Northbound Approach | B | 10.1 | B | 10.3 |
| • Westbound Left Turn | A | 7.9 | A | 8.0 |
| **Lake Street with Parking Garage Access Drive/Proposed Access Drive[2]** | | | | |
| • Southbound Approach | B | 10.8 | B | 10.5 |
| • Eastbound Left Turn | A | 7.7 | A | 7.6 |
| • Westbound Left Turn | A | 7.7 | A | 7.7 |
| **Milwaukee Avenue with Proposed Right-In/Right-Out Access Drive/Parking Lot Access Drive[3]** | | | | |
| • Eastbound Approach | B | 14.5 | B | 13.2 |
| • Westbound Approach | A | 0.1 | B | 12.7 |
| **Milwaukee Avenue with Metra Access Road[1]** | | | | |
| • Eastbound Approach | B | 14.3 | B | 13.2 |
| **Brainerd Avenue with Proposed Access Drive[1]** | | | | |
| • Westbound Approach | A | 8.8 | A | 9.2 |
| • Southbound Left Turn | A | 0.1 | A | 0.1 |

LOS = Level of Service
Delay is measured in seconds.

1- All-way stop control
2- One-way stop control
3- Two-way stop control

## Discussion and Recommendations

The following summarizes how the intersections are projected to operate and identifies any roadway and traffic control improvements necessary to accommodate the development-generated traffic.

### *Milwaukee Avenue with Lake Street*

The results of the capacity analysis indicate that the intersection currently operates at an overall Level of Service (LOS) B during the weekday morning and weekday evening peak hours. The northbound and southbound approaches operate at LOS B or better during the weekday morning and evening peak hours. The eastbound approach currently operates on the threshold between LOS D/E during the weekday morning peak hour and LOS D during the weekday evening peak hour. It should be noted that the lower level of service along the eastbound approach is due in part to the fact that Milwaukee Avenue is the major road at this intersection and receives the majority of the green time. While some queueing occurs along the eastbound approach, field observations and the intersection simulations show that the queue typically clears the intersection with each green phase.

Under Year 2030 no-build conditions, the intersection is projected to operate at LOS C during the weekday morning peak hour and LOS B during the weekday evening peak hour. In addition, the eastbound approach is projected to operate at the same level of service as existing conditions and the northbound and southbound approaches are projected to operate on the threshold of LOS B/C or better during both peak hours.

Under Year 2030 total projected conditions, the intersection is projected operate at LOS C during the weekday morning peak hour and LOS B during the weekday evening peak hour. The northbound and southbound approaches are projected to operate on the threshold of LOS B/C or better during both peak hours. The eastbound approach is projected to continue to operate at the same existing levels of service during both peak hours with limited increases in delay. As is the case under existing conditions, the eastbound approach is projected to experience some queuing and delay. However, the intersection simulations show that the queue will continue to generally clear the intersection with each green phase. Further, the impact of the development on this intersection will be reduced due to the following:

- With multiple access drives on several different roads, the development-generated traffic will be distributed along the roadway system, which will reduce the volume of development traffic at this intersection.

- The proposed circulation road will provide direct access between the development and southbound Milwaukee Avenue as well as direct inbound access from southbound Milwaukee Avenue to the Metra station, all of which will reduce the volume of traffic at this intersection.

As such, this intersection has sufficient reserve capacity to accommodate the traffic projected to be generated by the proposed development and no roadway or traffic control modifications are required.

*Lake Street with Brainerd Avenue*

The results of the capacity analysis indicate that overall, this intersection currently operates at LOS A during the weekday morning peak hour and LOS B during the weekday evening peak hour. Further, all the approaches operate at LOS B or better during both peak hours. It should be noted that the intersection can experience some limited queuing and delay due to the surging of traffic associated with Metra commuters arriving at/departing from the Metra station.

Under Year 2030 no-build and total projected conditions, the intersection is projected to continue to operate at the same existing levels of service during the weekday morning and weekday evening peak hours. Further, all the approaches are projected to operate at LOS B or better during the peak hours. The 95$^{th}$ percentile queue for the southbound approach is projected to be one to two vehicles during both peak hours and will not extend back to the location of the proposed drop-off/pick-up lane on Brainerd Avenue. Furthermore, the 95$^{th}$ percentile queue for the westbound approach is projected to be one to two vehicles during both peak hours and will not extend to the location of the Lake Street access drive. As discussed previously, the proposed circulation road will provide direct inbound access between Milwaukee Avenue and the Metra station, which will reduce the volume of traffic at this intersection. Further, the provision of multiple access drives on several different roads will distribute the development traffic along the roadway system and reduce its impact on this intersection. As such, this intersection has adequate reserve capacity to accommodate the traffic estimated to be generated by the proposed development and no roadway or traffic signal improvements are required.

*Lake Street with Access Drive to Parking Lot on North Side of Lake Street*

The results of the capacity analysis indicate that the southbound approach currently operates at LOS B during the weekday morning and weekday evening peak hours while the eastbound left-turn movement operates at LOS A during both peak hours.

Under Year 2030 no-build and total projected conditions, the southbound approach and the eastbound left-turn movement are projected to continue operating at the same existing levels of service during both peak hours with increases in delay of less than one second. As such, this intersection has adequate reserve capacity to accommodate the traffic estimated to be generated by the proposed development and no roadway or traffic control modifications are required.

*Lake Street with Access Drive to Parking Lot on South Side of Lake Street*

The results of the capacity analysis indicate that currently the northbound approach operates at LOS A during the weekday morning peak hour and LOS B during the weekday evening peak hour. Additionally, the westbound left-turn movement operates at LOS A during the weekday morning and weekday evening peak hours.

Under Year 2030 no-build and total projected conditions, the northbound approach is projected to operate at LOS B during both peak hours. The westbound left-turn movement is projected to continue operating at LOS A during the peak hours. As such, this intersection has adequate reserve capacity to accommodate the traffic estimated to be generated by the proposed development and no roadway or traffic control modifications are required.

*Lake Street with Parking Garage Access Drive and Development Access Drive*

This access drive is restricted to inbound only traffic movements. The results of the capacity analysis indicate that the westbound left-turn movement currently operates at LOS A during the weekday morning and weekday evening peak hours.

Under Year 2030 no-build conditions, all of the critical movements at this intersection are projected to operate at the same level of service as existing conditions.

As proposed, the access drive to the below-grade parking spaces is to be located on the north side of Lake Street offset just east of the existing parking garage access drive. The development access drive will provide one inbound lane and one outbound lane with the outbound lane under stop sign control. Given the proximity of the two access drives, they were evaluated as one intersection on Lake Street.

Under Year 2030 total projected conditions, the southbound approach is projected to operate at LOS B during the weekday morning and weekday evening peak hours while the eastbound and westbound left-turn movements are projected to operate at LOS A during both peak hours. The 95$^{th}$ percentile queue for the eastbound and westbound left-turn movements are projected to be one to two vehicles during both peak hours and will not interrupt the traffic flow along Lake Street. As such, this intersection has adequate reserve capacity to accommodate the traffic estimated to be generated by the proposed development and will ensure efficient and flexible access to the site.

*Milwaukee Street with Liberty Square Access Drive (Proposed Right-In/Right-Out Access Drive)/Parking Lot Access Drive*

The results of the capacity analysis indicate that the eastbound and westbound approaches currently operate at LOS C or better during the weekday morning and weekday evening peak hours. The northbound left-turn movement operates at LOS B during the weekday morning peak hour and LOS A during the weekday evening peak hour.

Under Year 2030 no-build conditions, the eastbound and westbound approaches are projected to continue operating at LOS C or better during the peak hours with increases in delay of less than two seconds. The northbound left-turn movement is projected to continue operating at LOS A during both peak hours with increases in delay of less than one second.

As part of the development, the existing full-movement access drive serving Liberty Square will be replaced with the proposed circulation road. At its intersection with Milwaukee Avenue, the circulation road will provide one inbound lane and one outbound lane that will be restricted to right-turn in and right-turn out movements only via a channelized (pork chop) median and via signage. The outbound lane should be under stop sign control.

Under Year 2030 total conditions, the eastbound and westbound approaches are projected to operate at LOS B or better during both peak hours. As such, this intersection will be adequate to accommodate the traffic estimated to be generated by the proposed development and will ensure efficient access to the site.

*Milwaukee Avenue with Metra Station Access Road*

This access road is restricted to outbound right-turn only traffic movements. The results of the capacity analysis indicate that the outbound movement currently operates at LOS B during the weekday morning and weekday evening peak hours and will continue to do so under Year 2030 no-build and total projected conditions. As such, the traffic estimated to be generated by the proposed development will have a limited impact on the operation of this intersection and no roadway improvements or traffic control adjustments will be required.

*Brainerd Avenue with Proposed Access Drive*

This access drive will be located approximately 325 feet north of Lake Street and will provide one inbound lane and one outbound lane with the outbound movements under stop sign control.

The results of the capacity analyses indicate that under Year 2030 total projected conditions, the westbound approach and the southbound left-turn movement are projected to operate at LOS A during the weekday morning and weekday evening peak hours and will ensure efficient and flexible access to the site.

# 6. Conclusion

Based on the proceeding analyses and recommendations, the following conclusions have been made:

- The traffic that will be generated by the proposed development will be reduced due to public transportation and alternative modes of transportation serving the area and the location of the development within downtown Libertyville.

- As part of the development, a new circulation road will be developed that will extend around the south and west sides of the restaurant parcel between Milwaukee Avenue and the Metra station parking lot. As proposed, the circulation road will provide two-way circulation with access to/from Milwaukee Avenue restricted to right-turn movements only via a channelized (pork chop) median and via signage. It should be noted that the circulation road's intersection with Milwaukee Avenue will replace the Liberty Square full-movement access drive which will reduce the turning movement conflicts along Milwaukee Avenue. In addition, the circulation road will provide direct inbound access to the Metra station parking lot from southbound Milwaukee Avenue. Currently, southbound Milwaukee Avenue traffic must traverse Lake Street and Brainard Avenue/Metra station access road to access the Metra station parking lot.

- Access to the development will be provided via the following:

    - A proposed full-movement access drive located on the north side of Lake Street approximately 79 feet east of Brainerd Avenue. This access drive will provide one inbound lane and one outbound lane to/from the proposed apartment building below grade parking. The outbound movements at this access drive should be under stop sign control.

    - A proposed full-movement access drive located on the east side of Brainerd Avenue/Metra station access road approximately 325 feet north of Lake Street. This access drive will provide one inbound lane and one outbound lane to/from the proposed apartment building surface parking lot. The outbound movements at this access drive should be under stop sign control.

    - Full-movement access drives to the apartment building below-grade parking, the apartment building surface parking lot, and the proposed restaurant parking lot will be located along the proposed circulation road. All the access drives will provide one inbound lane and one outbound lane with the outbound lanes under stop sign control.

    - A drop-off/pick-up lane located on the east side of Brainerd Avenue/Metra station access road at approximately the midpoint of the site. The drop-off/pick-up lane will provide one-way, northbound traffic flow with the south access drive restricted to inbound access only and the north access drive restricted to outbound access only.

- The proposed access system will be adequate in accommodating the traffic projected to be generated by the proposed development with limited impact on the external roadway system.

- The roadway network has sufficient reserve capacity to accommodate the traffic that will be generated by the proposed development. It should be noted that the area intersections can experience some limited queuing and delays due to the surging of Metra commuters arriving at or departing the Metra station. The impact of the development on the area roadway system, particularly the intersections of Lake Street with Milwaukee Avenue and Lake Street with Brainerd Avenue/Metra station access road, will be reduced due to the following:

    - With multiple access drives on several different roads, the development traffic will be distributed along the roadway system which will reduce the volume development traffic at any one intersection.

    - The proposed circulation road will provide direct access between the development and southbound Milwaukee Avenue as well as direct inbound access from southbound Milwaukee Avenue to the Metra train station, all of which will reduce the volume of traffic along the Lake Street corridor.

# Appendix

Traffic Count Summary Sheets
Site Plan
ITE Trip Generation Sheets
CMAP Projections Letter
Level of Service Criteria
Capacity Analysis Summary Sheets

# Traffic Count Summary Sheets

Kenig Lindgren O'Hara Aboona, Inc.
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Rosemont, Illinois, United States 60018
(847)518-9990 sainkeshavarzi@kloainc.com

Count Name: IL 21 with Metra Parking Lot
Access Drive TMC
Site Code:
Start Date: 05/23/2024


# Turning Movement Data

| Start Time | Access Drive Eastbound | | | | | | Access Drive Westbound | | | | | | Milwaukee Avenue Northbound | | | | | | Milwaukee Avenue Southbound | | | | | | Int. Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | U-Turn | Left | Thru | Right | Peds | App. Total | U-Turn | Left | Thru | Right | Peds | App. Total | U-Turn | Left | Thru | Right | Peds | App. Total | U-Turn | Left | Thru | Right | Peds | App. Total | |
| 7:00 AM | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 1 | 107 | 1 | 0 | 109 | 1 | 1 | 190 | 2 | 13 | 194 | 305 |
| 7:15 AM | 0 | 1 | 0 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 153 | 0 | 0 | 155 | 0 | 0 | 290 | 2 | 1 | 292 | 450 |
| 7:30 AM | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 1 | 142 | 1 | 0 | 144 | 0 | 0 | 270 | 3 | 12 | 273 | 420 |
| 7:45 AM | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 1 | 128 | 0 | 0 | 129 | 0 | 0 | 313 | 1 | 16 | 314 | 446 |
| Hourly Total | 0 | 2 | 0 | 9 | 0 | 11 | 0 | 0 | 0 | 0 | 26 | 0 | 0 | 5 | 530 | 2 | 0 | 537 | 1 | 1 | 1063 | 8 | 42 | 1073 | 1621 |
| 8:00 AM | 0 | 1 | 0 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 150 | 0 | 0 | 150 | 0 | 0 | 321 | 5 | 0 | 326 | 479 |
| 8:15 AM | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 164 | 0 | 0 | 165 | 0 | 0 | 343 | 2 | 1 | 345 | 512 |
| 8:30 AM | 0 | 1 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 187 | 0 | 0 | 187 | 0 | 0 | 297 | 2 | 1 | 299 | 488 |
| 8:45 AM | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 175 | 0 | 0 | 175 | 0 | 0 | 261 | 1 | 1 | 262 | 439 |
| Hourly Total | 0 | 2 | 0 | 7 | 1 | 9 | 0 | 0 | 0 | 0 | 14 | 0 | 0 | 1 | 676 | 0 | 0 | 677 | 0 | 0 | 1222 | 10 | 3 | 1232 | 1918 |
| *** BREAK *** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 2:00 PM | 0 | 0 | 0 | 4 | 3 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 298 | 1 | 0 | 302 | 0 | 0 | 198 | 3 | 2 | 201 | 507 |
| 2:15 PM | 0 | 0 | 0 | 4 | 1 | 4 | 0 | 0 | 0 | 1 | 3 | 1 | 0 | 0 | 273 | 0 | 0 | 273 | 0 | 0 | 201 | 8 | 2 | 209 | 487 |
| 2:30 PM | 0 | 2 | 0 | 2 | 8 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 297 | 0 | 0 | 298 | 0 | 0 | 208 | 6 | 4 | 214 | 516 |
| 2:45 PM | 0 | 0 | 0 | 8 | 1 | 8 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 283 | 0 | 0 | 286 | 0 | 0 | 238 | 5 | 4 | 243 | 537 |
| Hourly Total | 0 | 2 | 0 | 18 | 13 | 20 | 0 | 0 | 0 | 1 | 4 | 1 | 0 | 7 | 1151 | 1 | 0 | 1159 | 0 | 0 | 845 | 22 | 12 | 867 | 2047 |
| 3:00 PM | 0 | 1 | 0 | 3 | 0 | 4 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 3 | 264 | 0 | 0 | 267 | 0 | 0 | 235 | 2 | 5 | 237 | 508 |
| 3:15 PM | 0 | 1 | 0 | 2 | 0 | 3 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 336 | 0 | 0 | 337 | 0 | 0 | 244 | 0 | 4 | 244 | 585 |
| 3:30 PM | 0 | 1 | 0 | 11 | 2 | 12 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 2 | 338 | 0 | 0 | 340 | 0 | 0 | 258 | 1 | 1 | 259 | 611 |
| 3:45 PM | 0 | 0 | 0 | 7 | 0 | 7 | 0 | 0 | 0 | 3 | 3 | 3 | 0 | 1 | 328 | 0 | 0 | 329 | 0 | 0 | 262 | 2 | 7 | 264 | 603 |
| Hourly Total | 0 | 3 | 0 | 23 | 2 | 26 | 0 | 0 | 0 | 4 | 13 | 4 | 0 | 7 | 1266 | 0 | 0 | 1273 | 0 | 0 | 999 | 5 | 17 | 1004 | 2307 |
| 4:00 PM | 0 | 1 | 0 | 3 | 3 | 4 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 2 | 310 | 0 | 0 | 312 | 0 | 0 | 208 | 2 | 2 | 210 | 526 |
| 4:15 PM | 0 | 5 | 0 | 1 | 3 | 6 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 357 | 0 | 0 | 357 | 0 | 0 | 233 | 1 | 2 | 234 | 597 |
| 4:30 PM | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 330 | 0 | 0 | 330 | 0 | 0 | 246 | 1 | 0 | 247 | 578 |
| 4:45 PM | 0 | 0 | 0 | 2 | 3 | 2 | 0 | 0 | 0 | 4 | 0 | 4 | 0 | 0 | 336 | 0 | 0 | 336 | 0 | 0 | 237 | 1 | 26 | 238 | 580 |
| Hourly Total | 0 | 6 | 0 | 7 | 11 | 13 | 0 | 0 | 0 | 4 | 11 | 4 | 0 | 2 | 1333 | 0 | 0 | 1335 | 0 | 0 | 924 | 5 | 30 | 929 | 2281 |
| 5:00 PM | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 2 | 2 | 2 | 0 | 0 | 380 | 0 | 0 | 380 | 0 | 0 | 255 | 3 | 1 | 258 | 643 |
| 5:15 PM | 0 | 1 | 0 | 3 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 339 | 0 | 0 | 339 | 0 | 0 | 264 | 0 | 3 | 264 | 607 |
| 5:30 PM | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 280 | 0 | 0 | 280 | 0 | 0 | 263 | 1 | 0 | 264 | 545 |
| 5:45 PM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 4 | 1 | 5 | 0 | 0 | 258 | 0 | 0 | 258 | 0 | 0 | 252 | 2 | 20 | 254 | 517 |
| Hourly Total | 0 | 1 | 0 | 7 | 2 | 8 | 0 | 1 | 0 | 6 | 5 | 7 | 0 | 0 | 1257 | 0 | 0 | 1257 | 0 | 0 | 1034 | 6 | 24 | 1040 | 2312 |
| Grand Total | 0 | 16 | 0 | 71 | 29 | 87 | 0 | 1 | 0 | 15 | 73 | 16 | 0 | 22 | 6213 | 3 | 0 | 6238 | 1 | 1 | 6087 | 56 | 128 | 6145 | 12486 |
| Approach % | 0.0 | 18.4 | 0.0 | 81.6 | - | - | 0.0 | 6.3 | 0.0 | 93.8 | - | - | 0.0 | 0.4 | 99.6 | 0.0 | - | - | 0.0 | 0.0 | 99.1 | 0.9 | - | - | - |
| Total % | 0.0 | 0.1 | 0.0 | 0.6 | - | 0.7 | 0.0 | 0.0 | 0.0 | 0.1 | - | 0.1 | 0.0 | 0.2 | 49.8 | 0.0 | - | 50.0 | 0.0 | 0.0 | 48.8 | 0.4 | - | 49.2 | - |
| Lights | 0 | 16 | 0 | 70 | - | 86 | 0 | 1 | 0 | 15 | - | 16 | 0 | 22 | 6102 | 3 | - | 6127 | 1 | 1 | 5980 | 55 | - | 6037 | 12266 |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| % Lights | - | 100.0 | - | 98.6 | - | 98.9 | - | 100.0 | - | 100.0 | - | 100.0 | - | 100.0 | 98.2 | 100.0 | - | 98.2 | 100.0 | 100.0 | 98.2 | 98.2 | - | 98.2 | 98.2 |
| Buses | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 23 | 0 | - | 23 | 0 | 0 | 39 | 0 | - | 39 | 62 |
| % Buses | - | 0.0 | - | 0.0 | - | 0.0 | - | 0.0 | - | 0.0 | - | 0.0 | - | 0.0 | 0.4 | 0.0 | - | 0.4 | 0.0 | 0.0 | 0.6 | 0.0 | - | 0.6 | 0.5 |
| Single-Unit Trucks | 0 | 0 | 0 | 1 | - | 1 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 61 | 0 | - | 61 | 0 | 0 | 51 | 1 | - | 52 | 114 |
| % Single-Unit Trucks | - | 0.0 | - | 1.4 | - | 1.1 | - | 0.0 | - | 0.0 | - | 0.0 | - | 0.0 | 1.0 | 0.0 | - | 1.0 | 0.0 | 0.0 | 0.8 | 1.8 | - | 0.8 | 0.9 |
| Articulated Trucks | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 26 | 0 | - | 26 | 0 | 0 | 17 | 0 | - | 17 | 43 |
| % Articulated Trucks | - | 0.0 | - | 0.0 | - | 0.0 | - | 0.0 | - | 0.0 | - | 0.0 | - | 0.0 | 0.4 | 0.0 | - | 0.4 | 0.0 | 0.0 | 0.3 | 0.0 | - | 0.3 | 0.3 |
| Bicycles on Road | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 1 | 0 | - | 1 | 0 | 0 | 0 | 0 | - | 0 | 1 |
| % Bicycles on Road | - | 0.0 | - | 0.0 | - | 0.0 | - | 0.0 | - | 0.0 | - | 0.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 |
| Pedestrians | - | - | - | - | 29 | - | - | - | - | - | 73 | - | - | - | - | - | 0 | - | - | - | - | - | 128 | - | - |
| % Pedestrians | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - | - | - | - | - | - | - | - | - | - | 100.0 | - | - |

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Count Name: IL 21 with Metra Parking Lot
Access Drive TMC
Site Code:
Start Date: 05/23/2024


# Turning Movement Peak Hour Data (8:00 AM)

| Start Time | Access Drive Eastbound | | | | | | Access Drive Westbound | | | | | | Milwaukee Avenue Northbound | | | | | | Milwaukee Avenue Southbound | | | | | | Int. Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | U-Turn | Left | Thru | Right | Peds | App. Total | U-Turn | Left | Thru | Right | Peds | App. Total | U-Turn | Left | Thru | Right | Peds | App. Total | U-Turn | Left | Thru | Right | Peds | App. Total | |
| 8:00 AM | 0 | 1 | 0 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 150 | 0 | 0 | 150 | 0 | 0 | 321 | 5 | 0 | 326 | 479 |
| 8:15 AM | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 164 | 0 | 0 | 165 | 0 | 0 | 343 | 2 | 1 | 345 | 512 |
| 8:30 AM | 0 | 1 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 187 | 0 | 0 | 187 | 0 | 0 | 297 | 2 | 1 | 299 | 488 |
| 8:45 AM | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 175 | 0 | 0 | 175 | 0 | 0 | 261 | 1 | 1 | 262 | 439 |
| Total | 0 | 2 | 0 | 7 | 1 | 9 | 0 | 0 | 0 | 0 | 14 | 0 | 0 | 1 | 676 | 0 | 0 | 677 | 0 | 0 | 1222 | 10 | 3 | 1232 | 1918 |
| Approach % | 0.0 | 22.2 | 0.0 | 77.8 | - | - | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.1 | 99.9 | 0.0 | - | - | 0.0 | 0.0 | 99.2 | 0.8 | - | - | - |
| Total % | 0.0 | 0.1 | 0.0 | 0.4 | - | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.1 | 35.2 | 0.0 | - | 35.3 | 0.0 | 0.0 | 63.7 | 0.5 | - | 64.2 | - |
| PHF | 0.000 | 0.500 | 0.000 | 0.875 | - | 0.750 | 0.000 | 0.000 | 0.000 | 0.000 | - | 0.000 | 0.000 | 0.250 | 0.904 | 0.000 | - | 0.905 | 0.000 | 0.000 | 0.891 | 0.500 | - | 0.893 | 0.937 |
| Lights | 0 | 2 | 0 | 7 | - | 9 | 0 | 0 | 0 | 0 | - | 0 | 0 | 1 | 655 | 0 | - | 656 | 0 | 0 | 1183 | 10 | - | 1193 | 1858 |
| % Lights | - | 100.0 | - | 100.0 | - | 100.0 | - | - | - | - | - | - | - | 100.0 | 96.9 | - | - | 96.9 | - | - | 96.8 | 100.0 | - | 96.8 | 96.9 |
| Buses | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 7 | 0 | - | 7 | 0 | 0 | 14 | 0 | - | 14 | 21 |
| % Buses | - | 0.0 | - | 0.0 | - | 0.0 | - | - | - | - | - | - | - | 0.0 | 1.0 | - | - | 1.0 | - | - | 1.1 | 0.0 | - | 1.1 | 1.1 |
| Single-Unit Trucks | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 8 | 0 | - | 8 | 0 | 0 | 20 | 0 | - | 20 | 28 |
| % Single-Unit Trucks | - | 0.0 | - | 0.0 | - | 0.0 | - | - | - | - | - | - | - | 0.0 | 1.2 | - | - | 1.2 | - | - | 1.6 | 0.0 | - | 1.6 | 1.5 |
| Articulated Trucks | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 5 | 0 | - | 5 | 0 | 0 | 5 | 0 | - | 5 | 10 |
| % Articulated Trucks | - | 0.0 | - | 0.0 | - | 0.0 | - | - | - | - | - | - | - | 0.0 | 0.7 | - | - | 0.7 | - | - | 0.4 | 0.0 | - | 0.4 | 0.5 |
| Bicycles on Road | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 1 | 0 | - | 1 | 0 | 0 | 0 | 0 | - | 0 | 1 |
| % Bicycles on Road | - | 0.0 | - | 0.0 | - | 0.0 | - | - | - | - | - | - | - | 0.0 | 0.1 | - | - | 0.1 | - | - | 0.0 | 0.0 | - | 0.0 | 0.1 |
| Pedestrians | - | - | - | - | 1 | - | - | - | - | - | 14 | - | - | - | - | - | 0 | - | - | - | - | - | 3 | - | - |
| % Pedestrians | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - | - | - | - | - | - | - | - | - | - | 100.0 | - | - |

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Count Name: IL 21 with Metra Parking Lot
Access Drive TMC
Site Code:
Start Date: 05/23/2024


# Turning Movement Peak Hour Data (4:45 PM)

| Start Time | Access Drive Eastbound | | | | | | Access Drive Westbound | | | | | | Milwaukee Avenue Northbound | | | | | | Milwaukee Avenue Southbound | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | U-Turn | Left | Thru | Right | Peds | App. Total | U-Turn | Left | Thru | Right | Peds | App. Total | U-Turn | Left | Thru | Right | Peds | App. Total | U-Turn | Left | Thru | Right | Peds | App. Total | Int. Total |
| 4:45 PM | 0 | 0 | 0 | 2 | 3 | 2 | 0 | 0 | 0 | 4 | 0 | 4 | 0 | 0 | 336 | 0 | 0 | 336 | 0 | 0 | 237 | 1 | 26 | 238 | 580 |
| 5:00 PM | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 2 | 2 | 2 | 0 | 0 | 380 | 0 | 0 | 380 | 0 | 0 | 255 | 3 | 1 | 258 | 643 |
| 5:15 PM | 0 | 1 | 0 | 3 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 339 | 0 | 0 | 339 | 0 | 0 | 264 | 0 | 3 | 264 | 607 |
| 5:30 PM | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 280 | 0 | 0 | 280 | 0 | 0 | 263 | 1 | 0 | 264 | 545 |
| Total | 0 | 1 | 0 | 9 | 4 | 10 | 0 | 0 | 0 | 6 | 4 | 6 | 0 | 0 | 1335 | 0 | 0 | 1335 | 0 | 0 | 1019 | 5 | 30 | 1024 | 2375 |
| Approach % | 0.0 | 10.0 | 0.0 | 90.0 | - | - | 0.0 | 0.0 | 0.0 | 100.0 | - | - | 0.0 | 0.0 | 100.0 | 0.0 | - | - | 0.0 | 0.0 | 99.5 | 0.5 | - | - | - |
| Total % | 0.0 | 0.0 | 0.0 | 0.4 | - | 0.4 | 0.0 | 0.0 | 0.0 | 0.3 | - | 0.3 | 0.0 | 0.0 | 56.2 | 0.0 | - | 56.2 | 0.0 | 0.0 | 42.9 | 0.2 | - | 43.1 | - |
| PHF | 0.000 | 0.250 | 0.000 | 0.750 | - | 0.625 | 0.000 | 0.000 | 0.000 | 0.375 | - | 0.375 | 0.000 | 0.000 | 0.878 | 0.000 | - | 0.878 | 0.000 | 0.000 | 0.965 | 0.417 | - | 0.970 | 0.923 |
| Lights | 0 | 1 | 0 | 9 | - | 10 | 0 | 0 | 0 | 6 | - | 6 | 0 | 0 | 1328 | 0 | - | 1328 | 0 | 0 | 1017 | 5 | - | 1022 | 2366 |
| % Lights | - | 100.0 | - | 100.0 | - | 100.0 | - | - | - | 100.0 | - | 100.0 | - | - | 99.5 | - | - | 99.5 | - | - | 99.8 | 100.0 | - | 99.8 | 99.6 |
| Buses | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 1 | 0 | - | 1 | 0 | 0 | 0 | 0 | - | 0 | 1 |
| % Buses | - | 0.0 | - | 0.0 | - | 0.0 | - | - | - | 0.0 | - | 0.0 | - | - | 0.1 | - | - | 0.1 | - | - | 0.0 | 0.0 | - | 0.0 | 0.0 |
| Single-Unit Trucks | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 3 | 0 | - | 3 | 0 | 0 | 2 | 0 | - | 2 | 5 |
| % Single-Unit Trucks | - | 0.0 | - | 0.0 | - | 0.0 | - | - | - | 0.0 | - | 0.0 | - | - | 0.2 | - | - | 0.2 | - | - | 0.2 | 0.0 | - | 0.2 | 0.2 |
| Articulated Trucks | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 3 | 0 | - | 3 | 0 | 0 | 0 | 0 | - | 0 | 3 |
| % Articulated Trucks | - | 0.0 | - | 0.0 | - | 0.0 | - | - | - | 0.0 | - | 0.0 | - | - | 0.2 | - | - | 0.2 | - | - | 0.0 | 0.0 | - | 0.0 | 0.1 |
| Bicycles on Road | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Bicycles on Road | - | 0.0 | - | 0.0 | - | 0.0 | - | - | - | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 0.0 | - | - | 0.0 | 0.0 | - | 0.0 | 0.0 |
| Pedestrians | - | - | - | - | 4 | - | - | - | - | - | 4 | - | - | - | - | - | 0 | - | - | - | - | - | 30 | - | - |
| % Pedestrians | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - | - | - | - | - | - | - | - | - | - | 100.0 | - | - |

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Count Name: IL+21+and+Lake Street TMC
Site Code:
Start Date: 05/23/2024


# Turning Movement Data

| Start Time | Lake Street Eastbound | | | | | | Lake Street Westbound | | | | | | Milwaukee Avenue Northbound | | | | | | Milwaukee Avenue Southbound | | | | | | Int. Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | U-Turn | Left | Thru | Right | Peds | App. Total | U-Turn | Left | Thru | Right | Peds | App. Total | U-Turn | Left | Thru | Right | Peds | App. Total | U-Turn | Left | Thru | Right | Peds | App. Total | |
| 7:00 AM | 0 | 13 | 0 | 7 | 6 | 20 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 11 | 78 | 0 | 1 | 89 | 0 | 0 | 230 | 14 | 0 | 244 | 353 |
| 7:15 AM | 0 | 10 | 0 | 11 | 2 | 21 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 6 | 123 | 0 | 1 | 129 | 0 | 0 | 219 | 19 | 0 | 238 | 388 |
| 7:30 AM | 0 | 17 | 0 | 18 | 0 | 35 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 10 | 113 | 0 | 0 | 123 | 0 | 0 | 222 | 13 | 0 | 235 | 393 |
| 7:45 AM | 0 | 19 | 0 | 9 | 3 | 28 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 12 | 113 | 0 | 1 | 125 | 0 | 0 | 266 | 28 | 0 | 294 | 447 |
| Hourly Total | 0 | 59 | 0 | 45 | 11 | 104 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 39 | 427 | 0 | 3 | 466 | 0 | 0 | 937 | 74 | 0 | 1011 | 1581 |
| 8:00 AM | 0 | 29 | 0 | 16 | 0 | 45 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 6 | 121 | 0 | 2 | 127 | 0 | 0 | 318 | 37 | 0 | 355 | 527 |
| 8:15 AM | 0 | 36 | 0 | 17 | 1 | 53 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 9 | 129 | 0 | 2 | 138 | 0 | 0 | 270 | 48 | 0 | 318 | 509 |
| 8:30 AM | 0 | 38 | 0 | 5 | 1 | 43 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 5 | 139 | 0 | 2 | 144 | 0 | 1 | 242 | 59 | 0 | 302 | 489 |
| 8:45 AM | 0 | 33 | 0 | 9 | 2 | 42 | 0 | 0 | 0 | 1 | 4 | 1 | 0 | 13 | 165 | 0 | 2 | 178 | 0 | 0 | 246 | 23 | 0 | 269 | 490 |
| Hourly Total | 0 | 136 | 0 | 47 | 4 | 183 | 0 | 0 | 0 | 1 | 13 | 1 | 0 | 33 | 554 | 0 | 8 | 587 | 0 | 1 | 1076 | 167 | 0 | 1244 | 2015 |
| *** BREAK *** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 2:00 PM | 0 | 48 | 0 | 15 | 9 | 63 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 7 | 241 | 0 | 4 | 248 | 0 | 0 | 164 | 27 | 0 | 191 | 502 |
| 2:15 PM | 0 | 22 | 0 | 5 | 2 | 27 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 14 | 246 | 0 | 5 | 260 | 0 | 0 | 160 | 27 | 0 | 187 | 474 |
| 2:30 PM | 0 | 51 | 0 | 12 | 10 | 63 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 10 | 245 | 0 | 4 | 255 | 0 | 0 | 178 | 19 | 8 | 197 | 515 |
| 2:45 PM | 0 | 38 | 0 | 6 | 0 | 44 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 12 | 253 | 0 | 2 | 265 | 0 | 0 | 194 | 31 | 1 | 225 | 534 |
| Hourly Total | 0 | 159 | 0 | 38 | 21 | 197 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 43 | 985 | 0 | 15 | 1028 | 0 | 0 | 696 | 104 | 9 | 800 | 2025 |
| 3:00 PM | 0 | 34 | 0 | 13 | 1 | 47 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 8 | 227 | 0 | 0 | 235 | 0 | 0 | 189 | 23 | 0 | 212 | 494 |
| 3:15 PM | 0 | 23 | 0 | 11 | 2 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 280 | 0 | 2 | 288 | 0 | 0 | 200 | 23 | 1 | 223 | 545 |
| 3:30 PM | 0 | 38 | 0 | 13 | 4 | 51 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 15 | 295 | 0 | 3 | 310 | 0 | 0 | 193 | 23 | 0 | 216 | 577 |
| 3:45 PM | 0 | 30 | 0 | 16 | 7 | 46 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 12 | 297 | 0 | 5 | 309 | 0 | 0 | 202 | 33 | 0 | 235 | 590 |
| Hourly Total | 0 | 125 | 0 | 53 | 14 | 178 | 0 | 0 | 0 | 0 | 20 | 0 | 0 | 43 | 1099 | 0 | 10 | 1142 | 0 | 0 | 784 | 102 | 1 | 886 | 2206 |
| 4:00 PM | 0 | 37 | 0 | 9 | 7 | 46 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 9 | 239 | 0 | 11 | 248 | 0 | 0 | 153 | 21 | 0 | 174 | 468 |
| 4:15 PM | 0 | 39 | 0 | 10 | 4 | 49 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 18 | 330 | 0 | 1 | 348 | 0 | 0 | 229 | 27 | 0 | 256 | 653 |
| 4:30 PM | 0 | 27 | 0 | 5 | 10 | 32 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 12 | 276 | 0 | 12 | 288 | 0 | 0 | 190 | 24 | 3 | 214 | 534 |
| 4:45 PM | 0 | 37 | 0 | 7 | 12 | 44 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 19 | 313 | 0 | 6 | 332 | 0 | 0 | 227 | 37 | 0 | 264 | 640 |
| Hourly Total | 0 | 140 | 0 | 31 | 33 | 171 | 0 | 0 | 0 | 0 | 27 | 0 | 0 | 58 | 1158 | 0 | 30 | 1216 | 0 | 0 | 799 | 109 | 3 | 908 | 2295 |
| 5:00 PM | 0 | 51 | 0 | 9 | 4 | 60 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 13 | 291 | 0 | 8 | 304 | 0 | 0 | 229 | 30 | 1 | 259 | 623 |
| 5:15 PM | 0 | 32 | 0 | 6 | 10 | 38 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 17 | 308 | 0 | 4 | 325 | 0 | 0 | 235 | 20 | 0 | 255 | 618 |
| 5:30 PM | 0 | 39 | 0 | 10 | 10 | 49 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 29 | 267 | 1 | 18 | 297 | 0 | 1 | 236 | 35 | 1 | 272 | 618 |
| 5:45 PM | 0 | 34 | 0 | 18 | 5 | 52 | 0 | 0 | 0 | 0 | 3 | 0 | 1 | 29 | 208 | 0 | 3 | 238 | 0 | 0 | 215 | 33 | 0 | 248 | 538 |
| Hourly Total | 0 | 156 | 0 | 43 | 29 | 199 | 0 | 0 | 0 | 0 | 16 | 0 | 1 | 88 | 1074 | 1 | 33 | 1164 | 0 | 1 | 915 | 118 | 2 | 1034 | 2397 |
| Grand Total | 0 | 775 | 0 | 257 | 112 | 1032 | 0 | 0 | 0 | 1 | 98 | 1 | 1 | 304 | 5297 | 1 | 99 | 5603 | 0 | 2 | 5207 | 674 | 15 | 5883 | 12519 |
| Approach % | 0.0 | 75.1 | 0.0 | 24.9 | - | - | 0.0 | 0.0 | 0.0 | 100.0 | - | - | 0.0 | 5.4 | 94.5 | 0.0 | - | - | 0.0 | 0.0 | 88.5 | 11.5 | - | - | - |
| Total % | 0.0 | 6.2 | 0.0 | 2.1 | - | 8.2 | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 2.4 | 42.3 | 0.0 | - | 44.8 | 0.0 | 0.0 | 41.6 | 5.4 | - | 47.0 | - |
| Lights | 0 | 766 | 0 | 248 | - | 1014 | 0 | 0 | 0 | 1 | - | 1 | 1 | 296 | 5197 | 1 | - | 5495 | 0 | 2 | 5111 | 663 | - | 5776 | 12286 |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| % Lights | - | 98.8 | - | 96.5 | - | 98.3 | - | - | - | 100.0 | - | 100.0 | 100.0 | 97.4 | 98.1 | 100.0 | - | 98.1 | - | 100.0 | 98.2 | 98.4 | - | 98.2 | 98.1 |
| Buses | 0 | 3 | 0 | 1 | - | 4 | 0 | 0 | 0 | 0 | - | 0 | 0 | 4 | 23 | 0 | - | 27 | 0 | 0 | 33 | 6 | - | 39 | 70 |
| % Buses | - | 0.4 | - | 0.4 | - | 0.4 | - | - | - | 0.0 | - | 0.0 | 0.0 | 1.3 | 0.4 | 0.0 | - | 0.5 | - | 0.0 | 0.6 | 0.9 | - | 0.7 | 0.6 |
| Single-Unit Trucks | 0 | 6 | 0 | 5 | - | 11 | 0 | 0 | 0 | 0 | - | 0 | 0 | 4 | 51 | 0 | - | 55 | 0 | 0 | 43 | 4 | - | 47 | 113 |
| % Single-Unit Trucks | - | 0.8 | - | 1.9 | - | 1.1 | - | - | - | 0.0 | - | 0.0 | 0.0 | 1.3 | 1.0 | 0.0 | - | 1.0 | - | 0.0 | 0.8 | 0.6 | - | 0.8 | 0.9 |
| Articulated Trucks | 0 | 0 | 0 | 3 | - | 3 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 26 | 0 | - | 26 | 0 | 0 | 20 | 1 | - | 21 | 50 |
| % Articulated Trucks | - | 0.0 | - | 1.2 | - | 0.3 | - | - | - | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 | - | 0.5 | - | 0.0 | 0.4 | 0.1 | - | 0.4 | 0.4 |
| Bicycles on Road | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Bicycles on Road | - | 0.0 | - | 0.0 | - | 0.0 | - | - | - | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 |
| Pedestrians | - | - | - | - | 112 | - | - | - | - | - | 98 | - | - | - | - | - | 99 | - | - | - | - | - | 15 | - | - |
| % Pedestrians | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - |

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Count Name: IL+21+and+Lake Street TMC
Site Code:
Start Date: 05/23/2024


# Turning Movement Peak Hour Data (8:00 AM)

| Start Time | Lake Street Eastbound | | | | | | Lake Street Westbound | | | | | | Milwaukee Avenue Northbound | | | | | | Milwaukee Avenue Southbound | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | U-Turn | Left | Thru | Right | Peds | App. Total | U-Turn | Left | Thru | Right | Peds | App. Total | U-Turn | Left | Thru | Right | Peds | App. Total | U-Turn | Left | Thru | Right | Peds | App. Total | Int. Total |
| 8:00 AM | 0 | 29 | 0 | 16 | 0 | 45 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 6 | 121 | 0 | 2 | 127 | 0 | 0 | 318 | 37 | 0 | 355 | 527 |
| 8:15 AM | 0 | 36 | 0 | 17 | 1 | 53 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 9 | 129 | 0 | 2 | 138 | 0 | 0 | 270 | 48 | 0 | 318 | 509 |
| 8:30 AM | 0 | 38 | 0 | 5 | 1 | 43 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 5 | 139 | 0 | 2 | 144 | 0 | 1 | 242 | 59 | 0 | 302 | 489 |
| 8:45 AM | 0 | 33 | 0 | 9 | 2 | 42 | 0 | 0 | 0 | 1 | 4 | 1 | 0 | 13 | 165 | 0 | 2 | 178 | 0 | 0 | 246 | 23 | 0 | 269 | 490 |
| Total | 0 | 136 | 0 | 47 | 4 | 183 | 0 | 0 | 0 | 1 | 13 | 1 | 0 | 33 | 554 | 0 | 8 | 587 | 0 | 1 | 1076 | 167 | 0 | 1244 | 2015 |
| Approach % | 0.0 | 74.3 | 0.0 | 25.7 | - | - | 0.0 | 0.0 | 0.0 | 100.0 | - | - | 0.0 | 5.6 | 94.4 | 0.0 | - | - | 0.0 | 0.1 | 86.5 | 13.4 | - | - | - |
| Total % | 0.0 | 6.7 | 0.0 | 2.3 | - | 9.1 | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 1.6 | 27.5 | 0.0 | - | 29.1 | 0.0 | 0.0 | 53.4 | 8.3 | - | 61.7 | - |
| PHF | 0.000 | 0.895 | 0.000 | 0.691 | - | 0.863 | 0.000 | 0.000 | 0.000 | 0.250 | - | 0.250 | 0.000 | 0.635 | 0.839 | 0.000 | - | 0.824 | 0.000 | 0.250 | 0.846 | 0.708 | - | 0.876 | 0.956 |
| Lights | 0 | 134 | 0 | 45 | - | 179 | 0 | 0 | 0 | 1 | - | 1 | 0 | 30 | 535 | 0 | - | 565 | 0 | 1 | 1042 | 162 | - | 1205 | 1950 |
| % Lights | - | 98.5 | - | 95.7 | - | 97.8 | - | - | - | 100.0 | - | 100.0 | - | 90.9 | 96.6 | - | - | 96.3 | - | 100.0 | 96.8 | 97.0 | - | 96.9 | 96.8 |
| Buses | 0 | 2 | 0 | 0 | - | 2 | 0 | 0 | 0 | 0 | - | 0 | 0 | 2 | 5 | 0 | - | 7 | 0 | 0 | 10 | 5 | - | 15 | 24 |
| % Buses | - | 1.5 | - | 0.0 | - | 1.1 | - | - | - | 0.0 | - | 0.0 | - | 6.1 | 0.9 | - | - | 1.2 | - | 0.0 | 0.9 | 3.0 | - | 1.2 | 1.2 |
| Single-Unit Trucks | 0 | 0 | 0 | 1 | - | 1 | 0 | 0 | 0 | 0 | - | 0 | 0 | 1 | 9 | 0 | - | 10 | 0 | 0 | 18 | 0 | - | 18 | 29 |
| % Single-Unit Trucks | - | 0.0 | - | 2.1 | - | 0.5 | - | - | - | 0.0 | - | 0.0 | - | 3.0 | 1.6 | - | - | 1.7 | - | 0.0 | 1.7 | 0.0 | - | 1.4 | 1.4 |
| Articulated Trucks | 0 | 0 | 0 | 1 | - | 1 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 5 | 0 | - | 5 | 0 | 0 | 6 | 0 | - | 6 | 12 |
| % Articulated Trucks | - | 0.0 | - | 2.1 | - | 0.5 | - | - | - | 0.0 | - | 0.0 | - | 0.0 | 0.9 | - | - | 0.9 | - | 0.0 | 0.6 | 0.0 | - | 0.5 | 0.6 |
| Bicycles on Road | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Bicycles on Road | - | 0.0 | - | 0.0 | - | 0.0 | - | - | - | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | - | 0.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 |
| Pedestrians | - | - | - | - | 4 | - | - | - | - | - | 13 | - | - | - | - | - | 8 | - | - | - | - | - | 0 | - | - |
| % Pedestrians | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - | - | - | - | - | - | - |

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Count Name: IL+21+and+Lake Street TMC
Site Code:
Start Date: 05/23/2024


# Turning Movement Peak Hour Data (4:45 PM)

| Start Time | Lake Street Eastbound | | | | | | Lake Street Westbound | | | | | | Milwaukee Avenue Northbound | | | | | | Milwaukee Avenue Southbound | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | U-Turn | Left | Thru | Right | Peds | App. Total | U-Turn | Left | Thru | Right | Peds | App. Total | U-Turn | Left | Thru | Right | Peds | App. Total | U-Turn | Left | Thru | Right | Peds | App. Total | Int. Total |
| 4:45 PM | 0 | 37 | 0 | 7 | 12 | 44 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 19 | 313 | 0 | 6 | 332 | 0 | 0 | 227 | 37 | 0 | 264 | 640 |
| 5:00 PM | 0 | 51 | 0 | 9 | 4 | 60 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 13 | 291 | 0 | 8 | 304 | 0 | 0 | 229 | 30 | 1 | 259 | 623 |
| 5:15 PM | 0 | 32 | 0 | 6 | 10 | 38 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 17 | 308 | 0 | 4 | 325 | 0 | 0 | 235 | 20 | 0 | 255 | 618 |
| 5:30 PM | 0 | 39 | 0 | 10 | 10 | 49 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 29 | 267 | 1 | 18 | 297 | 0 | 1 | 236 | 35 | 1 | 272 | 618 |
| Total | 0 | 159 | 0 | 32 | 36 | 191 | 0 | 0 | 0 | 0 | 19 | 0 | 0 | 78 | 1179 | 1 | 36 | 1258 | 0 | 1 | 927 | 122 | 2 | 1050 | 2499 |
| Approach % | 0.0 | 83.2 | 0.0 | 16.8 | - | - | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 6.2 | 93.7 | 0.1 | - | - | 0.0 | 0.1 | 88.3 | 11.6 | - | - | - |
| Total % | 0.0 | 6.4 | 0.0 | 1.3 | - | 7.6 | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 3.1 | 47.2 | 0.0 | - | 50.3 | 0.0 | 0.0 | 37.1 | 4.9 | - | 42.0 | - |
| PHF | 0.000 | 0.779 | 0.000 | 0.800 | - | 0.796 | 0.000 | 0.000 | 0.000 | 0.000 | - | 0.000 | 0.000 | 0.672 | 0.942 | 0.250 | - | 0.947 | 0.000 | 0.250 | 0.982 | 0.824 | - | 0.965 | 0.976 |
| Lights | 0 | 159 | 0 | 32 | - | 191 | 0 | 0 | 0 | 0 | - | 0 | 0 | 78 | 1172 | 1 | - | 1251 | 0 | 1 | 925 | 122 | - | 1048 | 2490 |
| % Lights | - | 100.0 | - | 100.0 | - | 100.0 | - | - | - | - | - | - | - | 100.0 | 99.4 | 100.0 | - | 99.4 | - | 100.0 | 99.8 | 100.0 | - | 99.8 | 99.6 |
| Buses | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 2 | 0 | - | 2 | 0 | 0 | 1 | 0 | - | 1 | 3 |
| % Buses | - | 0.0 | - | 0.0 | - | 0.0 | - | - | - | - | - | - | - | 0.0 | 0.2 | 0.0 | - | 0.2 | - | 0.0 | 0.1 | 0.0 | - | 0.1 | 0.1 |
| Single-Unit Trucks | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 3 | 0 | - | 3 | 0 | 0 | 0 | 0 | - | 0 | 3 |
| % Single-Unit Trucks | - | 0.0 | - | 0.0 | - | 0.0 | - | - | - | - | - | - | - | 0.0 | 0.3 | 0.0 | - | 0.2 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.1 |
| Articulated Trucks | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 2 | 0 | - | 2 | 0 | 0 | 1 | 0 | - | 1 | 3 |
| % Articulated Trucks | - | 0.0 | - | 0.0 | - | 0.0 | - | - | - | - | - | - | - | 0.0 | 0.2 | 0.0 | - | 0.2 | - | 0.0 | 0.1 | 0.0 | - | 0.1 | 0.1 |
| Bicycles on Road | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Bicycles on Road | - | 0.0 | - | 0.0 | - | 0.0 | - | - | - | - | - | - | - | 0.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 |
| Pedestrians | - | - | - | - | 36 | - | - | - | - | - | 19 | - | - | - | - | - | 36 | - | - | - | - | - | 2 | - | - |
| % Pedestrians | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - |

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Count Name: IL+21+and+Metra+Access+Drive
TMC
Site Code:
Start Date: 05/23/2024


# Turning Movement Data

| Start Time | Parking Lot Access Drive Eastbound | | | | | | Parking Lot Access Drive Westbound | | | | | | Milwaukee Avenue Northbound | | | | | | Milwaukee Avenue Southbound | | | | | | Int. Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | U-Turn | Left | Thru | Right | Peds | App. Total | U-Turn | Left | Thru | Right | Peds | App. Total | U-Turn | Left | Thru | Right | Peds | App. Total | U-Turn | Left | Thru | Right | Peds | App. Total | |
| 7:00 AM | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 108 | 1 | 0 | 109 | 0 | 1 | 192 | 0 | 14 | 193 | 304 |
| 7:15 AM | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 157 | 0 | 0 | 157 | 0 | 0 | 293 | 0 | 1 | 293 | 451 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 141 | 1 | 0 | 142 | 0 | 0 | 280 | 0 | 10 | 280 | 422 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 127 | 0 | 0 | 127 | 0 | 0 | 317 | 0 | 15 | 317 | 444 |
| Hourly Total | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 24 | 0 | 0 | 0 | 533 | 2 | 0 | 535 | 0 | 1 | 1082 | 0 | 40 | 1083 | 1621 |
| 8:00 AM | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 151 | 0 | 0 | 151 | 0 | 0 | 329 | 0 | 1 | 329 | 481 |
| 8:15 AM | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 159 | 0 | 0 | 159 | 0 | 0 | 349 | 0 | 1 | 349 | 509 |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 177 | 0 | 0 | 177 | 0 | 0 | 303 | 0 | 1 | 303 | 480 |
| 8:45 AM | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 1 | 166 | 0 | 0 | 167 | 0 | 0 | 280 | 0 | 1 | 280 | 448 |
| Hourly Total | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 15 | 0 | 0 | 1 | 653 | 0 | 0 | 654 | 0 | 0 | 1261 | 0 | 4 | 1261 | 1918 |
| *** BREAK *** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 2:00 PM | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 289 | 1 | 0 | 290 | 0 | 0 | 201 | 0 | 1 | 201 | 492 |
| 2:15 PM | 0 | 0 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 1 | 3 | 1 | 0 | 0 | 271 | 0 | 0 | 271 | 0 | 0 | 206 | 0 | 2 | 206 | 482 |
| 2:30 PM | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 285 | 0 | 0 | 285 | 0 | 0 | 215 | 0 | 4 | 215 | 501 |
| 2:45 PM | 0 | 0 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 281 | 0 | 0 | 281 | 0 | 0 | 243 | 0 | 3 | 243 | 528 |
| Hourly Total | 0 | 0 | 0 | 10 | 0 | 10 | 0 | 0 | 0 | 1 | 5 | 1 | 0 | 0 | 1126 | 1 | 0 | 1127 | 0 | 0 | 865 | 0 | 10 | 865 | 2003 |
| 3:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 265 | 0 | 0 | 265 | 0 | 0 | 231 | 0 | 5 | 231 | 496 |
| 3:15 PM | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 327 | 0 | 0 | 327 | 0 | 0 | 237 | 0 | 4 | 237 | 565 |
| 3:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 316 | 0 | 0 | 316 | 0 | 0 | 253 | 0 | 1 | 253 | 569 |
| 3:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 5 | 3 | 0 | 0 | 323 | 0 | 0 | 323 | 0 | 0 | 253 | 0 | 7 | 253 | 579 |
| Hourly Total | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 3 | 15 | 3 | 0 | 0 | 1231 | 0 | 0 | 1231 | 0 | 0 | 974 | 0 | 17 | 974 | 2209 |
| 4:00 PM | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 319 | 0 | 0 | 319 | 0 | 0 | 201 | 0 | 2 | 201 | 521 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 366 | 0 | 0 | 366 | 0 | 0 | 222 | 0 | 3 | 222 | 588 |
| 4:30 PM | 0 | 0 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 330 | 0 | 0 | 330 | 0 | 0 | 233 | 0 | 0 | 233 | 567 |
| 4:45 PM | 0 | 0 | 0 | 10 | 0 | 10 | 0 | 0 | 0 | 5 | 2 | 5 | 0 | 0 | 338 | 0 | 0 | 338 | 0 | 0 | 225 | 0 | 26 | 225 | 578 |
| Hourly Total | 0 | 0 | 0 | 15 | 0 | 15 | 0 | 0 | 0 | 5 | 16 | 5 | 0 | 0 | 1353 | 0 | 0 | 1353 | 0 | 0 | 881 | 0 | 31 | 881 | 2254 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 391 | 0 | 0 | 391 | 0 | 0 | 273 | 0 | 2 | 273 | 665 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 335 | 0 | 0 | 335 | 0 | 0 | 274 | 0 | 2 | 274 | 609 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 289 | 0 | 0 | 289 | 0 | 0 | 273 | 0 | 0 | 273 | 562 |
| 5:45 PM | 0 | 0 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 5 | 0 | 5 | 0 | 0 | 255 | 0 | 0 | 255 | 0 | 0 | 252 | 0 | 27 | 252 | 516 |
| Hourly Total | 0 | 0 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 6 | 5 | 6 | 0 | 0 | 1270 | 0 | 0 | 1270 | 0 | 0 | 1072 | 0 | 31 | 1072 | 2352 |
| Grand Total | 0 | 0 | 0 | 36 | 0 | 36 | 0 | 0 | 0 | 15 | 80 | 15 | 0 | 1 | 6166 | 3 | 0 | 6170 | 0 | 1 | 6135 | 0 | 133 | 6136 | 12357 |
| Approach % | 0.0 | 0.0 | 0.0 | 100.0 | - | - | 0.0 | 0.0 | 0.0 | 100.0 | - | - | 0.0 | 0.0 | 99.9 | 0.0 | - | - | 0.0 | 0.0 | 100.0 | 0.0 | - | - | - |
| Total % | 0.0 | 0.0 | 0.0 | 0.3 | - | 0.3 | 0.0 | 0.0 | 0.0 | 0.1 | - | 0.1 | 0.0 | 0.0 | 49.9 | 0.0 | - | 49.9 | 0.0 | 0.0 | 49.6 | 0.0 | - | 49.7 | - |
| Lights | 0 | 0 | 0 | 36 | - | 36 | 0 | 0 | 0 | 15 | - | 15 | 0 | 0 | 6045 | 3 | - | 6048 | 0 | 1 | 6028 | 0 | - | 6029 | 12128 |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| % Lights | - | - | - | 100.0 | - | 100.0 | - | - | - | 100.0 | - | 100.0 | - | 0.0 | 98.0 | 100.0 | - | 98.0 | - | 100.0 | 98.3 | - | - | 98.3 | 98.1 |
| Buses | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 24 | 0 | - | 24 | 0 | 0 | 39 | 0 | - | 39 | 63 |
| % Buses | - | - | - | 0.0 | - | 0.0 | - | - | - | 0.0 | - | 0.0 | - | 0.0 | 0.4 | 0.0 | - | 0.4 | - | 0.0 | 0.6 | - | - | 0.6 | 0.5 |
| Single-Unit Trucks | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 71 | 0 | - | 71 | 0 | 0 | 49 | 0 | - | 49 | 120 |
| % Single-Unit Trucks | - | - | - | 0.0 | - | 0.0 | - | - | - | 0.0 | - | 0.0 | - | 0.0 | 1.2 | 0.0 | - | 1.2 | - | 0.0 | 0.8 | - | - | 0.8 | 1.0 |
| Articulated Trucks | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 26 | 0 | - | 26 | 0 | 0 | 19 | 0 | - | 19 | 45 |
| % Articulated Trucks | - | - | - | 0.0 | - | 0.0 | - | - | - | 0.0 | - | 0.0 | - | 0.0 | 0.4 | 0.0 | - | 0.4 | - | 0.0 | 0.3 | - | - | 0.3 | 0.4 |
| Bicycles on Road | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 1 | 0 | 0 | - | 1 | 0 | 0 | 0 | 0 | - | 0 | 1 |
| % Bicycles on Road | - | - | - | 0.0 | - | 0.0 | - | - | - | 0.0 | - | 0.0 | - | 100.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | - | 0.0 | 0.0 |
| Pedestrians | - | - | - | - | 0 | - | - | - | - | - | 80 | - | - | - | - | - | 0 | - | - | - | - | - | 133 | - | - |
| % Pedestrians | - | - | - | - | - | - | - | - | - | - | 100.0 | - | - | - | - | - | - | - | - | - | - | - | 100.0 | - | - |

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Count Name: IL+21+and+Metra+Access+Drive
TMC
Site Code:
Start Date: 05/23/2024


# Turning Movement Peak Hour Data (8:00 AM)

| Start Time | Parking Lot Access Drive Eastbound | | | | | | Parking Lot Access Drive Westbound | | | | | | Milwaukee Avenue Northbound | | | | | | Milwaukee Avenue Southbound | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | U-Turn | Left | Thru | Right | Peds | App. Total | U-Turn | Left | Thru | Right | Peds | App. Total | U-Turn | Left | Thru | Right | Peds | App. Total | U-Turn | Left | Thru | Right | Peds | App. Total | Int. Total |
| 8:00 AM | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 151 | 0 | 0 | 151 | 0 | 0 | 329 | 0 | 1 | 329 | 481 |
| 8:15 AM | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 159 | 0 | 0 | 159 | 0 | 0 | 349 | 0 | 1 | 349 | 509 |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 177 | 0 | 0 | 177 | 0 | 0 | 303 | 0 | 1 | 303 | 480 |
| 8:45 AM | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 1 | 166 | 0 | 0 | 167 | 0 | 0 | 280 | 0 | 1 | 280 | 448 |
| Total | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 15 | 0 | 0 | 1 | 653 | 0 | 0 | 654 | 0 | 0 | 1261 | 0 | 4 | 1261 | 1918 |
| Approach % | 0.0 | 0.0 | 0.0 | 100.0 | - | - | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.2 | 99.8 | 0.0 | - | - | 0.0 | 0.0 | 100.0 | 0.0 | - | - | - |
| Total % | 0.0 | 0.0 | 0.0 | 0.2 | - | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.1 | 34.0 | 0.0 | - | 34.1 | 0.0 | 0.0 | 65.7 | 0.0 | - | 65.7 | - |
| PHF | 0.000 | 0.000 | 0.000 | 0.750 | - | 0.750 | 0.000 | 0.000 | 0.000 | 0.000 | - | 0.000 | 0.000 | 0.250 | 0.922 | 0.000 | - | 0.924 | 0.000 | 0.000 | 0.903 | 0.000 | - | 0.903 | 0.942 |
| Lights | 0 | 0 | 0 | 3 | - | 3 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 631 | 0 | - | 631 | 0 | 0 | 1223 | 0 | - | 1223 | 1857 |
| % Lights | - | - | - | 100.0 | - | 100.0 | - | - | - | - | - | - | - | 0.0 | 96.6 | - | - | 96.5 | - | - | 97.0 | - | - | 97.0 | 96.8 |
| Buses | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 7 | 0 | - | 7 | 0 | 0 | 15 | 0 | - | 15 | 22 |
| % Buses | - | - | - | 0.0 | - | 0.0 | - | - | - | - | - | - | - | 0.0 | 1.1 | - | - | 1.1 | - | - | 1.2 | - | - | 1.2 | 1.1 |
| Single-Unit Trucks | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 11 | 0 | - | 11 | 0 | 0 | 16 | 0 | - | 16 | 27 |
| % Single-Unit Trucks | - | - | - | 0.0 | - | 0.0 | - | - | - | - | - | - | - | 0.0 | 1.7 | - | - | 1.7 | - | - | 1.3 | - | - | 1.3 | 1.4 |
| Articulated Trucks | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 4 | 0 | - | 4 | 0 | 0 | 7 | 0 | - | 7 | 11 |
| % Articulated Trucks | - | - | - | 0.0 | - | 0.0 | - | - | - | - | - | - | - | 0.0 | 0.6 | - | - | 0.6 | - | - | 0.6 | - | - | 0.6 | 0.6 |
| Bicycles on Road | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 1 | 0 | 0 | - | 1 | 0 | 0 | 0 | 0 | - | 0 | 1 |
| % Bicycles on Road | - | - | - | 0.0 | - | 0.0 | - | - | - | - | - | - | - | 100.0 | 0.0 | - | - | 0.2 | - | - | 0.0 | - | - | 0.0 | 0.1 |
| Pedestrians | - | - | - | - | 0 | - | - | - | - | - | 15 | - | - | - | - | - | 0 | - | - | - | - | - | 4 | - | - |
| % Pedestrians | - | - | - | - | - | - | - | - | - | - | 100.0 | - | - | - | - | - | - | - | - | - | - | - | 100.0 | - | - |

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Count Name: IL+21+and+Metra+Access+Drive
TMC
Site Code:
Start Date: 05/23/2024


# Turning Movement Peak Hour Data (4:45 PM)

| Start Time | Parking Lot Access Drive Eastbound | | | | | | Parking Lot Access Drive Westbound | | | | | | Milwaukee Avenue Northbound | | | | | | Milwaukee Avenue Southbound | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | U-Turn | Left | Thru | Right | Peds | App. Total | U-Turn | Left | Thru | Right | Peds | App. Total | U-Turn | Left | Thru | Right | Peds | App. Total | U-Turn | Left | Thru | Right | Peds | App. Total | Int. Total |
| 4:45 PM | 0 | 0 | 0 | 10 | 0 | 10 | 0 | 0 | 0 | 5 | 2 | 5 | 0 | 0 | 338 | 0 | 0 | 338 | 0 | 0 | 225 | 0 | 26 | 225 | 578 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 391 | 0 | 0 | 391 | 0 | 0 | 273 | 0 | 2 | 273 | 665 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 335 | 0 | 0 | 335 | 0 | 0 | 274 | 0 | 2 | 274 | 609 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 289 | 0 | 0 | 289 | 0 | 0 | 273 | 0 | 0 | 273 | 562 |
| Total | 0 | 0 | 0 | 10 | 0 | 10 | 0 | 0 | 0 | 6 | 7 | 6 | 0 | 0 | 1353 | 0 | 0 | 1353 | 0 | 0 | 1045 | 0 | 30 | 1045 | 2414 |
| Approach % | 0.0 | 0.0 | 0.0 | 100.0 | - | - | 0.0 | 0.0 | 0.0 | 100.0 | - | - | 0.0 | 0.0 | 100.0 | 0.0 | - | - | 0.0 | 0.0 | 100.0 | 0.0 | - | - | - |
| Total % | 0.0 | 0.0 | 0.0 | 0.4 | - | 0.4 | 0.0 | 0.0 | 0.0 | 0.2 | - | 0.2 | 0.0 | 0.0 | 56.0 | 0.0 | - | 56.0 | 0.0 | 0.0 | 43.3 | 0.0 | - | 43.3 | - |
| PHF | 0.000 | 0.000 | 0.000 | 0.250 | - | 0.250 | 0.000 | 0.000 | 0.000 | 0.300 | - | 0.300 | 0.000 | 0.000 | 0.865 | 0.000 | - | 0.865 | 0.000 | 0.000 | 0.953 | 0.000 | - | 0.953 | 0.908 |
| Lights | 0 | 0 | 0 | 10 | - | 10 | 0 | 0 | 0 | 6 | - | 6 | 0 | 0 | 1347 | 0 | - | 1347 | 0 | 0 | 1043 | 0 | - | 1043 | 2406 |
| % Lights | - | - | - | 100.0 | - | 100.0 | - | - | - | 100.0 | - | 100.0 | - | - | 99.6 | - | - | 99.6 | - | - | 99.8 | - | - | 99.8 | 99.7 |
| Buses | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 2 | 0 | - | 2 | 0 | 0 | 0 | 0 | - | 0 | 2 |
| % Buses | - | - | - | 0.0 | - | 0.0 | - | - | - | 0.0 | - | 0.0 | - | - | 0.1 | - | - | 0.1 | - | - | 0.0 | - | - | 0.0 | 0.1 |
| Single-Unit Trucks | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 2 | 0 | - | 2 | 0 | 0 | 2 | 0 | - | 2 | 4 |
| % Single-Unit Trucks | - | - | - | 0.0 | - | 0.0 | - | - | - | 0.0 | - | 0.0 | - | - | 0.1 | - | - | 0.1 | - | - | 0.2 | - | - | 0.2 | 0.2 |
| Articulated Trucks | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 2 | 0 | - | 2 | 0 | 0 | 0 | 0 | - | 0 | 2 |
| % Articulated Trucks | - | - | - | 0.0 | - | 0.0 | - | - | - | 0.0 | - | 0.0 | - | - | 0.1 | - | - | 0.1 | - | - | 0.0 | - | - | 0.0 | 0.1 |
| Bicycles on Road | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Bicycles on Road | - | - | - | 0.0 | - | 0.0 | - | - | - | 0.0 | - | 0.0 | - | - | 0.0 | - | - | 0.0 | - | - | 0.0 | - | - | 0.0 | 0.0 |
| Pedestrians | - | - | - | - | 0 | - | - | - | - | - | 7 | - | - | - | - | - | 0 | - | - | - | - | - | 30 | - | - |
| % Pedestrians | - | - | - | - | - | - | - | - | - | - | 100.0 | - | - | - | - | - | - | - | - | - | - | - | 100.0 | - | - |

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Count Name: Lake Street and Brainerd Avenue
TMC
Site Code:
Start Date: 05/23/2024


# Turning Movement Data

| Start Time | Lake Street Eastbound | | | | | | Lake Street Westbound | | | | | | Brainerd Avenue Northbound | | | | | | Brainerd Avenue Southbound | | | | | | Int. Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | U-Turn | Left | Thru | Right | Peds | App. Total | U-Turn | Left | Thru | Right | Peds | App. Total | U-Turn | Left | Thru | Right | Peds | App. Total | U-Turn | Left | Thru | Right | Peds | App. Total | |
| 7:00 AM | 0 | 10 | 13 | 16 | 0 | 39 | 0 | 3 | 5 | 15 | 2 | 23 | 0 | 9 | 23 | 11 | 1 | 43 | 0 | 5 | 3 | 2 | 0 | 10 | 115 |
| 7:15 AM | 0 | 1 | 14 | 18 | 2 | 33 | 0 | 7 | 4 | 6 | 4 | 17 | 0 | 8 | 6 | 11 | 4 | 25 | 0 | 4 | 7 | 2 | 1 | 13 | 88 |
| 7:30 AM | 0 | 3 | 15 | 19 | 3 | 37 | 0 | 7 | 13 | 12 | 6 | 32 | 0 | 9 | 10 | 9 | 4 | 28 | 0 | 4 | 5 | 2 | 2 | 11 | 108 |
| 7:45 AM | 0 | 5 | 15 | 38 | 0 | 58 | 0 | 15 | 13 | 7 | 5 | 35 | 0 | 12 | 16 | 17 | 5 | 45 | 0 | 3 | 10 | 0 | 1 | 13 | 151 |
| Hourly Total | 0 | 19 | 57 | 91 | 5 | 167 | 0 | 32 | 35 | 40 | 17 | 107 | 0 | 38 | 55 | 48 | 14 | 141 | 0 | 16 | 25 | 6 | 4 | 47 | 462 |
| 8:00 AM | 0 | 0 | 24 | 31 | 0 | 55 | 0 | 29 | 9 | 3 | 2 | 41 | 0 | 14 | 1 | 19 | 0 | 34 | 0 | 3 | 0 | 3 | 1 | 6 | 136 |
| 8:15 AM | 0 | 1 | 15 | 24 | 0 | 40 | 0 | 48 | 11 | 2 | 0 | 61 | 0 | 11 | 1 | 28 | 2 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 141 |
| 8:30 AM | 0 | 3 | 11 | 39 | 0 | 53 | 0 | 40 | 6 | 1 | 0 | 47 | 0 | 18 | 3 | 31 | 0 | 52 | 0 | 1 | 3 | 2 | 0 | 6 | 158 |
| 8:45 AM | 0 | 2 | 11 | 20 | 1 | 33 | 0 | 19 | 7 | 11 | 2 | 37 | 0 | 15 | 5 | 20 | 0 | 40 | 0 | 4 | 4 | 2 | 2 | 10 | 120 |
| Hourly Total | 0 | 6 | 61 | 114 | 1 | 181 | 0 | 136 | 33 | 17 | 4 | 186 | 0 | 58 | 10 | 98 | 2 | 166 | 0 | 8 | 7 | 7 | 3 | 22 | 555 |
| *** BREAK *** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 2:00 PM | 0 | 1 | 9 | 14 | 1 | 24 | 0 | 17 | 12 | 2 | 1 | 31 | 0 | 20 | 3 | 18 | 6 | 41 | 0 | 4 | 1 | 0 | 0 | 5 | 101 |
| 2:15 PM | 0 | 0 | 9 | 15 | 0 | 24 | 0 | 19 | 17 | 2 | 0 | 38 | 0 | 32 | 1 | 23 | 0 | 56 | 0 | 3 | 3 | 0 | 0 | 6 | 124 |
| 2:30 PM | 0 | 1 | 19 | 22 | 0 | 42 | 0 | 13 | 12 | 1 | 0 | 26 | 0 | 25 | 1 | 24 | 1 | 50 | 0 | 2 | 2 | 3 | 0 | 7 | 125 |
| 2:45 PM | 0 | 0 | 16 | 29 | 0 | 45 | 0 | 23 | 12 | 2 | 5 | 37 | 0 | 23 | 8 | 25 | 1 | 56 | 0 | 1 | 4 | 1 | 0 | 6 | 144 |
| Hourly Total | 0 | 2 | 53 | 80 | 1 | 135 | 0 | 72 | 53 | 7 | 6 | 132 | 0 | 100 | 13 | 90 | 8 | 203 | 0 | 10 | 10 | 4 | 0 | 24 | 494 |
| 3:00 PM | 0 | 0 | 19 | 23 | 0 | 42 | 0 | 14 | 5 | 1 | 1 | 20 | 0 | 24 | 0 | 18 | 1 | 42 | 0 | 0 | 3 | 0 | 0 | 3 | 107 |
| 3:15 PM | 0 | 0 | 16 | 22 | 0 | 38 | 0 | 13 | 9 | 4 | 0 | 26 | 0 | 31 | 2 | 31 | 0 | 64 | 0 | 3 | 3 | 0 | 1 | 6 | 134 |
| 3:30 PM | 0 | 2 | 11 | 17 | 0 | 30 | 0 | 19 | 11 | 3 | 1 | 33 | 0 | 53 | 3 | 20 | 1 | 76 | 0 | 1 | 1 | 0 | 0 | 2 | 141 |
| 3:45 PM | 0 | 2 | 11 | 22 | 0 | 35 | 0 | 14 | 12 | 4 | 4 | 30 | 0 | 61 | 10 | 30 | 1 | 101 | 0 | 8 | 11 | 1 | 2 | 20 | 186 |
| Hourly Total | 0 | 4 | 57 | 84 | 0 | 145 | 0 | 60 | 37 | 12 | 6 | 109 | 0 | 169 | 15 | 99 | 3 | 283 | 0 | 12 | 18 | 1 | 3 | 31 | 568 |
| 4:00 PM | 0 | 2 | 19 | 16 | 0 | 37 | 0 | 8 | 17 | 2 | 1 | 27 | 0 | 24 | 3 | 31 | 1 | 58 | 0 | 1 | 3 | 1 | 0 | 5 | 127 |
| 4:15 PM | 0 | 0 | 11 | 17 | 0 | 28 | 0 | 12 | 18 | 5 | 1 | 35 | 0 | 32 | 1 | 27 | 2 | 60 | 0 | 1 | 4 | 1 | 0 | 6 | 129 |
| 4:30 PM | 0 | 2 | 9 | 28 | 0 | 39 | 0 | 16 | 18 | 3 | 2 | 37 | 0 | 40 | 5 | 22 | 1 | 67 | 0 | 3 | 0 | 1 | 1 | 4 | 147 |
| 4:45 PM | 0 | 4 | 12 | 20 | 0 | 36 | 0 | 15 | 17 | 10 | 4 | 42 | 0 | 34 | 13 | 25 | 0 | 72 | 0 | 17 | 25 | 10 | 0 | 52 | 202 |
| Hourly Total | 0 | 8 | 51 | 81 | 0 | 140 | 0 | 51 | 70 | 20 | 8 | 141 | 0 | 130 | 22 | 105 | 4 | 257 | 0 | 22 | 32 | 13 | 1 | 67 | 605 |
| 5:00 PM | 0 | 0 | 12 | 17 | 0 | 29 | 0 | 14 | 14 | 3 | 1 | 31 | 0 | 41 | 3 | 28 | 1 | 72 | 0 | 5 | 5 | 1 | 0 | 11 | 143 |
| 5:15 PM | 0 | 0 | 9 | 15 | 0 | 24 | 0 | 12 | 9 | 1 | 1 | 22 | 0 | 21 | 1 | 24 | 2 | 46 | 0 | 1 | 2 | 0 | 1 | 3 | 95 |
| 5:30 PM | 0 | 1 | 6 | 13 | 1 | 20 | 0 | 17 | 25 | 5 | 0 | 47 | 0 | 30 | 5 | 24 | 4 | 59 | 0 | 2 | 0 | 0 | 0 | 2 | 128 |
| 5:45 PM | 0 | 1 | 13 | 18 | 0 | 32 | 0 | 13 | 20 | 4 | 5 | 37 | 0 | 18 | 4 | 21 | 0 | 43 | 0 | 16 | 22 | 6 | 1 | 44 | 156 |
| Hourly Total | 0 | 2 | 40 | 63 | 1 | 105 | 0 | 56 | 68 | 13 | 7 | 137 | 0 | 110 | 13 | 97 | 7 | 220 | 0 | 24 | 29 | 7 | 2 | 60 | 522 |
| Grand Total | 0 | 41 | 319 | 513 | 8 | 873 | 0 | 407 | 296 | 109 | 48 | 812 | 0 | 605 | 128 | 537 | 38 | 1270 | 0 | 92 | 121 | 38 | 13 | 251 | 3206 |
| Approach % | 0.0 | 4.7 | 36.5 | 58.8 | - | - | 0.0 | 50.1 | 36.5 | 13.4 | - | - | 0.0 | 47.6 | 10.1 | 42.3 | - | - | 0.0 | 36.7 | 48.2 | 15.1 | - | - | - |
| Total % | 0.0 | 1.3 | 10.0 | 16.0 | - | 27.2 | 0.0 | 12.7 | 9.2 | 3.4 | - | 25.3 | 0.0 | 18.9 | 4.0 | 16.7 | - | 39.6 | 0.0 | 2.9 | 3.8 | 1.2 | - | 7.8 | - |
| Lights | 0 | 39 | 310 | 502 | - | 851 | 0 | 399 | 290 | 108 | - | 797 | 0 | 595 | 123 | 533 | - | 1251 | 0 | 89 | 116 | 36 | - | 241 | 3140 |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| % Lights | - | 95.1 | 97.2 | 97.9 | - | 97.5 | - | 98.0 | 98.0 | 99.1 | - | 98.2 | - | 98.3 | 96.1 | 99.3 | - | 98.5 | - | 96.7 | 95.9 | 94.7 | - | 96.0 | 97.9 |
| Buses | 0 | 0 | 5 | 8 | - | 13 | 0 | 7 | 3 | 0 | - | 10 | 0 | 3 | 0 | 0 | - | 3 | 0 | 0 | 0 | 0 | - | 0 | 26 |
| % Buses | - | 0.0 | 1.6 | 1.6 | - | 1.5 | - | 1.7 | 1.0 | 0.0 | - | 1.2 | - | 0.5 | 0.0 | 0.0 | - | 0.2 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.8 |
| Single-Unit Trucks | 0 | 0 | 1 | 2 | - | 3 | 0 | 1 | 3 | 1 | - | 5 | 0 | 3 | 0 | 4 | - | 7 | 0 | 3 | 0 | 0 | - | 3 | 18 |
| % Single-Unit Trucks | - | 0.0 | 0.3 | 0.4 | - | 0.3 | - | 0.2 | 1.0 | 0.9 | - | 0.6 | - | 0.5 | 0.0 | 0.7 | - | 0.6 | - | 3.3 | 0.0 | 0.0 | - | 1.2 | 0.6 |
| Articulated Trucks | 0 | 0 | 2 | 0 | - | 2 | 0 | 0 | 0 | 0 | - | 0 | 0 | 1 | 0 | 0 | - | 1 | 0 | 0 | 0 | 0 | - | 0 | 3 |
| % Articulated Trucks | - | 0.0 | 0.6 | 0.0 | - | 0.2 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | - | 0.2 | 0.0 | 0.0 | - | 0.1 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.1 |
| Bicycles on Road | 0 | 2 | 1 | 1 | - | 4 | 0 | 0 | 0 | 0 | - | 0 | 0 | 3 | 5 | 0 | - | 8 | 0 | 0 | 5 | 2 | - | 7 | 19 |
| % Bicycles on Road | - | 4.9 | 0.3 | 0.2 | - | 0.5 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | - | 0.5 | 3.9 | 0.0 | - | 0.6 | - | 0.0 | 4.1 | 5.3 | - | 2.8 | 0.6 |
| Pedestrians | - | - | - | - | 8 | - | - | - | - | - | 48 | - | - | - | - | - | 38 | - | - | - | - | - | 13 | - | - |
| % Pedestrians | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - |

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Count Name: Lake Street and Brainerd Avenue
TMC
Site Code:
Start Date: 05/23/2024


# Turning Movement Peak Hour Data (8:00 AM)

| Start Time | Lake Street Eastbound | | | | | | Lake Street Westbound | | | | | | Brainerd Avenue Northbound | | | | | | Brainerd Avenue Southbound | | | | | | Int. Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | U-Turn | Left | Thru | Right | Peds | App. Total | U-Turn | Left | Thru | Right | Peds | App. Total | U-Turn | Left | Thru | Right | Peds | App. Total | U-Turn | Left | Thru | Right | Peds | App. Total | |
| 8:00 AM | 0 | 0 | 24 | 31 | 0 | 55 | 0 | 29 | 9 | 3 | 2 | 41 | 0 | 14 | 1 | 19 | 0 | 34 | 0 | 3 | 0 | 3 | 1 | 6 | 136 |
| 8:15 AM | 0 | 1 | 15 | 24 | 0 | 40 | 0 | 48 | 11 | 2 | 0 | 61 | 0 | 11 | 1 | 28 | 2 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 141 |
| 8:30 AM | 0 | 3 | 11 | 39 | 0 | 53 | 0 | 40 | 6 | 1 | 0 | 47 | 0 | 18 | 3 | 31 | 0 | 52 | 0 | 1 | 3 | 2 | 0 | 6 | 158 |
| 8:45 AM | 0 | 2 | 11 | 20 | 1 | 33 | 0 | 19 | 7 | 11 | 2 | 37 | 0 | 15 | 5 | 20 | 0 | 40 | 0 | 4 | 4 | 2 | 2 | 10 | 120 |
| Total | 0 | 6 | 61 | 114 | 1 | 181 | 0 | 136 | 33 | 17 | 4 | 186 | 0 | 58 | 10 | 98 | 2 | 166 | 0 | 8 | 7 | 7 | 3 | 22 | 555 |
| Approach % | 0.0 | 3.3 | 33.7 | 63.0 | - | - | 0.0 | 73.1 | 17.7 | 9.1 | - | - | 0.0 | 34.9 | 6.0 | 59.0 | - | - | 0.0 | 36.4 | 31.8 | 31.8 | - | - | - |
| Total % | 0.0 | 1.1 | 11.0 | 20.5 | - | 32.6 | 0.0 | 24.5 | 5.9 | 3.1 | - | 33.5 | 0.0 | 10.5 | 1.8 | 17.7 | - | 29.9 | 0.0 | 1.4 | 1.3 | 1.3 | - | 4.0 | - |
| PHF | 0.000 | 0.500 | 0.635 | 0.731 | - | 0.823 | 0.000 | 0.708 | 0.750 | 0.386 | - | 0.762 | 0.000 | 0.806 | 0.500 | 0.790 | - | 0.798 | 0.000 | 0.500 | 0.438 | 0.583 | - | 0.550 | 0.878 |
| Lights | 0 | 6 | 58 | 113 | - | 177 | 0 | 130 | 30 | 16 | - | 176 | 0 | 58 | 10 | 98 | - | 166 | 0 | 8 | 6 | 5 | - | 19 | 538 |
| % Lights | - | 100.0 | 95.1 | 99.1 | - | 97.8 | - | 95.6 | 90.9 | 94.1 | - | 94.6 | - | 100.0 | 100.0 | 100.0 | - | 100.0 | - | 100.0 | 85.7 | 71.4 | - | 86.4 | 96.9 |
| Buses | 0 | 0 | 3 | 1 | - | 4 | 0 | 5 | 2 | 0 | - | 7 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 11 |
| % Buses | - | 0.0 | 4.9 | 0.9 | - | 2.2 | - | 3.7 | 6.1 | 0.0 | - | 3.8 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | 2.0 |
| Single-Unit Trucks | 0 | 0 | 0 | 0 | - | 0 | 0 | 1 | 1 | 1 | - | 3 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 3 |
| % Single-Unit Trucks | - | 0.0 | 0.0 | 0.0 | - | 0.0 | - | 0.7 | 3.0 | 5.9 | - | 1.6 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.5 |
| Articulated Trucks | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Articulated Trucks | - | 0.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 |
| Bicycles on Road | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 1 | 2 | - | 3 | 3 |
| % Bicycles on Road | - | 0.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 14.3 | 28.6 | - | 13.6 | 0.5 |
| Pedestrians | - | - | - | - | 1 | - | - | - | - | - | 4 | - | - | - | - | - | 2 | - | - | - | - | - | 3 | - | - |
| % Pedestrians | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - |

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Count Name: Lake Street and Brainerd Avenue
TMC
Site Code:
Start Date: 05/23/2024


# Turning Movement Peak Hour Data (4:45 PM)

| Start Time | Lake Street Eastbound | | | | | | Lake Street Westbound | | | | | | Brainerd Avenue Northbound | | | | | | Brainerd Avenue Southbound | | | | | | Int. Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | U-Turn | Left | Thru | Right | Peds | App. Total | U-Turn | Left | Thru | Right | Peds | App. Total | U-Turn | Left | Thru | Right | Peds | App. Total | U-Turn | Left | Thru | Right | Peds | App. Total | |
| 4:45 PM | 0 | 4 | 12 | 20 | 0 | 36 | 0 | 15 | 17 | 10 | 4 | 42 | 0 | 34 | 13 | 25 | 0 | 72 | 0 | 17 | 25 | 10 | 0 | 52 | 202 |
| 5:00 PM | 0 | 0 | 12 | 17 | 0 | 29 | 0 | 14 | 14 | 3 | 1 | 31 | 0 | 41 | 3 | 28 | 1 | 72 | 0 | 5 | 5 | 1 | 0 | 11 | 143 |
| 5:15 PM | 0 | 0 | 9 | 15 | 0 | 24 | 0 | 12 | 9 | 1 | 1 | 22 | 0 | 21 | 1 | 24 | 2 | 46 | 0 | 1 | 2 | 0 | 1 | 3 | 95 |
| 5:30 PM | 0 | 1 | 6 | 13 | 1 | 20 | 0 | 17 | 25 | 5 | 0 | 47 | 0 | 30 | 5 | 24 | 4 | 59 | 0 | 2 | 0 | 0 | 0 | 2 | 128 |
| Total | 0 | 5 | 39 | 65 | 1 | 109 | 0 | 58 | 65 | 19 | 6 | 142 | 0 | 126 | 22 | 101 | 7 | 249 | 0 | 25 | 32 | 11 | 1 | 68 | 568 |
| Approach % | 0.0 | 4.6 | 35.8 | 59.6 | - | - | 0.0 | 40.8 | 45.8 | 13.4 | - | - | 0.0 | 50.6 | 8.8 | 40.6 | - | - | 0.0 | 36.8 | 47.1 | 16.2 | - | - | - |
| Total % | 0.0 | 0.9 | 6.9 | 11.4 | - | 19.2 | 0.0 | 10.2 | 11.4 | 3.3 | - | 25.0 | 0.0 | 22.2 | 3.9 | 17.8 | - | 43.8 | 0.0 | 4.4 | 5.6 | 1.9 | - | 12.0 | - |
| PHF | 0.000 | 0.313 | 0.813 | 0.813 | - | 0.757 | 0.000 | 0.853 | 0.650 | 0.475 | - | 0.755 | 0.000 | 0.768 | 0.423 | 0.902 | - | 0.865 | 0.000 | 0.368 | 0.320 | 0.275 | - | 0.327 | 0.703 |
| Lights | 0 | 4 | 39 | 65 | - | 108 | 0 | 58 | 65 | 19 | - | 142 | 0 | 125 | 21 | 101 | - | 247 | 0 | 25 | 32 | 11 | - | 68 | 565 |
| % Lights | - | 80.0 | 100.0 | 100.0 | - | 99.1 | - | 100.0 | 100.0 | 100.0 | - | 100.0 | - | 99.2 | 95.5 | 100.0 | - | 99.2 | - | 100.0 | 100.0 | 100.0 | - | 100.0 | 99.5 |
| Buses | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Buses | - | 0.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 |
| Single-Unit Trucks | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Single-Unit Trucks | - | 0.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 |
| Articulated Trucks | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Articulated Trucks | - | 0.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 |
| Bicycles on Road | 0 | 1 | 0 | 0 | - | 1 | 0 | 0 | 0 | 0 | - | 0 | 0 | 1 | 1 | 0 | - | 2 | 0 | 0 | 0 | 0 | - | 0 | 3 |
| % Bicycles on Road | - | 20.0 | 0.0 | 0.0 | - | 0.9 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | - | 0.8 | 4.5 | 0.0 | - | 0.8 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.5 |
| Pedestrians | - | - | - | - | 1 | - | - | - | - | - | 6 | - | - | - | - | - | 7 | - | - | - | - | - | 1 | - | - |
| % Pedestrians | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - |

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Count Name: Lake Street with Parking Lot Access Drive (east) TMC
Site Code:
Start Date: 05/23/2024


# Turning Movement Data

| Start Time | Lake Street Eastbound | | | | | Lake Street Westbound | | | | | Parking Lot Access Drive Southbound | | | | | Int. Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | U-Turn | Left | Thru | Peds | App. Total | U-Turn | Thru | Right | Peds | App. Total | U-Turn | Left | Right | Peds | App. Total | |
| 7:00 AM | 0 | 1 | 23 | 0 | 24 | 0 | 25 | 0 | 1 | 25 | 0 | 0 | 0 | 1 | 0 | 49 |
| 7:15 AM | 0 | 0 | 32 | 0 | 32 | 0 | 28 | 0 | 0 | 28 | 0 | 0 | 0 | 0 | 0 | 60 |
| 7:30 AM | 0 | 1 | 26 | 1 | 27 | 0 | 35 | 0 | 0 | 35 | 0 | 0 | 0 | 0 | 0 | 62 |
| 7:45 AM | 0 | 1 | 38 | 3 | 39 | 0 | 39 | 1 | 0 | 40 | 0 | 0 | 0 | 1 | 0 | 79 |
| Hourly Total | 0 | 3 | 119 | 4 | 122 | 0 | 127 | 1 | 1 | 128 | 0 | 0 | 0 | 2 | 0 | 250 |
| 8:00 AM | 0 | 0 | 48 | 2 | 48 | 0 | 42 | 0 | 1 | 42 | 0 | 0 | 0 | 1 | 0 | 90 |
| 8:15 AM | 0 | 2 | 40 | 1 | 42 | 0 | 68 | 0 | 0 | 68 | 0 | 0 | 0 | 1 | 0 | 110 |
| 8:30 AM | 0 | 1 | 46 | 0 | 47 | 0 | 49 | 0 | 0 | 49 | 0 | 0 | 0 | 2 | 0 | 96 |
| 8:45 AM | 0 | 0 | 32 | 5 | 32 | 0 | 41 | 2 | 0 | 43 | 0 | 2 | 1 | 0 | 3 | 78 |
| Hourly Total | 0 | 3 | 166 | 8 | 169 | 0 | 200 | 2 | 1 | 202 | 0 | 2 | 1 | 4 | 3 | 374 |
| *** BREAK *** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 2:00 PM | 0 | 1 | 44 | 5 | 45 | 0 | 30 | 1 | 5 | 31 | 0 | 4 | 1 | 1 | 5 | 81 |
| 2:15 PM | 0 | 1 | 41 | 1 | 42 | 0 | 41 | 1 | 0 | 42 | 0 | 1 | 1 | 1 | 2 | 86 |
| 2:30 PM | 0 | 2 | 50 | 3 | 52 | 0 | 23 | 2 | 0 | 25 | 0 | 5 | 2 | 0 | 7 | 84 |
| 2:45 PM | 0 | 0 | 44 | 0 | 44 | 0 | 49 | 1 | 1 | 50 | 0 | 3 | 0 | 1 | 3 | 97 |
| Hourly Total | 0 | 4 | 179 | 9 | 183 | 0 | 143 | 5 | 6 | 148 | 0 | 13 | 4 | 3 | 17 | 348 |
| 3:00 PM | 0 | 0 | 34 | 1 | 34 | 0 | 27 | 1 | 0 | 28 | 0 | 1 | 0 | 1 | 1 | 63 |
| 3:15 PM | 0 | 0 | 54 | 0 | 54 | 0 | 30 | 1 | 0 | 31 | 0 | 0 | 1 | 0 | 1 | 86 |
| 3:30 PM | 0 | 0 | 29 | 0 | 29 | 0 | 39 | 2 | 0 | 41 | 0 | 1 | 0 | 1 | 1 | 71 |
| 3:45 PM | 0 | 1 | 51 | 4 | 52 | 0 | 33 | 5 | 0 | 38 | 0 | 0 | 0 | 5 | 0 | 90 |
| Hourly Total | 0 | 1 | 168 | 5 | 169 | 0 | 129 | 9 | 0 | 138 | 0 | 2 | 1 | 7 | 3 | 310 |
| 4:00 PM | 0 | 1 | 50 | 1 | 51 | 0 | 29 | 0 | 0 | 29 | 0 | 1 | 0 | 0 | 1 | 81 |
| 4:15 PM | 0 | 1 | 33 | 1 | 34 | 0 | 43 | 1 | 0 | 44 | 0 | 0 | 0 | 1 | 0 | 78 |
| 4:30 PM | 0 | 2 | 32 | 2 | 34 | 0 | 46 | 2 | 1 | 48 | 0 | 3 | 0 | 2 | 3 | 85 |
| 4:45 PM | 0 | 0 | 47 | 0 | 47 | 0 | 52 | 2 | 1 | 54 | 0 | 1 | 0 | 0 | 1 | 102 |
| Hourly Total | 0 | 4 | 162 | 4 | 166 | 0 | 170 | 5 | 2 | 175 | 0 | 5 | 0 | 3 | 5 | 346 |
| 5:00 PM | 0 | 0 | 52 | 0 | 52 | 0 | 35 | 2 | 3 | 37 | 0 | 0 | 1 | 0 | 1 | 90 |
| 5:15 PM | 0 | 0 | 45 | 1 | 45 | 0 | 36 | 3 | 1 | 39 | 0 | 2 | 0 | 0 | 2 | 86 |
| 5:30 PM | 1 | 2 | 32 | 4 | 35 | 1 | 60 | 6 | 2 | 67 | 0 | 2 | 1 | 0 | 3 | 105 |
| 5:45 PM | 0 | 3 | 54 | 2 | 57 | 0 | 59 | 1 | 0 | 60 | 0 | 0 | 2 | 1 | 2 | 119 |
| Hourly Total | 1 | 5 | 183 | 7 | 189 | 1 | 190 | 12 | 6 | 203 | 0 | 4 | 4 | 1 | 8 | 400 |
| Grand Total | 1 | 20 | 977 | 37 | 998 | 1 | 959 | 34 | 16 | 994 | 0 | 26 | 10 | 20 | 36 | 2028 |
| Approach % | 0.1 | 2.0 | 97.9 | - | - | 0.1 | 96.5 | 3.4 | - | - | 0.0 | 72.2 | 27.8 | - | - | - |
| Total % | 0.0 | 1.0 | 48.2 | - | 49.2 | 0.0 | 47.3 | 1.7 | - | 49.0 | 0.0 | 1.3 | 0.5 | - | 1.8 | - |
| Lights | 1 | 20 | 962 | - | 983 | 1 | 940 | 33 | - | 974 | 0 | 25 | 10 | - | 35 | 1992 |
| % Lights | 100.0 | 100.0 | 98.5 | - | 98.5 | 100.0 | 98.0 | 97.1 | - | 98.0 | - | 96.2 | 100.0 | - | 97.2 | 98.2 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Buses | 0 | 0 | 4 | - | 4 | 0 | 10 | 0 | - | 10 | 0 | 0 | 0 | - | 0 | 14 |
| % Buses | 0.0 | 0.0 | 0.4 | - | 0.4 | 0.0 | 1.0 | 0.0 | - | 1.0 | - | 0.0 | 0.0 | - | 0.0 | 0.7 |
| Single-Unit Trucks | 0 | 0 | 9 | - | 9 | 0 | 7 | 1 | - | 8 | 0 | 1 | 0 | - | 1 | 18 |
| % Single-Unit Trucks | 0.0 | 0.0 | 0.9 | - | 0.9 | 0.0 | 0.7 | 2.9 | - | 0.8 | - | 3.8 | 0.0 | - | 2.8 | 0.9 |
| Articulated Trucks | 0 | 0 | 2 | - | 2 | 0 | 2 | 0 | - | 2 | 0 | 0 | 0 | - | 0 | 4 |
| % Articulated Trucks | 0.0 | 0.0 | 0.2 | - | 0.2 | 0.0 | 0.2 | 0.0 | - | 0.2 | - | 0.0 | 0.0 | - | 0.0 | 0.2 |
| Bicycles on Road | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Bicycles on Road | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | 0.0 | 0.0 |
| Pedestrians | - | - | - | 37 | - | - | - | - | 16 | - | - | - | - | 20 | - | - |
| % Pedestrians | - | - | - | 100.0 | - | - | - | - | 100.0 | - | - | - | - | 100.0 | - | - |

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Count Name: Lake Street with Parking Lot Access Drive (east) TMC
Site Code:
Start Date: 05/23/2024


# Turning Movement Peak Hour Data (8:00 AM)

| Start Time | Lake Street Eastbound | | | | | Lake Street Westbound | | | | | Parking Lot Access Drive Southbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | U-Turn | Left | Thru | Peds | App. Total | U-Turn | Thru | Right | Peds | App. Total | U-Turn | Left | Right | Peds | App. Total | Int. Total |
| 8:00 AM | 0 | 0 | 48 | 2 | 48 | 0 | 42 | 0 | 1 | 42 | 0 | 0 | 0 | 1 | 0 | 90 |
| 8:15 AM | 0 | 2 | 40 | 1 | 42 | 0 | 68 | 0 | 0 | 68 | 0 | 0 | 0 | 1 | 0 | 110 |
| 8:30 AM | 0 | 1 | 46 | 0 | 47 | 0 | 49 | 0 | 0 | 49 | 0 | 0 | 0 | 2 | 0 | 96 |
| 8:45 AM | 0 | 0 | 32 | 5 | 32 | 0 | 41 | 2 | 0 | 43 | 0 | 2 | 1 | 0 | 3 | 78 |
| Total | 0 | 3 | 166 | 8 | 169 | 0 | 200 | 2 | 1 | 202 | 0 | 2 | 1 | 4 | 3 | 374 |
| Approach % | 0.0 | 1.8 | 98.2 | - | - | 0.0 | 99.0 | 1.0 | - | - | 0.0 | 66.7 | 33.3 | - | - | - |
| Total % | 0.0 | 0.8 | 44.4 | - | 45.2 | 0.0 | 53.5 | 0.5 | - | 54.0 | 0.0 | 0.5 | 0.3 | - | 0.8 | - |
| PHF | 0.000 | 0.375 | 0.865 | - | 0.880 | 0.000 | 0.735 | 0.250 | - | 0.743 | 0.000 | 0.250 | 0.250 | - | 0.250 | 0.850 |
| Lights | 0 | 3 | 162 | - | 165 | 0 | 193 | 2 | - | 195 | 0 | 2 | 1 | - | 3 | 363 |
| % Lights | - | 100.0 | 97.6 | - | 97.6 | - | 96.5 | 100.0 | - | 96.5 | - | 100.0 | 100.0 | - | 100.0 | 97.1 |
| Buses | 0 | 0 | 2 | - | 2 | 0 | 6 | 0 | - | 6 | 0 | 0 | 0 | - | 0 | 8 |
| % Buses | - | 0.0 | 1.2 | - | 1.2 | - | 3.0 | 0.0 | - | 3.0 | - | 0.0 | 0.0 | - | 0.0 | 2.1 |
| Single-Unit Trucks | 0 | 0 | 1 | - | 1 | 0 | 1 | 0 | - | 1 | 0 | 0 | 0 | - | 0 | 2 |
| % Single-Unit Trucks | - | 0.0 | 0.6 | - | 0.6 | - | 0.5 | 0.0 | - | 0.5 | - | 0.0 | 0.0 | - | 0.0 | 0.5 |
| Articulated Trucks | 0 | 0 | 1 | - | 1 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 1 |
| % Articulated Trucks | - | 0.0 | 0.6 | - | 0.6 | - | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | 0.0 | 0.3 |
| Bicycles on Road | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Bicycles on Road | - | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | 0.0 | 0.0 |
| Pedestrians | - | - | - | 8 | - | - | - | - | 1 | - | - | - | - | 4 | - | - |
| % Pedestrians | - | - | - | 100.0 | - | - | - | - | 100.0 | - | - | - | - | 100.0 | - | - |

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

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Count Name: Lake Street with Parking Lot Access Drive (east) TMC
Site Code:
Start Date: 05/23/2024


# Turning Movement Peak Hour Data (4:45 PM)

| Start Time | Lake Street Eastbound | | | | | Lake Street Westbound | | | | | Parking Lot Access Drive Southbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | U-Turn | Left | Thru | Peds | App. Total | U-Turn | Thru | Right | Peds | App. Total | U-Turn | Left | Right | Peds | App. Total | Int. Total |
| 4:45 PM | 0 | 0 | 47 | 0 | 47 | 0 | 52 | 2 | 1 | 54 | 0 | 1 | 0 | 0 | 1 | 102 |
| 5:00 PM | 0 | 0 | 52 | 0 | 52 | 0 | 35 | 2 | 3 | 37 | 0 | 0 | 1 | 0 | 1 | 90 |
| 5:15 PM | 0 | 0 | 45 | 1 | 45 | 0 | 36 | 3 | 1 | 39 | 0 | 2 | 0 | 0 | 2 | 86 |
| 5:30 PM | 1 | 2 | 32 | 4 | 35 | 1 | 60 | 6 | 2 | 67 | 0 | 2 | 1 | 0 | 3 | 105 |
| Total | 1 | 2 | 176 | 5 | 179 | 1 | 183 | 13 | 7 | 197 | 0 | 5 | 2 | 0 | 7 | 383 |
| Approach % | 0.6 | 1.1 | 98.3 | - | - | 0.5 | 92.9 | 6.6 | - | - | 0.0 | 71.4 | 28.6 | - | - | - |
| Total % | 0.3 | 0.5 | 46.0 | - | 46.7 | 0.3 | 47.8 | 3.4 | - | 51.4 | 0.0 | 1.3 | 0.5 | - | 1.8 | - |
| PHF | 0.250 | 0.250 | 0.846 | - | 0.861 | 0.250 | 0.763 | 0.542 | - | 0.735 | 0.000 | 0.625 | 0.500 | - | 0.583 | 0.912 |
| Lights | 1 | 2 | 176 | - | 179 | 1 | 182 | 13 | - | 196 | 0 | 5 | 2 | - | 7 | 382 |
| % Lights | 100.0 | 100.0 | 100.0 | - | 100.0 | 100.0 | 99.5 | 100.0 | - | 99.5 | - | 100.0 | 100.0 | - | 100.0 | 99.7 |
| Buses | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Buses | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | 0.0 | 0.0 |
| Single-Unit Trucks | 0 | 0 | 0 | - | 0 | 0 | 1 | 0 | - | 1 | 0 | 0 | 0 | - | 0 | 1 |
| % Single-Unit Trucks | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.5 | 0.0 | - | 0.5 | - | 0.0 | 0.0 | - | 0.0 | 0.3 |
| Articulated Trucks | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Articulated Trucks | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | 0.0 | 0.0 |
| Bicycles on Road | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Bicycles on Road | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | 0.0 | 0.0 |
| Pedestrians | - | - | - | 5 | - | - | - | - | 7 | - | - | - | - | 0 | - | - |
| % Pedestrians | - | - | - | 100.0 | - | - | - | - | 100.0 | - | - | - | - | - | - | - |

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Count Name: Lake Street with Parking Lot Access Drive (middle) TMC
Site Code:
Start Date: 05/23/2024


# Turning Movement Data

| Start Time | Lake Street Eastbound | | | | | Lake Street Westbound | | | | | Parking Lot Access Drive Northbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | U-Turn | Thru | Right | Peds | App. Total | U-Turn | Left | Thru | Peds | App. Total | U-Turn | Left | Right | Peds | App. Total | Int. Total |
| 7:00 AM | 0 | 24 | 3 | 0 | 27 | 0 | 1 | 24 | 0 | 25 | 0 | 0 | 0 | 5 | 0 | 52 |
| 7:15 AM | 0 | 29 | 0 | 0 | 29 | 0 | 6 | 22 | 0 | 28 | 0 | 1 | 1 | 1 | 2 | 59 |
| 7:30 AM | 0 | 24 | 0 | 0 | 24 | 0 | 3 | 32 | 1 | 35 | 0 | 0 | 1 | 6 | 1 | 60 |
| 7:45 AM | 0 | 34 | 0 | 0 | 34 | 0 | 3 | 36 | 3 | 39 | 0 | 0 | 4 | 5 | 4 | 77 |
| Hourly Total | 0 | 111 | 3 | 0 | 114 | 0 | 13 | 114 | 4 | 127 | 0 | 1 | 6 | 17 | 7 | 248 |
| 8:00 AM | 0 | 43 | 1 | 0 | 44 | 0 | 0 | 42 | 0 | 42 | 0 | 2 | 3 | 4 | 5 | 91 |
| 8:15 AM | 0 | 39 | 2 | 0 | 41 | 0 | 0 | 66 | 1 | 66 | 0 | 0 | 1 | 5 | 1 | 108 |
| 8:30 AM | 0 | 43 | 0 | 0 | 43 | 0 | 2 | 47 | 0 | 49 | 0 | 1 | 3 | 1 | 4 | 96 |
| 8:45 AM | 0 | 31 | 4 | 0 | 35 | 0 | 0 | 40 | 1 | 40 | 0 | 0 | 1 | 1 | 1 | 76 |
| Hourly Total | 0 | 156 | 7 | 0 | 163 | 0 | 2 | 195 | 2 | 197 | 0 | 3 | 8 | 11 | 11 | 371 |
| *** BREAK *** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 2:00 PM | 0 | 30 | 0 | 0 | 30 | 0 | 2 | 30 | 4 | 32 | 0 | 2 | 13 | 5 | 15 | 77 |
| 2:15 PM | 0 | 37 | 0 | 0 | 37 | 0 | 4 | 37 | 1 | 41 | 0 | 1 | 5 | 0 | 6 | 84 |
| 2:30 PM | 0 | 44 | 0 | 0 | 44 | 0 | 2 | 24 | 3 | 26 | 0 | 3 | 7 | 2 | 10 | 80 |
| 2:45 PM | 0 | 39 | 0 | 0 | 39 | 0 | 9 | 39 | 0 | 48 | 0 | 2 | 5 | 5 | 7 | 94 |
| Hourly Total | 0 | 150 | 0 | 0 | 150 | 0 | 17 | 130 | 8 | 147 | 0 | 8 | 30 | 12 | 38 | 335 |
| 3:00 PM | 0 | 34 | 2 | 0 | 36 | 0 | 5 | 22 | 1 | 27 | 0 | 0 | 5 | 6 | 5 | 68 |
| 3:15 PM | 0 | 51 | 0 | 0 | 51 | 0 | 3 | 28 | 0 | 31 | 0 | 0 | 2 | 4 | 2 | 84 |
| 3:30 PM | 0 | 29 | 0 | 0 | 29 | 0 | 7 | 32 | 0 | 39 | 0 | 0 | 4 | 2 | 4 | 72 |
| 3:45 PM | 0 | 47 | 1 | 0 | 48 | 0 | 8 | 25 | 4 | 33 | 0 | 2 | 3 | 2 | 5 | 86 |
| Hourly Total | 0 | 161 | 3 | 0 | 164 | 0 | 23 | 107 | 5 | 130 | 0 | 2 | 14 | 14 | 16 | 310 |
| 4:00 PM | 0 | 49 | 0 | 0 | 49 | 0 | 3 | 27 | 1 | 30 | 0 | 1 | 3 | 4 | 4 | 83 |
| 4:15 PM | 0 | 31 | 1 | 0 | 32 | 0 | 8 | 32 | 1 | 40 | 0 | 0 | 0 | 4 | 0 | 72 |
| 4:30 PM | 0 | 31 | 0 | 0 | 31 | 0 | 9 | 38 | 2 | 47 | 0 | 0 | 5 | 4 | 5 | 83 |
| 4:45 PM | 0 | 51 | 1 | 0 | 52 | 0 | 9 | 44 | 0 | 53 | 0 | 1 | 2 | 1 | 3 | 108 |
| Hourly Total | 0 | 162 | 2 | 0 | 164 | 0 | 29 | 141 | 4 | 170 | 0 | 2 | 10 | 13 | 12 | 346 |
| 5:00 PM | 0 | 42 | 3 | 0 | 45 | 0 | 6 | 29 | 2 | 35 | 0 | 3 | 7 | 4 | 10 | 90 |
| 5:15 PM | 0 | 37 | 2 | 0 | 39 | 0 | 11 | 24 | 0 | 35 | 0 | 1 | 8 | 0 | 9 | 83 |
| 5:30 PM | 0 | 30 | 0 | 0 | 30 | 0 | 13 | 43 | 4 | 56 | 0 | 1 | 2 | 5 | 3 | 89 |
| 5:45 PM | 0 | 52 | 4 | 0 | 56 | 0 | 18 | 41 | 2 | 59 | 0 | 3 | 7 | 8 | 10 | 125 |
| Hourly Total | 0 | 161 | 9 | 0 | 170 | 0 | 48 | 137 | 8 | 185 | 0 | 8 | 24 | 17 | 32 | 387 |
| Grand Total | 0 | 901 | 24 | 0 | 925 | 0 | 132 | 824 | 31 | 956 | 0 | 24 | 92 | 84 | 116 | 1997 |
| Approach % | 0.0 | 97.4 | 2.6 | - | - | 0.0 | 13.8 | 86.2 | - | - | 0.0 | 20.7 | 79.3 | - | - | - |
| Total % | 0.0 | 45.1 | 1.2 | - | 46.3 | 0.0 | 6.6 | 41.3 | - | 47.9 | 0.0 | 1.2 | 4.6 | - | 5.8 | - |
| Lights | 0 | 886 | 23 | - | 909 | 0 | 128 | 810 | - | 938 | 0 | 24 | 92 | - | 116 | 1963 |
| % Lights | - | 98.3 | 95.8 | - | 98.3 | - | 97.0 | 98.3 | - | 98.1 | - | 100.0 | 100.0 | - | 100.0 | 98.3 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Buses | 0 | 4 | 0 | - | 4 | 0 | 0 | 10 | - | 10 | 0 | 0 | 0 | - | 0 | 14 |
| % Buses | - | 0.4 | 0.0 | - | 0.4 | - | 0.0 | 1.2 | - | 1.0 | - | 0.0 | 0.0 | - | 0.0 | 0.7 |
| Single-Unit Trucks | 0 | 8 | 1 | - | 9 | 0 | 4 | 3 | - | 7 | 0 | 0 | 0 | - | 0 | 16 |
| % Single-Unit Trucks | - | 0.9 | 4.2 | - | 1.0 | - | 3.0 | 0.4 | - | 0.7 | - | 0.0 | 0.0 | - | 0.0 | 0.8 |
| Articulated Trucks | 0 | 2 | 0 | - | 2 | 0 | 0 | 1 | - | 1 | 0 | 0 | 0 | - | 0 | 3 |
| % Articulated Trucks | - | 0.2 | 0.0 | - | 0.2 | - | 0.0 | 0.1 | - | 0.1 | - | 0.0 | 0.0 | - | 0.0 | 0.2 |
| Bicycles on Road | 0 | 1 | 0 | - | 1 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 1 |
| % Bicycles on Road | - | 0.1 | 0.0 | - | 0.1 | - | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | 0.0 | 0.1 |
| Pedestrians | - | - | - | 0 | - | - | - | - | 31 | - | - | - | - | 84 | - | - |
| % Pedestrians | - | - | - | - | - | - | - | - | 100.0 | - | - | - | - | 100.0 | - | - |

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Count Name: Lake Street with Parking Lot Access Drive (middle) TMC
Site Code:
Start Date: 05/23/2024


# Turning Movement Peak Hour Data (8:00 AM)

| Start Time | Lake Street Eastbound | | | | | Lake Street Westbound | | | | | Parking Lot Access Drive Northbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | U-Turn | Thru | Right | Peds | App. Total | U-Turn | Left | Thru | Peds | App. Total | U-Turn | Left | Right | Peds | App. Total | Int. Total |
| 8:00 AM | 0 | 43 | 1 | 0 | 44 | 0 | 0 | 42 | 0 | 42 | 0 | 2 | 3 | 4 | 5 | 91 |
| 8:15 AM | 0 | 39 | 2 | 0 | 41 | 0 | 0 | 66 | 1 | 66 | 0 | 0 | 1 | 5 | 1 | 108 |
| 8:30 AM | 0 | 43 | 0 | 0 | 43 | 0 | 2 | 47 | 0 | 49 | 0 | 1 | 3 | 1 | 4 | 96 |
| 8:45 AM | 0 | 31 | 4 | 0 | 35 | 0 | 0 | 40 | 1 | 40 | 0 | 0 | 1 | 1 | 1 | 76 |
| Total | 0 | 156 | 7 | 0 | 163 | 0 | 2 | 195 | 2 | 197 | 0 | 3 | 8 | 11 | 11 | 371 |
| Approach % | 0.0 | 95.7 | 4.3 | - | - | 0.0 | 1.0 | 99.0 | - | - | 0.0 | 27.3 | 72.7 | - | - | - |
| Total % | 0.0 | 42.0 | 1.9 | - | 43.9 | 0.0 | 0.5 | 52.6 | - | 53.1 | 0.0 | 0.8 | 2.2 | - | 3.0 | - |
| PHF | 0.000 | 0.907 | 0.438 | - | 0.926 | 0.000 | 0.250 | 0.739 | - | 0.746 | 0.000 | 0.375 | 0.667 | - | 0.550 | 0.859 |
| Lights | 0 | 153 | 6 | - | 159 | 0 | 2 | 186 | - | 188 | 0 | 3 | 8 | - | 11 | 358 |
| % Lights | - | 98.1 | 85.7 | - | 97.5 | - | 100.0 | 95.4 | - | 95.4 | - | 100.0 | 100.0 | - | 100.0 | 96.5 |
| Buses | 0 | 2 | 0 | - | 2 | 0 | 0 | 7 | - | 7 | 0 | 0 | 0 | - | 0 | 9 |
| % Buses | - | 1.3 | 0.0 | - | 1.2 | - | 0.0 | 3.6 | - | 3.6 | - | 0.0 | 0.0 | - | 0.0 | 2.4 |
| Single-Unit Trucks | 0 | 1 | 1 | - | 2 | 0 | 0 | 2 | - | 2 | 0 | 0 | 0 | - | 0 | 4 |
| % Single-Unit Trucks | - | 0.6 | 14.3 | - | 1.2 | - | 0.0 | 1.0 | - | 1.0 | - | 0.0 | 0.0 | - | 0.0 | 1.1 |
| Articulated Trucks | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Articulated Trucks | - | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | 0.0 | 0.0 |
| Bicycles on Road | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Bicycles on Road | - | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | 0.0 | 0.0 |
| Pedestrians | - | - | - | 0 | - | - | - | - | 2 | - | - | - | - | 11 | - | - |
| % Pedestrians | - | - | - | - | - | - | - | - | 100.0 | - | - | - | - | 100.0 | - | - |

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Count Name: Lake Street with Parking Lot Access Drive (middle) TMC
Site Code:
Start Date: 05/23/2024


# Turning Movement Peak Hour Data (4:45 PM)

| Start Time | Lake Street Eastbound | | | | | Lake Street Westbound | | | | | Parking Lot Access Drive Northbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | U-Turn | Thru | Right | Peds | App. Total | U-Turn | Left | Thru | Peds | App. Total | U-Turn | Left | Right | Peds | App. Total | Int. Total |
| 4:45 PM | 0 | 51 | 1 | 0 | 52 | 0 | 9 | 44 | 0 | 53 | 0 | 1 | 2 | 1 | 3 | 108 |
| 5:00 PM | 0 | 42 | 3 | 0 | 45 | 0 | 6 | 29 | 2 | 35 | 0 | 3 | 7 | 4 | 10 | 90 |
| 5:15 PM | 0 | 37 | 2 | 0 | 39 | 0 | 11 | 24 | 0 | 35 | 0 | 1 | 8 | 0 | 9 | 83 |
| 5:30 PM | 0 | 30 | 0 | 0 | 30 | 0 | 13 | 43 | 4 | 56 | 0 | 1 | 2 | 5 | 3 | 89 |
| Total | 0 | 160 | 6 | 0 | 166 | 0 | 39 | 140 | 6 | 179 | 0 | 6 | 19 | 10 | 25 | 370 |
| Approach % | 0.0 | 96.4 | 3.6 | - | - | 0.0 | 21.8 | 78.2 | - | - | 0.0 | 24.0 | 76.0 | - | - | - |
| Total % | 0.0 | 43.2 | 1.6 | - | 44.9 | 0.0 | 10.5 | 37.8 | - | 48.4 | 0.0 | 1.6 | 5.1 | - | 6.8 | - |
| PHF | 0.000 | 0.784 | 0.500 | - | 0.798 | 0.000 | 0.750 | 0.795 | - | 0.799 | 0.000 | 0.500 | 0.594 | - | 0.625 | 0.856 |
| Lights | 0 | 159 | 6 | - | 165 | 0 | 39 | 140 | - | 179 | 0 | 6 | 19 | - | 25 | 369 |
| % Lights | - | 99.4 | 100.0 | - | 99.4 | - | 100.0 | 100.0 | - | 100.0 | - | 100.0 | 100.0 | - | 100.0 | 99.7 |
| Buses | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Buses | - | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | 0.0 | 0.0 |
| Single-Unit Trucks | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Single-Unit Trucks | - | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | 0.0 | 0.0 |
| Articulated Trucks | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Articulated Trucks | - | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | 0.0 | 0.0 |
| Bicycles on Road | 0 | 1 | 0 | - | 1 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 1 |
| % Bicycles on Road | - | 0.6 | 0.0 | - | 0.6 | - | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | 0.0 | 0.3 |
| Pedestrians | - | - | - | 0 | - | - | - | - | 6 | - | - | - | - | 10 | - | - |
| % Pedestrians | - | - | - | - | - | - | - | - | 100.0 | - | - | - | - | 100.0 | - | - |

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Count Name: Lake Street with Parking Lot Access Drive (west) TMC
Site Code:
Start Date: 05/23/2024


# Turning Movement Data

| Start Time | Lake Street Eastbound | | | | | Lake Street Westbound | | | | | Access Drive Northbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | U-Turn | Thru | Right | Peds | App. Total | U-Turn | Left | Thru | Peds | App. Total | U-Turn | Left | Right | Peds | App. Total | Int. Total |
| 7:00 AM | 0 | 26 | 0 | 0 | 26 | 0 | 0 | 25 | 0 | 25 | 0 | 0 | 0 | 1 | 0 | 51 |
| 7:15 AM | 0 | 28 | 0 | 0 | 28 | 0 | 5 | 15 | 0 | 20 | 0 | 0 | 0 | 3 | 0 | 48 |
| 7:30 AM | 0 | 26 | 2 | 0 | 28 | 0 | 2 | 27 | 0 | 29 | 0 | 0 | 0 | 1 | 0 | 57 |
| 7:45 AM | 0 | 33 | 0 | 0 | 33 | 0 | 3 | 35 | 0 | 38 | 0 | 0 | 0 | 2 | 0 | 71 |
| Hourly Total | 0 | 113 | 2 | 0 | 115 | 0 | 10 | 102 | 0 | 112 | 0 | 0 | 0 | 7 | 0 | 227 |
| 8:00 AM | 0 | 43 | 1 | 0 | 44 | 0 | 1 | 44 | 2 | 45 | 0 | 0 | 0 | 2 | 0 | 89 |
| 8:15 AM | 0 | 44 | 0 | 0 | 44 | 0 | 6 | 57 | 0 | 63 | 0 | 0 | 0 | 4 | 0 | 107 |
| 8:30 AM | 0 | 46 | 0 | 0 | 46 | 0 | 1 | 53 | 0 | 54 | 0 | 0 | 0 | 0 | 0 | 100 |
| 8:45 AM | 0 | 34 | 1 | 1 | 35 | 1 | 0 | 36 | 0 | 37 | 0 | 0 | 0 | 1 | 0 | 72 |
| Hourly Total | 0 | 167 | 2 | 1 | 169 | 1 | 8 | 190 | 2 | 199 | 0 | 0 | 0 | 7 | 0 | 368 |
| *** BREAK *** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 2:00 PM | 0 | 32 | 0 | 0 | 32 | 0 | 0 | 35 | 0 | 35 | 0 | 0 | 1 | 1 | 1 | 68 |
| 2:15 PM | 0 | 34 | 0 | 0 | 34 | 0 | 2 | 35 | 0 | 37 | 0 | 0 | 0 | 0 | 0 | 71 |
| 2:30 PM | 0 | 45 | 0 | 0 | 45 | 0 | 0 | 22 | 0 | 22 | 0 | 0 | 0 | 1 | 0 | 67 |
| 2:45 PM | 0 | 42 | 1 | 0 | 43 | 0 | 3 | 43 | 0 | 46 | 0 | 0 | 0 | 0 | 0 | 89 |
| Hourly Total | 0 | 153 | 1 | 0 | 154 | 0 | 5 | 135 | 0 | 140 | 0 | 0 | 1 | 2 | 1 | 295 |
| 3:00 PM | 0 | 36 | 1 | 0 | 37 | 0 | 2 | 20 | 0 | 22 | 0 | 0 | 0 | 1 | 0 | 59 |
| 3:15 PM | 0 | 50 | 0 | 0 | 50 | 0 | 1 | 28 | 0 | 29 | 0 | 0 | 0 | 1 | 0 | 79 |
| 3:30 PM | 0 | 28 | 0 | 0 | 28 | 0 | 0 | 28 | 0 | 28 | 0 | 0 | 0 | 1 | 0 | 56 |
| 3:45 PM | 0 | 48 | 0 | 0 | 48 | 0 | 0 | 32 | 0 | 32 | 0 | 1 | 0 | 2 | 1 | 81 |
| Hourly Total | 0 | 162 | 1 | 0 | 163 | 0 | 3 | 108 | 0 | 111 | 0 | 1 | 0 | 5 | 1 | 275 |
| 4:00 PM | 0 | 52 | 0 | 0 | 52 | 0 | 1 | 25 | 0 | 26 | 0 | 0 | 0 | 1 | 0 | 78 |
| 4:15 PM | 0 | 37 | 3 | 0 | 40 | 0 | 1 | 36 | 0 | 37 | 0 | 0 | 0 | 0 | 0 | 77 |
| 4:30 PM | 0 | 32 | 0 | 0 | 32 | 0 | 0 | 31 | 0 | 31 | 0 | 1 | 0 | 2 | 1 | 64 |
| 4:45 PM | 0 | 49 | 0 | 0 | 49 | 0 | 2 | 49 | 0 | 51 | 0 | 0 | 0 | 0 | 0 | 100 |
| Hourly Total | 0 | 170 | 3 | 0 | 173 | 0 | 4 | 141 | 0 | 145 | 0 | 1 | 0 | 3 | 1 | 319 |
| 5:00 PM | 0 | 49 | 0 | 0 | 49 | 0 | 1 | 31 | 0 | 32 | 0 | 0 | 0 | 0 | 0 | 81 |
| 5:15 PM | 0 | 37 | 0 | 0 | 37 | 0 | 3 | 18 | 1 | 21 | 0 | 0 | 0 | 0 | 0 | 58 |
| 5:30 PM | 0 | 36 | 0 | 0 | 36 | 0 | 2 | 47 | 0 | 49 | 0 | 0 | 0 | 0 | 0 | 85 |
| 5:45 PM | 0 | 51 | 0 | 0 | 51 | 0 | 4 | 41 | 2 | 45 | 0 | 0 | 0 | 0 | 0 | 96 |
| Hourly Total | 0 | 173 | 0 | 0 | 173 | 0 | 10 | 137 | 3 | 147 | 0 | 0 | 0 | 0 | 0 | 320 |
| Grand Total | 0 | 938 | 9 | 1 | 947 | 1 | 40 | 813 | 5 | 854 | 0 | 2 | 1 | 24 | 3 | 1804 |
| Approach % | 0.0 | 99.0 | 1.0 | - | - | 0.1 | 4.7 | 95.2 | - | - | 0.0 | 66.7 | 33.3 | - | - | - |
| Total % | 0.0 | 52.0 | 0.5 | - | 52.5 | 0.1 | 2.2 | 45.1 | - | 47.3 | 0.0 | 0.1 | 0.1 | - | 0.2 | - |
| Lights | 0 | 921 | 9 | - | 930 | 1 | 40 | 801 | - | 842 | 0 | 2 | 1 | - | 3 | 1775 |
| % Lights | - | 98.2 | 100.0 | - | 98.2 | 100.0 | 100.0 | 98.5 | - | 98.6 | - | 100.0 | 100.0 | - | 100.0 | 98.4 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Buses | 0 | 4 | 0 | - | 4 | 0 | 0 | 10 | - | 10 | 0 | 0 | 0 | - | 0 | 14 |
| % Buses | - | 0.4 | 0.0 | - | 0.4 | 0.0 | 0.0 | 1.2 | - | 1.2 | - | 0.0 | 0.0 | - | 0.0 | 0.8 |
| Single-Unit Trucks | 0 | 9 | 0 | - | 9 | 0 | 0 | 2 | - | 2 | 0 | 0 | 0 | - | 0 | 11 |
| % Single-Unit Trucks | - | 1.0 | 0.0 | - | 1.0 | 0.0 | 0.0 | 0.2 | - | 0.2 | - | 0.0 | 0.0 | - | 0.0 | 0.6 |
| Articulated Trucks | 0 | 2 | 0 | - | 2 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 2 |
| % Articulated Trucks | - | 0.2 | 0.0 | - | 0.2 | 0.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | 0.0 | 0.1 |
| Bicycles on Road | 0 | 2 | 0 | - | 2 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 2 |
| % Bicycles on Road | - | 0.2 | 0.0 | - | 0.2 | 0.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | 0.0 | 0.1 |
| Pedestrians | - | - | - | 1 | - | - | - | - | 5 | - | - | - | - | 24 | - | - |
| % Pedestrians | - | - | - | 100.0 | - | - | - | - | 100.0 | - | - | - | - | 100.0 | - | - |

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 sainkeshavarzi@kloainc.com

Count Name: Lake Street with Parking Lot
Access Drive (west) TMC
Site Code:
Start Date: 05/23/2024


# Turning Movement Peak Hour Data (8:00 AM)

| Start Time | Lake Street Eastbound | | | | | Lake Street Westbound | | | | | Access Drive Northbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | U-Turn | Thru | Right | Peds | App. Total | U-Turn | Left | Thru | Peds | App. Total | U-Turn | Left | Right | Peds | App. Total | Int. Total |
| 8:00 AM | 0 | 43 | 1 | 0 | 44 | 0 | 1 | 44 | 2 | 45 | 0 | 0 | 0 | 2 | 0 | 89 |
| 8:15 AM | 0 | 44 | 0 | 0 | 44 | 0 | 6 | 57 | 0 | 63 | 0 | 0 | 0 | 4 | 0 | 107 |
| 8:30 AM | 0 | 46 | 0 | 0 | 46 | 0 | 1 | 53 | 0 | 54 | 0 | 0 | 0 | 0 | 0 | 100 |
| 8:45 AM | 0 | 34 | 1 | 1 | 35 | 1 | 0 | 36 | 0 | 37 | 0 | 0 | 0 | 1 | 0 | 72 |
| Total | 0 | 167 | 2 | 1 | 169 | 1 | 8 | 190 | 2 | 199 | 0 | 0 | 0 | 7 | 0 | 368 |
| Approach % | 0.0 | 98.8 | 1.2 | - | - | 0.5 | 4.0 | 95.5 | - | - | 0.0 | 0.0 | 0.0 | - | - | - |
| Total % | 0.0 | 45.4 | 0.5 | - | 45.9 | 0.3 | 2.2 | 51.6 | - | 54.1 | 0.0 | 0.0 | 0.0 | - | 0.0 | - |
| PHF | 0.000 | 0.908 | 0.500 | - | 0.918 | 0.250 | 0.333 | 0.833 | - | 0.790 | 0.000 | 0.000 | 0.000 | - | 0.000 | 0.860 |
| Lights | 0 | 163 | 2 | - | 165 | 1 | 8 | 182 | - | 191 | 0 | 0 | 0 | - | 0 | 356 |
| % Lights | - | 97.6 | 100.0 | - | 97.6 | 100.0 | 100.0 | 95.8 | - | 96.0 | - | - | - | - | - | 96.7 |
| Buses | 0 | 2 | 0 | - | 2 | 0 | 0 | 7 | - | 7 | 0 | 0 | 0 | - | 0 | 9 |
| % Buses | - | 1.2 | 0.0 | - | 1.2 | 0.0 | 0.0 | 3.7 | - | 3.5 | - | - | - | - | - | 2.4 |
| Single-Unit Trucks | 0 | 2 | 0 | - | 2 | 0 | 0 | 1 | - | 1 | 0 | 0 | 0 | - | 0 | 3 |
| % Single-Unit Trucks | - | 1.2 | 0.0 | - | 1.2 | 0.0 | 0.0 | 0.5 | - | 0.5 | - | - | - | - | - | 0.8 |
| Articulated Trucks | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Articulated Trucks | - | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | - | - | - | - | - | 0.0 |
| Bicycles on Road | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Bicycles on Road | - | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | - | - | - | - | - | 0.0 |
| Pedestrians | - | - | - | 1 | - | - | - | - | 2 | - | - | - | - | 7 | - | - |
| % Pedestrians | - | - | - | 100.0 | - | - | - | - | 100.0 | - | - | - | - | 100.0 | - | - |

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

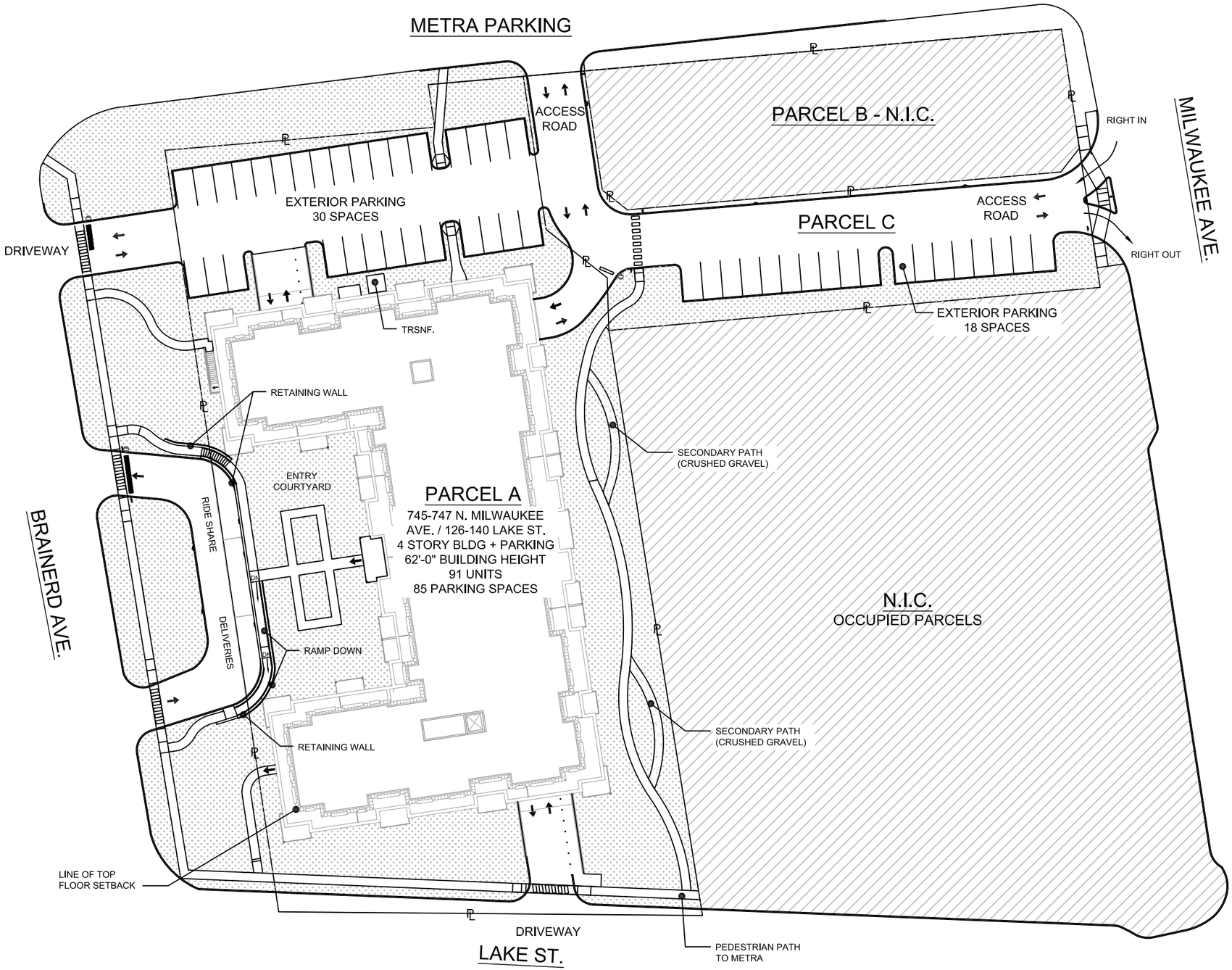
Rosemont, Illinois, United States 60018
(847)518-9990 sainkeshavarzi@kloainc.com

Count Name: Lake Street with Parking Lot
Access Drive (west) TMC
Site Code:
Start Date: 05/23/2024


# Turning Movement Peak Hour Data (4:45 PM)

| Start Time | Lake Street Eastbound | | | | | Lake Street Westbound | | | | | Access Drive Northbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | U-Turn | Thru | Right | Peds | App. Total | U-Turn | Left | Thru | Peds | App. Total | U-Turn | Left | Right | Peds | App. Total | Int. Total |
| 4:45 PM | 0 | 49 | 0 | 0 | 49 | 0 | 2 | 49 | 0 | 51 | 0 | 0 | 0 | 0 | 0 | 100 |
| 5:00 PM | 0 | 49 | 0 | 0 | 49 | 0 | 1 | 31 | 0 | 32 | 0 | 0 | 0 | 0 | 0 | 81 |
| 5:15 PM | 0 | 37 | 0 | 0 | 37 | 0 | 3 | 18 | 1 | 21 | 0 | 0 | 0 | 0 | 0 | 58 |
| 5:30 PM | 0 | 36 | 0 | 0 | 36 | 0 | 2 | 47 | 0 | 49 | 0 | 0 | 0 | 0 | 0 | 85 |
| Total | 0 | 171 | 0 | 0 | 171 | 0 | 8 | 145 | 1 | 153 | 0 | 0 | 0 | 0 | 0 | 324 |
| Approach % | 0.0 | 100.0 | 0.0 | - | - | 0.0 | 5.2 | 94.8 | - | - | 0.0 | 0.0 | 0.0 | - | - | - |
| Total % | 0.0 | 52.8 | 0.0 | - | 52.8 | 0.0 | 2.5 | 44.8 | - | 47.2 | 0.0 | 0.0 | 0.0 | - | 0.0 | - |
| PHF | 0.000 | 0.872 | 0.000 | - | 0.872 | 0.000 | 0.667 | 0.740 | - | 0.750 | 0.000 | 0.000 | 0.000 | - | 0.000 | 0.810 |
| Lights | 0 | 170 | 0 | - | 170 | 0 | 8 | 145 | - | 153 | 0 | 0 | 0 | - | 0 | 323 |
| % Lights | - | 99.4 | - | - | 99.4 | - | 100.0 | 100.0 | - | 100.0 | - | - | - | - | - | 99.7 |
| Buses | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Buses | - | 0.0 | - | - | 0.0 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | - | - | 0.0 |
| Single-Unit Trucks | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Single-Unit Trucks | - | 0.0 | - | - | 0.0 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | - | - | 0.0 |
| Articulated Trucks | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Articulated Trucks | - | 0.0 | - | - | 0.0 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | - | - | 0.0 |
| Bicycles on Road | 0 | 1 | 0 | - | 1 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 1 |
| % Bicycles on Road | - | 0.6 | - | - | 0.6 | - | 0.0 | 0.0 | - | 0.0 | - | - | - | - | - | 0.3 |
| Pedestrians | - | - | - | 0 | - | - | - | - | 1 | - | - | - | - | 0 | - | - |
| % Pedestrians | - | - | - | - | - | - | - | - | 100.0 | - | - | - | - | - | - | - |

Site Plan




## DEVELOPMENT TOTALS

### PARCEL A
67,641 SQ. FT.

91 UNITS
(20) 2 BED + DEN UNITS
(44) 2 BED UNITS
(27) 1 BED UNITS

PROPOSED PARKING RATIOS

| | |
|---|---|
| 2 BEDS + DEN @ 1.5 | = 30 |
| 2 BEDS @ 1.25 | = 55 |
| 1 BEDS @ 1.0 | = 27 |
| TOTAL = | 112 |

PARKING SPACES PROVIDED
INTERIOR SPACES = 85
EXTERIOR SPACES = 30
TOTAL SPACES = 115

### PARCEL B
N.I.C.

### PARCEL C
14,380 SQ. FT.
18 PARKING SPACES

# 1 OVERALL SITE PLAN
NTS

**745-47 N MILWAKEE AVENUE / 126-40 LAKE STREET**
LIBERTYVILLE, ILLINOIS

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SPACE
ARCHITECTS + PLANNERS
2149 N. TALMAN AVE., CHICAGO, IL 60647
P. 312.829.6666
E. INFO@SPACEARCHPLAN.COM

VERSION
A0.1
10.09.24

# ITE Trip Generation Sheets

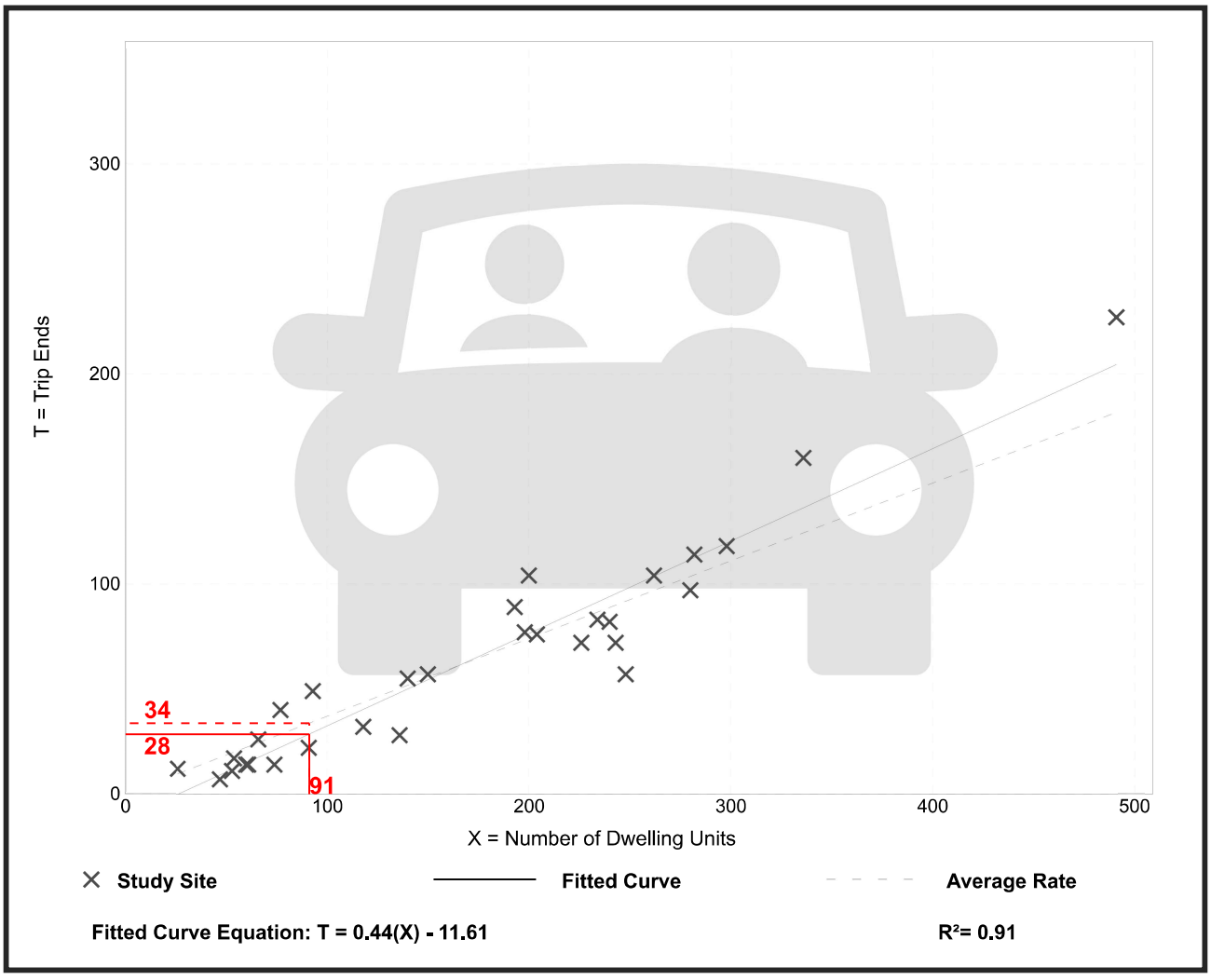
# Multifamily Housing (Mid-Rise)
## Not Close to Rail Transit (221)

| | |
|---|---|
| **Vehicle Trip Ends vs:** | **Dwelling Units** |
| **On a:** | **Weekday,** |
| | **Peak Hour of Adjacent Street Traffic,** |
| | **One Hour Between 7 and 9 a.m.** |
| **Setting/Location:** | **General Urban/Suburban** |
| Number of Studies: | 30 |
| Avg. Num. of Dwelling Units: | 173 |
| Directional Distribution: | 23% entering, 77% exiting |

## Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.37 | 0.15 - 0.53 | 0.09 |

## Data Plot and Equation



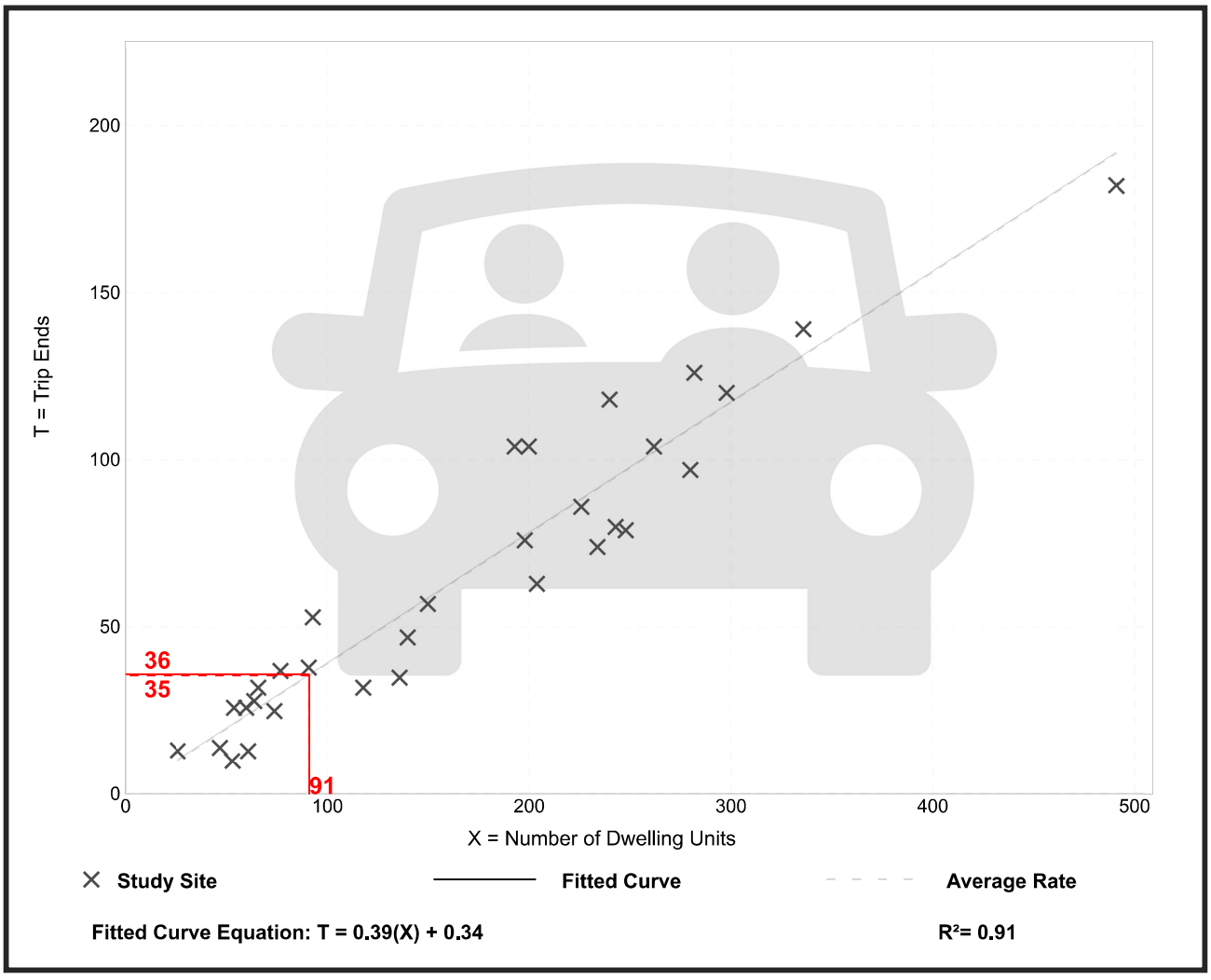
# Multifamily Housing (Mid-Rise)
## Not Close to Rail Transit (221)

**Vehicle Trip Ends vs:** **Dwelling Units**
**On a:** **Weekday,**
**Peak Hour of Adjacent Street Traffic,**
**One Hour Between 4 and 6 p.m.**
**Setting/Location:** **General Urban/Suburban**
Number of Studies: 31
Avg. Num. of Dwelling Units: 169
Directional Distribution: 61% entering, 39% exiting

## Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.39 | 0.19 - 0.57 | 0.08 |

## Data Plot and Equation



# Multifamily Housing (Mid-Rise)
## Not Close to Rail Transit (221)

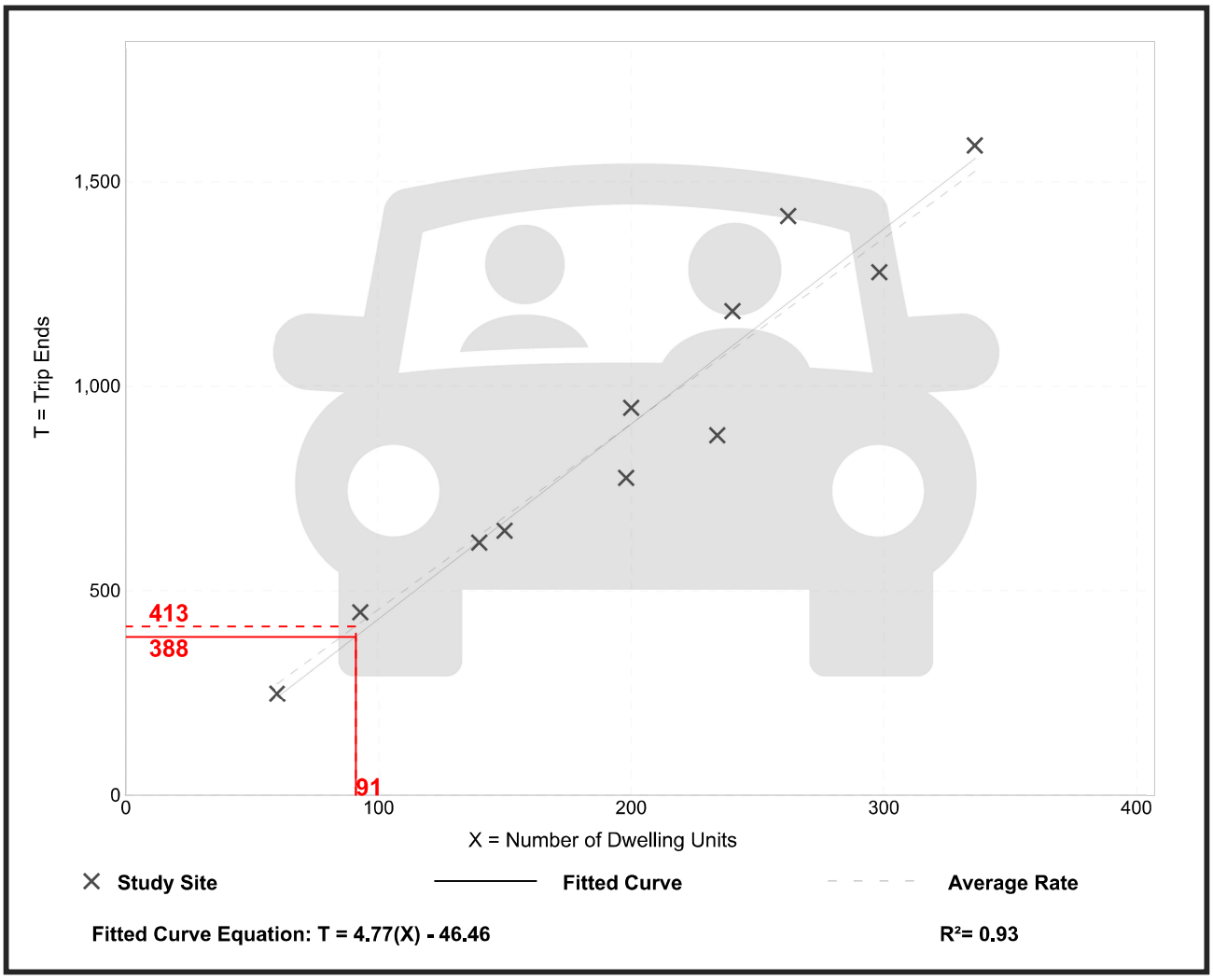
**Vehicle Trip Ends vs:** **Dwelling Units**
**On a:** **Weekday**

**Setting/Location:** **General Urban/Suburban**
Number of Studies: 11
Avg. Num. of Dwelling Units: 201
Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 4.54 | 3.76 - 5.40 | 0.51 |

## Data Plot and Equation



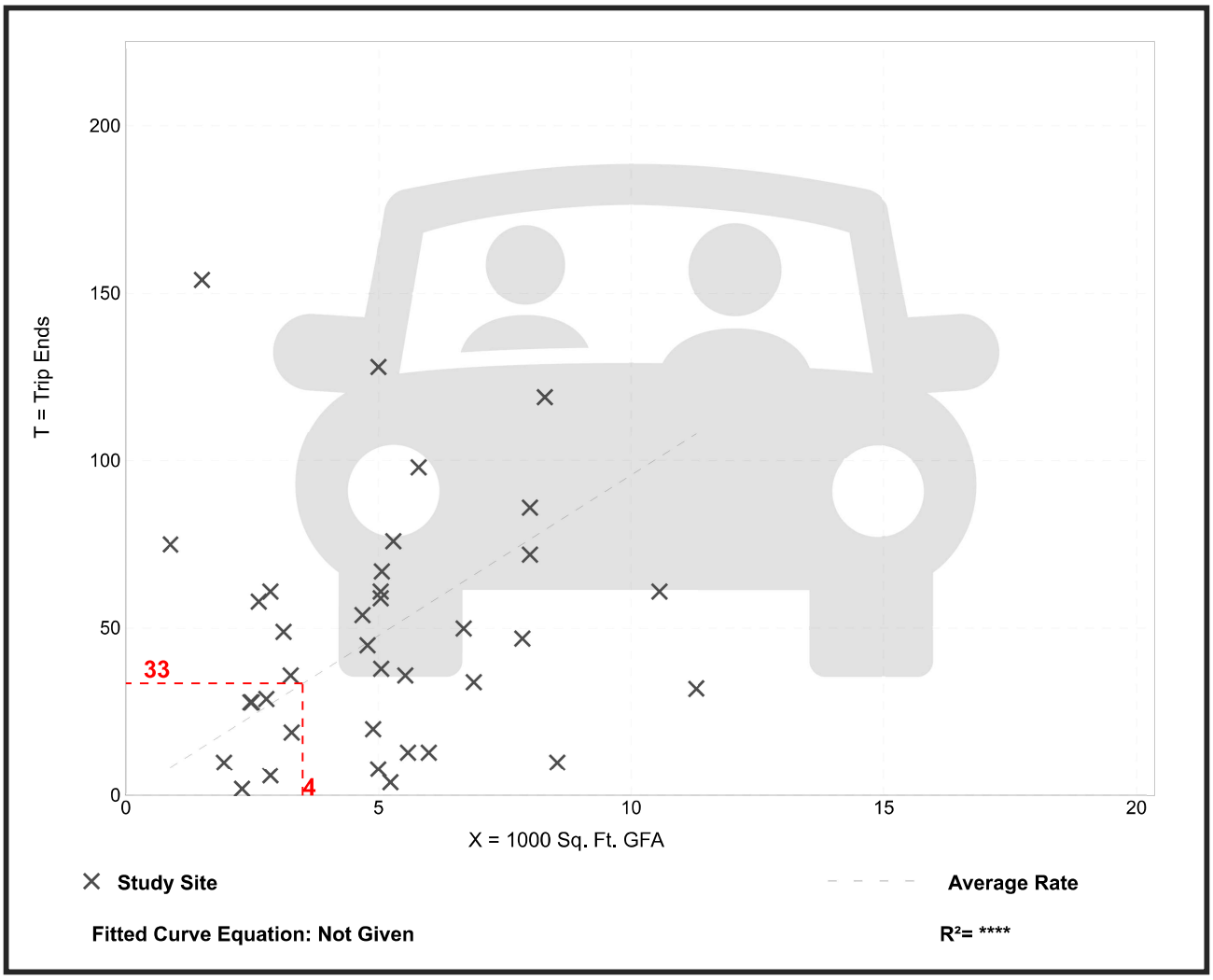
# High-Turnover (Sit-Down) Restaurant
(932)

**Vehicle Trip Ends vs:** **1000 Sq. Ft. GFA**
**On a:** **Weekday,**
**Peak Hour of Adjacent Street Traffic,**
**One Hour Between 7 and 9 a.m.**
**Setting/Location:** **General Urban/Suburban**
Number of Studies: 37
Avg. 1000 Sq. Ft. GFA: 5
Directional Distribution: 55% entering, 45% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 9.57 | 0.76 - 102.39 | 11.61 |

## Data Plot and Equation



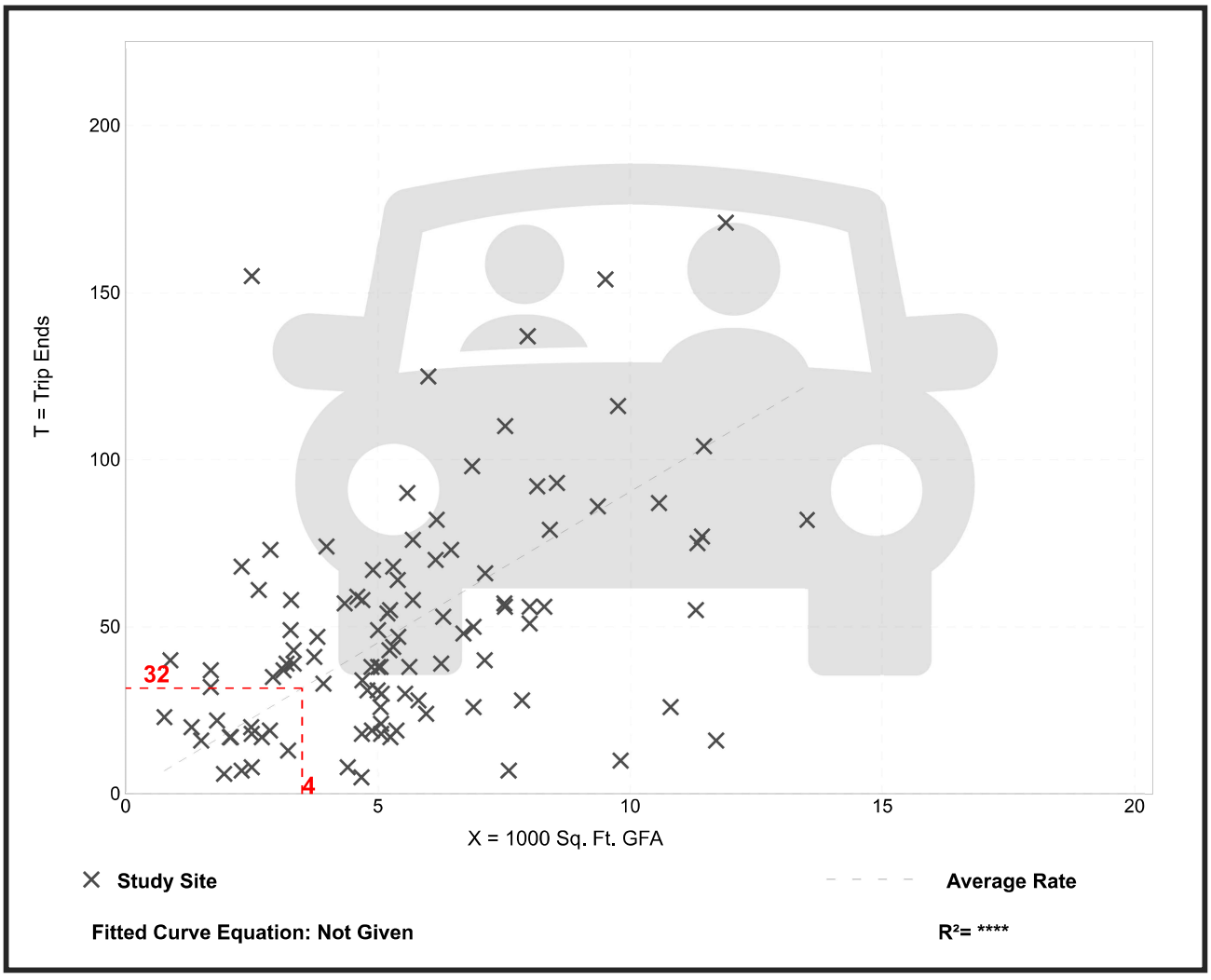
# High-Turnover (Sit-Down) Restaurant
(932)

**Vehicle Trip Ends vs:** **1000 Sq. Ft. GFA**
**On a:** **Weekday,**
**Peak Hour of Adjacent Street Traffic,**
**One Hour Between 4 and 6 p.m.**
**Setting/Location:** **General Urban/Suburban**
Number of Studies: 104
Avg. 1000 Sq. Ft. GFA: 6
Directional Distribution: 61% entering, 39% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 9.05 | 0.92 - 62.00 | 6.18 |

## Data Plot and Equation



# High-Turnover (Sit-Down) Restaurant
(932)

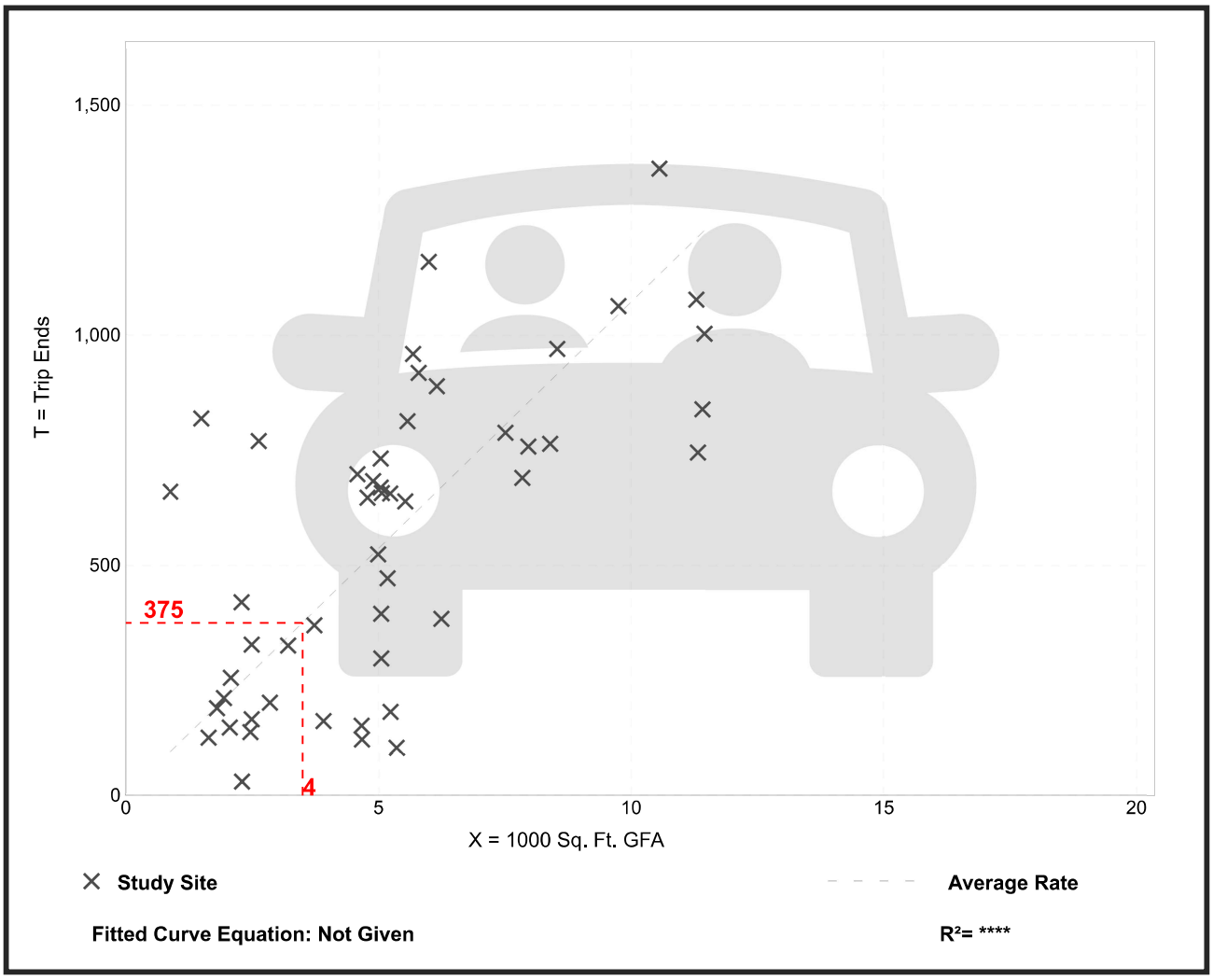
**Vehicle Trip Ends vs:** **1000 Sq. Ft. GFA**
**On a:** **Weekday**

**Setting/Location:** **General Urban/Suburban**
Number of Studies: 50
Avg. 1000 Sq. Ft. GFA: 5
Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 107.20 | 13.04 - 742.41 | 66.72 |

## Data Plot and Equation



# CMAP Projections Letter

Chicago Metropolitan Agency for Planning

433 West Van Buren Street, Suite 450
Chicago, IL 60607
cmap.illinois.gov | 312-454-0400

June 7, 2024

Ryan May
Project Coordinator
Kenig, Lindgren, O'Hara and Aboona, Inc.
9575 West Higgins Road
Suite 400
Rosemont, IL 60018

***Subject: Milwaukee Avenue (IL 21) @ Lake Street***
IDOT

Dear Ms. May:

In response to a request made on your behalf and dated June 6, 2024, we have developed year 2050 average daily traffic (ADT) projections for the subject location.

| ROAD SEGMENT | Current ADT (2023) | Year 2050 ADT |
|---|---|---|
| Lake St, @ Milwaukee Ave | 4,300 | 4,900 |
| Milwaukee Ave, @ Lake St | 24,100 | 29,800 |
| Brainard Ave, @ Lake St | 3,850 | 4,400 |

Traffic projections are developed using existing ADT data provided in the request letter and the results from the December 2023 CMAP Travel Demand Analysis. The regional travel model uses CMAP 2050 socioeconomic projections and assumes the implementation of the ON TO 2050 Comprehensive Regional Plan for the Northeastern Illinois area. The provision of this data in support of your request does not constitute a CMAP endorsement of the proposed development or any subsequent developments.

If you have any questions, please call me at (312) 386-8806 or email me at jrodriguez@cmap.illinois.gov

Jose Rodriguez, PTP, AICP
Senior Planner, Research & Analysis

cc: Rios (IDOT)
\2024_TrafficForecasts\Libertyville\la-20-24\la-20-24.docx

# Level of Service Criteria

LEVEL OF SERVICE CRITERIA

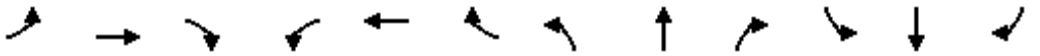
| Signalized Intersections | | |
|---|---|---|
| **Level of Service** | **Interpretation** | **Average Control Delay (seconds per vehicle)** |
| A | Favorable progression. Most vehicles arrive during the green indication and travel through the intersection without stopping. | ≤10 |
| B | Good progression, with more vehicles stopping than for Level of Service A. | > 10 - 20 |
| C | Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear. Number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping. | > 20 - 35 |
| D | The volume-to-capacity ratio is high and either progression is ineffective or the cycle length is too long. Many vehicles stop and individual cycle failures are noticeable. | > 35 - 55 |
| E | Progression is unfavorable. The volume-to-capacity ratio is high and the cycle length is long. Individual cycle failures are frequent. | > 55 - 80 |
| F | The volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue. | > 80 |

| Unsignalized Intersections | |
|---|---|
| **Level of Service** | **Average Total Delay (sec/veh)** |
| A | 0 - 10 |
| B | > 10 - 15 |
| C | > 15 - 25 |
| D | > 25 - 35 |
| E | > 35 - 50 |
| F | > 50 |

Source: *Highway Capacity Manual*, 6th Edition.

# Capacity Analysis Summary Sheets

## Weekday Morning Peak Hour – Existing Conditions



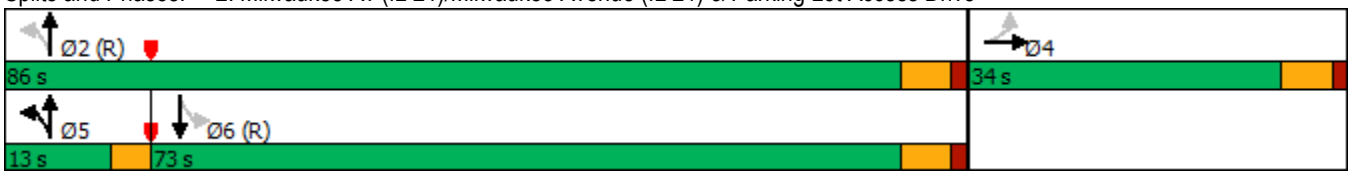
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 136 | 0 | 47 | 0 | 0 | 0 | 33 | 554 | 0 | 1 | 1076 | 169 |
| Future Volume (vph) | 136 | 0 | 47 | 0 | 0 | 0 | 33 | 554 | 0 | 1 | 1076 | 169 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Ped Bike Factor | | 0.99 | | | | | | | | | 1.00 | |
| Frt | | 0.965 | | | | | | | | | 0.980 | |
| Flt Protected | | 0.964 | | | | | | 0.997 | | | | |
| Satd. Flow (prot) | 0 | 1725 | 0 | 0 | 0 | 0 | 0 | 3483 | 0 | 0 | 3420 | 0 |
| Flt Permitted | | 0.964 | | | | | | 0.829 | | | 0.955 | |
| Satd. Flow (perm) | 0 | 1725 | 0 | 0 | 0 | 0 | 0 | 2896 | 0 | 0 | 3266 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (mph) | | 25 | | | 20 | | | 25 | | | 25 | |
| Link Distance (ft) | | 180 | | | 97 | | | 432 | | | 359 | |
| Travel Time (s) | | 4.9 | | | 3.3 | | | 11.8 | | | 9.8 | |
| Confl. Peds. (#/hr) | | | 8 | | | | 4 | | | | | 4 |
| Peak Hour Factor | 0.96 | 0.95 | 0.96 | 0.95 | 0.95 | 0.95 | 0.96 | 0.96 | 0.95 | 0.95 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 1% | 2% | 4% | 2% | 2% | 2% | 9% | 3% | 2% | 2% | 3% | 3% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 191 | 0 | 0 | 0 | 0 | 0 | 611 | 0 | 0 | 1298 | 0 |
| Turn Type | Perm | NA | | | | | pm+pt | NA | | Perm | NA | |
| Protected Phases | | 4 | | | | | 5 | 2 5 | | | 6 | |
| Permitted Phases | 4 | | | | | | 2 5 | | | 6 | | |
| Detector Phase | 4 | 4 | | | | | 5 | 2 5 | | 6 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 8.0 | 8.0 | | | | | 3.0 | | | 15.0 | 15.0 | |
| Minimum Split (s) | 27.0 | 27.0 | | | | | 8.0 | | | 25.0 | 25.0 | |
| Total Split (s) | 34.0 | 34.0 | | | | | 13.0 | | | 73.0 | 73.0 | |
| Total Split (%) | 28.3% | 28.3% | | | | | 10.8% | | | 60.8% | 60.8% | |
| Yellow Time (s) | 4.5 | 4.5 | | | | | 3.5 | | | 4.5 | 4.5 | |
| All-Red Time (s) | 1.5 | 1.5 | | | | | 0.0 | | | 1.5 | 1.5 | |
| Lost Time Adjust (s) | | 0.0 | | | | | | | | | 0.0 | |
| Total Lost Time (s) | | 6.0 | | | | | | | | | 6.0 | |
| Lead/Lag | | | | | | | Lead | | | Lag | Lag | |
| Lead-Lag Optimize? | | | | | | | Yes | | | Yes | Yes | |
| Recall Mode | None | None | | | | | None | | | C-Min | C-Min | |
| Act Effct Green (s) | | 19.4 | | | | | | 88.6 | | | 70.6 | |
| Actuated g/C Ratio | | 0.16 | | | | | | 0.74 | | | 0.59 | |
| v/c Ratio | | 0.69 | | | | | | 0.28 | | | 0.68 | |
| Control Delay | | 59.6 | | | | | | 5.8 | | | 19.9 | |
| Queue Delay | | 0.0 | | | | | | 0.0 | | | 0.0 | |
| Total Delay | | 59.6 | | | | | | 5.8 | | | 19.9 | |
| LOS | | E | | | | | | A | | | B | |
| Approach Delay | | 59.6 | | | | | | 5.8 | | | 19.9 | |
| Approach LOS | | E | | | | | | A | | | B | |
| Queue Length 50th (ft) | | 141 | | | | | | 68 | | | 370 | |
| Queue Length 95th (ft) | | 208 | | | | | | 112 | | | 454 | |
| Internal Link Dist (ft) | | 100 | | | 17 | | | 352 | | | 279 | |

| Lane Group | Ø2 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Turn Type | |
| Protected Phases | 2 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 15.0 |
| Minimum Split (s) | 22.0 |
| Total Split (s) | 86.0 |
| Total Split (%) | 72% |
| Yellow Time (s) | 4.5 |
| All-Red Time (s) | 1.5 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Recall Mode | C-Min |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| LOS | |
| Approach Delay | |
| Approach LOS | |
| Queue Length 50th (ft) | |
| Queue Length 95th (ft) | |
| Internal Link Dist (ft) | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | | 402 | | | | | | 2197 | | | 1920 | |
| Starvation Cap Reductn | | 0 | | | | | | 0 | | | 0 | |
| Spillback Cap Reductn | | 0 | | | | | | 0 | | | 0 | |
| Storage Cap Reductn | | 0 | | | | | | 0 | | | 0 | |
| Reduced v/c Ratio | | 0.48 | | | | | | 0.28 | | | 0.68 | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 120 | | | |
| Actuated Cycle Length: 120 | | | |
| Offset: 36 (30%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green | | | |
| Natural Cycle: 70 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.69 | | | |
| Intersection Signal Delay: 19.4 | | Intersection LOS: B | |
| Intersection Capacity Utilization 62.2% | | ICU Level of Service B | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 2: Milwaukee Av (IL 21)/Milwaukee Avenue (IL 21) & Parking Lot Access Drive



| Lane Group | Ø2 |
|---|---|
| Turn Bay Length (ft) | |
| Base Capacity (vph) | |
| Starvation Cap Reductn | |
| Spillback Cap Reductn | |
| Storage Cap Reductn | |
| Reduced v/c Ratio | |

| Intersection Summary |
|---|

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 9.3 |
| Intersection LOS | A |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 6 | 79 | 114 | 136 | 40 | 17 | 58 | 10 | 98 | 8 | 7 | 7 |
| Future Vol, veh/h | 6 | 79 | 114 | 136 | 40 | 17 | 58 | 10 | 98 | 8 | 7 | 7 |
| Peak Hour Factor | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Heavy Vehicles, % | 0 | 5 | 1 | 4 | 9 | 6 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 7 | 90 | 130 | 155 | 45 | 19 | 66 | 11 | 111 | 9 | 8 | 8 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 1 | 1 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 1 | 1 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 1 | 1 | 1 | 1 |
| HCM Control Delay | 9 | 9.9 | 9.2 | 8.3 |
| HCM LOS | A | A | A | A |

| Lane | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|---|---|---|---|---|
| Vol Left, % | 35% | 3% | 70% | 36% |
| Vol Thru, % | 6% | 40% | 21% | 32% |
| Vol Right, % | 59% | 57% | 9% | 32% |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 166 | 199 | 193 | 22 |
| LT Vol | 58 | 6 | 136 | 8 |
| Through Vol | 10 | 79 | 40 | 7 |
| RT Vol | 98 | 114 | 17 | 7 |
| Lane Flow Rate | 189 | 226 | 219 | 25 |
| Geometry Grp | 1 | 1 | 1 | 1 |
| Degree of Util (X) | 0.244 | 0.272 | 0.293 | 0.035 |
| Departure Headway (Hd) | 4.657 | 4.338 | 4.814 | 5.048 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 768 | 825 | 743 | 704 |
| Service Time | 2.706 | 2.383 | 2.86 | 3.115 |
| HCM Lane V/C Ratio | 0.246 | 0.274 | 0.295 | 0.036 |
| HCM Control Delay | 9.2 | 9 | 9.9 | 8.3 |
| HCM Lane LOS | A | A | A | A |
| HCM 95th-tile Q | 1 | 1.1 | 1.2 | 0.1 |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0 |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 0 | 3 | 0 | 678 | 1261 | 0 |
| Future Vol, veh/h | 0 | 3 | 0 | 678 | 1261 | 0 |
| Conflicting Peds, #/hr | 4 | 0 | 4 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 0 | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 94 | 94 | 94 | 94 | 94 | 94 |
| Heavy Vehicles, % | 0 | 0 | 0 | 3 | 3 | 0 |
| Mvmt Flow | 0 | 3 | 0 | 721 | 1341 | 0 |

| Major/Minor | Minor2 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | - | 671 | - | 0 | - | 0 |
| Stage 1 | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - |
| Critical Hdwy | - | 6.9 | - | - | - | - |
| Critical Hdwy Stg 1 | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - |
| Follow-up Hdwy | - | 3.3 | - | - | - | - |
| Pot Cap-1 Maneuver | 0 | 404 | 0 | - | - | 0 |
| Stage 1 | 0 | - | 0 | - | - | 0 |
| Stage 2 | 0 | - | 0 | - | - | 0 |
| Platoon blocked, % | | | | - | - | |
| Mov Cap-1 Maneuver | - | 404 | - | - | - | - |
| Mov Cap-2 Maneuver | - | - | - | - | - | - |
| Stage 1 | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - |

| Approach | EB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 14 | 0 | 0 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NBT | EBLn1 | SBT |
|---|---|---|---|
| Capacity (veh/h) | - | 404 | - |
| HCM Lane V/C Ratio | - | 0.008 | - |
| HCM Control Delay (s) | - | 14 | - |
| HCM Lane LOS | - | B | - |
| HCM 95th %tile Q(veh) | - | 0 | - |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.1 |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 3 | 181 | 200 | 2 | 2 | 1 |
| Future Vol, veh/h | 3 | 181 | 200 | 2 | 2 | 1 |
| Conflicting Peds, #/hr | 4 | 0 | 0 | 4 | 1 | 8 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 85 | 85 | 85 | 85 | 85 | 85 |
| Heavy Vehicles, % | 0 | 2 | 4 | 0 | 0 | 0 |
| Mvmt Flow | 4 | 213 | 235 | 2 | 2 | 1 |

| Major/Minor | Major1 | | Major2 | | Minor2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 241 | 0 | - | 0 | 462 | 248 |
| Stage 1 | - | - | - | - | 240 | - |
| Stage 2 | - | - | - | - | 222 | - |
| Critical Hdwy | 4.1 | - | - | - | 6.4 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 | - |
| Follow-up Hdwy | 2.2 | - | - | - | 3.5 | 3.3 |
| Pot Cap-1 Maneuver | 1372 | - | - | - | 611 | 902 |
| Stage 1 | - | - | - | - | 863 | - |
| Stage 2 | - | - | - | - | 820 | - |
| Platoon blocked, % | 1 | - | - | - | 1 | 1 |
| Mov Cap-1 Maneuver | 1367 | - | - | - | 605 | 893 |
| Mov Cap-2 Maneuver | - | - | - | - | 605 | - |
| Stage 1 | - | - | - | - | 858 | - |
| Stage 2 | - | - | - | - | 818 | - |

| Approach | EB | WB | SB |
|---|---|---|---|
| HCM Control Delay, s | 0.1 | 0 | 10.3 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|
| Capacity (veh/h) | 1367 | - | - | - | 678 |
| HCM Lane V/C Ratio | 0.003 | - | - | - | 0.005 |
| HCM Control Delay (s) | 7.6 | 0 | - | - | 10.3 |
| HCM Lane LOS | A | A | - | - | B |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0 |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.3 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 176 | 7 | 2 | 199 | 3 | 8 |
| Future Vol, veh/h | 176 | 7 | 2 | 199 | 3 | 8 |
| Conflicting Peds, #/hr | 0 | 11 | 11 | 0 | 0 | 2 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 86 | 86 | 86 | 86 | 86 | 86 |
| Heavy Vehicles, % | 1 | 0 | 15 | 6 | 0 | 0 |
| Mvmt Flow | 205 | 8 | 2 | 231 | 3 | 9 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 224 | 0 | 455 | 222 |
| Stage 1 | - | - | - | - | 220 | - |
| Stage 2 | - | - | - | - | 235 | - |
| Critical Hdwy | - | - | 4.25 | - | 6.4 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 | - |
| Follow-up Hdwy | - | - | 2.335 | - | 3.5 | 3.3 |
| Pot Cap-1 Maneuver | - | - | 1272 | - | *618 | 823 |
| Stage 1 | - | - | - | - | *821 | - |
| Stage 2 | - | - | - | - | *866 | - |
| Platoon blocked, % | - | - | | - | 1 | |
| Mov Cap-1 Maneuver | - | - | 1260 | - | *611 | 814 |
| Mov Cap-2 Maneuver | - | - | - | - | *611 | - |
| Stage 1 | - | - | - | - | *814 | - |
| Stage 2 | - | - | - | - | *865 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0.1 | 9.9 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 746 | - | - | 1260 | - |
| HCM Lane V/C Ratio | 0.017 | - | - | 0.002 | - |
| HCM Control Delay (s) | 9.9 | - | - | 7.9 | 0 |
| HCM Lane LOS | A | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.1 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 2 | 0 | 7 | 0 | 0 | 0 | 1 | 676 | 0 | 0 | 1254 | 10 |
| Future Vol, veh/h | 2 | 0 | 7 | 0 | 0 | 0 | 1 | 676 | 0 | 0 | 1254 | 10 |
| Conflicting Peds, #/hr | 3 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 14 | 14 | 0 | 1 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | 0 | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 0 |
| Mvmt Flow | 2 | 0 | 7 | 0 | 0 | 0 | 1 | 719 | 0 | 0 | 1334 | 11 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 1706 | 2076 | 674 | - | - | 377 | 1346 | 0 | 0 | - | - | 0 |
| Stage 1 | 1341 | 1341 | - | - | - | - | - | - | - | - | - | - |
| Stage 2 | 365 | 735 | - | - | - | - | - | - | - | - | - | - |
| Critical Hdwy | 7.5 | 6.5 | 6.9 | - | - | 6.9 | 4.1 | - | - | - | - | - |
| Critical Hdwy Stg 1 | 6.5 | 5.5 | - | - | - | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.5 | 5.5 | - | - | - | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.5 | 4 | 3.3 | - | - | 3.3 | 2.2 | - | - | - | - | - |
| Pot Cap-1 Maneuver | *96 | *64 | 402 | 0 | 0 | *809 | 518 | - | - | 0 | - | - |
| Stage 1 | *163 | *223 | - | 0 | 0 | - | - | - | - | 0 | - | - |
| Stage 2 | *763 | *668 | - | 0 | 0 | - | - | - | - | 0 | - | - |
| Platoon blocked, % | 1 | 1 | | | | 1 | | - | - | | - | - |
| Mov Cap-1 Maneuver | *95 | *63 | 402 | - | - | *798 | 518 | - | - | - | - | - |
| Mov Cap-2 Maneuver | *95 | *63 | - | - | - | - | - | - | - | - | - | - |
| Stage 1 | *162 | *223 | - | - | - | - | - | - | - | - | - | - |
| Stage 2 | *759 | *658 | - | - | - | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 21 | 0 | 0 | 0 |
| HCM LOS | C | A | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBT | SBR |
|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 518 | - | - | 234 | - | - | - |
| HCM Lane V/C Ratio | 0.002 | - | - | 0.041 | - | - | - |
| HCM Control Delay (s) | 12 | 0 | - | 21 | 0 | - | - |
| HCM Lane LOS | B | A | - | C | A | - | - |
| HCM 95th %tile Q(veh) | 0 | - | - | 0.1 | - | - | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.2 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 183 | 2 | 9 | 193 | 0 | 0 |
| Future Vol, veh/h | 183 | 2 | 9 | 193 | 0 | 0 |
| Conflicting Peds, #/hr | 0 | 7 | 7 | 0 | 1 | 2 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 86 | 86 | 86 | 86 | 86 | 86 |
| Heavy Vehicles, % | 2 | 0 | 0 | 4 | 0 | 0 |
| Mvmt Flow | 213 | 2 | 10 | 224 | 0 | 0 |

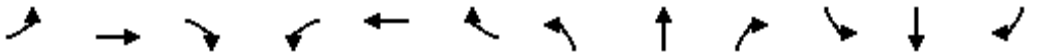
| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 222 | 0 | 466 | 223 |
| Stage 1 | - | - | - | - | 221 | - |
| Stage 2 | - | - | - | - | 245 | - |
| Critical Hdwy | - | - | 4.1 | - | 6.4 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 | - |
| Follow-up Hdwy | - | - | 2.2 | - | 3.5 | 3.3 |
| Pot Cap-1 Maneuver | - | - | 1359 | - | 597 | 822 |
| Stage 1 | - | - | - | - | 821 | - |
| Stage 2 | - | - | - | - | 845 | - |
| Platoon blocked, % | - | - | | - | 1 | |
| Mov Cap-1 Maneuver | - | - | 1351 | - | 588 | 816 |
| Mov Cap-2 Maneuver | - | - | - | - | 588 | - |
| Stage 1 | - | - | - | - | 816 | - |
| Stage 2 | - | - | - | - | 837 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0.3 | 0 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | - | 1351 | - |
| HCM Lane V/C Ratio | - | - | - | 0.008 | - |
| HCM Control Delay (s) | 0 | - | - | 7.7 | 0 |
| HCM Lane LOS | A | - | - | A | A |
| HCM 95th %tile Q(veh) | - | - | - | 0 | - |

# Capacity Analysis Summary Sheets

## Weekday Evening Peak Hour – Existing Conditions



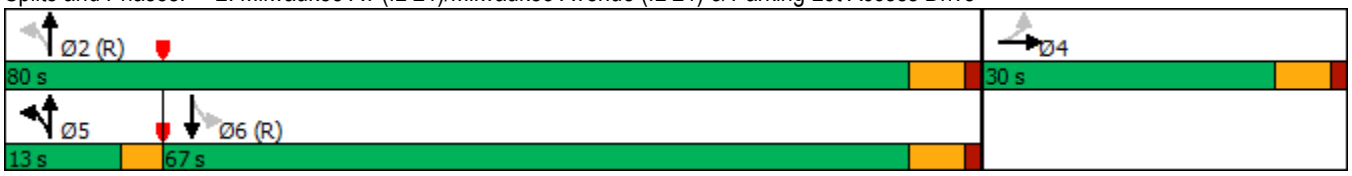
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 159 | 0 | 32 | 0 | 0 | 0 | 78 | 1179 | 1 | 1 | 927 | 122 |
| Future Volume (vph) | 159 | 0 | 32 | 0 | 0 | 0 | 78 | 1179 | 1 | 1 | 927 | 122 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Ped Bike Factor | | 0.99 | | | | | | | | | 0.99 | |
| Frt | | 0.977 | | | | | | | | | 0.983 | |
| Flt Protected | | 0.960 | | | | | | 0.997 | | | | |
| Satd. Flow (prot) | 0 | 1762 | 0 | 0 | 0 | 0 | 0 | 3566 | 0 | 0 | 3498 | 0 |
| Flt Permitted | | 0.960 | | | | | | 0.723 | | | 0.954 | |
| Satd. Flow (perm) | 0 | 1757 | 0 | 0 | 0 | 0 | 0 | 2586 | 0 | 0 | 3337 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (mph) | | 20 | | | 20 | | | 25 | | | 25 | |
| Link Distance (ft) | | 180 | | | 97 | | | 432 | | | 359 | |
| Travel Time (s) | | 6.1 | | | 3.3 | | | 11.8 | | | 9.8 | |
| Confl. Peds. (#/hr) | 2 | | 36 | | | | 36 | | | | | 36 |
| Peak Hour Factor | 0.98 | 0.95 | 0.98 | 0.95 | 0.95 | 0.95 | 0.98 | 0.98 | 0.95 | 0.95 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 0% | 2% | 0% | 2% | 2% | 2% | 0% | 1% | 2% | 2% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 195 | 0 | 0 | 0 | 0 | 0 | 1284 | 0 | 0 | 1071 | 0 |
| Turn Type | Perm | NA | | | | | pm+pt | NA | | Perm | NA | |
| Protected Phases | | 4 | | | | | 5 | 2 5 | | | 6 | |
| Permitted Phases | 4 | | | | | | 2 5 | | | 6 | | |
| Detector Phase | 4 | 4 | | | | | 5 | 2 5 | | 6 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 8.0 | 8.0 | | | | | 3.0 | | | 15.0 | 15.0 | |
| Minimum Split (s) | 27.0 | 27.0 | | | | | 8.0 | | | 25.0 | 25.0 | |
| Total Split (s) | 30.0 | 30.0 | | | | | 13.0 | | | 67.0 | 67.0 | |
| Total Split (%) | 27.3% | 27.3% | | | | | 11.8% | | | 60.9% | 60.9% | |
| Yellow Time (s) | 4.5 | 4.5 | | | | | 3.5 | | | 4.5 | 4.5 | |
| All-Red Time (s) | 1.5 | 1.5 | | | | | 0.0 | | | 1.5 | 1.5 | |
| Lost Time Adjust (s) | | 0.0 | | | | | | | | | 0.0 | |
| Total Lost Time (s) | | 6.0 | | | | | | | | | 6.0 | |
| Lead/Lag | | | | | | | Lead | | | Lag | Lag | |
| Lead-Lag Optimize? | | | | | | | Yes | | | Yes | Yes | |
| Recall Mode | None | None | | | | | None | | | C-Min | C-Min | |
| Act Effct Green (s) | | 18.2 | | | | | | 79.8 | | | 61.0 | |
| Actuated g/C Ratio | | 0.17 | | | | | | 0.73 | | | 0.55 | |
| v/c Ratio | | 0.67 | | | | | | 0.65 | | | 0.58 | |
| Control Delay | | 54.1 | | | | | | 9.5 | | | 17.7 | |
| Queue Delay | | 0.0 | | | | | | 0.0 | | | 0.0 | |
| Total Delay | | 54.1 | | | | | | 9.5 | | | 17.7 | |
| LOS | | D | | | | | | A | | | B | |
| Approach Delay | | 54.1 | | | | | | 9.5 | | | 17.7 | |
| Approach LOS | | D | | | | | | A | | | B | |
| Queue Length 50th (ft) | | 131 | | | | | | 178 | | | 247 | |
| Queue Length 95th (ft) | | 195 | | | | | | 271 | | | 311 | |
| Internal Link Dist (ft) | | 100 | | | 17 | | | 352 | | | 279 | |

| Lane Group | Ø2 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Turn Type | |
| Protected Phases | 2 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 15.0 |
| Minimum Split (s) | 22.0 |
| Total Split (s) | 80.0 |
| Total Split (%) | 73% |
| Yellow Time (s) | 4.5 |
| All-Red Time (s) | 1.5 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Recall Mode | C-Min |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| LOS | |
| Approach Delay | |
| Approach LOS | |
| Queue Length 50th (ft) | |
| Queue Length 95th (ft) | |
| Internal Link Dist (ft) | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | | 383 | | | | | | 1989 | | | 1850 | |
| Starvation Cap Reductn | | 0 | | | | | | 0 | | | 0 | |
| Spillback Cap Reductn | | 0 | | | | | | 0 | | | 0 | |
| Storage Cap Reductn | | 0 | | | | | | 0 | | | 0 | |
| Reduced v/c Ratio | | 0.51 | | | | | | 0.65 | | | 0.58 | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 110 | | | |
| Actuated Cycle Length: 110 | | | |
| Offset: 35.2 (32%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green | | | |
| Natural Cycle: 70 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.67 | | | |
| Intersection Signal Delay: 16.3 | | Intersection LOS: B | |
| Intersection Capacity Utilization 95.4% | | ICU Level of Service F | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 2: Milwaukee Av (IL 21)/Milwaukee Avenue (IL 21) & Parking Lot Access Drive



| Lane Group | Ø2 |
|---|---|
| Turn Bay Length (ft) | |
| Base Capacity (vph) | |
| Starvation Cap Reductn | |
| Spillback Cap Reductn | |
| Storage Cap Reductn | |
| Reduced v/c Ratio | |

| Intersection Summary |
|---|

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 11.2 |
| Intersection LOS | B |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 5 | 50 | 65 | 58 | 71 | 19 | 126 | 22 | 101 | 25 | 32 | 11 |
| Future Vol, veh/h | 5 | 50 | 65 | 58 | 71 | 19 | 126 | 22 | 101 | 25 | 32 | 11 |
| Peak Hour Factor | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 7 | 71 | 93 | 83 | 101 | 27 | 180 | 31 | 144 | 36 | 46 | 16 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 1 | 1 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 1 | 1 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 1 | 1 | 1 | 1 |
| HCM Control Delay | 9.8 | 10.8 | 12.6 | 9.4 |
| HCM LOS | A | B | B | A |

| Lane | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|---|---|---|---|---|
| Vol Left, % | 51% | 4% | 39% | 37% |
| Vol Thru, % | 9% | 42% | 48% | 47% |
| Vol Right, % | 41% | 54% | 13% | 16% |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 249 | 120 | 148 | 68 |
| LT Vol | 126 | 5 | 58 | 25 |
| Through Vol | 22 | 50 | 71 | 32 |
| RT Vol | 101 | 65 | 19 | 11 |
| Lane Flow Rate | 356 | 171 | 211 | 97 |
| Geometry Grp | 1 | 1 | 1 | 1 |
| Degree of Util (X) | 0.49 | 0.243 | 0.314 | 0.147 |
| Departure Headway (Hd) | 4.964 | 5.108 | 5.35 | 5.439 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 729 | 701 | 672 | 659 |
| Service Time | 2.964 | 3.148 | 3.387 | 3.478 |
| HCM Lane V/C Ratio | 0.488 | 0.244 | 0.314 | 0.147 |
| HCM Control Delay | 12.6 | 9.8 | 10.8 | 9.4 |
| HCM Lane LOS | B | A | B | A |
| HCM 95th-tile Q | 2.7 | 0.9 | 1.3 | 0.5 |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.1 |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 0 | 10 | 0 | 1353 | 1045 | 0 |
| Future Vol, veh/h | 0 | 10 | 0 | 1353 | 1045 | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 0 | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 91 | 91 | 91 | 91 | 91 | 91 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 1 | 0 |
| Mvmt Flow | 0 | 11 | 0 | 1487 | 1148 | 0 |

| Major/Minor | Minor2 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | - | 574 | - | 0 | - | 0 |
| Stage 1 | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - |
| Critical Hdwy | - | 6.9 | - | - | - | - |
| Critical Hdwy Stg 1 | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - |
| Follow-up Hdwy | - | 3.3 | - | - | - | - |
| Pot Cap-1 Maneuver | 0 | 467 | 0 | - | - | 0 |
| Stage 1 | 0 | - | 0 | - | - | 0 |
| Stage 2 | 0 | - | 0 | - | - | 0 |
| Platoon blocked, % | | | | - | - | |
| Mov Cap-1 Maneuver | - | 467 | - | - | - | - |
| Mov Cap-2 Maneuver | - | - | - | - | - | - |
| Stage 1 | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - |

| Approach | EB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 12.9 | 0 | 0 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NBT | EBLn1 | SBT |
|---|---|---|---|
| Capacity (veh/h) | - | 467 | - |
| HCM Lane V/C Ratio | - | 0.024 | - |
| HCM Control Delay (s) | - | 12.9 | - |
| HCM Lane LOS | - | B | - |
| HCM 95th %tile Q(veh) | - | 0.1 | - |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.2 |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 3 | 186 | 187 | 13 | 5 | 2 |
| Future Vol, veh/h | 3 | 186 | 187 | 13 | 5 | 2 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 7 | 5 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 91 | 91 | 91 | 91 | 91 | 91 |
| Heavy Vehicles, % | 0 | 0 | 1 | 0 | 0 | 0 |
| Mvmt Flow | 3 | 204 | 205 | 14 | 5 | 2 |

| Major/Minor | Major1 | | Major2 | | Minor2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 219 | 0 | - | 0 | 429 | 217 |
| Stage 1 | - | - | - | - | 212 | - |
| Stage 2 | - | - | - | - | 217 | - |
| Critical Hdwy | 4.1 | - | - | - | 6.4 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 | - |
| Follow-up Hdwy | 2.2 | - | - | - | 3.5 | 3.3 |
| Pot Cap-1 Maneuver | *1394 | - | - | - | *639 | *929 |
| Stage 1 | - | - | - | - | *876 | - |
| Stage 2 | - | - | - | - | *824 | - |
| Platoon blocked, % | 1 | - | - | - | 1 | 1 |
| Mov Cap-1 Maneuver | *1394 | - | - | - | *637 | *925 |
| Mov Cap-2 Maneuver | - | - | - | - | *637 | - |
| Stage 1 | - | - | - | - | *875 | - |
| Stage 2 | - | - | - | - | *824 | - |

| Approach | EB | WB | SB |
|---|---|---|---|
| HCM Control Delay, s | 0.1 | 0 | 10.2 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|
| Capacity (veh/h) | * 1394 | - | - | - | 699 |
| HCM Lane V/C Ratio | 0.002 | - | - | - | 0.011 |
| HCM Control Delay (s) | 7.6 | 0 | - | - | 10.2 |
| HCM Lane LOS | A | A | - | - | B |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0 |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Intersection | |
|---|---|
| Int Delay, s/veh | 1.4 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 170 | 6 | 39 | 150 | 6 | 19 |
| Future Vol, veh/h | 170 | 6 | 39 | 150 | 6 | 19 |
| Conflicting Peds, #/hr | 0 | 10 | 10 | 0 | 0 | 6 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 86 | 86 | 86 | 86 | 86 | 86 |
| Heavy Vehicles, % | 1 | 0 | 15 | 6 | 0 | 0 |
| Mvmt Flow | 198 | 7 | 45 | 174 | 7 | 22 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 215 | 0 | 476 | 218 |
| Stage 1 | - | - | - | - | 212 | - |
| Stage 2 | - | - | - | - | 264 | - |
| Critical Hdwy | - | - | 4.25 | - | 6.4 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 | - |
| Follow-up Hdwy | - | - | 2.335 | - | 3.5 | 3.3 |
| Pot Cap-1 Maneuver | - | - | 1281 | - | 583 | 827 |
| Stage 1 | - | - | - | - | 828 | - |
| Stage 2 | - | - | - | - | 822 | - |
| Platoon blocked, % | - | - | | - | 1 | |
| Mov Cap-1 Maneuver | - | - | 1270 | - | 556 | 816 |
| Mov Cap-2 Maneuver | - | - | - | - | 556 | - |
| Stage 1 | - | - | - | - | 821 | - |
| Stage 2 | - | - | - | - | 790 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 1.6 | 10.1 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 734 | - | - | 1270 | - |
| HCM Lane V/C Ratio | 0.04 | - | - | 0.036 | - |
| HCM Control Delay (s) | 10.1 | - | - | 7.9 | 0 |
| HCM Lane LOS | B | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 0.1 | - |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.1 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 1 | 0 | 9 | 0 | 0 | 6 | 0 | 1346 | 0 | 0 | 1050 | 5 |
| Future Vol, veh/h | 1 | 0 | 9 | 0 | 0 | 6 | 0 | 1346 | 0 | 0 | 1050 | 5 |
| Conflicting Peds, #/hr | 30 | 0 | 0 | 0 | 0 | 30 | 4 | 0 | 4 | 4 | 0 | 4 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | 0 | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 1 | 0 | 10 | 0 | 0 | 7 | 0 | 1463 | 0 | 0 | 1141 | 5 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 1910 | 2615 | 577 | - | - | 766 | 1150 | 0 | 0 | - | - | 0 |
| Stage 1 | 1148 | 1148 | - | - | - | - | - | - | - | - | - | - |
| Stage 2 | 762 | 1467 | - | - | - | - | - | - | - | - | - | - |
| Critical Hdwy | 7.5 | 6.5 | 6.9 | - | - | 6.9 | 4.1 | - | - | - | - | - |
| Critical Hdwy Stg 1 | 6.5 | 5.5 | - | - | - | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.5 | 5.5 | - | - | - | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.5 | 4 | 3.3 | - | - | 3.3 | 2.2 | - | - | - | - | - |
| Pot Cap-1 Maneuver | *154 | *22 | 465 | 0 | 0 | *519 | 615 | - | - | 0 | - | - |
| Stage 1 | *215 | *276 | - | 0 | 0 | - | - | - | - | 0 | - | - |
| Stage 2 | *489 | *428 | - | 0 | 0 | - | - | - | - | 0 | - | - |
| Platoon blocked, % | 1 | 1 | | | | 1 | | - | - | | - | - |
| Mov Cap-1 Maneuver | *148 | *22 | 463 | - | - | *504 | 613 | - | - | - | - | - |
| Mov Cap-2 Maneuver | *148 | *22 | - | - | - | - | - | - | - | - | - | - |
| Stage 1 | *214 | *275 | - | - | - | - | - | - | - | - | - | - |
| Stage 2 | *471 | *427 | - | - | - | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 14.7 | 12.2 | 0 | 0 |
| HCM LOS | B | B | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBT | SBR |
|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 613 | - | - | 382 | 504 | - | - |
| HCM Lane V/C Ratio | - | - | - | 0.028 | 0.013 | - | - |
| HCM Control Delay (s) | 0 | - | - | 14.7 | 12.2 | - | - |
| HCM Lane LOS | A | - | - | B | B | - | - |
| HCM 95th %tile Q(veh) | 0 | - | - | 0.1 | 0 | - | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.2 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 176 | 0 | 8 | 148 | 0 | 0 |
| Future Vol, veh/h | 176 | 0 | 8 | 148 | 0 | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 1 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 81 | 81 | 81 | 81 | 81 | 81 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 217 | 0 | 10 | 183 | 0 | 0 |

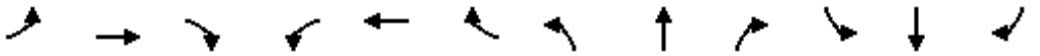
| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 217 | 0 | 420 | 218 |
| Stage 1 | - | - | - | - | 217 | - |
| Stage 2 | - | - | - | - | 203 | - |
| Critical Hdwy | - | - | 4.1 | - | 6.4 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 | - |
| Follow-up Hdwy | - | - | 2.2 | - | 3.5 | 3.3 |
| Pot Cap-1 Maneuver | - | - | 1365 | - | 623 | 827 |
| Stage 1 | - | - | - | - | 824 | - |
| Stage 2 | - | - | - | - | 869 | - |
| Platoon blocked, % | - | - | | - | 1 | |
| Mov Cap-1 Maneuver | - | - | 1365 | - | 618 | 826 |
| Mov Cap-2 Maneuver | - | - | - | - | 618 | - |
| Stage 1 | - | - | - | - | 824 | - |
| Stage 2 | - | - | - | - | 862 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0.4 | 0 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | - | 1365 | - |
| HCM Lane V/C Ratio | - | - | - | 0.007 | - |
| HCM Control Delay (s) | 0 | - | - | 7.7 | 0 |
| HCM Lane LOS | A | - | - | A | A |
| HCM 95th %tile Q(veh) | - | - | - | 0 | - |

# Capacity Analysis Summary Sheets

## Weekday Morning Peak Hour – No-Build Conditions



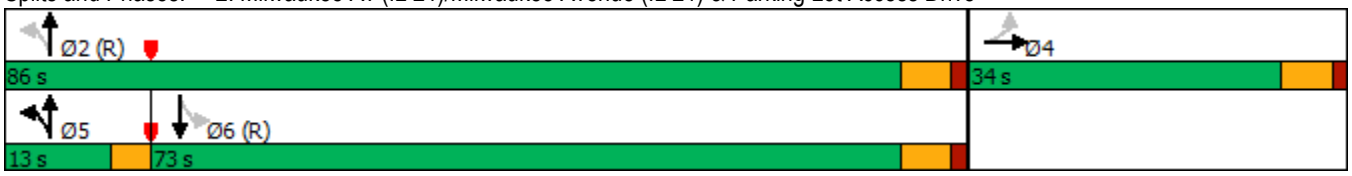
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 141 | 0 | 49 | 0 | 0 | 0 | 34 | 576 | 0 | 1 | 1119 | 176 |
| Future Volume (vph) | 141 | 0 | 49 | 0 | 0 | 0 | 34 | 576 | 0 | 1 | 1119 | 176 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Ped Bike Factor | | 0.99 | | | | | | | | | 1.00 | |
| Frt | | 0.965 | | | | | | | | | 0.980 | |
| Flt Protected | | 0.964 | | | | | | 0.997 | | | | |
| Satd. Flow (prot) | 0 | 1725 | 0 | 0 | 0 | 0 | 0 | 3483 | 0 | 0 | 3420 | 0 |
| Flt Permitted | | 0.964 | | | | | | 0.809 | | | 0.955 | |
| Satd. Flow (perm) | 0 | 1725 | 0 | 0 | 0 | 0 | 0 | 2826 | 0 | 0 | 3266 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (mph) | | 30 | | | 20 | | | 25 | | | 25 | |
| Link Distance (ft) | | 180 | | | 97 | | | 432 | | | 359 | |
| Travel Time (s) | | 4.1 | | | 3.3 | | | 11.8 | | | 9.8 | |
| Confl. Peds. (#/hr) | | | 9 | | | | 4 | | | | | 4 |
| Peak Hour Factor | 0.96 | 0.95 | 0.96 | 0.95 | 0.95 | 0.95 | 0.96 | 0.96 | 0.95 | 0.95 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 1% | 2% | 4% | 2% | 2% | 2% | 9% | 3% | 2% | 2% | 3% | 3% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 198 | 0 | 0 | 0 | 0 | 0 | 635 | 0 | 0 | 1350 | 0 |
| Turn Type | Perm | NA | | | | | pm+pt | NA | | Perm | NA | |
| Protected Phases | | 4 | | | | | 5 | 2 5 | | | 6 | |
| Permitted Phases | 4 | | | | | | 2 5 | | | 6 | | |
| Detector Phase | 4 | 4 | | | | | 5 | 2 5 | | 6 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 8.0 | 8.0 | | | | | 3.0 | | | 15.0 | 15.0 | |
| Minimum Split (s) | 27.0 | 27.0 | | | | | 8.0 | | | 25.0 | 25.0 | |
| Total Split (s) | 34.0 | 34.0 | | | | | 13.0 | | | 73.0 | 73.0 | |
| Total Split (%) | 28.3% | 28.3% | | | | | 10.8% | | | 60.8% | 60.8% | |
| Yellow Time (s) | 4.5 | 4.5 | | | | | 3.5 | | | 4.5 | 4.5 | |
| All-Red Time (s) | 1.5 | 1.5 | | | | | 0.0 | | | 1.5 | 1.5 | |
| Lost Time Adjust (s) | | 0.0 | | | | | | | | | 0.0 | |
| Total Lost Time (s) | | 6.0 | | | | | | | | | 6.0 | |
| Lead/Lag | | | | | | | Lead | | | Lag | Lag | |
| Lead-Lag Optimize? | | | | | | | Yes | | | Yes | Yes | |
| Recall Mode | None | None | | | | | None | | | C-Min | C-Min | |
| Act Effct Green (s) | | 19.9 | | | | | | 88.1 | | | 70.2 | |
| Actuated g/C Ratio | | 0.17 | | | | | | 0.73 | | | 0.58 | |
| v/c Ratio | | 0.69 | | | | | | 0.30 | | | 0.71 | |
| Control Delay | | 59.5 | | | | | | 6.0 | | | 20.9 | |
| Queue Delay | | 0.0 | | | | | | 0.0 | | | 0.0 | |
| Total Delay | | 59.5 | | | | | | 6.0 | | | 20.9 | |
| LOS | | E | | | | | | A | | | C | |
| Approach Delay | | 59.5 | | | | | | 6.0 | | | 20.9 | |
| Approach LOS | | E | | | | | | A | | | C | |
| Queue Length 50th (ft) | | 146 | | | | | | 73 | | | 395 | |
| Queue Length 95th (ft) | | 215 | | | | | | 118 | | | 484 | |
| Internal Link Dist (ft) | | 100 | | | 17 | | | 352 | | | 279 | |

| Lane Group | Ø2 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Turn Type | |
| Protected Phases | 2 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 15.0 |
| Minimum Split (s) | 22.0 |
| Total Split (s) | 86.0 |
| Total Split (%) | 72% |
| Yellow Time (s) | 4.5 |
| All-Red Time (s) | 1.5 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Recall Mode | C-Min |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| LOS | |
| Approach Delay | |
| Approach LOS | |
| Queue Length 50th (ft) | |
| Queue Length 95th (ft) | |
| Internal Link Dist (ft) | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | | 402 | | | | | | 2140 | | | 1911 | |
| Starvation Cap Reductn | | 0 | | | | | | 0 | | | 0 | |
| Spillback Cap Reductn | | 0 | | | | | | 0 | | | 0 | |
| Storage Cap Reductn | | 0 | | | | | | 0 | | | 0 | |
| Reduced v/c Ratio | | 0.49 | | | | | | 0.30 | | | 0.71 | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 120 | | | |
| Actuated Cycle Length: 120 | | | |
| Offset: 36 (30%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green | | | |
| Natural Cycle: 70 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.71 | | | |
| Intersection Signal Delay: 20.1 | | Intersection LOS: C | |
| Intersection Capacity Utilization 64.1% | | ICU Level of Service C | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 2: Milwaukee Av (IL 21)/Milwaukee Avenue (IL 21) & Parking Lot Access Drive



| Lane Group | Ø2 |
|---|---|
| Turn Bay Length (ft) | |
| Base Capacity (vph) | |
| Starvation Cap Reductn | |
| Spillback Cap Reductn | |
| Storage Cap Reductn | |
| Reduced v/c Ratio | |

| Intersection Summary |
|---|

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 9.5 |
| Intersection LOS | A |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 6 | 82 | 119 | 141 | 42 | 18 | 60 | 10 | 102 | 8 | 7 | 7 |
| Future Vol, veh/h | 6 | 82 | 119 | 141 | 42 | 18 | 60 | 10 | 102 | 8 | 7 | 7 |
| Peak Hour Factor | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Heavy Vehicles, % | 0 | 5 | 1 | 4 | 9 | 6 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 7 | 93 | 135 | 160 | 48 | 20 | 68 | 11 | 116 | 9 | 8 | 8 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 1 | 1 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 1 | 1 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 1 | 1 | 1 | 1 |
| HCM Control Delay | 9.2 | 10 | 9.4 | 8.4 |
| HCM LOS | A | A | A | A |

| Lane | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|---|---|---|---|---|
| Vol Left, % | 35% | 3% | 70% | 36% |
| Vol Thru, % | 6% | 40% | 21% | 32% |
| Vol Right, % | 59% | 57% | 9% | 32% |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 172 | 207 | 201 | 22 |
| LT Vol | 60 | 6 | 141 | 8 |
| Through Vol | 10 | 82 | 42 | 7 |
| RT Vol | 102 | 119 | 18 | 7 |
| Lane Flow Rate | 195 | 235 | 228 | 25 |
| Geometry Grp | 1 | 1 | 1 | 1 |
| Degree of Util (X) | 0.255 | 0.286 | 0.307 | 0.035 |
| Departure Headway (Hd) | 4.7 | 4.37 | 4.844 | 5.108 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 760 | 819 | 738 | 695 |
| Service Time | 2.754 | 2.417 | 2.895 | 3.182 |
| HCM Lane V/C Ratio | 0.257 | 0.287 | 0.309 | 0.036 |
| HCM Control Delay | 9.4 | 9.2 | 10 | 8.4 |
| HCM Lane LOS | A | A | A | A |
| HCM 95th-tile Q | 1 | 1.2 | 1.3 | 0.1 |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0 |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 0 | 3 | 0 | 705 | 1311 | 0 |
| Future Vol, veh/h | 0 | 3 | 0 | 705 | 1311 | 0 |
| Conflicting Peds, #/hr | 4 | 0 | 4 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 0 | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 94 | 94 | 94 | 94 | 94 | 94 |
| Heavy Vehicles, % | 0 | 0 | 0 | 3 | 3 | 0 |
| Mvmt Flow | 0 | 3 | 0 | 750 | 1395 | 0 |

| Major/Minor | Minor2 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | - | 698 | - | 0 | - | 0 |
| Stage 1 | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - |
| Critical Hdwy | - | 6.9 | - | - | - | - |
| Critical Hdwy Stg 1 | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - |
| Follow-up Hdwy | - | 3.3 | - | - | - | - |
| Pot Cap-1 Maneuver | 0 | 388 | 0 | - | - | 0 |
| Stage 1 | 0 | - | 0 | - | - | 0 |
| Stage 2 | 0 | - | 0 | - | - | 0 |
| Platoon blocked, % | | | | - | - | |
| Mov Cap-1 Maneuver | - | 388 | - | - | - | - |
| Mov Cap-2 Maneuver | - | - | - | - | - | - |
| Stage 1 | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - |

| Approach | EB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 14.4 | 0 | 0 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NBT | EBLn1 | SBT |
|---|---|---|---|
| Capacity (veh/h) | - | 388 | - |
| HCM Lane V/C Ratio | - | 0.008 | - |
| HCM Control Delay (s) | - | 14.4 | - |
| HCM Lane LOS | - | B | - |
| HCM 95th %tile Q(veh) | - | 0 | - |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.1 |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 3 | 188 | 208 | 2 | 2 | 1 |
| Future Vol, veh/h | 3 | 188 | 208 | 2 | 2 | 1 |
| Conflicting Peds, #/hr | 4 | 0 | 0 | 4 | 1 | 8 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 85 | 85 | 85 | 85 | 85 | 85 |
| Heavy Vehicles, % | 0 | 2 | 4 | 0 | 0 | 0 |
| Mvmt Flow | 4 | 221 | 245 | 2 | 2 | 1 |

| Major/Minor | Major1 | | Major2 | | Minor2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 251 | 0 | - | 0 | 480 | 258 |
| Stage 1 | - | - | - | - | 250 | - |
| Stage 2 | - | - | - | - | 230 | - |
| Critical Hdwy | 4.1 | - | - | - | 6.4 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 | - |
| Follow-up Hdwy | 2.2 | - | - | - | 3.5 | 3.3 |
| Pot Cap-1 Maneuver | 1356 | - | - | - | 592 | 884 |
| Stage 1 | - | - | - | - | 850 | - |
| Stage 2 | - | - | - | - | 813 | - |
| Platoon blocked, % | 1 | - | - | - | 1 | 1 |
| Mov Cap-1 Maneuver | 1352 | - | - | - | 586 | 876 |
| Mov Cap-2 Maneuver | - | - | - | - | 586 | - |
| Stage 1 | - | - | - | - | 844 | - |
| Stage 2 | - | - | - | - | 811 | - |

| Approach | EB | WB | SB |
|---|---|---|---|
| HCM Control Delay, s | 0.1 | 0 | 10.5 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|
| Capacity (veh/h) | 1352 | - | - | - | 659 |
| HCM Lane V/C Ratio | 0.003 | - | - | - | 0.005 |
| HCM Control Delay (s) | 7.7 | 0 | - | - | 10.5 |
| HCM Lane LOS | A | A | - | - | B |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0 |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.3 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 183 | 7 | 2 | 207 | 3 | 8 |
| Future Vol, veh/h | 183 | 7 | 2 | 207 | 3 | 8 |
| Conflicting Peds, #/hr | 0 | 12 | 12 | 0 | 0 | 2 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 86 | 86 | 86 | 86 | 86 | 86 |
| Heavy Vehicles, % | 1 | 0 | 15 | 6 | 0 | 0 |
| Mvmt Flow | 213 | 8 | 2 | 241 | 3 | 9 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 233 | 0 | 474 | 231 |
| Stage 1 | - | - | - | - | 229 | - |
| Stage 2 | - | - | - | - | 245 | - |
| Critical Hdwy | - | - | 4.25 | - | 6.4 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 | - |
| Follow-up Hdwy | - | - | 2.335 | - | 3.5 | 3.3 |
| Pot Cap-1 Maneuver | - | - | 1262 | - | 598 | 813 |
| Stage 1 | - | - | - | - | 814 | - |
| Stage 2 | - | - | - | - | 855 | - |
| Platoon blocked, % | - | - | | - | 1 | |
| Mov Cap-1 Maneuver | - | - | 1249 | - | 590 | 804 |
| Mov Cap-2 Maneuver | - | - | - | - | 590 | - |
| Stage 1 | - | - | - | - | 806 | - |
| Stage 2 | - | - | - | - | 853 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0.1 | 10 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 732 | - | - | 1249 | - |
| HCM Lane V/C Ratio | 0.017 | - | - | 0.002 | - |
| HCM Control Delay (s) | 10 | - | - | 7.9 | 0 |
| HCM Lane LOS | B | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 0 | - |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.1 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 2 | 0 | 7 | 0 | 0 | 0 | 1 | 703 | 0 | 0 | 1304 | 10 |
| Future Vol, veh/h | 2 | 0 | 7 | 0 | 0 | 0 | 1 | 703 | 0 | 0 | 1304 | 10 |
| Conflicting Peds, #/hr | 3 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 15 | 15 | 0 | 1 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | 0 | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 0 |
| Mvmt Flow | 2 | 0 | 7 | 0 | 0 | 0 | 1 | 748 | 0 | 0 | 1387 | 11 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 1773 | 2159 | 700 | - | - | 392 | 1399 | 0 | 0 | - | - | 0 |
| Stage 1 | 1394 | 1394 | - | - | - | - | - | - | - | - | - | - |
| Stage 2 | 379 | 765 | - | - | - | - | - | - | - | - | - | - |
| Critical Hdwy | 7.5 | 6.5 | 6.9 | - | - | 6.9 | 4.1 | - | - | - | - | - |
| Critical Hdwy Stg 1 | 6.5 | 5.5 | - | - | - | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.5 | 5.5 | - | - | - | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.5 | 4 | 3.3 | - | - | 3.3 | 2.2 | - | - | - | - | - |
| Pot Cap-1 Maneuver | *88 | *55 | 386 | 0 | 0 | *782 | 495 | - | - | 0 | - | - |
| Stage 1 | *152 | *210 | - | 0 | 0 | - | - | - | - | 0 | - | - |
| Stage 2 | *738 | *646 | - | 0 | 0 | - | - | - | - | 0 | - | - |
| Platoon blocked, % | 1 | 1 | | | | 1 | | - | - | | - | - |
| Mov Cap-1 Maneuver | *87 | *54 | 386 | - | - | *771 | 495 | - | - | - | - | - |
| Mov Cap-2 Maneuver | *87 | *54 | - | - | - | - | - | - | - | - | - | - |
| Stage 1 | *151 | *210 | - | - | - | - | - | - | - | - | - | - |
| Stage 2 | *734 | *636 | - | - | - | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 22.2 | 0 | 0 | 0 |
| HCM LOS | C | A | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBT | SBR |
|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 495 | - | - | 219 | - | - | - |
| HCM Lane V/C Ratio | 0.002 | - | - | 0.044 | - | - | - |
| HCM Control Delay (s) | 12.3 | 0 | - | 22.2 | 0 | - | - |
| HCM Lane LOS | B | A | - | C | A | - | - |
| HCM 95th %tile Q(veh) | 0 | - | - | 0.1 | - | - | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.2 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 190 | 2 | 9 | 201 | 0 | 0 |
| Future Vol, veh/h | 190 | 2 | 9 | 201 | 0 | 0 |
| Conflicting Peds, #/hr | 0 | 8 | 8 | 0 | 1 | 2 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 86 | 86 | 86 | 86 | 86 | 86 |
| Heavy Vehicles, % | 2 | 0 | 0 | 4 | 0 | 0 |
| Mvmt Flow | 221 | 2 | 10 | 234 | 0 | 0 |

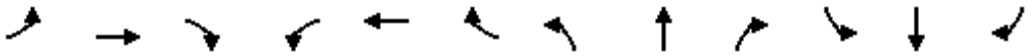
| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 231 | 0 | 485 | 232 |
| Stage 1 | - | - | - | - | 230 | - |
| Stage 2 | - | - | - | - | 255 | - |
| Critical Hdwy | - | - | 4.1 | - | 6.4 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 | - |
| Follow-up Hdwy | - | - | 2.2 | - | 3.5 | 3.3 |
| Pot Cap-1 Maneuver | - | - | 1349 | - | 587 | 812 |
| Stage 1 | - | - | - | - | 813 | - |
| Stage 2 | - | - | - | - | 844 | - |
| Platoon blocked, % | - | - | | - | 1 | |
| Mov Cap-1 Maneuver | - | - | 1340 | - | 577 | 805 |
| Mov Cap-2 Maneuver | - | - | - | - | 577 | - |
| Stage 1 | - | - | - | - | 807 | - |
| Stage 2 | - | - | - | - | 836 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0.3 | 0 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | - | 1340 | - |
| HCM Lane V/C Ratio | - | - | - | 0.008 | - |
| HCM Control Delay (s) | 0 | - | - | 7.7 | 0 |
| HCM Lane LOS | A | - | - | A | A |
| HCM 95th %tile Q(veh) | - | - | - | 0 | - |

# Capacity Analysis Summary Sheets

## Weekday Evening Peak Hour – No-Build Conditions



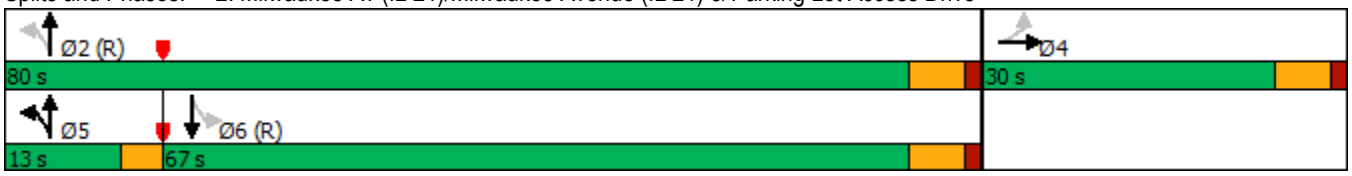
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 165 | 0 | 33 | 0 | 0 | 0 | 81 | 1226 | 1 | 1 | 964 | 127 |
| Future Volume (vph) | 165 | 0 | 33 | 0 | 0 | 0 | 81 | 1226 | 1 | 1 | 964 | 127 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Ped Bike Factor | | 0.99 | | | | | | | | | 0.98 | |
| Frt | | 0.977 | | | | | | | | | 0.983 | |
| Flt Protected | | 0.960 | | | | | | 0.997 | | | | |
| Satd. Flow (prot) | 0 | 1760 | 0 | 0 | 0 | 0 | 0 | 3566 | 0 | 0 | 3493 | 0 |
| Flt Permitted | | 0.960 | | | | | | 0.703 | | | 0.954 | |
| Satd. Flow (perm) | 0 | 1755 | 0 | 0 | 0 | 0 | 0 | 2514 | 0 | 0 | 3333 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (mph) | | 25 | | | 20 | | | 25 | | | 25 | |
| Link Distance (ft) | | 180 | | | 97 | | | 432 | | | 359 | |
| Travel Time (s) | | 4.9 | | | 3.3 | | | 11.8 | | | 9.8 | |
| Confl. Peds. (#/hr) | 2 | | 40 | | | | 40 | | | | | 40 |
| Peak Hour Factor | 0.98 | 0.95 | 0.98 | 0.95 | 0.95 | 0.95 | 0.98 | 0.98 | 0.95 | 0.95 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 0% | 2% | 0% | 2% | 2% | 2% | 0% | 1% | 2% | 2% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 202 | 0 | 0 | 0 | 0 | 0 | 1335 | 0 | 0 | 1115 | 0 |
| Turn Type | Perm | NA | | | | | pm+pt | NA | | Perm | NA | |
| Protected Phases | | 4 | | | | | 5 | 2 5 | | | 6 | |
| Permitted Phases | 4 | | | | | | 2 5 | | | 6 | | |
| Detector Phase | 4 | 4 | | | | | 5 | 2 5 | | 6 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 8.0 | 8.0 | | | | | 3.0 | | | 15.0 | 15.0 | |
| Minimum Split (s) | 27.0 | 27.0 | | | | | 8.0 | | | 25.0 | 25.0 | |
| Total Split (s) | 30.0 | 30.0 | | | | | 13.0 | | | 67.0 | 67.0 | |
| Total Split (%) | 27.3% | 27.3% | | | | | 11.8% | | | 60.9% | 60.9% | |
| Yellow Time (s) | 4.5 | 4.5 | | | | | 3.5 | | | 4.5 | 4.5 | |
| All-Red Time (s) | 1.5 | 1.5 | | | | | 0.0 | | | 1.5 | 1.5 | |
| Lost Time Adjust (s) | | 0.0 | | | | | | | | | 0.0 | |
| Total Lost Time (s) | | 6.0 | | | | | | | | | 6.0 | |
| Lead/Lag | | | | | | | Lead | | | Lag | Lag | |
| Lead-Lag Optimize? | | | | | | | Yes | | | Yes | Yes | |
| Recall Mode | None | None | | | | | None | | | C-Min | C-Min | |
| Act Effct Green (s) | | 18.5 | | | | | | 79.5 | | | 61.0 | |
| Actuated g/C Ratio | | 0.17 | | | | | | 0.72 | | | 0.55 | |
| v/c Ratio | | 0.69 | | | | | | 0.69 | | | 0.60 | |
| Control Delay | | 54.6 | | | | | | 10.5 | | | 18.1 | |
| Queue Delay | | 0.0 | | | | | | 0.0 | | | 0.0 | |
| Total Delay | | 54.6 | | | | | | 10.5 | | | 18.1 | |
| LOS | | D | | | | | | B | | | B | |
| Approach Delay | | 54.6 | | | | | | 10.5 | | | 18.1 | |
| Approach LOS | | D | | | | | | B | | | B | |
| Queue Length 50th (ft) | | 135 | | | | | | 193 | | | 263 | |
| Queue Length 95th (ft) | | 203 | | | | | | 287 | | | 329 | |
| Internal Link Dist (ft) | | 100 | | | 17 | | | 352 | | | 279 | |

| Lane Group | Ø2 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Turn Type | |
| Protected Phases | 2 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 15.0 |
| Minimum Split (s) | 22.0 |
| Total Split (s) | 80.0 |
| Total Split (%) | 73% |
| Yellow Time (s) | 4.5 |
| All-Red Time (s) | 1.5 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Recall Mode | C-Min |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| LOS | |
| Approach Delay | |
| Approach LOS | |
| Queue Length 50th (ft) | |
| Queue Length 95th (ft) | |
| Internal Link Dist (ft) | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | | 382 | | | | | | 1936 | | | 1848 | |
| Starvation Cap Reductn | | 0 | | | | | | 0 | | | 0 | |
| Spillback Cap Reductn | | 0 | | | | | | 0 | | | 0 | |
| Storage Cap Reductn | | 0 | | | | | | 0 | | | 0 | |
| Reduced v/c Ratio | | 0.53 | | | | | | 0.69 | | | 0.60 | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 110 | | | |
| Actuated Cycle Length: 110 | | | |
| Offset: 35.2 (32%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green | | | |
| Natural Cycle: 75 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.69 | | | |
| Intersection Signal Delay: 17.1 | | Intersection LOS: B | |
| Intersection Capacity Utilization 98.4% | | ICU Level of Service F | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 2: Milwaukee Av (IL 21)/Milwaukee Avenue (IL 21) & Parking Lot Access Drive



| Lane Group | Ø2 |
|---|---|
| Turn Bay Length (ft) | |
| Base Capacity (vph) | |
| Starvation Cap Reductn | |
| Spillback Cap Reductn | |
| Storage Cap Reductn | |
| Reduced v/c Ratio | |

| Intersection Summary |
|---|

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 11.6 |
| Intersection LOS | B |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 5 | 52 | 68 | 60 | 74 | 20 | 131 | 23 | 105 | 26 | 33 | 11 |
| Future Vol, veh/h | 5 | 52 | 68 | 60 | 74 | 20 | 131 | 23 | 105 | 26 | 33 | 11 |
| Peak Hour Factor | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 7 | 74 | 97 | 86 | 106 | 29 | 187 | 33 | 150 | 37 | 47 | 16 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 1 | 1 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 1 | 1 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 1 | 1 | 1 | 1 |
| HCM Control Delay | 10 | 11.2 | 13.2 | 9.6 |
| HCM LOS | A | B | B | A |

| Lane | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|---|---|---|---|---|
| Vol Left, % | 51% | 4% | 39% | 37% |
| Vol Thru, % | 9% | 42% | 48% | 47% |
| Vol Right, % | 41% | 54% | 13% | 16% |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 259 | 125 | 154 | 70 |
| LT Vol | 131 | 5 | 60 | 26 |
| Through Vol | 23 | 52 | 74 | 33 |
| RT Vol | 105 | 68 | 20 | 11 |
| Lane Flow Rate | 370 | 179 | 220 | 100 |
| Geometry Grp | 1 | 1 | 1 | 1 |
| Degree of Util (X) | 0.514 | 0.257 | 0.332 | 0.154 |
| Departure Headway (Hd) | 5.001 | 5.19 | 5.426 | 5.535 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 722 | 691 | 662 | 647 |
| Service Time | 3.032 | 3.23 | 3.463 | 3.577 |
| HCM Lane V/C Ratio | 0.512 | 0.259 | 0.332 | 0.155 |
| HCM Control Delay | 13.2 | 10 | 11.2 | 9.6 |
| HCM Lane LOS | B | A | B | A |
| HCM 95th-tile Q | 3 | 1 | 1.5 | 0.5 |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.1 |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 0 | 10 | 0 | 1407 | 1087 | 0 |
| Future Vol, veh/h | 0 | 10 | 0 | 1407 | 1087 | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 0 | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 91 | 91 | 91 | 91 | 91 | 91 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 1 | 0 |
| Mvmt Flow | 0 | 11 | 0 | 1546 | 1195 | 0 |

| Major/Minor | Minor2 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | - | 598 | - | 0 | - | 0 |
| Stage 1 | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - |
| Critical Hdwy | - | 6.9 | - | - | - | - |
| Critical Hdwy Stg 1 | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - |
| Follow-up Hdwy | - | 3.3 | - | - | - | - |
| Pot Cap-1 Maneuver | 0 | 450 | 0 | - | - | 0 |
| Stage 1 | 0 | - | 0 | - | - | 0 |
| Stage 2 | 0 | - | 0 | - | - | 0 |
| Platoon blocked, % | | | | - | - | |
| Mov Cap-1 Maneuver | - | 450 | - | - | - | - |
| Mov Cap-2 Maneuver | - | - | - | - | - | - |
| Stage 1 | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - |

| Approach | EB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 13.2 | 0 | 0 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NBT | EBLn1 | SBT |
|---|---|---|---|
| Capacity (veh/h) | - | 450 | - |
| HCM Lane V/C Ratio | - | 0.024 | - |
| HCM Control Delay (s) | - | 13.2 | - |
| HCM Lane LOS | - | B | - |
| HCM 95th %tile Q(veh) | - | 0.1 | - |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.2 |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 3 | 193 | 194 | 14 | 5 | 2 |
| Future Vol, veh/h | 3 | 193 | 194 | 14 | 5 | 2 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 9 | 7 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 91 | 91 | 91 | 91 | 91 | 91 |
| Heavy Vehicles, % | 0 | 0 | 1 | 0 | 0 | 0 |
| Mvmt Flow | 3 | 212 | 213 | 15 | 5 | 2 |

| Major/Minor | Major1 | | Major2 | | Minor2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 228 | 0 | - | 0 | 448 | 228 |
| Stage 1 | - | - | - | - | 221 | - |
| Stage 2 | - | - | - | - | 227 | - |
| Critical Hdwy | 4.1 | - | - | - | 6.4 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 | - |
| Follow-up Hdwy | 2.2 | - | - | - | 3.5 | 3.3 |
| Pot Cap-1 Maneuver | 1385 | - | - | - | 618 | 918 |
| Stage 1 | - | - | - | - | 875 | - |
| Stage 2 | - | - | - | - | 815 | - |
| Platoon blocked, % | 1 | - | - | - | 1 | 1 |
| Mov Cap-1 Maneuver | 1385 | - | - | - | 617 | 913 |
| Mov Cap-2 Maneuver | - | - | - | - | 617 | - |
| Stage 1 | - | - | - | - | 873 | - |
| Stage 2 | - | - | - | - | 815 | - |

| Approach | EB | WB | SB |
|---|---|---|---|
| HCM Control Delay, s | 0.1 | 0 | 10.4 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|
| Capacity (veh/h) | 1385 | - | - | - | 680 |
| HCM Lane V/C Ratio | 0.002 | - | - | - | 0.011 |
| HCM Control Delay (s) | 7.6 | 0 | - | - | 10.4 |
| HCM Lane LOS | A | A | - | - | B |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0 |

| Intersection | |
|---|---|
| Int Delay, s/veh | 1.4 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 177 | 6 | 40 | 156 | 6 | 19 |
| Future Vol, veh/h | 177 | 6 | 40 | 156 | 6 | 19 |
| Conflicting Peds, #/hr | 0 | 11 | 11 | 0 | 0 | 7 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 86 | 86 | 86 | 86 | 86 | 86 |
| Heavy Vehicles, % | 1 | 0 | 15 | 6 | 0 | 0 |
| Mvmt Flow | 206 | 7 | 47 | 181 | 7 | 22 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 224 | 0 | 496 | 228 |
| Stage 1 | - | - | - | - | 221 | - |
| Stage 2 | - | - | - | - | 275 | - |
| Critical Hdwy | - | - | 4.25 | - | 6.4 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 | - |
| Follow-up Hdwy | - | - | 2.335 | - | 3.5 | 3.3 |
| Pot Cap-1 Maneuver | - | - | 1272 | - | 566 | 816 |
| Stage 1 | - | - | - | - | 821 | - |
| Stage 2 | - | - | - | - | 810 | - |
| Platoon blocked, % | - | - | | - | 1 | |
| Mov Cap-1 Maneuver | - | - | 1260 | - | 537 | 804 |
| Mov Cap-2 Maneuver | - | - | - | - | 537 | - |
| Stage 1 | - | - | - | - | 814 | - |
| Stage 2 | - | - | - | - | 777 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 1.6 | 10.2 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 718 | - | - | 1260 | - |
| HCM Lane V/C Ratio | 0.04 | - | - | 0.037 | - |
| HCM Control Delay (s) | 10.2 | - | - | 8 | 0 |
| HCM Lane LOS | B | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 0.1 | - |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.1 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 1 | 0 | 9 | 0 | 0 | 6 | 0 | 1400 | 0 | 0 | 1092 | 5 |
| Future Vol, veh/h | 1 | 0 | 9 | 0 | 0 | 6 | 0 | 1400 | 0 | 0 | 1092 | 5 |
| Conflicting Peds, #/hr | 33 | 0 | 0 | 0 | 0 | 33 | 4 | 0 | 4 | 4 | 0 | 4 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | 0 | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 1 | 0 | 10 | 0 | 0 | 7 | 0 | 1522 | 0 | 0 | 1187 | 5 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 1988 | 2720 | 600 | - | - | 798 | 1196 | 0 | 0 | - | - | 0 |
| Stage 1 | 1194 | 1194 | - | - | - | - | - | - | - | - | - | - |
| Stage 2 | 794 | 1526 | - | - | - | - | - | - | - | - | - | - |
| Critical Hdwy | 7.5 | 6.5 | 6.9 | - | - | 6.9 | 4.1 | - | - | - | - | - |
| Critical Hdwy Stg 1 | 6.5 | 5.5 | - | - | - | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.5 | 5.5 | - | - | - | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.5 | 4 | 3.3 | - | - | 3.3 | 2.2 | - | - | - | - | - |
| Pot Cap-1 Maneuver | *137 | *16 | 449 | 0 | 0 | *489 | 591 | - | - | 0 | - | - |
| Stage 1 | *201 | *262 | - | 0 | 0 | - | - | - | - | 0 | - | - |
| Stage 2 | *461 | *404 | - | 0 | 0 | - | - | - | - | 0 | - | - |
| Platoon blocked, % | 1 | 1 | | | | 1 | | - | - | | - | - |
| Mov Cap-1 Maneuver | *131 | *16 | 448 | - | - | *474 | 589 | - | - | - | - | - |
| Mov Cap-2 Maneuver | *131 | *16 | - | - | - | - | - | - | - | - | - | - |
| Stage 1 | *200 | *261 | - | - | - | - | - | - | - | - | - | - |
| Stage 2 | *442 | *403 | - | - | - | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 15.3 | 12.7 | 0 | 0 |
| HCM LOS | C | B | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBT | SBR |
|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 589 | - | - | 361 | 474 | - | - |
| HCM Lane V/C Ratio | - | - | - | 0.03 | 0.014 | - | - |
| HCM Control Delay (s) | 0 | - | - | 15.3 | 12.7 | - | - |
| HCM Lane LOS | A | - | - | C | B | - | - |
| HCM 95th %tile Q(veh) | 0 | - | - | 0.1 | 0 | - | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.2 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 183 | 0 | 8 | 154 | 0 | 0 |
| Future Vol, veh/h | 183 | 0 | 8 | 154 | 0 | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 1 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 81 | 81 | 81 | 81 | 81 | 81 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 226 | 0 | 10 | 190 | 0 | 0 |

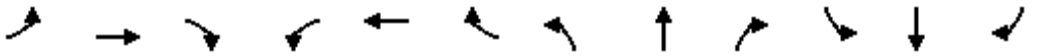
| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 226 | 0 | 436 | 227 |
| Stage 1 | - | - | - | - | 226 | - |
| Stage 2 | - | - | - | - | 210 | - |
| Critical Hdwy | - | - | 4.1 | - | 6.4 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 | - |
| Follow-up Hdwy | - | - | 2.2 | - | 3.5 | 3.3 |
| Pot Cap-1 Maneuver | - | - | 1354 | - | 619 | 817 |
| Stage 1 | - | - | - | - | 816 | - |
| Stage 2 | - | - | - | - | 873 | - |
| Platoon blocked, % | - | - | | - | 1 | |
| Mov Cap-1 Maneuver | - | - | 1354 | - | 614 | 816 |
| Mov Cap-2 Maneuver | - | - | - | - | 614 | - |
| Stage 1 | - | - | - | - | 816 | - |
| Stage 2 | - | - | - | - | 866 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0.4 | 0 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | - | 1354 | - |
| HCM Lane V/C Ratio | - | - | - | 0.007 | - |
| HCM Control Delay (s) | 0 | - | - | 7.7 | 0 |
| HCM Lane LOS | A | - | - | A | A |
| HCM 95th %tile Q(veh) | - | - | - | 0 | - |

# Capacity Analysis Summary Sheets

## Weekday Morning Peak Hour – Projected Conditions



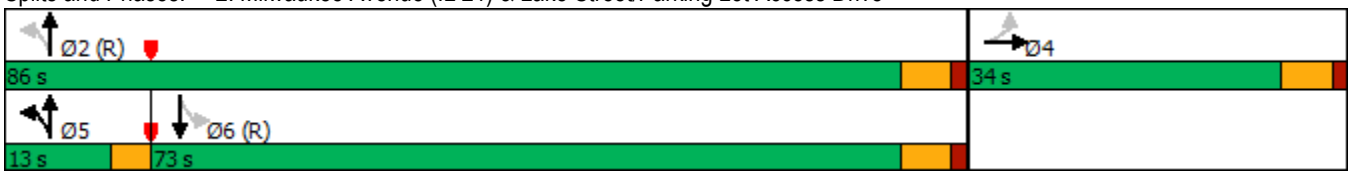
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 150 | 0 | 52 | 0 | 0 | 0 | 41 | 575 | 0 | 1 | 1120 | 168 |
| Future Volume (vph) | 150 | 0 | 52 | 0 | 0 | 0 | 41 | 575 | 0 | 1 | 1120 | 168 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Ped Bike Factor | | 0.99 | | | | | | | | | 1.00 | |
| Frt | | 0.965 | | | | | | | | | 0.980 | |
| Flt Protected | | 0.964 | | | | | | 0.997 | | | | |
| Satd. Flow (prot) | 0 | 1725 | 0 | 0 | 0 | 0 | 0 | 3481 | 0 | 0 | 3420 | 0 |
| Flt Permitted | | 0.964 | | | | | | 0.755 | | | 0.955 | |
| Satd. Flow (perm) | 0 | 1725 | 0 | 0 | 0 | 0 | 0 | 2636 | 0 | 0 | 3266 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (mph) | | 25 | | | 30 | | | 25 | | | 25 | |
| Link Distance (ft) | | 180 | | | 87 | | | 432 | | | 359 | |
| Travel Time (s) | | 4.9 | | | 2.0 | | | 11.8 | | | 9.8 | |
| Confl. Peds. (#/hr) | | | 9 | | | | 4 | | | | | 4 |
| Peak Hour Factor | 0.96 | 0.95 | 0.96 | 0.95 | 0.95 | 0.95 | 0.96 | 0.96 | 0.95 | 0.95 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 1% | 2% | 4% | 2% | 2% | 2% | 9% | 3% | 2% | 2% | 3% | 3% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 210 | 0 | 0 | 0 | 0 | 0 | 642 | 0 | 0 | 1343 | 0 |
| Turn Type | Perm | NA | | | | | pm+pt | NA | | Perm | NA | |
| Protected Phases | | 4 | | | | | 5 | 2 5 | | | 6 | |
| Permitted Phases | 4 | | | | | | 2 5 | | | 6 | | |
| Detector Phase | 4 | 4 | | | | | 5 | 2 5 | | 6 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 8.0 | 8.0 | | | | | 3.0 | | | 15.0 | 15.0 | |
| Minimum Split (s) | 27.0 | 27.0 | | | | | 8.0 | | | 25.0 | 25.0 | |
| Total Split (s) | 34.0 | 34.0 | | | | | 13.0 | | | 73.0 | 73.0 | |
| Total Split (%) | 28.3% | 28.3% | | | | | 10.8% | | | 60.8% | 60.8% | |
| Yellow Time (s) | 4.5 | 4.5 | | | | | 3.5 | | | 4.5 | 4.5 | |
| All-Red Time (s) | 1.5 | 1.5 | | | | | 0.0 | | | 1.5 | 1.5 | |
| Lost Time Adjust (s) | | 0.0 | | | | | | | | | 0.0 | |
| Total Lost Time (s) | | 6.0 | | | | | | | | | 6.0 | |
| Lead/Lag | | | | | | | Lead | | | Lag | Lag | |
| Lead-Lag Optimize? | | | | | | | Yes | | | Yes | Yes | |
| Recall Mode | None | None | | | | | None | | | C-Min | C-Min | |
| Act Effct Green (s) | | 20.7 | | | | | | 87.3 | | | 69.7 | |
| Actuated g/C Ratio | | 0.17 | | | | | | 0.73 | | | 0.58 | |
| v/c Ratio | | 0.71 | | | | | | 0.32 | | | 0.71 | |
| Control Delay | | 59.4 | | | | | | 6.4 | | | 21.2 | |
| Queue Delay | | 0.0 | | | | | | 0.0 | | | 0.0 | |
| Total Delay | | 59.4 | | | | | | 6.4 | | | 21.2 | |
| LOS | | E | | | | | | A | | | C | |
| Approach Delay | | 59.4 | | | | | | 6.4 | | | 21.2 | |
| Approach LOS | | E | | | | | | A | | | C | |
| Queue Length 50th (ft) | | 155 | | | | | | 76 | | | 392 | |
| Queue Length 95th (ft) | | 224 | | | | | | 123 | | | 480 | |
| Internal Link Dist (ft) | | 100 | | | 7 | | | 352 | | | 279 | |

| Lane Group | Ø2 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Turn Type | |
| Protected Phases | 2 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 15.0 |
| Minimum Split (s) | 22.0 |
| Total Split (s) | 86.0 |
| Total Split (%) | 72% |
| Yellow Time (s) | 4.5 |
| All-Red Time (s) | 1.5 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Recall Mode | C-Min |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| LOS | |
| Approach Delay | |
| Approach LOS | |
| Queue Length 50th (ft) | |
| Queue Length 95th (ft) | |
| Internal Link Dist (ft) | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | | 402 | | | | | | 1999 | | | 1897 | |
| Starvation Cap Reductn | | 0 | | | | | | 0 | | | 0 | |
| Spillback Cap Reductn | | 0 | | | | | | 0 | | | 0 | |
| Storage Cap Reductn | | 0 | | | | | | 0 | | | 0 | |
| Reduced v/c Ratio | | 0.52 | | | | | | 0.32 | | | 0.71 | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 120 | | | |
| Actuated Cycle Length: 120 | | | |
| Offset: 36 (30%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green | | | |
| Natural Cycle: 70 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.71 | | | |
| Intersection Signal Delay: 20.5 | | Intersection LOS: C | |
| Intersection Capacity Utilization 70.2% | | ICU Level of Service C | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 2: Milwaukee Avenue (IL 21) & Lake Street/Parking Lot Access Drive



| Lane Group | Ø2 |
|---|---|
| Turn Bay Length (ft) | |
| Base Capacity (vph) | |
| Starvation Cap Reductn | |
| Spillback Cap Reductn | |
| Storage Cap Reductn | |
| Reduced v/c Ratio | |

| Intersection Summary |
|---|

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 9.6 |
| Intersection LOS | A |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 9 | 83 | 119 | 144 | 45 | 15 | 60 | 13 | 103 | 12 | 10 | 10 |
| Future Vol, veh/h | 9 | 83 | 119 | 144 | 45 | 15 | 60 | 13 | 103 | 12 | 10 | 10 |
| Peak Hour Factor | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Heavy Vehicles, % | 0 | 5 | 1 | 4 | 9 | 6 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 10 | 94 | 135 | 164 | 51 | 17 | 68 | 15 | 117 | 14 | 11 | 11 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 1 | 1 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 1 | 1 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 1 | 1 | 1 | 1 |
| HCM Control Delay | 9.4 | 10.2 | 9.5 | 8.5 |
| HCM LOS | A | B | A | A |

| Lane | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|---|---|---|---|---|
| Vol Left, % | 34% | 4% | 71% | 38% |
| Vol Thru, % | 7% | 39% | 22% | 31% |
| Vol Right, % | 59% | 56% | 7% | 31% |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 176 | 211 | 204 | 32 |
| LT Vol | 60 | 9 | 144 | 12 |
| Through Vol | 13 | 83 | 45 | 10 |
| RT Vol | 103 | 119 | 15 | 10 |
| Lane Flow Rate | 200 | 240 | 232 | 36 |
| Geometry Grp | 1 | 1 | 1 | 1 |
| Degree of Util (X) | 0.264 | 0.295 | 0.316 | 0.052 |
| Departure Headway (Hd) | 4.747 | 4.43 | 4.907 | 5.151 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 752 | 806 | 728 | 688 |
| Service Time | 2.809 | 2.488 | 2.967 | 3.233 |
| HCM Lane V/C Ratio | 0.266 | 0.298 | 0.319 | 0.052 |
| HCM Control Delay | 9.5 | 9.4 | 10.2 | 8.5 |
| HCM Lane LOS | A | A | B | A |
| HCM 95th-tile Q | 1.1 | 1.2 | 1.4 | 0.2 |

| Intersection | |
|---|---|
| Int Delay, s/veh | 1.3 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 10 | 0 | 26 | 11 | 0 | 22 |
| Future Vol, veh/h | 10 | 0 | 26 | 11 | 0 | 22 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 11 | 0 | 27 | 12 | 0 | 23 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 56 | 33 | 0 | 0 | 39 | 0 |
| Stage 1 | 33 | - | - | - | - | - |
| Stage 2 | 23 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 | - |
| Pot Cap-1 Maneuver | 952 | 1041 | - | - | 1571 | - |
| Stage 1 | 989 | - | - | - | - | - |
| Stage 2 | 1000 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 952 | 1041 | - | - | 1571 | - |
| Mov Cap-2 Maneuver | 952 | - | - | - | - | - |
| Stage 1 | 989 | - | - | - | - | - |
| Stage 2 | 1000 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 8.8 | 0 | 0 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 952 | 1571 | - |
| HCM Lane V/C Ratio | - | - | 0.011 | - | - |
| HCM Control Delay (s) | - | - | 8.8 | 0 | - |
| HCM Lane LOS | - | - | A | A | - |
| HCM 95th %tile Q(veh) | - | - | 0 | 0 | - |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0 |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 0 | 3 | 0 | 712 | 1308 | 0 |
| Future Vol, veh/h | 0 | 3 | 0 | 712 | 1308 | 0 |
| Conflicting Peds, #/hr | 4 | 0 | 4 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 0 | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 94 | 94 | 94 | 94 | 94 | 94 |
| Heavy Vehicles, % | 0 | 0 | 0 | 3 | 3 | 0 |
| Mvmt Flow | 0 | 3 | 0 | 757 | 1391 | 0 |

| Major/Minor | Minor2 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | - | 696 | - | 0 | - | 0 |
| Stage 1 | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - |
| Critical Hdwy | - | 6.9 | - | - | - | - |
| Critical Hdwy Stg 1 | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - |
| Follow-up Hdwy | - | 3.3 | - | - | - | - |
| Pot Cap-1 Maneuver | 0 | 389 | 0 | - | - | 0 |
| Stage 1 | 0 | - | 0 | - | - | 0 |
| Stage 2 | 0 | - | 0 | - | - | 0 |
| Platoon blocked, % | | | | - | - | |
| Mov Cap-1 Maneuver | - | 389 | - | - | - | - |
| Mov Cap-2 Maneuver | - | - | - | - | - | - |
| Stage 1 | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - |

| Approach | EB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 14.3 | 0 | 0 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NBT | EBLn1 | SBT |
|---|---|---|---|
| Capacity (veh/h) | - | 389 | - |
| HCM Lane V/C Ratio | - | 0.008 | - |
| HCM Control Delay (s) | - | 14.3 | - |
| HCM Lane LOS | - | B | - |
| HCM 95th %tile Q(veh) | - | 0 | - |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.1 |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 3 | 200 | 207 | 2 | 2 | 1 |
| Future Vol, veh/h | 3 | 200 | 207 | 2 | 2 | 1 |
| Conflicting Peds, #/hr | 4 | 0 | 0 | 4 | 1 | 8 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 85 | 85 | 85 | 85 | 85 | 85 |
| Heavy Vehicles, % | 0 | 2 | 4 | 0 | 0 | 0 |
| Mvmt Flow | 4 | 235 | 244 | 2 | 2 | 1 |

| Major/Minor | Major1 | | Major2 | | Minor2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 250 | 0 | - | 0 | 493 | 257 |
| Stage 1 | - | - | - | - | 249 | - |
| Stage 2 | - | - | - | - | 244 | - |
| Critical Hdwy | 4.1 | - | - | - | 6.4 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 | - |
| Follow-up Hdwy | 2.2 | - | - | - | 3.5 | 3.3 |
| Pot Cap-1 Maneuver | 1360 | - | - | - | 582 | 891 |
| Stage 1 | - | - | - | - | 854 | - |
| Stage 2 | - | - | - | - | 801 | - |
| Platoon blocked, % | 1 | - | - | - | 1 | 1 |
| Mov Cap-1 Maneuver | 1356 | - | - | - | 577 | 882 |
| Mov Cap-2 Maneuver | - | - | - | - | 577 | - |
| Stage 1 | - | - | - | - | 848 | - |
| Stage 2 | - | - | - | - | 799 | - |

| Approach | EB | WB | SB |
|---|---|---|---|
| HCM Control Delay, s | 0.1 | 0 | 10.6 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|
| Capacity (veh/h) | 1356 | - | - | - | 652 |
| HCM Lane V/C Ratio | 0.003 | - | - | - | 0.005 |
| HCM Control Delay (s) | 7.7 | 0 | - | - | 10.6 |
| HCM Lane LOS | A | A | - | - | B |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0 |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.3 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 195 | 7 | 2 | 206 | 3 | 8 |
| Future Vol, veh/h | 195 | 7 | 2 | 206 | 3 | 8 |
| Conflicting Peds, #/hr | 0 | 12 | 12 | 0 | 0 | 2 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 86 | 86 | 86 | 86 | 86 | 86 |
| Heavy Vehicles, % | 1 | 0 | 15 | 6 | 0 | 0 |
| Mvmt Flow | 227 | 8 | 2 | 240 | 3 | 9 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 247 | 0 | 487 | 245 |
| Stage 1 | - | - | - | - | 243 | - |
| Stage 2 | - | - | - | - | 244 | - |
| Critical Hdwy | - | - | 4.25 | - | 6.4 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 | - |
| Follow-up Hdwy | - | - | 2.335 | - | 3.5 | 3.3 |
| Pot Cap-1 Maneuver | - | - | 1247 | - | 588 | 799 |
| Stage 1 | - | - | - | - | 802 | - |
| Stage 2 | - | - | - | - | 859 | - |
| Platoon blocked, % | - | - | | - | 1 | |
| Mov Cap-1 Maneuver | - | - | 1235 | - | 581 | 790 |
| Mov Cap-2 Maneuver | - | - | - | - | 581 | - |
| Stage 1 | - | - | - | - | 794 | - |
| Stage 2 | - | - | - | - | 857 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0.1 | 10.1 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 719 | - | - | 1235 | - |
| HCM Lane V/C Ratio | 0.018 | - | - | 0.002 | - |
| HCM Control Delay (s) | 10.1 | - | - | 7.9 | 0 |
| HCM Lane LOS | B | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 0 | - |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 712 | 0 | 0 | 1296 | 15 |
| Future Vol, veh/h | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 712 | 0 | 0 | 1296 | 15 |
| Conflicting Peds, #/hr | 3 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 15 | 15 | 0 | 1 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | 0 | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 0 |
| Mvmt Flow | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 757 | 0 | 0 | 1379 | 16 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 1770 | 2160 | 699 | - | - | 397 | 1396 | 0 | 0 | - | - | 0 |
| Stage 1 | 1388 | 1388 | - | - | - | - | - | - | - | - | - | - |
| Stage 2 | 382 | 772 | - | - | - | - | - | - | - | - | - | - |
| Critical Hdwy | 7.5 | 6.5 | 6.9 | - | - | 6.9 | 4.1 | - | - | - | - | - |
| Critical Hdwy Stg 1 | 6.5 | 5.5 | - | - | - | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.5 | 5.5 | - | - | - | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.5 | 4 | 3.3 | - | - | 3.3 | 2.2 | - | - | - | - | - |
| Pot Cap-1 Maneuver | *88 | *55 | 387 | 0 | 0 | *782 | 496 | - | - | 0 | - | - |
| Stage 1 | *153 | *212 | - | 0 | 0 | - | - | - | - | 0 | - | - |
| Stage 2 | *738 | *646 | - | 0 | 0 | - | - | - | - | 0 | - | - |
| Platoon blocked, % | 1 | 1 | | | | 1 | | - | - | | - | - |
| Mov Cap-1 Maneuver | *88 | *55 | 387 | - | - | *771 | 496 | - | - | - | - | - |
| Mov Cap-2 Maneuver | *88 | *55 | - | - | - | - | - | - | - | - | - | - |
| Stage 1 | *153 | *212 | - | - | - | - | - | - | - | - | - | - |
| Stage 2 | *736 | *638 | - | - | - | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 14.5 | 0 | 0 | 0 |
| HCM LOS | B | A | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBT | SBR |
|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 496 | - | - | 387 | - | - | - |
| HCM Lane V/C Ratio | - | - | - | 0.016 | - | - | - |
| HCM Control Delay (s) | 0 | - | - | 14.5 | 0 | - | - |
| HCM Lane LOS | A | - | - | B | A | - | - |
| HCM 95th %tile Q(veh) | 0 | - | - | 0.1 | - | - | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.6 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | ↕ | | | | | | ↕ | |
| Traffic Vol, veh/h | 2 | 194 | 2 | 9 | 198 | 2 | 0 | 0 | 0 | 8 | 0 | 6 |
| Future Vol, veh/h | 2 | 194 | 2 | 9 | 198 | 2 | 0 | 0 | 0 | 8 | 0 | 6 |
| Conflicting Peds, #/hr | 0 | 0 | 8 | 8 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 |
| Heavy Vehicles, % | 0 | 2 | 0 | 0 | 4 | 0 | 0 | 2 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 2 | 226 | 2 | 10 | 230 | 2 | 0 | 0 | 0 | 9 | 0 | 7 |

| Major/Minor | Major1 | | | Major2 | | | Minor2 | | |
|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 232 | 0 | 0 | 236 | 0 | 0 | 482 | 491 | 231 |
| Stage 1 | - | - | - | - | - | - | 251 | 251 | - |
| Stage 2 | - | - | - | - | - | - | 231 | 240 | - |
| Critical Hdwy | 4.1 | - | - | 4.1 | - | - | 6.4 | 6.5 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 5.4 | 5.5 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 5.4 | 5.5 | - |
| Follow-up Hdwy | 2.2 | - | - | 2.2 | - | - | 3.5 | 4 | 3.3 |
| Pot Cap-1 Maneuver | 1348 | - | - | 1343 | - | - | 547 | 481 | 813 |
| Stage 1 | - | - | - | - | - | - | 795 | 703 | - |
| Stage 2 | - | - | - | - | - | - | 812 | 711 | - |
| Platoon blocked, % | | - | - | | - | - | | | |
| Mov Cap-1 Maneuver | 1348 | - | - | 1343 | - | - | 541 | 0 | 813 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 541 | 0 | - |
| Stage 1 | - | - | - | - | - | - | 793 | 0 | - |
| Stage 2 | - | - | - | - | - | - | 805 | 0 | - |

| Approach | EB | WB | SB |
|---|---|---|---|
| HCM Control Delay, s | 0.1 | 0.3 | 10.8 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 1348 | - | - | 1343 | - | - | 632 |
| HCM Lane V/C Ratio | 0.002 | - | - | 0.008 | - | - | 0.026 |
| HCM Control Delay (s) | 7.7 | 0 | - | 7.7 | 0 | - | 10.8 |
| HCM Lane LOS | A | A | - | A | A | - | B |
| HCM 95th %tile Q(veh) | 0 | - | - | 0 | - | - | 0.1 |

# Capacity Analysis Summary Sheets

Weekday Evening Peak Hour – Projected Conditi

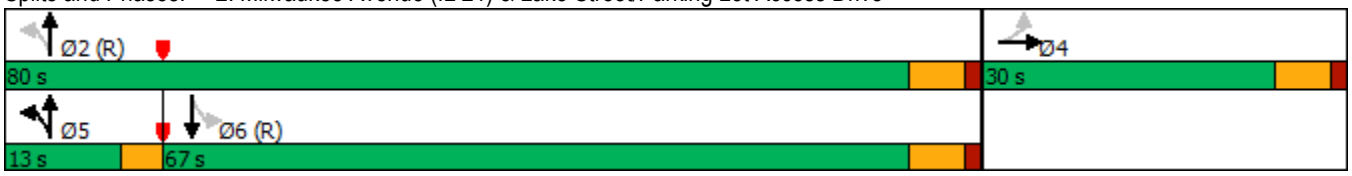
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 172 | 0 | 35 | 0 | 0 | 0 | 92 | 1226 | 1 | 1 | 960 | 117 |
| Future Volume (vph) | 172 | 0 | 35 | 0 | 0 | 0 | 92 | 1226 | 1 | 1 | 960 | 117 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Ped Bike Factor | | 0.98 | | | | | | | | | 0.99 | |
| Frt | | 0.977 | | | | | | | | | 0.984 | |
| Flt Protected | | 0.960 | | | | | | 0.997 | | | | |
| Satd. Flow (prot) | 0 | 1760 | 0 | 0 | 0 | 0 | 0 | 3566 | 0 | 0 | 3501 | 0 |
| Flt Permitted | | 0.960 | | | | | | 0.674 | | | 0.954 | |
| Satd. Flow (perm) | 0 | 1755 | 0 | 0 | 0 | 0 | 0 | 2411 | 0 | 0 | 3340 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (mph) | | 25 | | | 30 | | | 25 | | | 25 | |
| Link Distance (ft) | | 180 | | | 87 | | | 432 | | | 359 | |
| Travel Time (s) | | 4.9 | | | 2.0 | | | 11.8 | | | 9.8 | |
| Confl. Peds. (#/hr) | 2 | | 40 | | | | 40 | | | | | 40 |
| Peak Hour Factor | 0.98 | 0.95 | 0.98 | 0.95 | 0.95 | 0.95 | 0.98 | 0.98 | 0.95 | 0.95 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 0% | 2% | 0% | 2% | 2% | 2% | 0% | 1% | 2% | 2% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 212 | 0 | 0 | 0 | 0 | 0 | 1346 | 0 | 0 | 1100 | 0 |
| Turn Type | Perm | NA | | | | | pm+pt | NA | | Perm | NA | |
| Protected Phases | | 4 | | | | | 5 | 2 5 | | | 6 | |
| Permitted Phases | 4 | | | | | | 2 5 | | | 6 | | |
| Detector Phase | 4 | 4 | | | | | 5 | 2 5 | | 6 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 8.0 | 8.0 | | | | | 3.0 | | | 15.0 | 15.0 | |
| Minimum Split (s) | 27.0 | 27.0 | | | | | 8.0 | | | 25.0 | 25.0 | |
| Total Split (s) | 30.0 | 30.0 | | | | | 13.0 | | | 67.0 | 67.0 | |
| Total Split (%) | 27.3% | 27.3% | | | | | 11.8% | | | 60.9% | 60.9% | |
| Yellow Time (s) | 4.5 | 4.5 | | | | | 3.5 | | | 4.5 | 4.5 | |
| All-Red Time (s) | 1.5 | 1.5 | | | | | 0.0 | | | 1.5 | 1.5 | |
| Lost Time Adjust (s) | | 0.0 | | | | | | | | | 0.0 | |
| Total Lost Time (s) | | 6.0 | | | | | | | | | 6.0 | |
| Lead/Lag | | | | | | | Lead | | | Lag | Lag | |
| Lead-Lag Optimize? | | | | | | | Yes | | | Yes | Yes | |
| Recall Mode | None | None | | | | | None | | | C-Min | C-Min | |
| Act Effct Green (s) | | 19.0 | | | | | | 79.0 | | | 61.0 | |
| Actuated g/C Ratio | | 0.17 | | | | | | 0.72 | | | 0.55 | |
| v/c Ratio | | 0.70 | | | | | | 0.72 | | | 0.59 | |
| Control Delay | | 55.0 | | | | | | 11.6 | | | 17.9 | |
| Queue Delay | | 0.0 | | | | | | 0.0 | | | 0.0 | |
| Total Delay | | 55.0 | | | | | | 11.6 | | | 17.9 | |
| LOS | | D | | | | | | B | | | B | |
| Approach Delay | | 55.0 | | | | | | 11.6 | | | 17.9 | |
| Approach LOS | | D | | | | | | B | | | B | |
| Queue Length 50th (ft) | | 142 | | | | | | 201 | | | 257 | |
| Queue Length 95th (ft) | | 213 | | | | | | 291 | | | 322 | |
| Internal Link Dist (ft) | | 100 | | | 7 | | | 352 | | | 279 | |

| Lane Group | Ø2 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Turn Type | |
| Protected Phases | 2 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 15.0 |
| Minimum Split (s) | 22.0 |
| Total Split (s) | 80.0 |
| Total Split (%) | 73% |
| Yellow Time (s) | 4.5 |
| All-Red Time (s) | 1.5 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Recall Mode | C-Min |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| LOS | |
| Approach Delay | |
| Approach LOS | |
| Queue Length 50th (ft) | |
| Queue Length 95th (ft) | |
| Internal Link Dist (ft) | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | | 382 | | | | | | 1858 | | | 1852 | |
| Starvation Cap Reductn | | 0 | | | | | | 0 | | | 0 | |
| Spillback Cap Reductn | | 0 | | | | | | 0 | | | 0 | |
| Storage Cap Reductn | | 0 | | | | | | 0 | | | 0 | |
| Reduced v/c Ratio | | 0.55 | | | | | | 0.72 | | | 0.59 | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 110 | | | |
| Actuated Cycle Length: 110 | | | |
| Offset: 35.2 (32%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green | | | |
| Natural Cycle: 80 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.72 | | | |
| Intersection Signal Delay: 17.7 | | Intersection LOS: B | |
| Intersection Capacity Utilization 98.4% | | ICU Level of Service F | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 2: Milwaukee Avenue (IL 21) & Lake Street/Parking Lot Access Drive



| Lane Group | Ø2 |
|---|---|
| Turn Bay Length (ft) | |
| Base Capacity (vph) | |
| Starvation Cap Reductn | |
| Spillback Cap Reductn | |
| Storage Cap Reductn | |
| Reduced v/c Ratio | |

| Intersection Summary |
|---|

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 12.1 |
| Intersection LOS | B |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 9 | 54 | 68 | 62 | 76 | 15 | 131 | 29 | 107 | 30 | 37 | 14 |
| Future Vol, veh/h | 9 | 54 | 68 | 62 | 76 | 15 | 131 | 29 | 107 | 30 | 37 | 14 |
| Peak Hour Factor | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 13 | 77 | 97 | 89 | 109 | 21 | 187 | 41 | 153 | 43 | 53 | 20 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 1 | 1 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 1 | 1 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 1 | 1 | 1 | 1 |
| HCM Control Delay | 10.4 | 11.4 | 13.9 | 9.9 |
| HCM LOS | B | B | B | A |

| Lane | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|---|---|---|---|---|
| Vol Left, % | 49% | 7% | 41% | 37% |
| Vol Thru, % | 11% | 41% | 50% | 46% |
| Vol Right, % | 40% | 52% | 10% | 17% |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 267 | 131 | 153 | 81 |
| LT Vol | 131 | 9 | 62 | 30 |
| Through Vol | 29 | 54 | 76 | 37 |
| RT Vol | 107 | 68 | 15 | 14 |
| Lane Flow Rate | 381 | 187 | 219 | 116 |
| Geometry Grp | 1 | 1 | 1 | 1 |
| Degree of Util (X) | 0.537 | 0.276 | 0.337 | 0.18 |
| Departure Headway (Hd) | 5.069 | 5.306 | 5.558 | 5.594 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 709 | 676 | 645 | 640 |
| Service Time | 3.107 | 3.353 | 3.603 | 3.646 |
| HCM Lane V/C Ratio | 0.537 | 0.277 | 0.34 | 0.181 |
| HCM Control Delay | 13.9 | 10.4 | 11.4 | 9.9 |
| HCM Lane LOS | B | B | B | A |
| HCM 95th-tile Q | 3.2 | 1.1 | 1.5 | 0.7 |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.8 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 11 | 0 | 38 | 15 | 0 | 70 |
| Future Vol, veh/h | 11 | 0 | 38 | 15 | 0 | 70 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 12 | 0 | 40 | 16 | 0 | 74 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 122 | 48 | 0 | 0 | 56 | 0 |
| Stage 1 | 48 | - | - | - | - | - |
| Stage 2 | 74 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 | - |
| Pot Cap-1 Maneuver | 873 | 1021 | - | - | 1549 | - |
| Stage 1 | 974 | - | - | - | - | - |
| Stage 2 | 949 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 873 | 1021 | - | - | 1549 | - |
| Mov Cap-2 Maneuver | 873 | - | - | - | - | - |
| Stage 1 | 974 | - | - | - | - | - |
| Stage 2 | 949 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9.2 | 0 | 0 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 873 | 1549 | - |
| HCM Lane V/C Ratio | - | - | 0.013 | - | - |
| HCM Control Delay (s) | - | - | 9.2 | 0 | - |
| HCM Lane LOS | - | - | A | A | - |
| HCM 95th %tile Q(veh) | - | - | 0 | 0 | - |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.1 |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 0 | 10 | 0 | 1413 | 1093 | 0 |
| Future Vol, veh/h | 0 | 10 | 0 | 1413 | 1093 | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 0 | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 91 | 91 | 91 | 91 | 91 | 91 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 1 | 0 |
| Mvmt Flow | 0 | 11 | 0 | 1553 | 1201 | 0 |

| Major/Minor | Minor2 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | - | 601 | - | 0 | - | 0 |
| Stage 1 | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - |
| Critical Hdwy | - | 6.9 | - | - | - | - |
| Critical Hdwy Stg 1 | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - |
| Follow-up Hdwy | - | 3.3 | - | - | - | - |
| Pot Cap-1 Maneuver | 0 | 448 | 0 | - | - | 0 |
| Stage 1 | 0 | - | 0 | - | - | 0 |
| Stage 2 | 0 | - | 0 | - | - | 0 |
| Platoon blocked, % | | | | - | - | |
| Mov Cap-1 Maneuver | - | 448 | - | - | - | - |
| Mov Cap-2 Maneuver | - | - | - | - | - | - |
| Stage 1 | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - |

| Approach | EB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 13.2 | 0 | 0 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NBT | EBLn1 | SBT |
|---|---|---|---|
| Capacity (veh/h) | - | 448 | - |
| HCM Lane V/C Ratio | - | 0.025 | - |
| HCM Control Delay (s) | - | 13.2 | - |
| HCM Lane LOS | - | B | - |
| HCM 95th %tile Q(veh) | - | 0.1 | - |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.2 |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 3 | 202 | 195 | 14 | 5 | 2 |
| Future Vol, veh/h | 3 | 202 | 195 | 14 | 5 | 2 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 9 | 7 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 91 | 91 | 91 | 91 | 91 | 91 |
| Heavy Vehicles, % | 0 | 0 | 1 | 0 | 0 | 0 |
| Mvmt Flow | 3 | 222 | 214 | 15 | 5 | 2 |

| Major/Minor | Major1 | | Major2 | | Minor2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 229 | 0 | - | 0 | 459 | 229 |
| Stage 1 | - | - | - | - | 222 | - |
| Stage 2 | - | - | - | - | 237 | - |
| Critical Hdwy | 4.1 | - | - | - | 6.4 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 | - |
| Follow-up Hdwy | 2.2 | - | - | - | 3.5 | 3.3 |
| Pot Cap-1 Maneuver | 1383 | - | - | - | 608 | 916 |
| Stage 1 | - | - | - | - | 874 | - |
| Stage 2 | - | - | - | - | 807 | - |
| Platoon blocked, % | 1 | - | - | - | 1 | 1 |
| Mov Cap-1 Maneuver | 1383 | - | - | - | 607 | 911 |
| Mov Cap-2 Maneuver | - | - | - | - | 607 | - |
| Stage 1 | - | - | - | - | 873 | - |
| Stage 2 | - | - | - | - | 807 | - |

| Approach | EB | WB | SB |
|---|---|---|---|
| HCM Control Delay, s | 0.1 | 0 | 10.4 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|
| Capacity (veh/h) | 1383 | - | - | - | 671 |
| HCM Lane V/C Ratio | 0.002 | - | - | - | 0.011 |
| HCM Control Delay (s) | 7.6 | 0 | - | - | 10.4 |
| HCM Lane LOS | A | A | - | - | B |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0 |

| Intersection | |
|---|---|
| Int Delay, s/veh | 1.4 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 186 | 6 | 40 | 157 | 6 | 19 |
| Future Vol, veh/h | 186 | 6 | 40 | 157 | 6 | 19 |
| Conflicting Peds, #/hr | 0 | 11 | 11 | 0 | 0 | 7 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 86 | 86 | 86 | 86 | 86 | 86 |
| Heavy Vehicles, % | 1 | 0 | 15 | 6 | 0 | 0 |
| Mvmt Flow | 216 | 7 | 47 | 183 | 7 | 22 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 234 | 0 | 508 | 238 |
| Stage 1 | - | - | - | - | 231 | - |
| Stage 2 | - | - | - | - | 277 | - |
| Critical Hdwy | - | - | 4.25 | - | 6.4 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 | - |
| Follow-up Hdwy | - | - | 2.335 | - | 3.5 | 3.3 |
| Pot Cap-1 Maneuver | - | - | 1261 | - | 555 | 806 |
| Stage 1 | - | - | - | - | 812 | - |
| Stage 2 | - | - | - | - | 808 | - |
| Platoon blocked, % | - | - | | - | 1 | |
| Mov Cap-1 Maneuver | - | - | 1249 | - | 527 | 794 |
| Mov Cap-2 Maneuver | - | - | - | - | 527 | - |
| Stage 1 | - | - | - | - | 805 | - |
| Stage 2 | - | - | - | - | 774 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 1.6 | 10.3 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 708 | - | - | 1249 | - |
| HCM Lane V/C Ratio | 0.041 | - | - | 0.037 | - |
| HCM Control Delay (s) | 10.3 | - | - | 8 | 0 |
| HCM Lane LOS | B | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 0.1 | - |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.1 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 0 | 0 | 4 | 0 | 0 | 6 | 0 | 1407 | 0 | 0 | 1082 | 21 |
| Future Vol, veh/h | 0 | 0 | 4 | 0 | 0 | 6 | 0 | 1407 | 0 | 0 | 1082 | 21 |
| Conflicting Peds, #/hr | 33 | 0 | 0 | 0 | 0 | 33 | 4 | 0 | 4 | 4 | 0 | 4 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | 0 | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 0 | 0 | 4 | 0 | 0 | 7 | 0 | 1529 | 0 | 0 | 1176 | 23 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 1990 | 2725 | 604 | - | - | 802 | 1203 | 0 | 0 | - | - | 0 |
| Stage 1 | 1192 | 1192 | - | - | - | - | - | - | - | - | - | - |
| Stage 2 | 798 | 1533 | - | - | - | - | - | - | - | - | - | - |
| Critical Hdwy | 7.5 | 6.5 | 6.9 | - | - | 6.9 | 4.1 | - | - | - | - | - |
| Critical Hdwy Stg 1 | 6.5 | 5.5 | - | - | - | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.5 | 5.5 | - | - | - | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.5 | 4 | 3.3 | - | - | 3.3 | 2.2 | - | - | - | - | - |
| Pot Cap-1 Maneuver | *136 | *15 | 446 | 0 | 0 | *489 | 587 | - | - | 0 | - | - |
| Stage 1 | *202 | *263 | - | 0 | 0 | - | - | - | - | 0 | - | - |
| Stage 2 | *461 | *404 | - | 0 | 0 | - | - | - | - | 0 | - | - |
| Platoon blocked, % | 1 | 1 | | | | 1 | | - | - | | - | - |
| Mov Cap-1 Maneuver | *130 | *15 | 445 | - | - | *474 | 585 | - | - | - | - | - |
| Mov Cap-2 Maneuver | *130 | *15 | - | - | - | - | - | - | - | - | - | - |
| Stage 1 | *201 | *262 | - | - | - | - | - | - | - | - | - | - |
| Stage 2 | *442 | *403 | - | - | - | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 13.2 | 12.7 | 0 | 0 |
| HCM LOS | B | B | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBT | SBR |
|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 585 | - | - | 445 | 474 | - | - |
| HCM Lane V/C Ratio | - | - | - | 0.01 | 0.014 | - | - |
| HCM Control Delay (s) | 0 | - | - | 13.2 | 12.7 | - | - |
| HCM Lane LOS | A | - | - | B | B | - | - |
| HCM 95th %tile Q(veh) | 0 | - | - | 0 | 0 | - | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.5 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | ↕ | | | | | | ↕ | |
| Traffic Vol, veh/h | 4 | 187 | 0 | 8 | 149 | 6 | 0 | 0 | 0 | 5 | 0 | 4 |
| Future Vol, veh/h | 4 | 187 | 0 | 8 | 149 | 6 | 0 | 0 | 0 | 5 | 0 | 4 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| Mvmt Flow | 5 | 231 | 0 | 10 | 184 | 7 | 0 | 0 | 0 | 6 | 0 | 5 |

| Major/Minor | Major1 | | | Major2 | | | Minor2 | | |
|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 191 | 0 | 0 | 231 | 0 | 0 | 449 | 449 | 188 |
| Stage 1 | - | - | - | - | - | - | 208 | 208 | - |
| Stage 2 | - | - | - | - | - | - | 241 | 241 | - |
| Critical Hdwy | 4.1 | - | - | 4.1 | - | - | 6.42 | 6.5 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 5.42 | 5.5 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 5.42 | 5.5 | - |
| Follow-up Hdwy | 2.2 | - | - | 2.2 | - | - | 3.518 | 4 | 3.318 |
| Pot Cap-1 Maneuver | 1395 | - | - | 1349 | - | - | 568 | 508 | 854 |
| Stage 1 | - | - | - | - | - | - | 827 | 734 | - |
| Stage 2 | - | - | - | - | - | - | 799 | 710 | - |
| Platoon blocked, % | | - | - | | - | - | | | |
| Mov Cap-1 Maneuver | 1395 | - | - | 1349 | - | - | 561 | 0 | 854 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 561 | 0 | - |
| Stage 1 | - | - | - | - | - | - | 824 | 0 | - |
| Stage 2 | - | - | - | - | - | - | 793 | 0 | - |

| Approach | EB | WB | SB |
|---|---|---|---|
| HCM Control Delay, s | 0.2 | 0.4 | 10.5 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 1395 | - | - | 1349 | - | - | 662 |
| HCM Lane V/C Ratio | 0.004 | - | - | 0.007 | - | - | 0.017 |
| HCM Control Delay (s) | 7.6 | 0 | - | 7.7 | 0 | - | 10.5 |
| HCM Lane LOS | A | A | - | A | A | - | B |
| HCM 95th %tile Q(veh) | 0 | - | - | 0 | - | - | 0.1 |