Development Site: 725-747 North Milwaukee Avenue / 126-140 Lake Street
Applicant: Libertyville Land LLC
Final Plan Approval – Planned Development
Submission: September 8, 2025

VILLAGE OF LIBERTYVILLE
LAND USE APPLICATION

FINAL PLAN APPROVAL – PLANNED DEVELOPMENT

PROJECT NARRATIVE

The Applicant – *Libertyville Land LLC,* is seeking a *Planned Development*[1], in conjunction with two Special *Use Permits*[2], which – as approved for concept[3], 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 725-747 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 97,481 square feet / 2.14 acres of total "Site Area", which is to be consolidated and resubdivided into three lots of record – Parcel A / Lot 1 + Parcel B / Lot 2 + Parcel C / Lot 3, as further described herein. Parcel A / Lot 1 (66,206 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.[4] Parcel B / Lot 2 (14,046 square feet) will be held and maintained for a future phase of commercial / retail development, not included in the current proposal. Parcel C / Lot 3 (14,372 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.[5]

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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 *Planned Development* review and approval, to allow the relaxation of otherwise substantive standards and limitations, so to encourage more significant developments. The proposed development contemplates moderate deviations to the following *B&D Standards*: density (MLA), 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*. Furthermore, no "use" located in the C-1 *Downtown Core Commercial District* is permitted to occupy more than 10,000 square feet of any building, without obtaining a *Special Use* permit.

[3] Ordinance No. 25-O-29, approved and adopted May 27, 2025.

[4] 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 Applicant is seeking a *Special Use* permit to allow for the *residential use* to occupy more than 10,000 square feet of floor area within the new proposed four-story multi-family building.

[5] 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.

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 load bearing exterior walls with non-combustible cladding, 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[6], all with private balconies.[7] The 4th floor is conscientiously inset five feet (5'-0") from the lower floors, with a standing seam mansard roof style. The 4th floor[8] 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, 720 square feet; two-bedroom units, 1,050 square feet and two-bedroom plus den units, 1,200 square feet.

Accessory features of the proposed new development include a new landscaped surface parking lot along the north end of the site, in addition to an internal garage below the building. The lower-level garage[9] contains a total of eighty-five (85) vehicular parking spaces, which includes four (4) ADA spaces (with access aisle). Secured parking and designated storage for at least twenty-eight (28) 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, while two overhead garage doors accommodate vehicular access through the corresponding surface parking lot off of Brainerd Avenue and the new internal access drive. The outdoor parking lot that comprises the north end of Parcel A will boast an additional twenty-nine (29) vehicular spaces, which includes two (2) ADA spaces, with low-emission affixed lighting to enhance safety and for the convenience of residents and pedestrians. In addition hereto, thirteen (13) vehicular parking stalls to be located on Parcel C will be dedicated to the new residential development, resulting in a total of 127 off-street parking spaces servicing the new 91-unit development[10], with the interior parking specifically reserved for residents and the outdoor parking retained for visitors and unanticipated tenant demand. [11]

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[6] 27 one-bedroom units + 64 two-bedroom units = 91 total units.
[7] 1st-3rd Floors = 27,100 gross square feet per floor (footprint).
[8] 4th Floor = 20,500 gross square feet (footprint).
[9] Below ground garage = 35,200 gross square feet
[10] 127 / 1.40 parking spaces per dwelling unit (proposed) < 169 / 1.85 parking spaces per unit (required). *Deviation granted.
[11] Additional parking demand data tracked for other comparable suburban developments was tendered to the Village's Planning Division as a supplement to and in further support of the underlying approved land use applications.

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.

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 27,282 square feet of functional and ornamental "open space", which greatly exceeds the minimum amount of open space required by Ordinance.[12]

The Applicant – *Libertyville Land LLC*, recently purchased 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.

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.

[12] Pursuant to Section 26-16-13.5(b)(5) of the Zoning Ordinance, the project is required to maintain a minimum 19,892 square feet of open space, which is 6,480 square feet less open space than that provided for the new development.

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 general qualified support for the development and corresponding zoning relief required to permit the same. The Applicant also presented the project to the Village's Appearance Review Commission (ARC), at a public meeting held on October 21, 2024, at the conclusion of which the members of the ARC recommended approval of the proposed new development. In conclusion of these preliminary efforts, the Applicant appeared before and presented the development proposal to the Plan Commission of the Village at two separate public hearings – on January 27, 2025, and on March 31, 2025, which culminated with findings and recommendations in support of the requested approvals by the Commission. Such recommendations were then reviewed and duly adopted by the Board of Trustees at a public meeting on or about May 27, 2025.

September 5th, 2025

Village of Libertyville
Development Review Committee
118 W Cook Ave.
Libertyville, IL 6004

Dear Heather,

Please find the comprehensive comments and our responses to each of them as required from the Development Review Committee Review and Report. We look forward to you continued review and comment.

ENGINEERING DIVISION COMMENTS:

1. Stormwater Detention - The proposed plans indicate that an underground stormwater detention system would be located under the parking lot north of the building.

    a. Please refer to the comments within the updated preliminary engineering review letter dated 3/18/2025, prepared by the Village's WDO Enforcement Officer (Scott Griffith, KimleyHom and Associates, Inc.) As indicated therein, final engineering plans will require review and approval, and additional comments should be anticipated during final submittals.

    Noted.

    b. This comment remains to be addressed during final review. Sheet 13.1 of the civil plan set shows that fire truck access would occur through the parking lot that is to be constructed over the proposed underground detention. Design documents will need to demonstrate that the underground detention product will structurally support the proposed heavy traffic loading (which may also include garbage trucks, moving trucks, etc.)

    Vendor for the stormwater detention vault will provide shop drawings sign and sealed by licensed structural engineer.

2. Public Watermain - Staff generally agrees with the concept of the looped public watermain system shown. The plans should be revised to address the following comments for future review:

    a. This comment remains to be addressed from the previous review. All public water main within easements shall be Ductile Iron Pipe Class 55 in accordance with the Village's Engineering Design & Construction Standards.

    Water main material has been revised to CIP Class 55.

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b. This comment remains for reference from the previous review. Public water main should be located a minimum of 7.5 feet from the subdivision boundary which is adjacent to private property on the east, and at least 15 feet from buildings or structural installations such as underground detention, retaining walls, etc.

Water main is shown within 15' easement and 7.5 from both sides of the easement.

c. Final route and layout of proposed watermain will need to be reviewed and approved during final engineering review. It was noted that the proposed alignment along the west side of the building (directly coinciding with the existing 4" pipe) is unlikely to be feasible, as the 4" water line should remain in service during the new pipe installation. The plans will also need to show the ultimate abandonment of the existing 4" connection in Lake Street. Additional comments should be anticipated during final engineering review.

Water main extension has been moved away from the existing 4" main.

3. **Traffic & Parking** - The applicant has provided a Traffic Impact Study (TIS) Addendum and Parking Evaluation prepared by KLOA. While there is general concurrence with the approach, the comments within the Technical Memorandum dated 3/19/2025, prepared by Civiltech, Inc. should be addressed. This includes preparing a finalized version of the TIS including revised traffic analyses.

Final version of the traffic impact study with revised traffic analysis has been included.

4. Existing Water and Sewer Services - This comment has been updated from the previous review and appears to be partially addressed. The following items are noted at this time:

a. Sheet 3 of the civil plans shows existing water and sewer services connecting to public mains in Lake Street, and indicates that these services shall be abandoned and disconnected at the (respective) main, which is in accordance with Village requirements.

Noted.

b. Existing water and sewer connections are now shown within Milwaukee A venue. The plans show abandonment of the water service and reuse of the sanitary service. However, it's anticipated that both water and sewer would need to be abandoned. Per LMC 25-101, all new residential and commercial structures constructed on lots with an existing sanitary sewer service shall remove and plug said existing service if it consists of vitrified clay pipe, or if sags, root intrusion, or other evidence of infiltration are present in the service. The new service shall be PVC SDR 26 pipe with gasket joints or Ductile Iron Class 52 pipe, include a new wye connection, and extend to the structure."

Existing sanitary service will be televised and the video of the same will be provided to the Village. If the sewer is in good condition and using acceptable material, we would like to reuse it. This can be finalized during final plan approvals.

c. Per the above comment, the Applicant should anticipate that sanitary abandonment work would be required as part of the permit request to IDOT. Further review of this item should be anticipated at the time of final engineering submittals.

Noted.

d. It should be clarified how the existing water and sewer service locations were verified. Final plans will need to specify that additional field investigation would be required, as needed to verify locations of all existing services which would need to be properly abandoned.

A note has been added to the plan to locate all existing services and disconnect at the main.

5. This comment has been updated from the previous review. It is anticipated that future development of Parcel Band the adjacent property to the west would connect to the proposed water main loop via pressure taps, in order to provide the necessary water service or water main connections. Pressure taps are required to avoid shutting down the main for future connections. Therefore, water stub should not be shown on the final engineering plans and additional comments may be provided during final reviews.

Water service stub to Lot 2 (Parcel 2) has been removed.

6. This comment has been updated from the previous review. The plans should show a proposed location where sanitary service for Parcel B would connect to public sanitary sewer main. It's unknown if such a connection would be allowed within Metra property. Please also refer to comment 4b and 4c above, as it's anticipated the existing sanitary service could not be reused.

We are not planning on making any connection for the sanitary service for Lot2 (Parcel2) within Metra Lot. As mentioned above, we will televise the existing service and see if it can be reused, if not we will make a new tie-in on Milwaukee Ave.

7. This comment has been updated from the previous review. Appropriate easements will need to be delineated on the Final Plat of Subdivision and/or separate easement documents, which would likely include, but not necessarily be limited to the following:

a. All public watermain shall be situated within a 15' wide Village Utility Easement. Provisions language would be provided by staff for inclusion in the final plat.

Noted.

b. The Village Utility Easement for the watermain should extend over proposed fire hydrants.

The proposed fire hydrant is within the easement.

c. Easements for cross-access and installation and maintenance of development improvements within Village-owned property. It's anticipated that this would also require some form of recorded easement or license agreement between the Village and the developer.

The verbiage for the easements will be included in final plat of subdivision.

d. Access easement(s) over Lot 3 (Parcel C)

Access Easement is shown.

e. Blanket Public Utility & Drainage Easement should be provided over Lot 3 (Parcel C)

Blanket easement is shown

f. Public service and utility easements

With the 15' watermain easement along the east/rear property line & north property line for Lot1 and the entire Lot 3, we do not believe there would ne any other easement to be provided.

g. Private utility easement(s) for serving Lot 2 (Parcel B)

Lot 3 has blanket easement for access, utility & drainage, and Lot1 has drainage easement it would suffice to serve Lot 2.

It should be noted that staff has not reviewed the easement provisions shown on the preliminary plat of subdivision, as the limits and provisions of easements would not be considered finalized until review and approval of the final engineering plans.

Noted.

8. This comment remains to be addressed during final review. Based on the proposed plans, the project results in a hydrologic disturbance of 5,000 sq. ft. or greater. Therefore, a Watershed Development Permit application will be required along with all corresponding supporting documents (i.e. final engineering plans, stormwater calculations, cost estimates, etc.).

   Lake County Watershed application will be provided during final approval process.

9. This comment remains to be addressed during final review. Based on the information submitted, permits from the following outside agencies will be required:

   a. IDOT Highway / Utility Permit
   b. IEP A Sanitary Construction Permit
   c. IEPA Water Construction and Operating Permit
   d. IEPA NPDES Permit (for construction disturbance greater than 1 acre)

   Noted

10. This comment remains to be addressed during final review. The final Architectural floor plans and Plumbing drawings will need to be provided for review to the Lake County Public Works Department (LCPW). The Applicant is required to provide information to LCPW to dete1mine the amount of any applicable Lake County Sanitary Connection Fee for the redevelopment of these parcels. The Applicant may contact LCPW directly at 847.377.7500.

    Noted.

11. These comments are based on the nature of the preliminary submittal documents, and additional comments should be anticipated in response to subsequent submittals.

    Noted.

PLANNING DIVISION

1. Per the Zoning Code Sec. 26-9-2.12, except for streetlights, no exterior light in or adjacent to any residential district shall be so designed, arranged, or operated to produce an intensity of light exceeding two (2) foot candle at any non-residential lot line and one-half (½) foot candle at any residential lot line. Staff notes that there are foot candle illuminations that exceed 2.0 along the Lake Street right of way property line.

   Lighting plans have been revised to comply with footcandle requirements at lot lines

   The Appearance Review Commission, at their October 21, 2024, meeting, reviewed ARC 24-35 and positively recommended forwarding the project to the Plan Commission/Zoning Board of Appeals, on condition that the light fixtures are removed or moved inward to comply with ZC 26-9-2.12 and Village policy. The Village requires light fixtures in public areas to match streetlight standards, specifically Sternberg light poles, which would require coordination with the Engineering Department. The proposed exterior H-EX2 lighting fixtures along the southern and western perimeter as depicted on the Exterior Site Lighting Plan (Sheet LT.2) of the plans dated February 27, 2025, by Space Architects + Planners must be removed along the Lake Street public sidewalk and Brainerd sidewalk. No private light fixtures shall be placed along a public sidewalk or Village property.

   After a meeting with the Libertyville Engineering Department and a subsequent email dated 7.22.25 it was noted that village staff will treat the edge of the sidewalk as the effective property line and that the light pole will be private poles with a future license agreement. It was also noted that the light poles do not have to match village standards and the design team noted that they would work to find a complementary fixture. The lighting plans have been revised to reflect all of the above.

2. Please identify the Lake Street right-of-way line on the north side of Lake Street on all exhibit sheets in the same way as it is shown on the proposed preliminary plat of subdivision. Please note in accordance with the Zoning Code definition section that 'Lot line' means the property lines bounding a lot; provided, however, that when a lot includes land subject to a public or private right of way easement for street purposes, such as a portion of Lake Street in this case, the line separating such right of way from the rest of the lot shall be deemed to be the lot line.

   The Lake St. ROW has been updated to match the Plat of Subdivision on all exhibit sheets.

BUILDING DIVISION

1. Revise lighting used at exterior. Provide a minimum of one (1) footcandle along the paths of egress from the building exits to the property lines, public walks or parking lots depending on what side of the building the exits are on.

   Lighting plans have been revised to comply with footcandle requirements for egress paths.

2. Sheet 7 of 17 in the Civil Engineering drawings; need hard surface walks at north side for stair and exit door and door to fire sprinkler room to parking lot.

   The Civil Engineering plans have been revised to include hard surface walks where requested.

3. The handicap space and adjoining striped area on Parcel B does not appear to be required for the lot concept provided for Parcel C. At application for Final Development approvals, evaluate the necessity and consider if revised striping would enable division into two standard spaces.

   At the final Board meeting it was determined that 13 spaces on parcel C would be dedicated for the residential building parking. Ownership has elected to keep the handicap space but is moving it west and closer to the building for ease of accessibility.

FIRE DEPARTMENT

1. The Fire Department discussed with the applicant having the ambulance respond to the north side where the fire apparatus is shown responding. This would be an appropriate response point. Note that the ambulance will need a clear path to the exterior door. The Fire Department connection will also be located in this area and requires 36" inches of clearance. These clearances can be shared or overlap.

   The ambulance response point and fire department connection have been moved to the north side with proper paths and clearances provided. The drawings have been revised to reflect this.

2. The Fire Department will require a second Knox Box at the main entrance so that it can be used as an access point in the event of a combination fire/EMS event. Note EMS will be using the door that allows them to enter at grade with the elevator vestibule, not the one that would require them to carry the cot up / down stairs.

   A second knox box will be added at the main entrance in addition to the knox box at the north side of the building.

We appreciate your consideration and will be happy to answer any questions that may come up.

Sincerely,

Jay Keller, AIA NCARB LEED AP BD+C
Principal – SPACE Architects + Planners

Village of Libertyville Tree Survey and Preservation Plan Markup Response Memo:

Memo by Teska Associates

Lot 1: (Apartment Development)

Note1: Effort was made to preserve more existing street trees along Lake Street, Brainerd Avenue, and the north property line. As a result of reworking the site plan and landscape plan 431,432,458,469, 497,498, 499, 505 will be protected. See updated Tree Survey and Preservation Plan.

Note 2: Tree plantings in the parkway have been upsized to larger caliper size per request. See Landscape Plan and Plant Schedule.

Note 3: Trees have been spaced out and shifted as noted on plan markup. See Landscape Plan and Plant Schedule.

Note 4: Tree 430 could not be preserved do to location of proposed water main location. Additional tree plantings have been proposed to meet requirements.

Note 5: Per request, lawn areas within parkway and public right of way adjacent to the subject area will be maintained by ownership.

Comment Noted. See general note on Landscape Plan.

Note 6: The sidewalk will be dividing line between Trees owned and maintained by the Village and trees considered Private.

Comment Noted. See general note on Landscape Plan.

Note 7: Plant species near Metra parking stalls will be salt tolerant varieties, see Landscape Plan.

Continued:

Lot 2: (Future Development)

Notes 1. Trees 520, 521 along Milwaukee Ave will be preserved, see Tree Survey and Preservation Plan.

Note 2. The irrigation systems in three flower beds as noted will need to be coordinated with the Village at time of removal/alteration.

Note 3. (3) existing trees, highlighted in yellow approved for removal with this PUD will remain until the development of the future parcel fronting Milwaukee Avenue. Tree replacements for these trees if removed will be accounted for in Future lot 2 development.

Note 4: Trees 522, 523 and 528 are to be removed. Trees 524, 525, 526, and 527 are to be preserved. Tree preservation plans and tables, L-1and L-2 have been updated to match civil drawings.

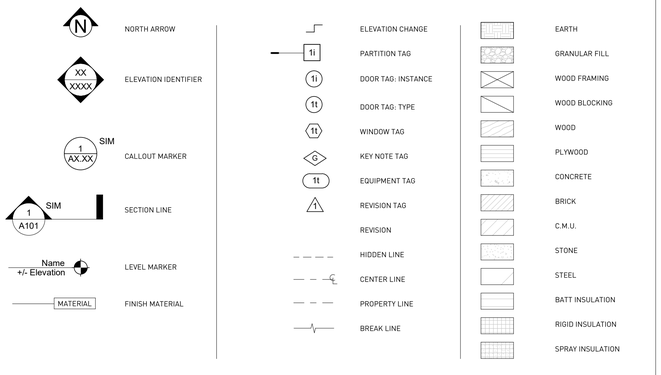
MILWAUKEE & LAKE

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 / CONTRACTOR INSTALLED	T.V.	TELEVISION
CLG.	CEILING	GR.	GRADE			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 & AIR CONDITIONING	P.A.	PUBLIC ACCESS	U.L.	UNDERWRITERS LABORATORIES
COORD.	COORDINATE			P.C.	PRE-CAST	U.N.O.	UNLESS NOTED OTHERWISE
CPT.	CARPET	H.W.	HOT WATER	P.F.	PANEL FABRIC	UNEXEC.	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

SYMBOLS & MATERIALS LEGEND



PROJECT TEAM

OWNER:

LIBERTYVILLE LAND, LLC
WILL HUNTER + EVAN MEADOR
312.248.3119

ARCHITECT:

SPACE ARCHITECTS + PLANNERS
JAY KELLER - ARCHITECT OF RECORD
2149 N TALMAN AVENUE, CHICAGO, IL 60647
312.829.6666

CIVIL ENGINEER:

BONO CONSULTING CIVIL ENGINEERS
ABHI VEER - ENGINEER OF RECORD
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847.823.3300

LANDSCAPE ARCHITECT:

TESKA ASSOCIATES, INC.
NICHOLAS PATERA
627 GROVE STREET, EVANSTON, IL 60201
847.563.9720

LIGHTING DESIGNER:

HUGH LIGHTING DESIGN
PETER HUGH - LIGHTING DESIGNER
212 S. MARION STREET, SUITE 1, OAK PARK, IL 60302
708.445.0995

PLAT OF SUBDIVISION:

VANDERSTAPPEN LAND SURVEYING, INC.
TERRY VAN ALSTINE - PLS
1316 N MADISON ST, SUITE A, WOODSTOCK, IL 60098
815.502.5512

3D VISUALIZATION / RENDERER:

DPICT VISUALIZATION, INC.
DAVID PARISI
355 E. WEBSTER AVENUE, ELMHURST, IL 60126
708.822.2366

LOCATION MAP/ IMAGE

SHEET LIST - PD

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GENERAL CONTRACTOR	
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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

NO.	DESCRIPTION	DATE
1	ISSUED FOR DEVELOPMENT REVIEW	10.11.24
2	SUPPLEMENTAL SUBMISSION	2.27.25
3	FINAL PLANNED DEVELOPMENT SUBMISSION	09.05.25

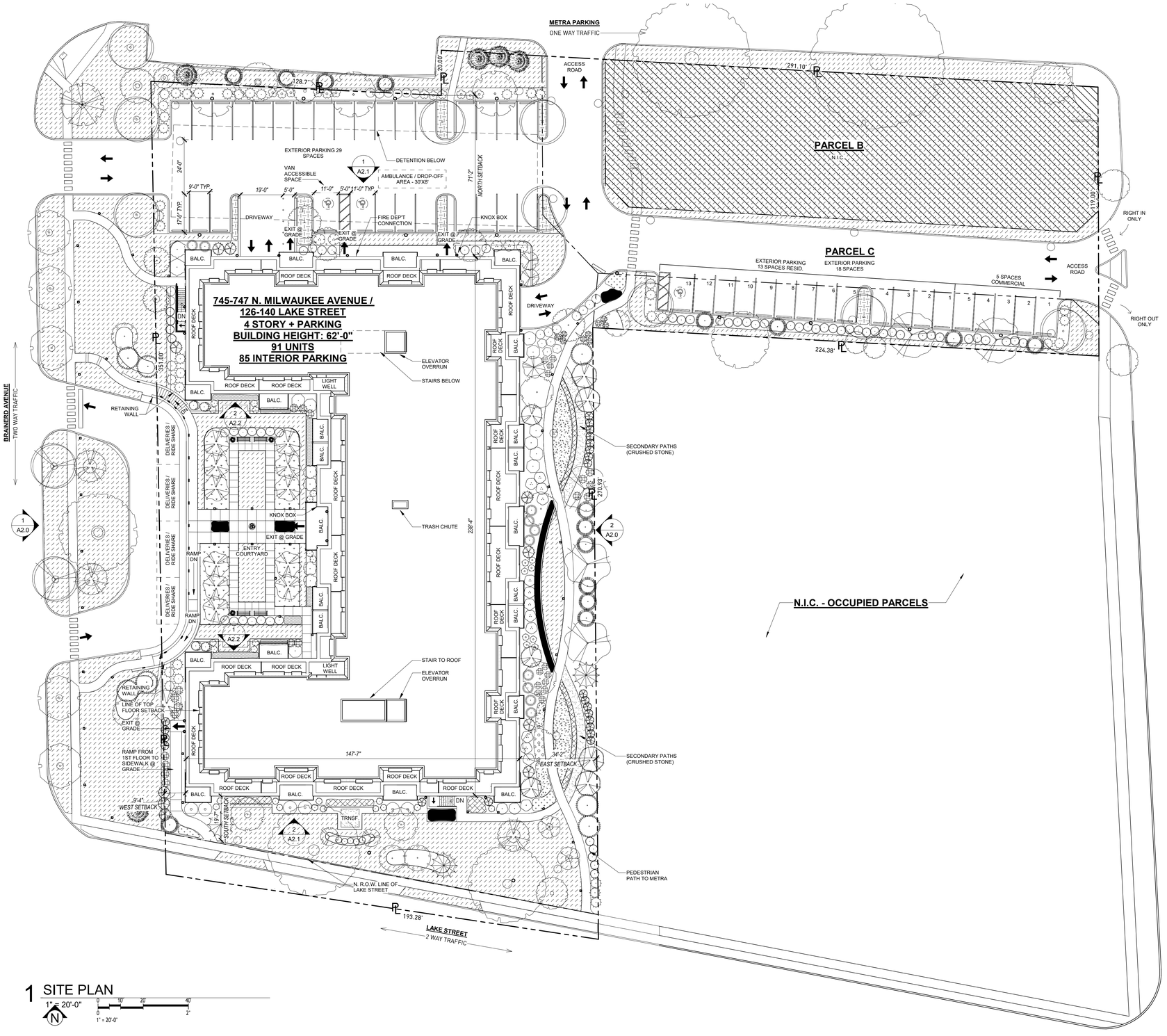
CERTIFICATION

SHEET TITLE

PROJECT DATA

SHEET #

A0.0



1 SITE PLAN

1" = 20'-0"

0 10' 20 40

0 1" = 20'-0" 2'

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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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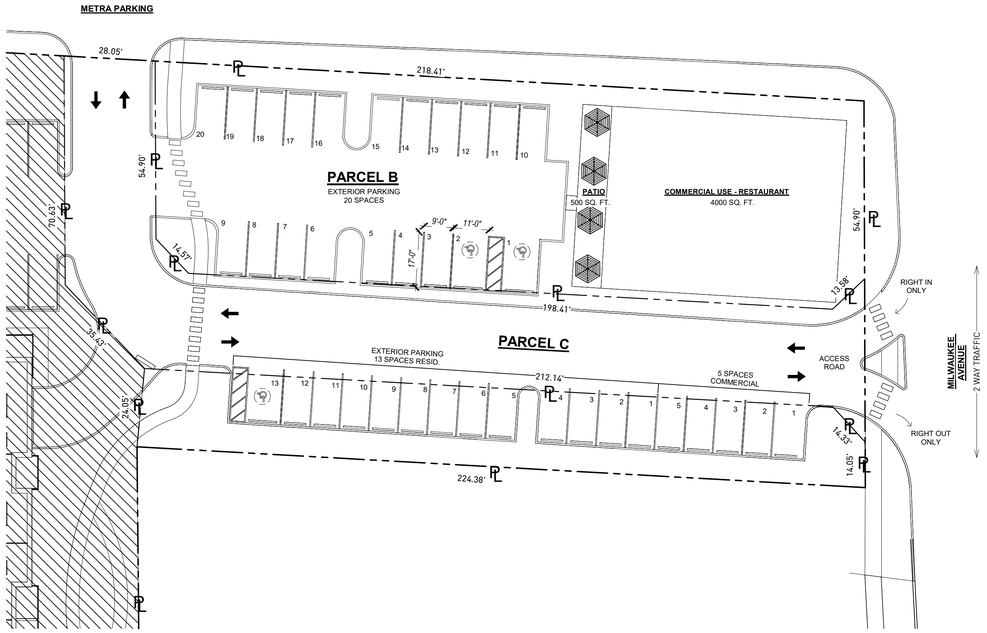
CERTIFICATION

SHEET TITLE

EXTENDED SITE PLAN OF PROPOSAL

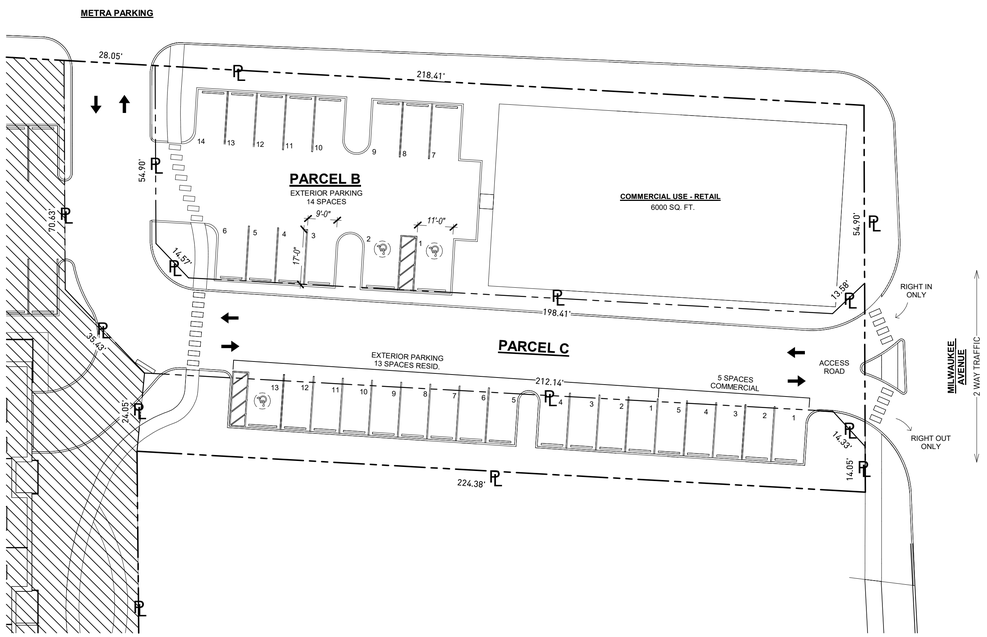
SHEET #

A0.2



1 SITE PLAN - PARCEL B & C - OPTION A

1" = 20'-0"



2 SITE PLAN - PARCEL B & C - OPTION B

1" = 20'-0"

PARCEL B RESTAURANT PRECEDENT CASE STUDY 1:
MICKEY FINN'S, LIBERTYVILLE

PARCEL B SINGLE STORY RETAIL PRECEDENT CASE STUDY 1:

PARCEL B PARKING RATIOS:

PER ARTICLE 10 OF ZONING CODE

RESTAURANT: OPT. A 4,000 SQ FT INTERIOR* 500 SQ FT EXT. PATIO**	1 FOR EACH 100 SQ FT OF FLOOR AREA (MINIMUM OF 10)	**25 SPACES REQ'D**
RETAIL USE: OPT B. 6,000 SQ FT*	1 FOR EACH 250 SQ FT OF FLOOR AREA	**18 SPACES REQ'D**

*PER EXCEPTION D OF ARTICLE 10, THE FIRST 1,500 SQ FT WITHIN ANY NEW BUILDING IN THE C-1 COMMERCIAL DISTRICT CAN BE EXCLUDED
**THE FIRST 500 SQ FT OF OUTDOOR DINING SPACE CAN BE EXCLUDED

3 PARKING CALCULATIONS

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PROJECT INFO

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3	FINAL PLANNED DEVELOPMENT SUBMISSION	09.05.25

CERTIFICATION

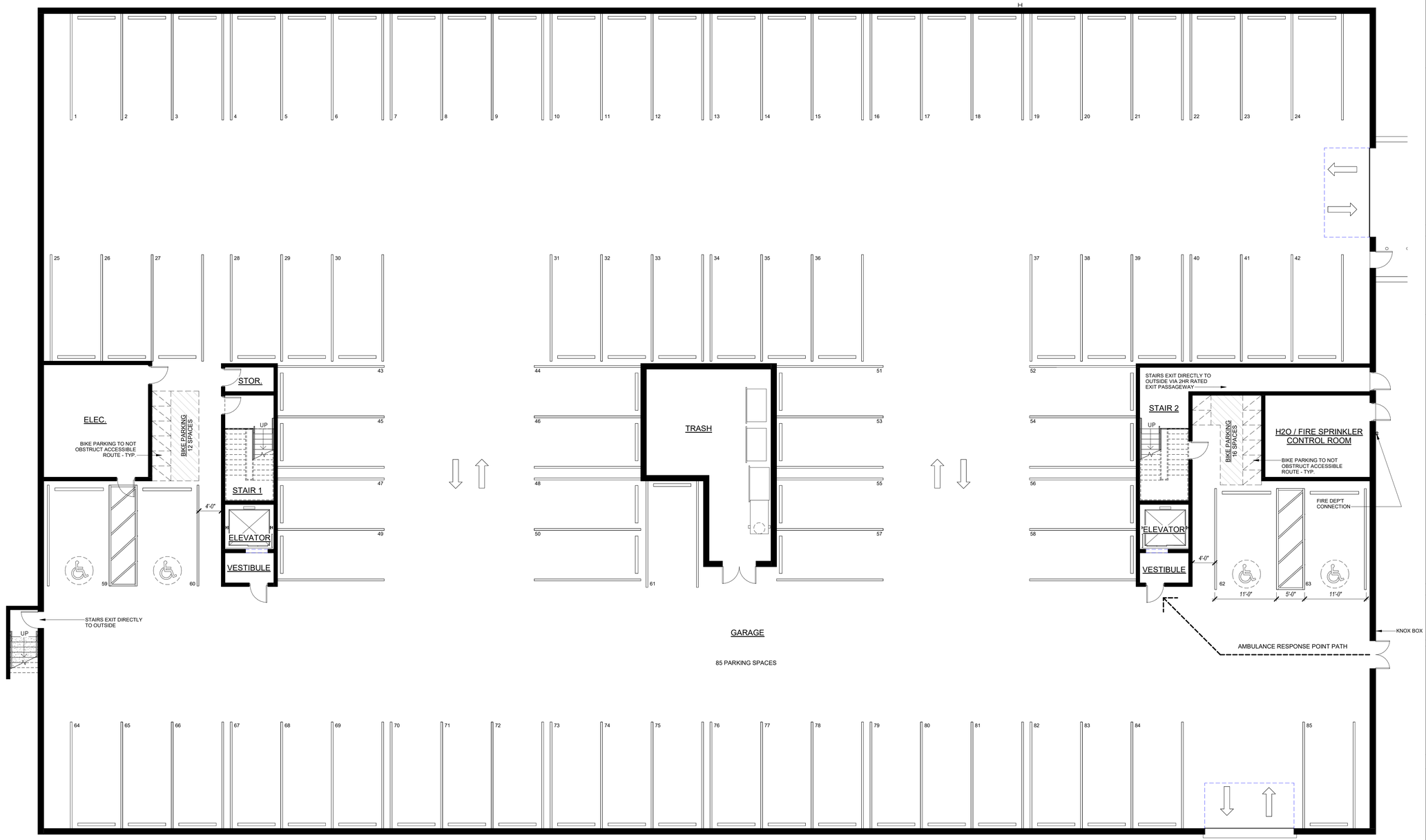
SHEET TITLE

SITE PLAN OF PROPOSAL PARCEL B & C

SHEET #

A0.3

PARKING SPACE TOTAL: 85
REGULAR - 81
ADA - 4



1 PARKING LEVEL PLAN

1/8" = 1'-0"

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

GARAGE GSF: 35,200 SF

BUILDING HEIGHT: 62' - 0"

NOTES:

-MECHANICAL VENTILATION SYSTEMS FOR ENCLOSED PARKING GARAGES SHALL OPERATE CONTINUOUSLY OR SHALL BE AUTOMATICALLY OPERATED BY MEANS OF CARBON MONOXIDE DETECTORS APPLIED IN CONJUNCTION WITH NITROGEN DIOXIDE DETECTORS. SUCH DETECTORS SHALL BE LISTED IN ACCORDANCE WITH UL 2075 AND INSTALLED IN ACCORDANCE WITH THEIR LISTING AND THE MANUFACTURERS' INSTRUCTIONS. AUTOMATIC OPERATION SHALL CYCLE THE VENTILATION SYSTEM BETWEEN THE FOLLOWING TWO MODES OF OPERATION:
1. FULL-ON AT AN AIRFLOW RATE OF NOT LESS THAN 0.75 CFM PER SQ. FT. OF THE FLOOR AREA SERVED.
2. STANDBY AT AN AIRFLOW RATE OF NOT LESS THAN 0.05 CFM PER SQ. FT. OF THE FLOOR AREA SERVED.

-CONNECTING VESTIBULE AREAS AND SIMILAR USES THAT ARE ACCESSORY TO A PUBLIC GARAGE SHALL BE MAINTAINED AT A POSITIVE PRESSURE AND SHALL BE PROVIDED WITH VENTILATION IN ACCORDANCE WITH SECTION 403.3.1 OF IMC.

-AN AUTOMATIC SPRINKLER SYSTEM SHALL BE PROVIDED THROUGHOUT BUILDINGS CLASSIFIED AS PARKING GARAGES WHERE ANY OF THE FOLLOWING CONDITIONS EXISTS:
1. WHERE THE FIRE AREA OF THE ENCLOSED PARKING GARAGE IN ACCORDANCE WITH SECTION 406.6 EXCEEDS 12,000 SQ FT.
2. WHERE THE ENCLOSED PARKING GARAGE IN ACCORDANCE WITH SECTION 406.6 IS LOCATED BENEATH OTHER GROUPS
3. WHERE THE FIRE AREA OF THE OPEN PARKING GARAGE IN ACCORDANCE WITH SECTION 406.5 EXCEEDS 48,000 SQ FT.

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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

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ASSOCIATES - MB

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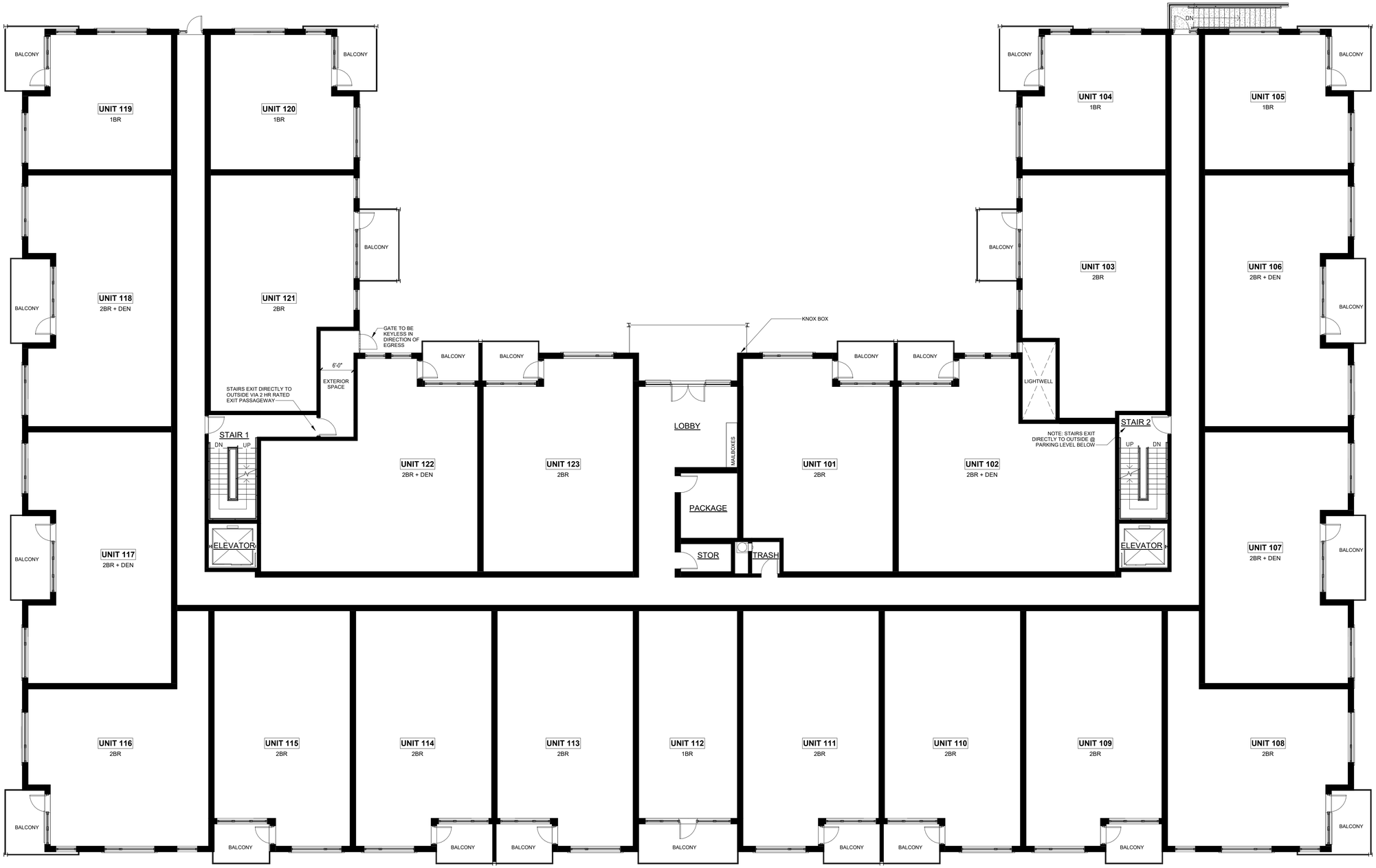
CERTIFICATION

SHEET TITLE

LOWER LEVEL PARKING PLAN

SHEET #

A1.01



1 1ST FLOOR PLAN

1/8" = 1'-0"

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

1ST FLOOR GSF: 27,100 SF

BUILDING HEIGHT: 62' - 0"

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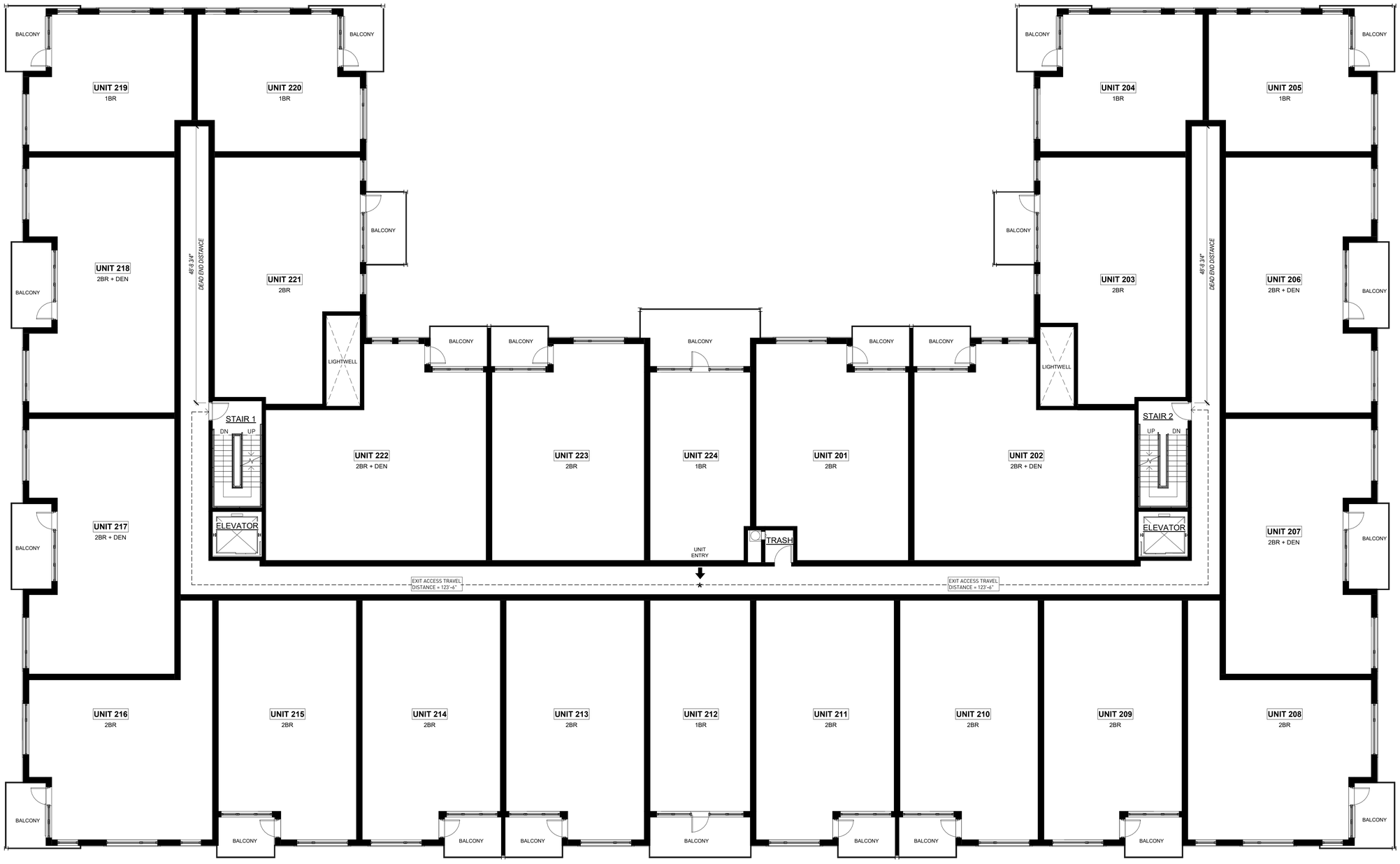
CERTIFICATION

SHEET TITLE

1ST FLOOR PLAN

SHEET #

A1.02



1 2ND FLOOR PLAN

1/8" = 1'-0"

N

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

2ND FLOOR GSF: 27,100 SF

BUILDING HEIGHT: 62' - 0"

PER 1BC TABLE 1017.2:
MAXIMUM EXIT ACCESS TRAVEL DISTANCE = 250'-0" MAX

PER IBC 1020.5, EXCEPTION 2:
MAXIMUM DEAD END CORRIDOR DISTANCE = 50'-0" MAX.

*BUILDING IS FULLY SPRINKLERED

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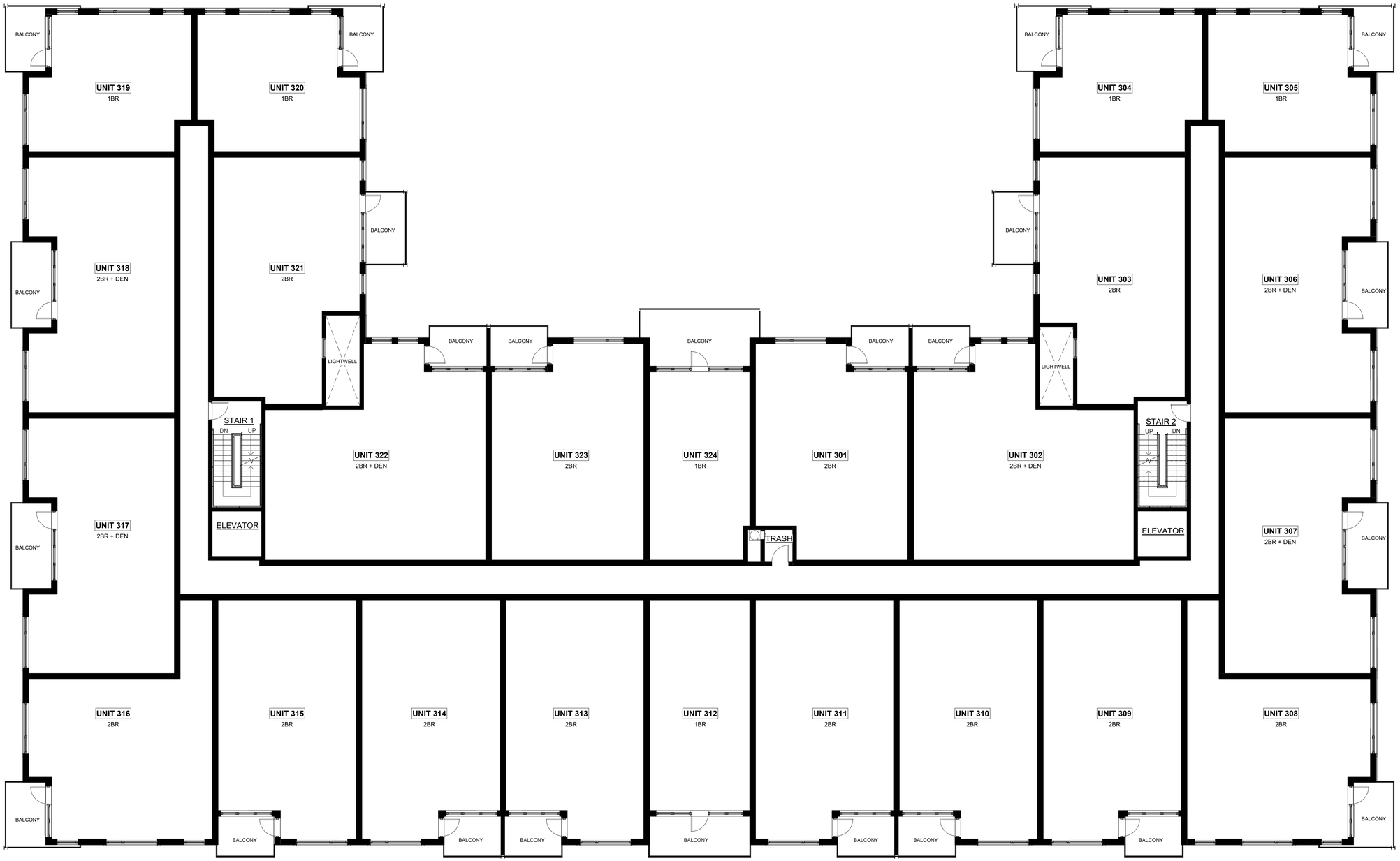
CERTIFICATION

SHEET TITLE

2ND FLOOR PLAN

SHEET #

A1.03



1 3RD FLOOR PLAN

1/8" = 1'-0"

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

3RD FLOOR GSF: 27,100 SF

BUILDING HEIGHT: 62' - 0"

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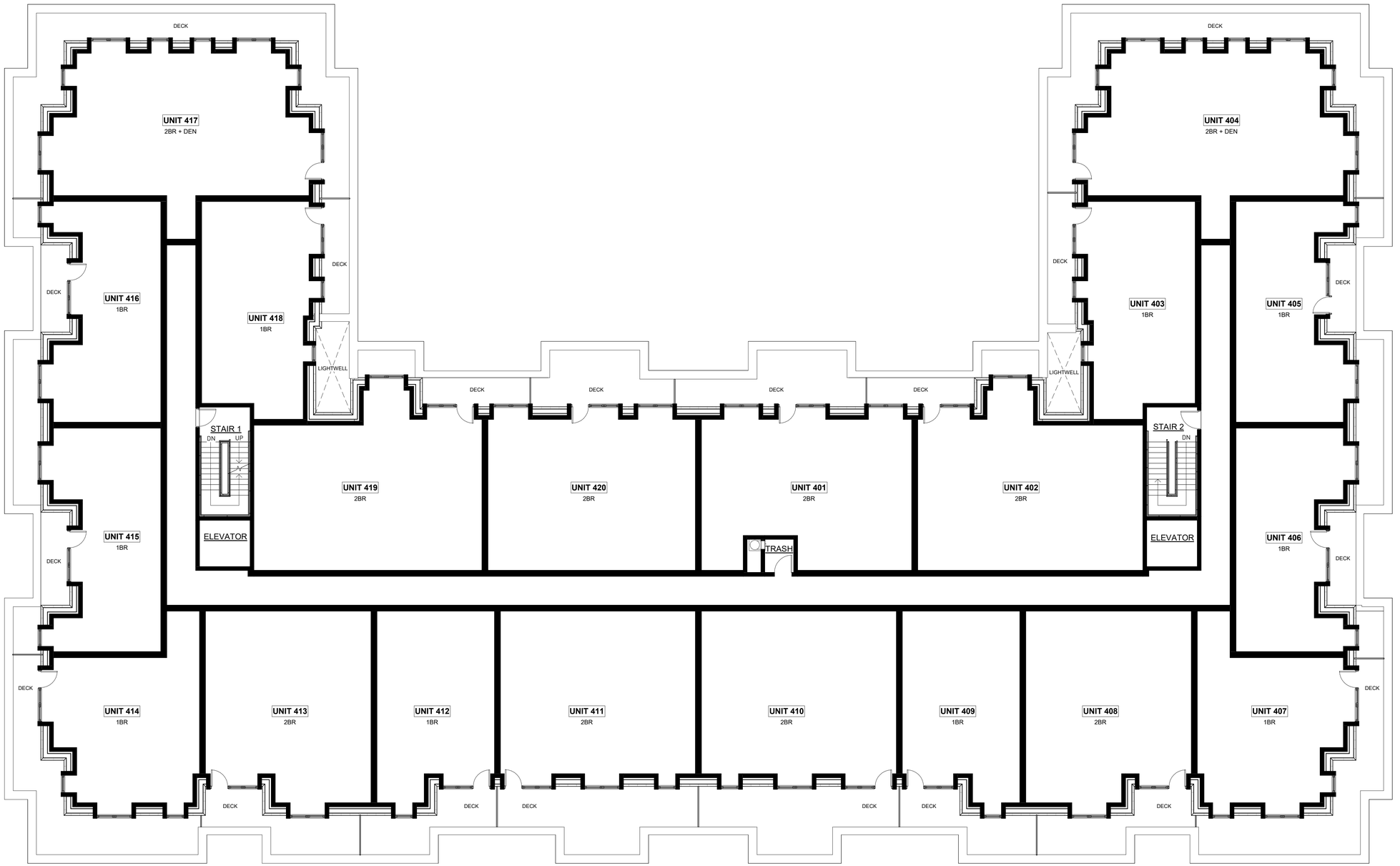
CERTIFICATION

SHEET TITLE

3RD FLOOR PLAN

SHEET #

A1.04



1 4TH FLOOR PLAN

1/8" = 1'-0"

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

4TH FLOOR GSF: 20,500 SF

BUILDING HEIGHT: 62' - 0"

FINAL P.D. SUBMISSION

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2149 N. TALMAN AVENUE
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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

NO.	DESCRIPTION	DATE
1	ISSUED FOR DEVELOPMENT REVIEW	10.11.24
2	SUPPLEMENTAL SUBMISSION	2.27.25
3	FINAL PLANNED DEVELOPMENT SUBMISSION	09.05.25

CERTIFICATION

SHEET TITLE

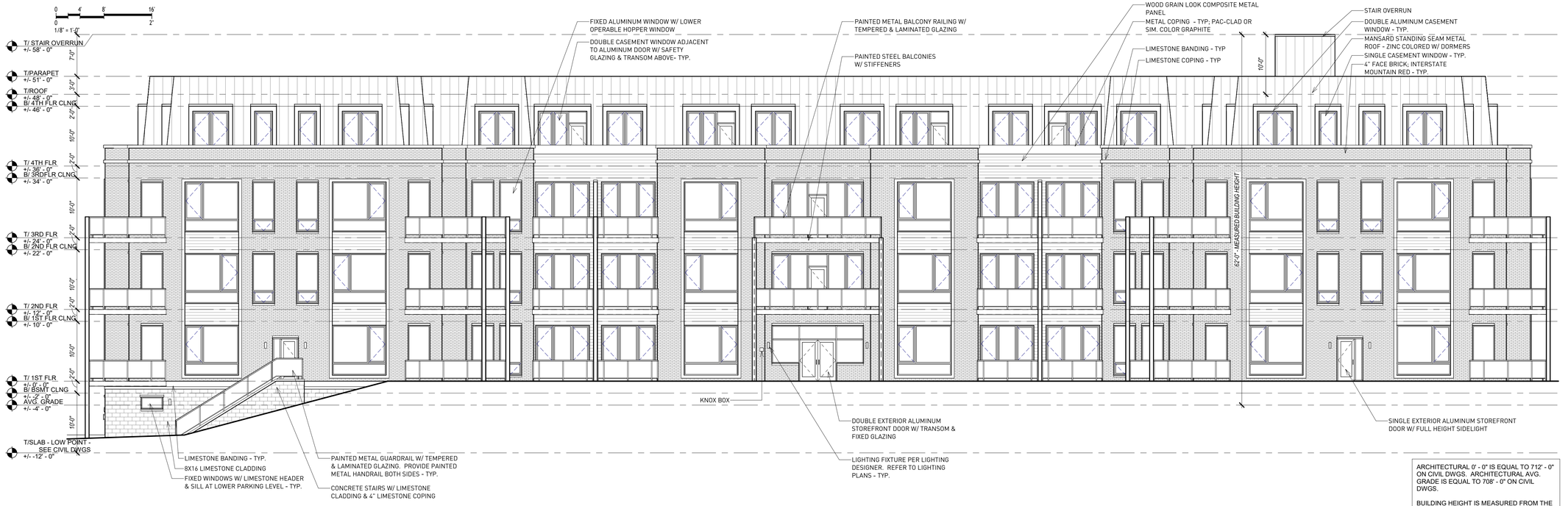
4TH FLOOR PLAN

SHEET #

A1.05

2 EAST EXTERIOR ELEVATION

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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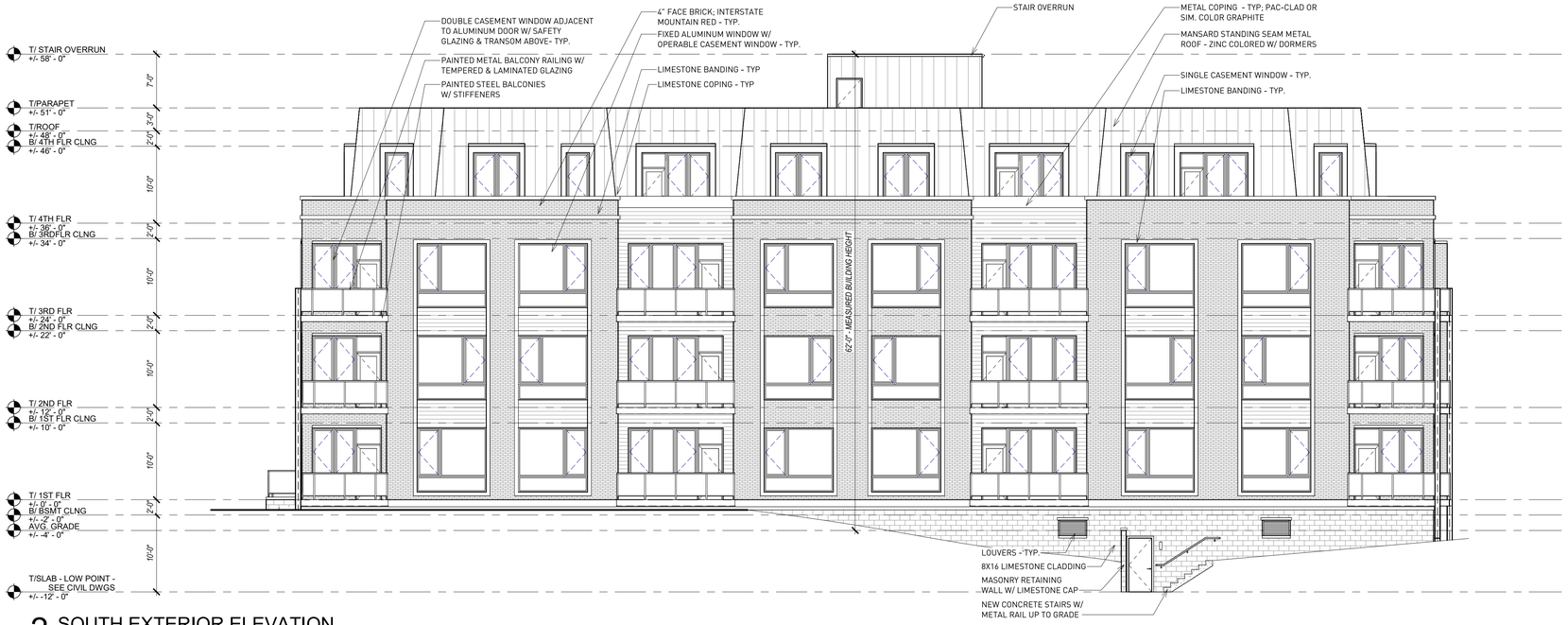
CERTIFICATION

SHEET TITLE

EXTERIOR ELEVATIONS

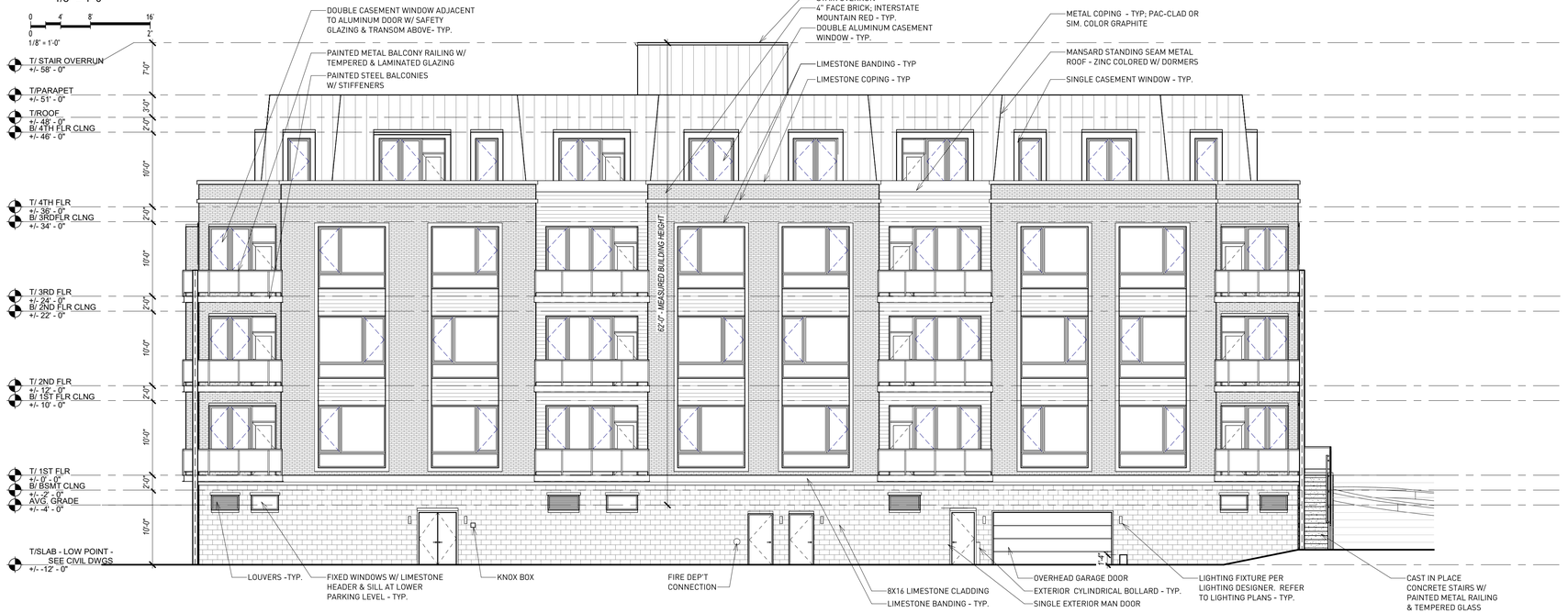
SHEET #

A2.0



2 SOUTH EXTERIOR ELEVATION

1/8" = 1'-0"



1 NORTH EXTERIOR ELEVATION

1/8" = 1'-0"

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THE MEASURED BUILDING HEIGHT IS 62' - 0".

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CERTIFICATION

SHEET TITLE

EXTERIOR ELEVATIONS

SHEET #

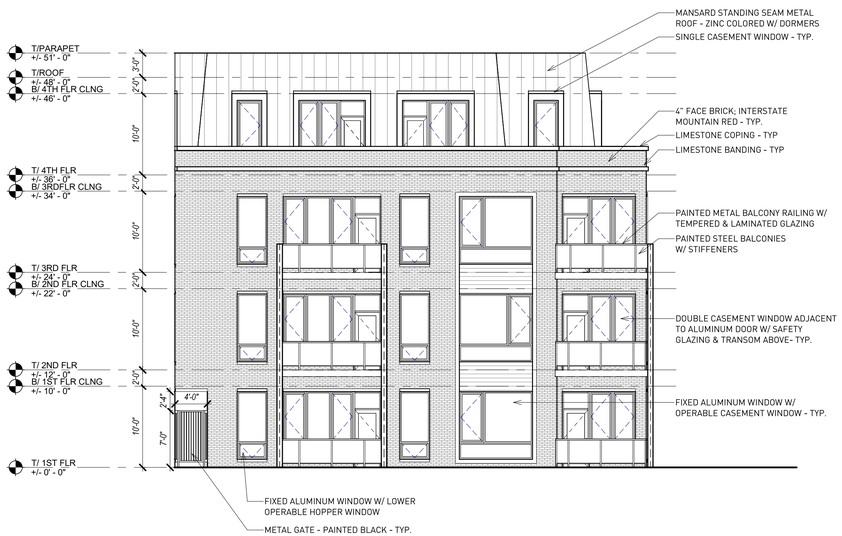
A2.1

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"

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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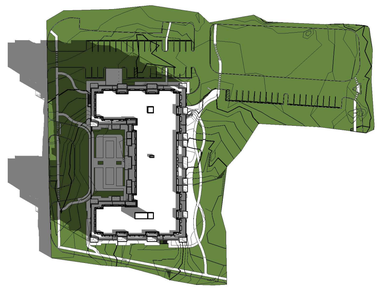
SHEET TITLE

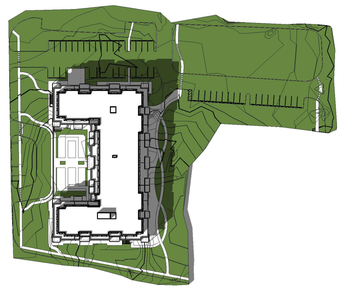
EXTERIOR ELEVATIONS

SHEET #

A2.2



1 MARCH 21ST - 8AM



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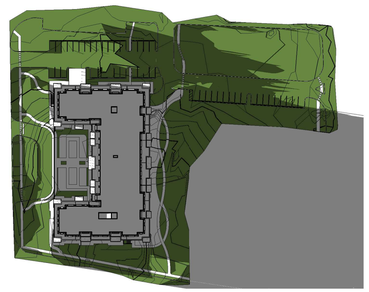

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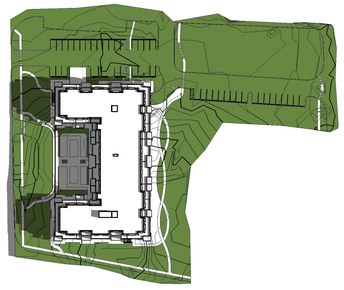
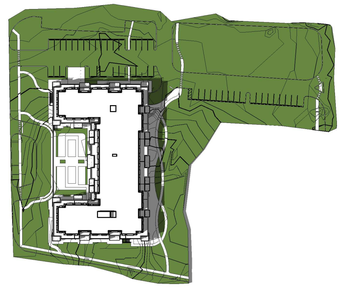
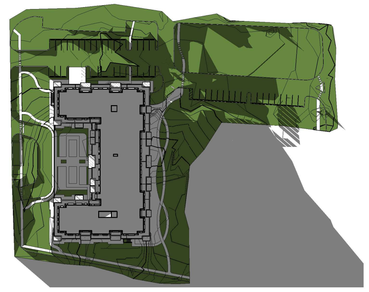


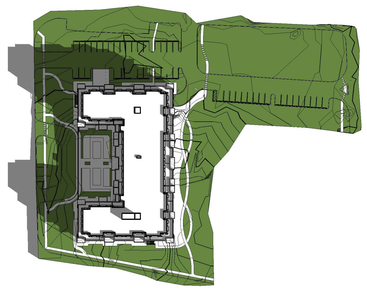
2 JUNE 21ST - 8AM



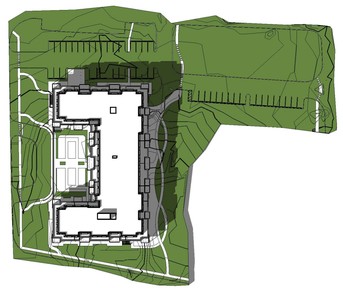
6 JUNE 21ST - 2PM



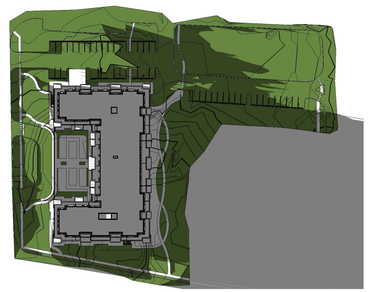
10 JUNE 21ST - 8PM



3 SEPTEMBER 21ST - 8AM



7 SEPTEMBER 21ST - 2PM



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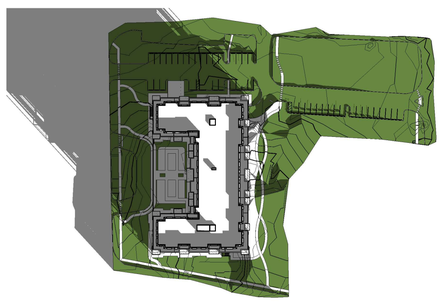
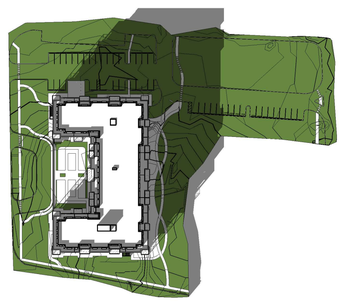
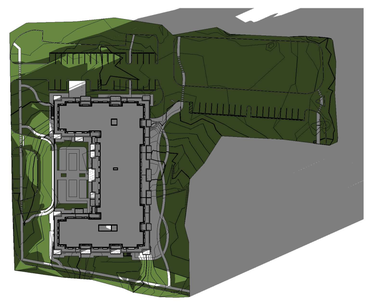


4 DECEMBER 21ST - 8AM



8 DECEMBER 21ST - 8PM



12 DECEMBER 21ST - 8PM

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PARK RIDGE, IL 60068 FAX: (847) 823-5555
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Hugh
LIGHTING DESIGN

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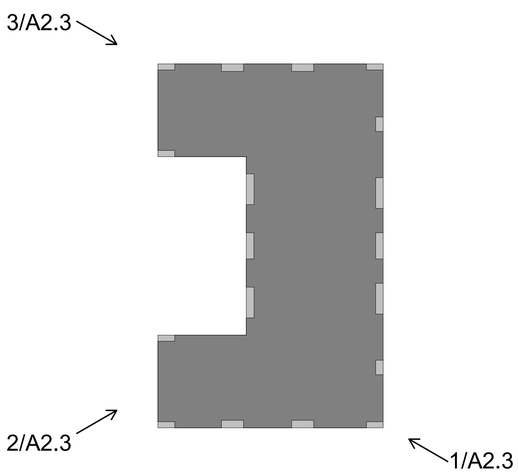
CERTIFICATION

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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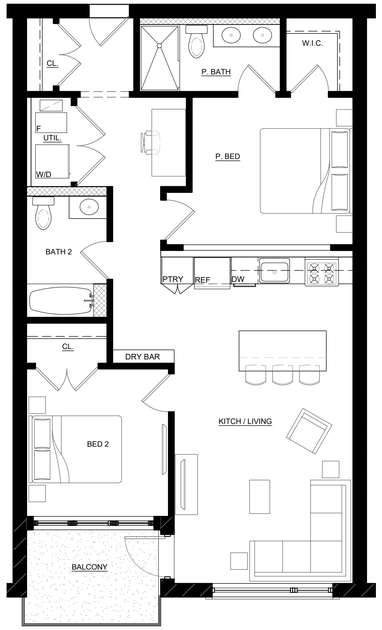
SHEET TITLE

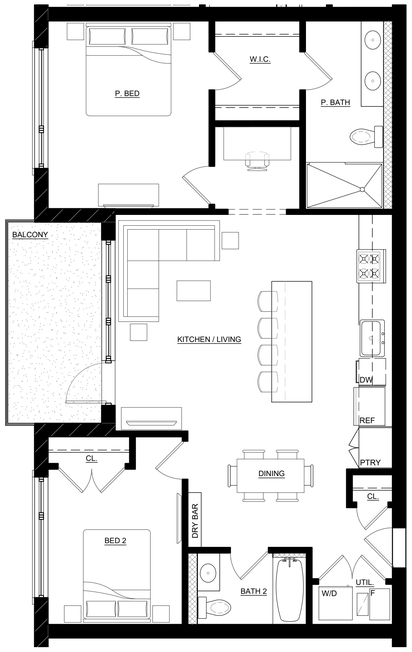
EXTERIOR RENDERS

SHEET #

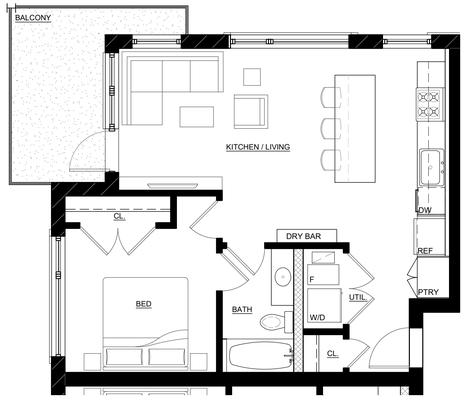
A4.1



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



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



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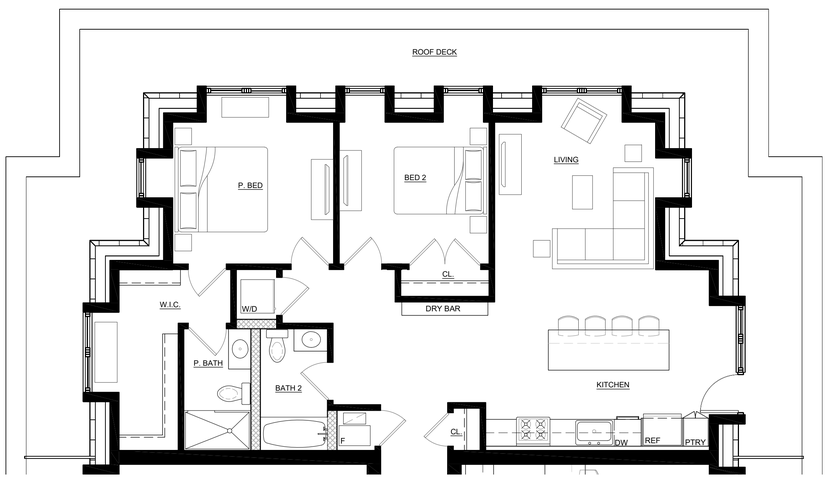
SCALE: 3/16" = 1'-0"



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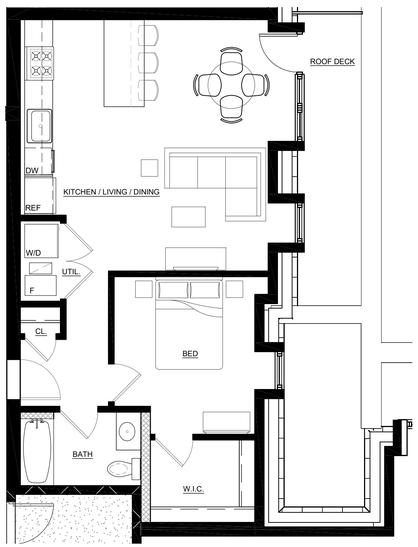
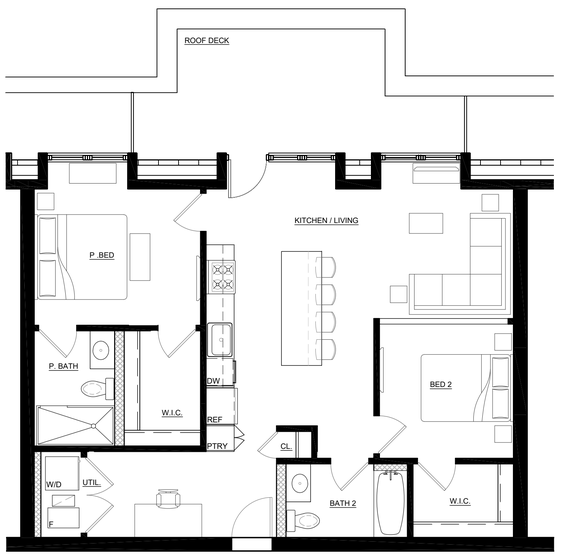
SCALE: 3/16" = 1'-0"



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



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

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SHEET TITLE

SAMPLE FLOOR PLANS

SHEET #

A4.2

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

MANSARD ROOF
MANUFACTURER: PAC-CLAD
COLOR: ZINC

EXPOSED PAINTED STEEL
MANUFACTURER: PAC-CLAD
COLOR: CHARCOAL

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

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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SHEET TITLE

MATERIAL BOARD

SHEET #

A4.3

BENCHMARK INFO

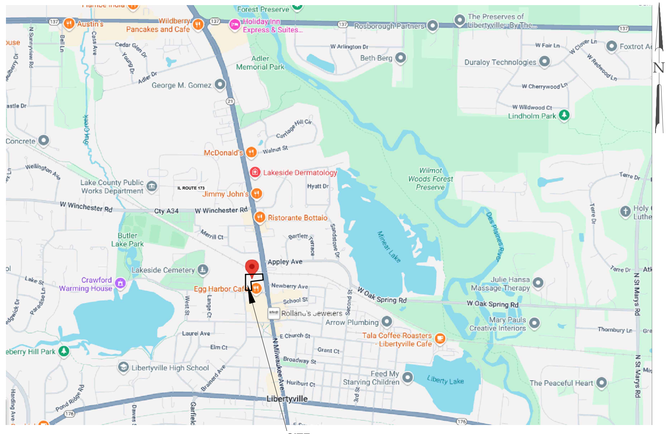
SITE BENCHMARK IS A CROSS CUT ON THE NORTH ARROW BOLT OF A FIRE HYDRANT ON THE NORTH SIDE OF IL-173, APPROXIMATELY 180 FEET EAST OF THE EAST PROPERTY LINE. ELEV 812.752. TRANSFERRED FROM LAKE COUNTY BENCHMARK 2-5A, ELEV 780.63 NAVD 88

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:

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AERIAL MAP

PROJECT NARRATIVE

GENERAL: PROPOSED MULTI-FAMILY RESIDENTIAL BUILDING IS PROPOSED ON AT 2.173AC. 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 OF BE DEVELOPED AT PRESENT: 2.173 ACRES
DISTURBED AREA OF SITE: 2.173 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.

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

Abh Veer
ENGINEER

09/05/2025
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	787.10	787.55
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		
TOP OF CURB BOTTOM OF CURB		T/C XXX.XX B/C XXX.XX
TOP OF CURB BOTTOM OF GUTTER		T/C XXX.XX B/G XXX.XX
WALK BOTTOM OF WALK		W XXX.XX B/W XXX.XX
DESPRESSED CURB BOTTOM OF GUTTER		D/C XXX.XX B/G XXX.XX
MOUNTABLE CURB		M/C XXX.XX B/C XXX.XX

FINAL P.D. SUBMISSION

ISSUE	REVISIONS	DATE
A	PRELIMINARY PLAN	10-09-2024
B	PRELIMINARY PLAN SUPPLEMENTAL SUBMISSION.	02-27-2025
C	FINAL PLANNED DEVELOPMENT SUBMISSION.	09-09-2025

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

BCI
BONO CONSULTING
CIVIL ENGINEERS
A Sieve & Maher Engineers company
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4234 MERIDIAN PKWY, STE 116
AURORA, IL 60504
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rwallace@bonoconsulting.com
DESIGN FIRM NO. 184.006857.0002

SME
SEVEE & MAHER ENGINEERS
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Phone 207.829.5016 Fax 207.829.5692 sme-engineers.com

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

NOT FOR CONSTRUCTION

COPYRIGHT:
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
0
SCALE: NTS
SHEET NUMBER
1 OF 17

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

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.

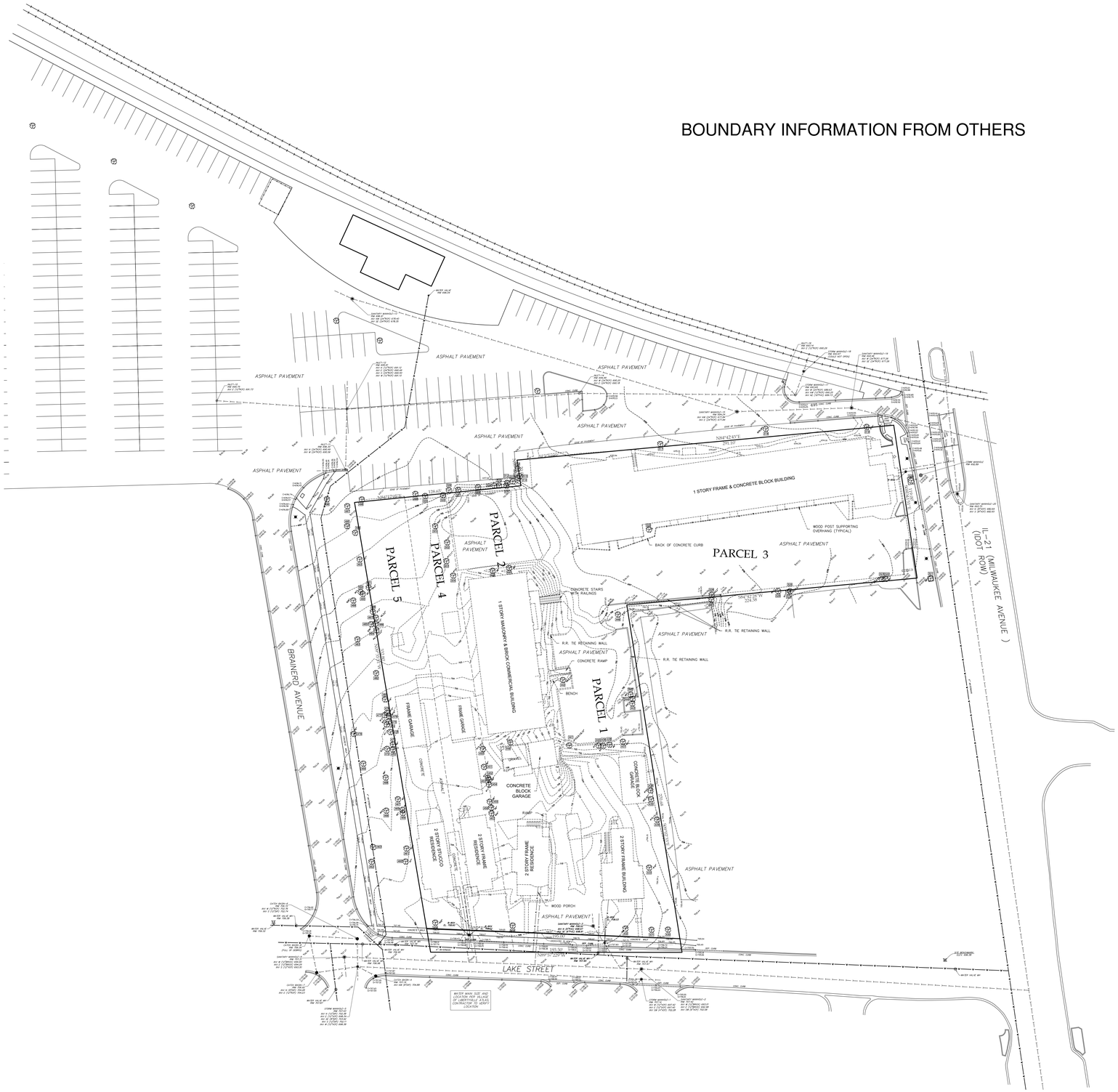
PARCEL 4

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.

BOUNDARY INFORMATION FROM OTHERS



LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING ELEVATION
- 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
- EXISTING GAS LINE
- EXISTING UNDERGROUND ELECTRIC
- EXISTING UNDERGROUND TELEPHONE
- EXISTING UNDERGROUND CABLE
- EXISTING TREE
- REMOVE TREE
- TEMPORARY TREE FENCE
- TEMPORARY SILT / CONSTRUCTION FENCE
- SUMP PUMP (PROPOSED/EXISTING)
- EJECTOR PUMP (PROPOSED/EXISTING)
- 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
- 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

FINAL P.D. SUBMISSION

PROJECT STAFF		ISSUE	REVISIONS	DATE
PROJECT MANAGER:	B. BONO P.E.	A	PRELIMARY PLAN	10-09-2024
ENGINEER:	A. VEER P.E.	B	PRELIMARY PLAN SUPPLEMENTAL SUBMISSION.	02-27-2025
ENGINEER:		C	FINAL PLANNED DEVELOPMENT SUBMISSION.	09-09-2025
TECHNICIAN:				

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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*	4,3,2,2,2,2	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:

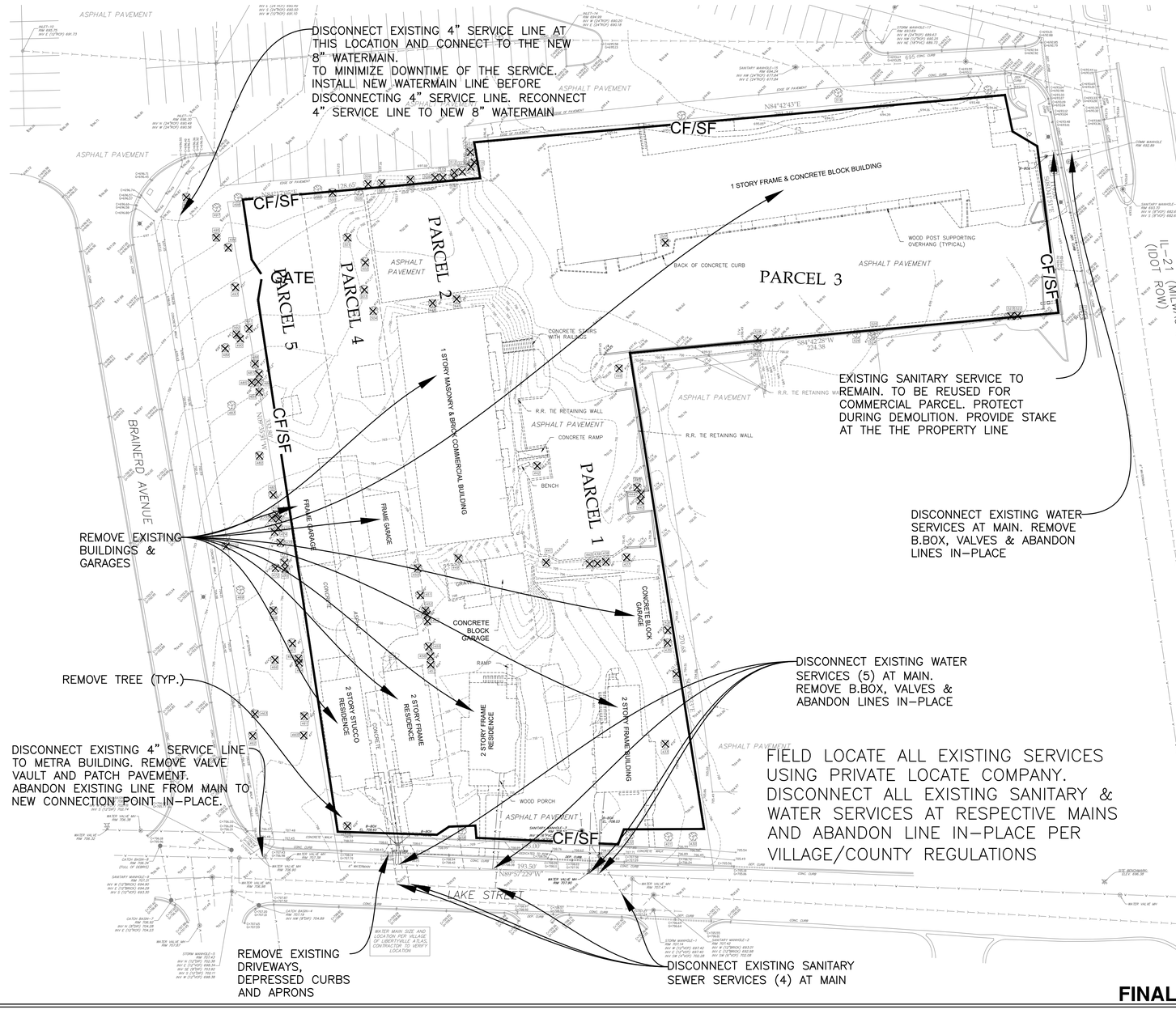
1 – Excellent
2 - Very Good
3 – Good
4 – Below Average
5 - Poor
6 - Dead

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.



FINAL P.D. SUBMISSION

PROJECT STAFF		ISSUE	REVISIONS	DATE
PROJECT MANAGER:	B. BONO P.E.	A	PRELIMINARY PLAN	10-09-2024
ENGINEER:	A. VEER P.E.	B	PRELIMINARY PLAN-SUPPLEMENTAL SUBMISSION.	02-27-2025
ENGINEER:		C	FINAL PLANNED DEVELOPMENT SUBMISSION.	09-08-2025
TECHNICIAN:				

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DESIGN FIRM NO. 184.006857.0002

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Phone 207.829.5016 Fax 207.829.5692 sme-engineers.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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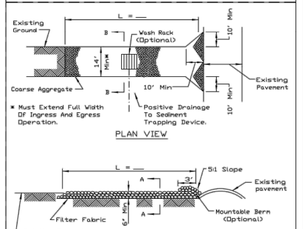
PROJECT NUMBER: 240973
START DATE: AUG. 01, 2024
GRAPHIC SCALE
30 0 30
SCALE: 1"=30'-0

SHEET NUMBER
3 OF 17

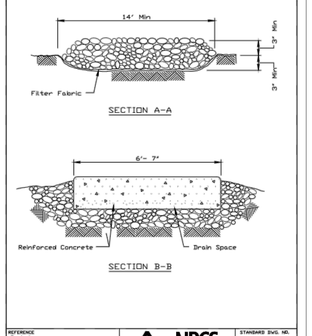
STABILIZED CONSTRUCTION ENTRANCE PLAN



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 ES 802(K)FILL 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	NRCS	STANDARD SVG. NO.
Project	Natural Resources Conservation Service	IL-630
Designed _____ Date _____		SHEET 1 OF 2
Checked _____ Date _____		DATE 8-18-94
Approved _____ Date _____		

STABILIZED CONSTRUCTION ENTRANCE PLAN



REFERENCE	NRCS	STANDARD SVG. NO.
Project	Natural Resources Conservation Service	IL-630
Designed _____ Date _____		SHEET 2 OF 2
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.

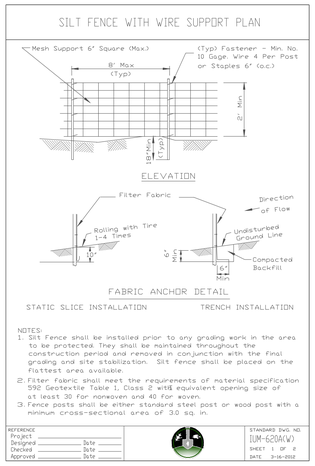
DAILY INSPECTIONS AND REPORTING USING THE SWPPP MANAGEMENT TOOL MUST START THE DAY OF OR IMMEDIATELY AFTER BMP CERTIFICATION.

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.

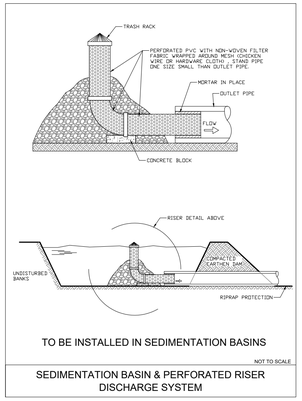
NOTE: THE GENERAL CONTRACTOR MAY COMPLETE CONSTRUCTION-RELATED ACTIVITIES CONCURRENTLY ONLY IF ALL PRECEDING BMPs HAVE BEEN COMPLETELY INSTALLED.

SILT FENCE WITH WIRE SUPPORT PLAN



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 30 sq. in.

REFERENCE		STANDARD SVG. NO.
Project		IUM-620(W)
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.

FINAL P.D. SUBMISSION

ISSUE	REVISIONS	DATE
A	PRELIMINARY PLAN	10-09-2024
B	PRELIMINARY PLAN-SUPPLEMENTAL SUBMISSION.	02-27-2025
C	FINAL PLANNED DEVELOPMENT SUBMISSION.	09-08-2025

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

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PHASE - I -SOIL EROSION & SEDIMENTATION CONTROL PLAN

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

NOT FOR CONSTRUCTION

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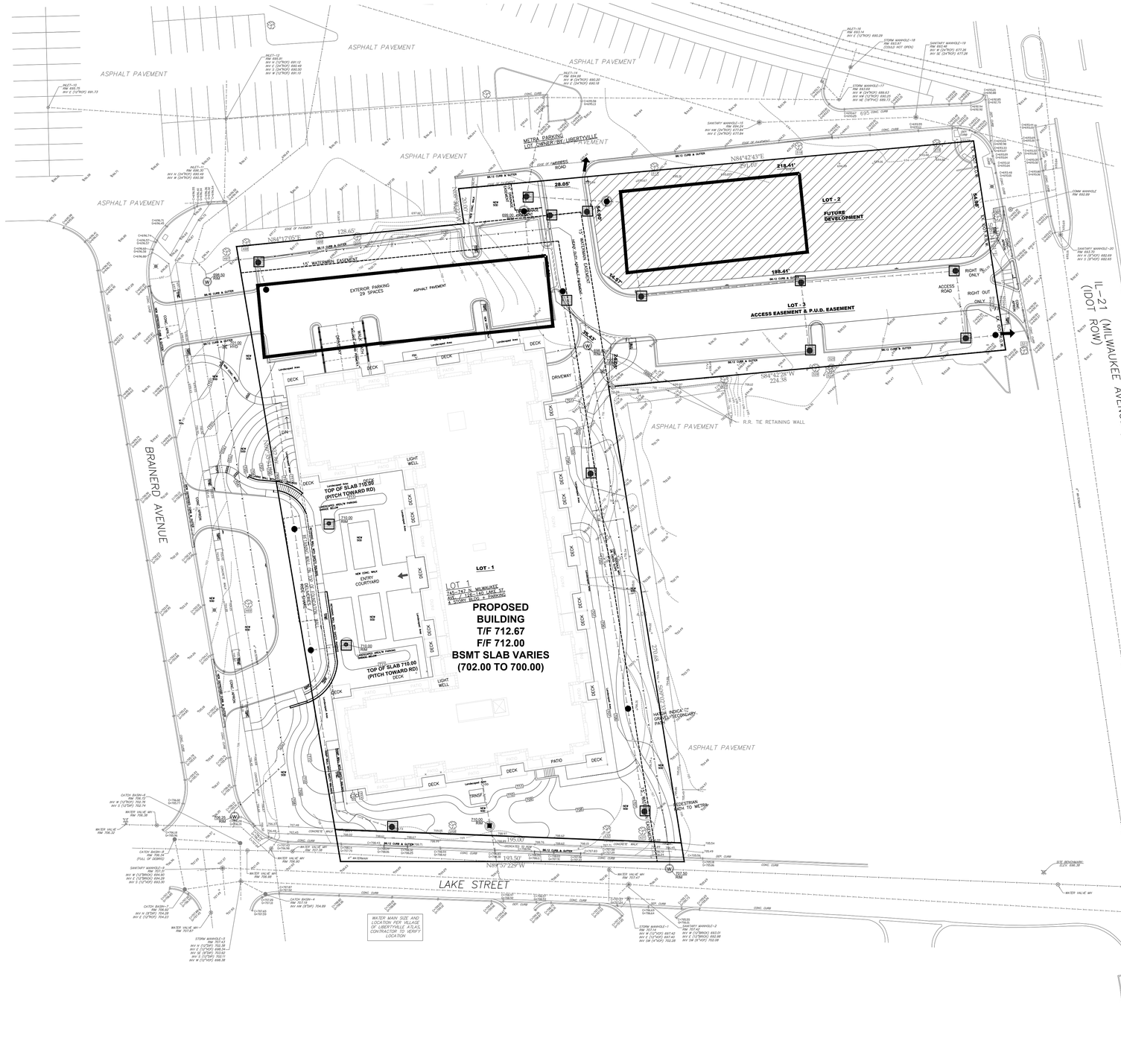
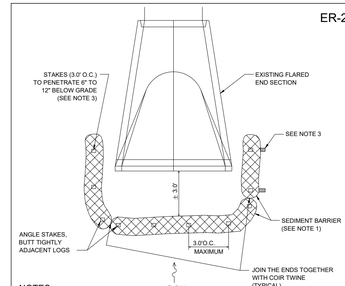
PROJECT NUMBER: 240973
START DATE: AUG. 01, 2024
GRAPHIC SCALE
20 0 20
SCALE: 1"=20'-0
SHEET NUMBER
4 OF 17





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

FINAL P.D. SUBMISSION

N

PROJECT STAFF		ISSUE	REVISIONS	DATE
PROJECT MANAGER:	B. BONO P.E.	A	PRELIMINARY PLAN	10-09-2024
ENGINEER:	A. VEER P.E.	B	PRELIMINARY PLAN SUPPLEMENTAL SUBMISSION.	02-27-2025
ENGINEER:		C	FINAL PLANNED DEVELOPMENT SUBMISSION.	09-08-2025
TECHNICIAN:				

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PHASE II - SOIL EROSION & SEDIMENTATION CONTROL PLAN

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

NOT FOR CONSTRUCTION

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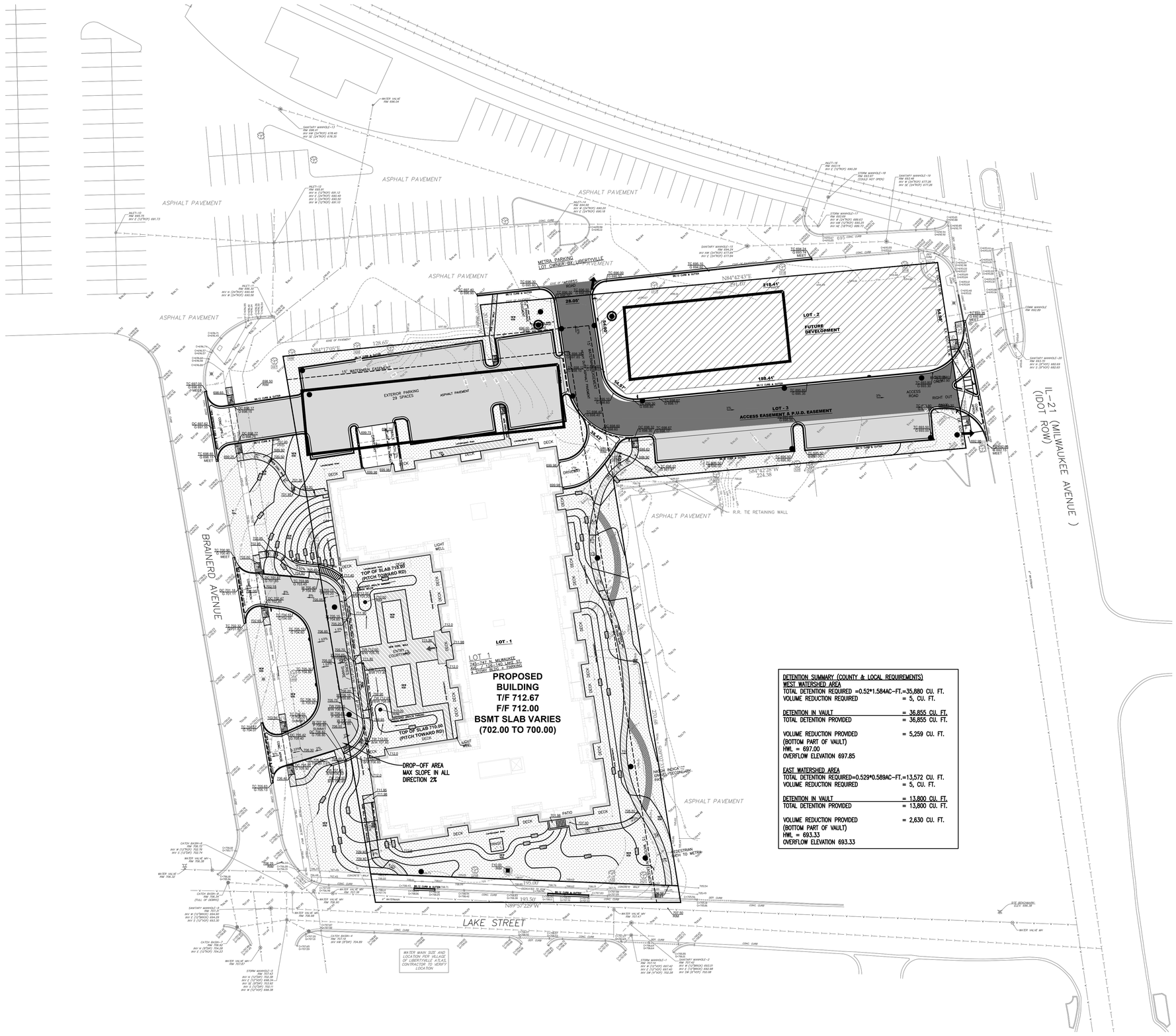
PROJECT NUMBER: 240973

START DATE: AUG. 01, 2024

GRAPHIC SCALE
30 0 30

SCALE: 1"=30'-0

SHEET NUMBER
5 OF 17



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.

DETENTION SUMMARY (COUNTY & LOCAL REQUIREMENTS)

WEST WATERSHED AREA

TOTAL DETENTION REQUIRED =0.52*1.584AC-FT.=	35,880 CU. FT.
VOLUME REDUCTION REQUIRED	= 5, CU. FT.
DETENTION IN VAULT	= 36,855 CU. FT.
TOTAL DETENTION PROVIDED	= 36,855 CU. FT.
VOLUME REDUCTION PROVIDED (BOTTOM PART OF VAULT) HWL = 697.00 OVERFLOW ELEVATION 697.85	= 5,259 CU. FT.

EAST WATERSHED AREA

TOTAL DETENTION REQUIRED=0.529*0.589AC-FT.=	13,572 CU. FT.
VOLUME REDUCTION REQUIRED	= 5, CU. FT.
DETENTION IN VAULT	= 13,800 CU. FT.
TOTAL DETENTION PROVIDED	= 13,800 CU. FT.
VOLUME REDUCTION PROVIDED (BOTTOM PART OF VAULT) HWL = 693.33 OVERFLOW ELEVATION 693.33	= 2,630 CU. FT.

FINAL P.D. SUBMISSION

PROJECT STAFF		ISSUE	REVISIONS	DATE
PROJECT MANAGER:	B. BONO P.E.	A	PRELIMINARY PLAN	10-09-2024
ENGINEER:	A. VEER P.E.	B	PRELIMINARY PLAN SUPPLEMENTAL SUBMISSION	02-27-2025
ENGINEER:		C	FINAL PLANNED DEVELOPMENT SUBMISSION	09-08-2025
TECHNICIAN:				

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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

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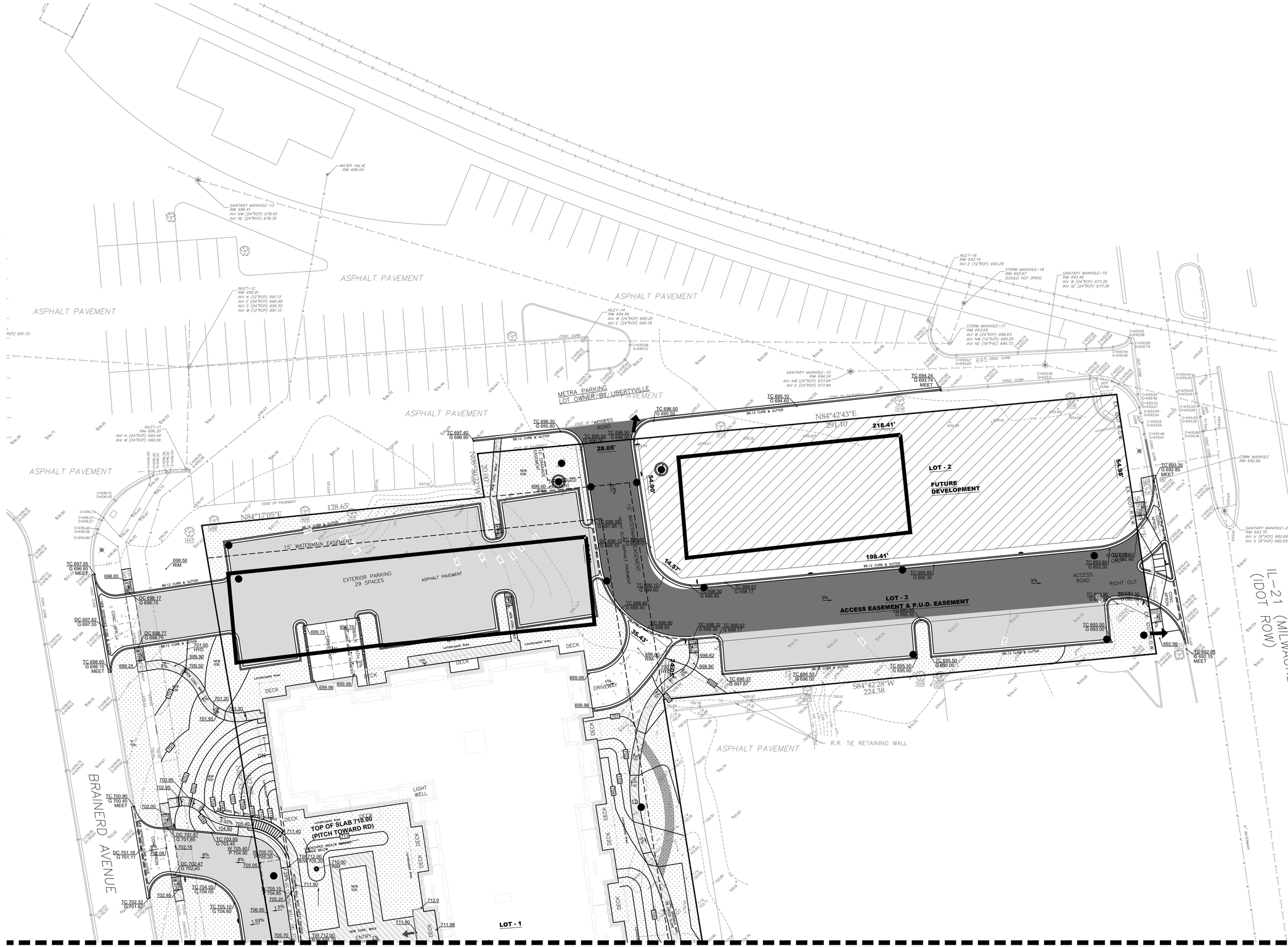
PROJECT NUMBER: 240973
START DATE: AUG. 01, 2024
GRAPHIC SCALE
30 0 30
SCALE: 1"=30'-0

SHEET NUMBER 7 OF 17



MATCH LINE SEE SHEET 9

FINAL P.D. SUBMISSION

PROJECT STAFF		ISSUE	REVISIONS	DATE
PROJECT MANAGER:	B. BONO P.E.	A	PRELIMINARY PLAN	10-09-2024
ENGINEER:	A. VEER P.E.	B	PRELIMINARY PLAN SUPPLEMENTAL SUBMISSION.	02-27-2025
ENGINEER:		C	FINAL PLANNED DEVELOPMENT SUBMISSION.	09-08-2025
TECHNICIAN:				

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A Sevee & Maher Engineers company
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Phone 207.829.5016 Fax 207.829.5692 sme-engineers.com

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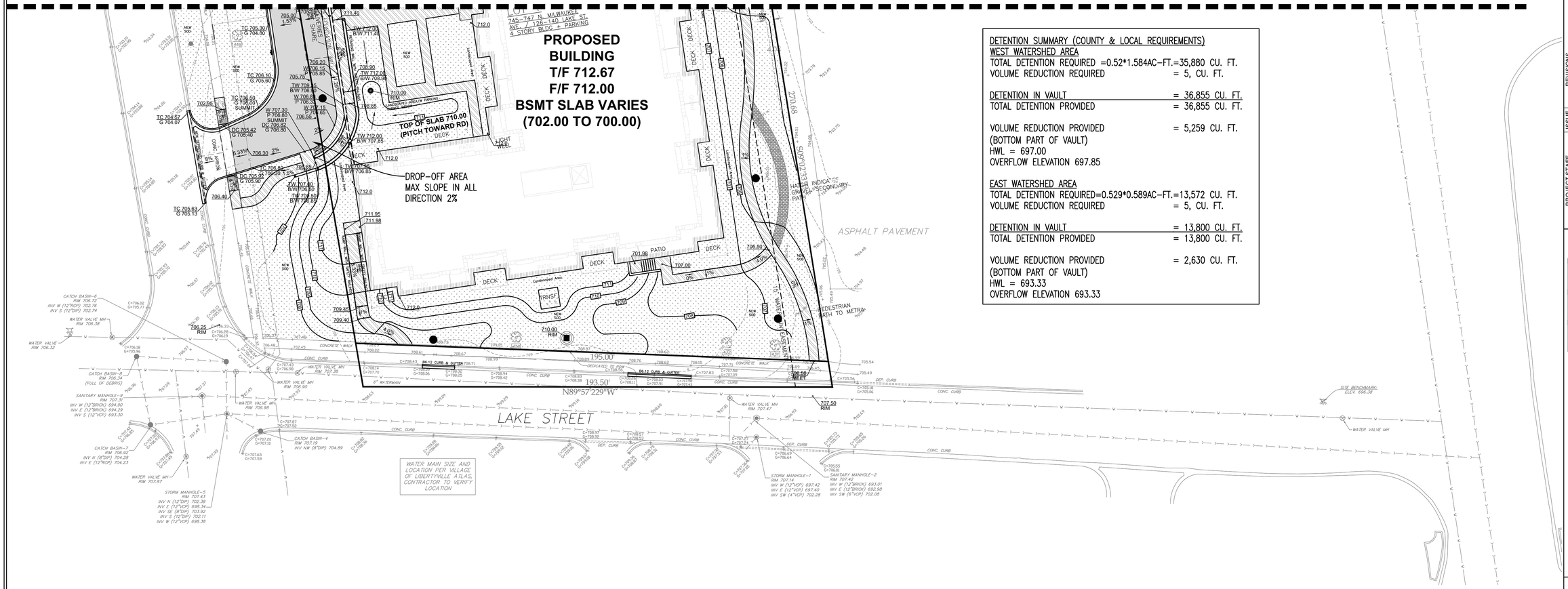
PROJECT NUMBER: 240973
START DATE: AUG. 01, 2024
GRAPHIC SCALE
20 0 20
SCALE: 1"=20'-0

MATCH LINE SEE SHEET 8



DETENTION SUMMARY (COUNTY & LOCAL REQUIREMENTS)

WEST WATERSHED AREA

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TOTAL DETENTION PROVIDED = 36,855 CU. FT.

VOLUME REDUCTION PROVIDED = 5,259 CU. FT.
(BOTTOM PART OF VAULT)
HWL = 697.00
OVERFLOW ELEVATION 697.85

EAST WATERSHED AREA

TOTAL DETENTION REQUIRED=0.529*0.589AC-FT.=13,572 CU. FT.
VOLUME REDUCTION REQUIRED = 5, CU. FT.

DETENTION IN VAULT = 13,800 CU. FT.
TOTAL DETENTION PROVIDED = 13,800 CU. FT.

VOLUME REDUCTION PROVIDED = 2,630 CU. FT.
(BOTTOM PART OF VAULT)
HWL = 693.33
OVERFLOW ELEVATION 693.33

DATE	REVISIONS	ISSUE
10-09-2024	PRELIMINARY PLAN	A
02-27-2025	PRELIMINARY PLAN-SUPPLEMENTAL SUBMISSION.	B
09-08-2025	FINAL PLANNED DEVELOPMENT SUBMISSION.	C

PROJECT STAFF

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

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CIVIL ENGINEERS
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Phone 207.829.5016 Fax 207.829.5692 sme-engineers.com

PROPOSED GRADING, & DRAINAGE PLAN

SOUTH 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

SHEET NUMBER
9 OF 17

FINAL P.D. SUBMISSION

Lake & Brainard, Libertyville, IL

Date: 2.25.25

	Existing Sq. Ft.	Existing Acres	Proposed Sq. Ft.	Proposed Acres
Total Site Area	96,062	2.205		
Lot area Excluding ROW	94,667	2.173		
Project Area of Site	94,667	2.173		
Building (included Bsmt.)	0	0.000	37,791	0.868
Walks, Decks, Patio	0	0.000	7,676	0.176
Access & Parking	0	0.000	26,535	0.609
Impervious Area	0	0.000	72,002 76.06%	1.653
Pervious Area	0	0.000	22,665	0.520
Disturbed area of Site	2.173	Ac.		
Increase in Impervious Area	1.653			

BEST MANAGEMENT PRACTICES
(West Watershed Area)

Impervious Area (Net New)	51,053 s.f.	
VOLUME REDUCTION BEST MANAGEMENT PRACTICES		
Volume Control Requirements	1.1	Inches Rainfall
Volume Control Storage Required	4,680	Cu. Ft.
PROPOSED		
Size of the infiltration Vault= V = 6500X1.00	5259	
	5259	Cu. Ft.
Proposed Volume	5,259	
Total Volume Reduction Storage Provided =	**5,259**	**Cu. Ft.**

Release Rate Calculation (Qr) and Restrictor Sizing Calculation

(WEST WATERSHED AREA)

RELEASE RATE CALCULATION

Watershed A	=	1.584	Ac.
Release Rate	=	0.150	CFS/Ac.
Release Rate	=	**0.238**	CFS

RESTRICTOR SIZE CALCULATION

Orifice Design

Require Q =	0.238 cfs	Det. HWL =	697.00
Cd =	0.61	Orifice Invert:	691.00
Max. Head =	5.92	Orifice Cent.	691.08
Orifice Area:	0.0197		
Calculated Max. Restrictor Discharge:		0.235	

Restrictor Diameter = ***1.9 inches***

USE 2" PLATE RESTRICTOR

BEST MANAGEMENT PRACTICES
(East Watershed Area)

Impervious Area (Net New)	20,949 s.f.	
VOLUME REDUCTION BEST MANAGEMENT PRACTICES		
Volume Control Requirements	1.1	Inches Rainfall
Volume Control Storage Required	1,920	Cu. Ft.
PROPOSED		
Size of the infiltration Vault= V = 4600X0.5	5259	
	2630	Cu. Ft.
Proposed Volume	2,630	
Total Volume Reduction Storage Provided =	**2,630**	**Cu. Ft.**

Release Rate Calculation (Qr) and Restrictor Sizing Calculation

(EAST WATERSHED AREA)

RELEASE RATE CALCULATION

Area of Site	=	0.589	Ac.
Release Rate	=	0.150	CFS/Ac.
Release Rate	=	**0.088**	CFS

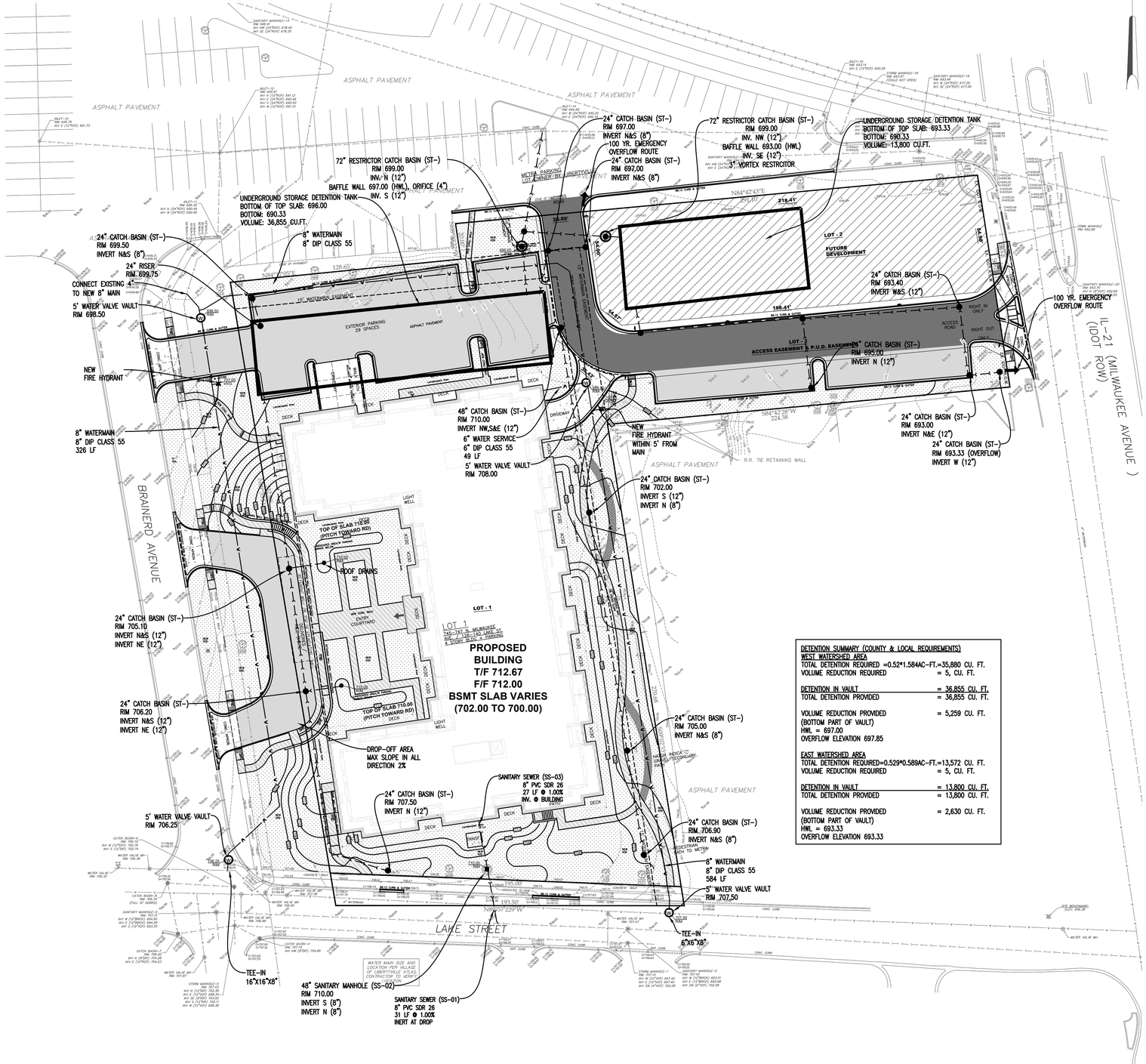
RESTRICTOR SIZE CALCULATION

Orifice Design

Require Q =	0.088 cfs	Det. HWL =	693.00
Cd =	0.61	Orifice Invert:	691.00
Max. Head =	1.94	Orifice Cent.	691.06
Orifice Area:	0.0123		
Calculated Max. Restrictor Discharge:		0.084	

Restrictor Diameter = ***1.5 inches***

USE 3" VORTEX RESTRICTOR



DETENTION SUMMARY (COUNTY & LOCAL REQUIREMENTS)	
WEST WATERSHED AREA	
TOTAL DETENTION REQUIRED =0.52*1.584AC-FT.=	35,880 CU. FT.
VOLUME REDUCTION REQUIRED	= 5, CU. FT.
DETENTION IN VAULT	= 36,855 CU. FT.
TOTAL DETENTION PROVIDED	= 36,855 CU. FT.
VOLUME REDUCTION PROVIDED	= 5,259 CU. FT.
(BOTTOM PART OF VAULT)	
HWL = 697.00	
OVERFLOW ELEVATION 697.85	
EAST WATERSHED AREA	
TOTAL DETENTION REQUIRED=0.529*0.589AC-FT.=	13,572 CU. FT.
VOLUME REDUCTION REQUIRED	= 5, CU. FT.
DETENTION IN VAULT	= 13,800 CU. FT.
TOTAL DETENTION PROVIDED	= 13,800 CU. FT.
VOLUME REDUCTION PROVIDED	= 2,630 CU. FT.
(BOTTOM PART OF VAULT)	
HWL = 693.33	
OVERFLOW ELEVATION 693.33	

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.

ISSUE	REVISIONS	DATE
A	PRELIMINARY PLAN	10-09-2024
B	PRELIMINARY PLAN-SUPPLEMENTAL SUBMISSION	02-27-2025
C	FINAL PLANNED DEVELOPMENT SUBMISSION	04-08-2025

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

FINAL P.D. SUBMISSION

ASPHALT PAVEMENT

WATER VALVE
RIM 696.04

SANITARY MANHOLE-13
RIM 696.41
INV NW (24"RCP) 678.40
INV SE (24"RCP) 678.35

INLET-10
RIM 695.75
INV E (12"RCP) 691.73

INLET-12
RIM 695.91
INV N (12"RCP) 691.12
INV E (24"RCP) 690.49
INV S (24"RCP) 690.50
INV W (12"RCP) 691.10

INLET-11
RIM 696.30
INV N (24"RCP) 690.49
INV W (24"RCP) 690.56

INLET-14
RIM 694.99
INV W (24"RCP) 690.20
INV E (24"RCP) 690.16

24" CATCH BASIN (ST-)
RIM 697.00
INVERT N&S (8")
100 YR. EMERGENCY
OVERFLOW ROUTE
24" CATCH BASIN (ST-)
RIM 697.00
INVERT N&S (8")

72" RESTRICTOR CATCH BASIN (ST-)
RIM 699.00
INV. N (12")
BAFFLE WALL 697.00 (HWL), ORIFICE (4")
INV. S (12")

72" RESTRICTOR CATCH BASIN (ST-)
RIM 699.00
INV. NW (12")
BAFFLE WALL 693.00 (HWL)
INV. SE (12")
3" VORTEX RESTRICTOR

UNDERGROUND STORAGE DETENTION TANK
BOTTOM OF TOP SLAB: 696.00
BOTTOM: 690.33
VOLUME: 36,855 CU.FT.

UNDERGROUND STORAGE DETENTION TANK
BOTTOM OF TOP SLAB: 693.33
BOTTOM: 690.33
VOLUME: 13,800 CU.FT.

METRA PARKING
LOT OWNER BY LIBERTYVILLE

EDGE OF PAVEMENT

EDGE OF PAVEMENT ACROSS ROAD

86.12 CURB & GUTTER

N84°42'43"E
291.10'

218.41'

29.05'

54.98'

14.57'

LOT - 2
FUTURE
DEVELOPMENT

198.41'

LOT - 3
ACCESS EASEMENT & P.U.D. EASEMENT

24" CATCH BASIN (ST-)
RIM 693.40
INVERT W&S (12")

24" CATCH BASIN (ST-)
RIM 695.00
INVERT N (12")

RIGHT IN ONLY

RIGHT OUT ONLY

ACCESS ROAD

100 YR. EMERGENCY
OVERFLOW ROUTE

IL-21 (MILWAUKEE AVENUE)
(IDOT ROW)

24" CATCH BASIN (ST-)
RIM 699.50
INVERT N&S (8")

24" RISER
RIM 699.75

CONNECT EXISTING 4"
TO NEW 8" MAIN

5' WATER VALVE VAULT
RIM 698.50

8" WATERMAIN
8" DIP CLASS 55

15' WATERMAIN EASEMENT

N84°07'05"E
128.65'

EXTERIOR PARKING
29 SPACES

ASPHALT PAVEMENT

NEW
FIRE HYDRANT

8" WATERMAIN
8" DIP CLASS 55
326 LF

48" CATCH BASIN (ST-)
RIM 710.00
INVERT NW,S&E (12")
6" WATER SERVICE
6" DIP CLASS 55
49 LF
5' WATER VALVE VAULT
RIM 708.00

NEW
FIRE HYDRANT
WITHIN 5' FROM
MAIN

S84°42'28"W
224.38

R.R. TIE RETAINING WALL

24" CATCH BASIN (ST-)
RIM 702.00
INVERT S (12")
INVERT N (8")

24" CATCH BASIN (ST-)
RIM 693.00
INVERT N&E (12")

24" CATCH BASIN (ST-)
RIM 693.33 (OVERFLOW)
INVERT W (12")

TOP OF SLAB 710.00
(PITCH TOWARD RD)

ROOF DRAINS

LIGHT WELL

NEW CONC. WALK

ENTRY

LOT - 1

BRAINERD AVENUE

24" CATCH BASIN (ST-)

MATCH LINE SEE SHEET 12

FINAL P.D. SUBMISSION

PROJECT STAFF		ISSUE	REVISIONS	DATE
PROJECT MANAGER:	B. BONO P.E.	A	PRELIMINARY PLAN	10-09-2024
ENGINEER:	A. VEER P.E.	B	PRELIMINARY PLAN-SUPPLEMENTAL SUBMISSION	02-27-2025
ENGINEER:		C	FINAL PLANNED DEVELOPMENT SUBMISSION	09-05-2025
TECHNICIAN:				

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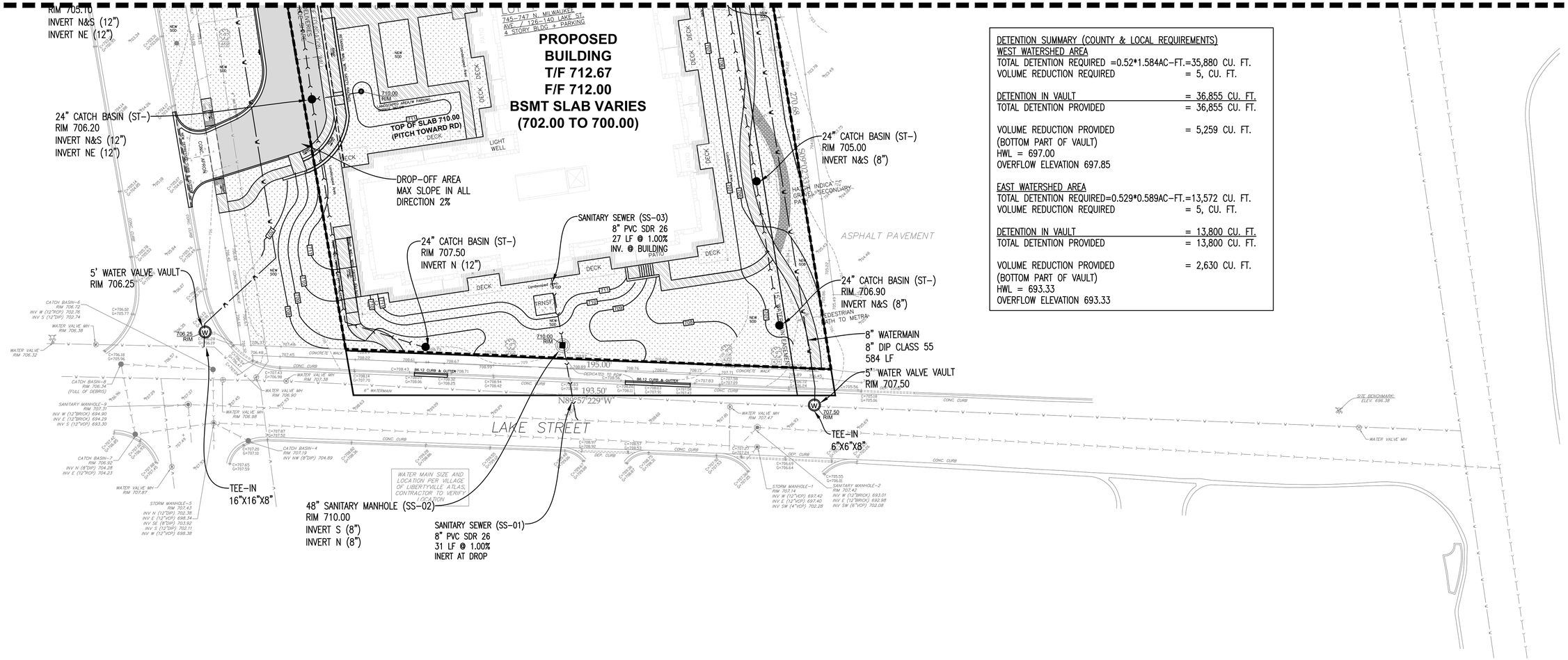
PROJECT NUMBER: 240973
START DATE: AUG. 01, 2024
GRAPHIC SCALE
20 0 20
SCALE: 1"=20'-0

SHEET NUMBER
11 OF 17

MATCH LINE SEE SHEET 11



DETENTION SUMMARY (COUNTY & LOCAL REQUIREMENTS)

WEST WATERSHED AREA

TOTAL DETENTION REQUIRED =0.52*1.584AC-FT.	=35,880 CU. FT.
VOLUME REDUCTION REQUIRED	= 5, CU. FT.
DETENTION IN VAULT	= 36,855 CU. FT.
TOTAL DETENTION PROVIDED	= 36,855 CU. FT.
VOLUME REDUCTION PROVIDED	= 5,259 CU. FT.

(BOTTOM PART OF VAULT)
HWL = 697.00
OVERFLOW ELEVATION 697.85

EAST WATERSHED AREA

TOTAL DETENTION REQUIRED=0.529*0.589AC-FT.	=13,572 CU. FT.
VOLUME REDUCTION REQUIRED	= 5, CU. FT.
DETENTION IN VAULT	= 13,800 CU. FT.
TOTAL DETENTION PROVIDED	= 13,800 CU. FT.
VOLUME REDUCTION PROVIDED	= 2,630 CU. FT.

(BOTTOM PART OF VAULT)
HWL = 693.33
OVERFLOW ELEVATION 693.33

ISSUE	REVISIONS	DATE
A	PRELIMINARY PLAN	10-09-2024
B	PRELIMINARY PLAN-SUPPLEMENTAL SUBMISSION	04-27-2025
C	FINAL PLANNED DEVELOPMENT SUBMISSION	09-09-2025

PROJECT STAFF	
PROJECT MANAGER:	B. BONO P.E.
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

NOT FOR CONSTRUCTION

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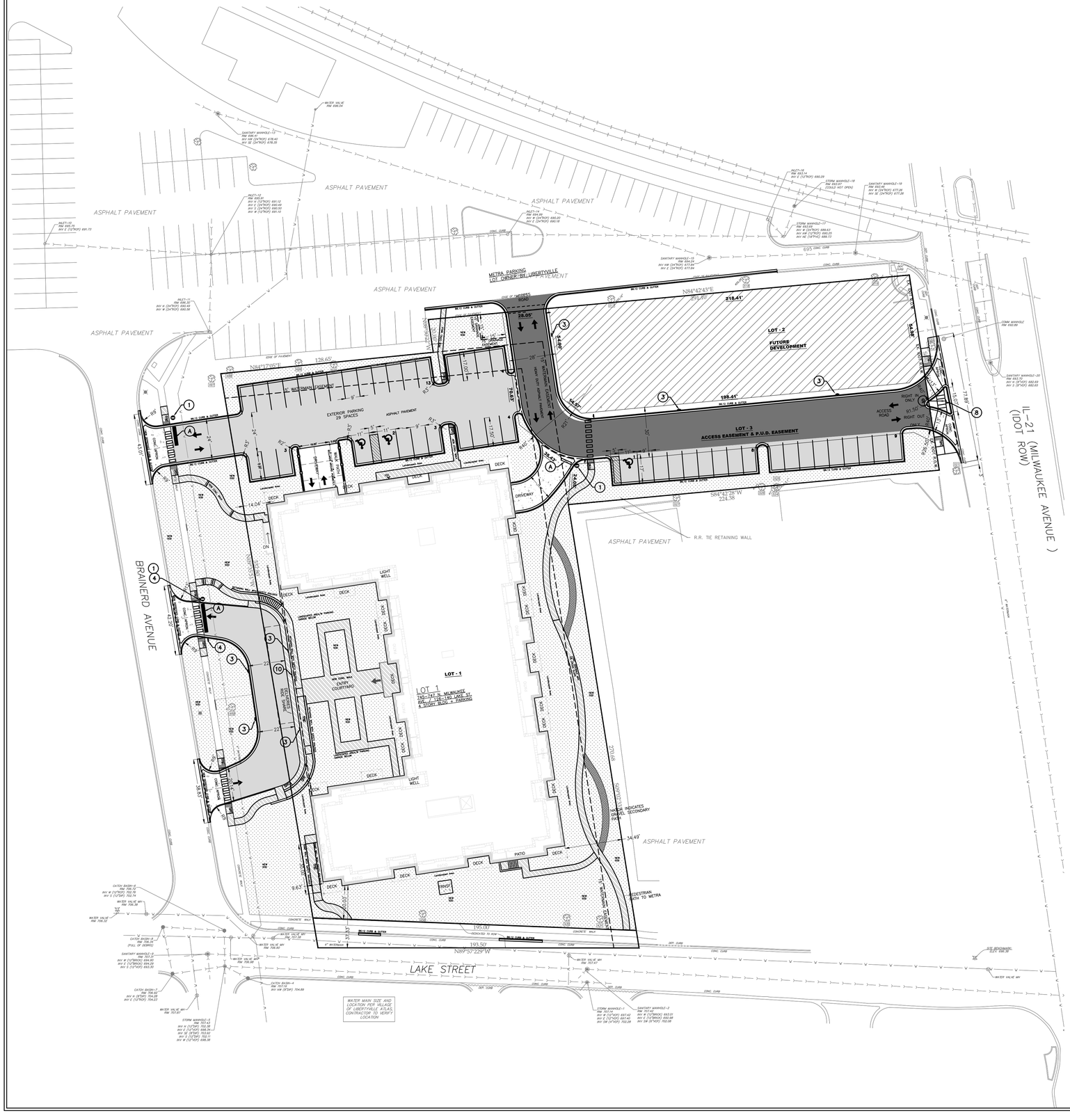
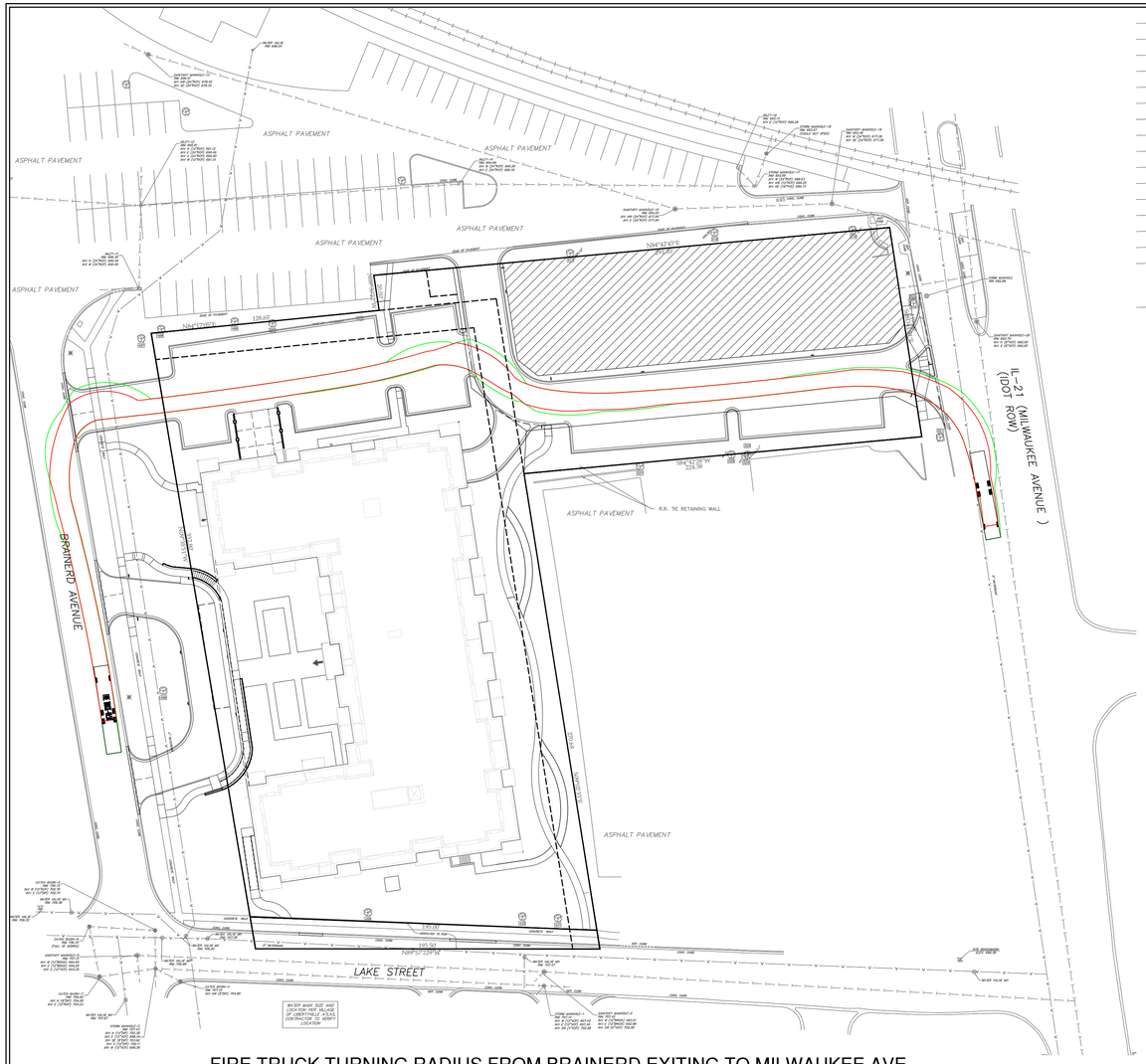
PROJECT NUMBER: 240973
START DATE: AUG. 01, 2024
GRAPHIC SCALE
20 0 20
SCALE: 1"=20'-0

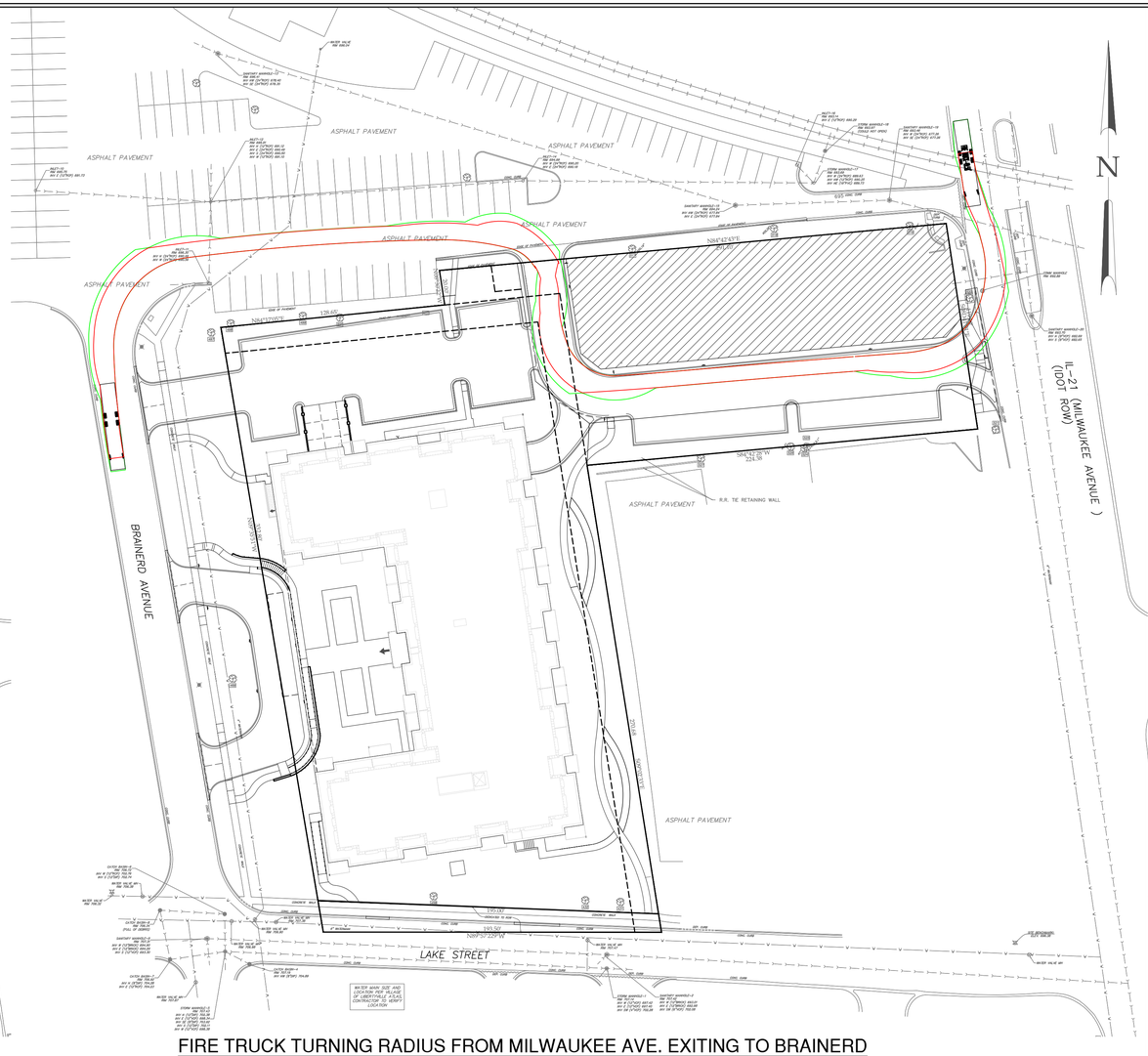
SHEET NUMBER 12 OF 17

FINAL P.D. SUBMISSION

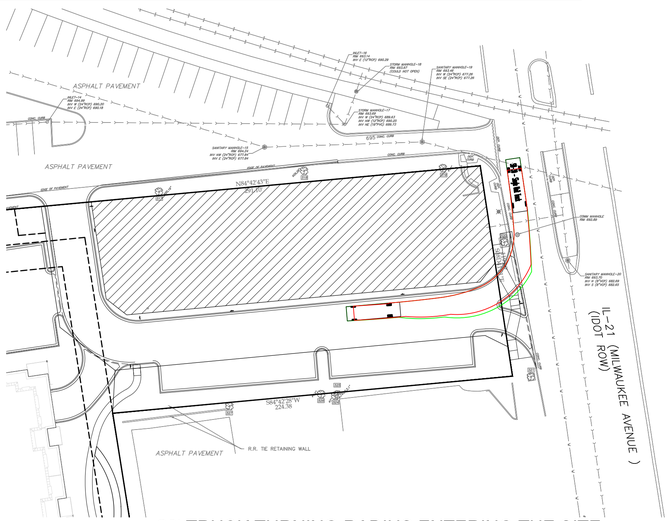

N
ASPHALT PAVEMENT
METRA PARKING
LOT OWNED BY LIBERTYVILLE
LOT - 2
FUTURE
DEVELOPMENT
LOT - 3
ACCESS EASEMENT & P.U.D. EASEMENT
LOT - 1
EXTERIOR PARKING
29 SPACES
ACCESS
ROAD
RIGHT IN
ONLY
RIGHT OUT
ONLY
DRIVEWAY
PATIO
DECK
LIGHT
WELL
ENTRY
COURTYARD
TRASH
ENCLOSURE
PAVER
PCC
R.R. TIE RETAINING WALL
PEDESTRIAN
PATH TO METRA
BRAINERD AVENUE
LAKE STREET
IL-21 (MILWAUKEE AVENUE)
(IDOT ROW)
N84°42'43"E
218.41'
S84°42'28"W
224.36'
N89°57'29"W
195.00'
193.50'
128.65'
77.89'
77.89'
270.08'
34.49'
9.63'
42.50'
30.83'
14.04'
14.04'
14.00'
14.00'
14.00'
14.00'
188.41'
28.09'
28.09'
28.09



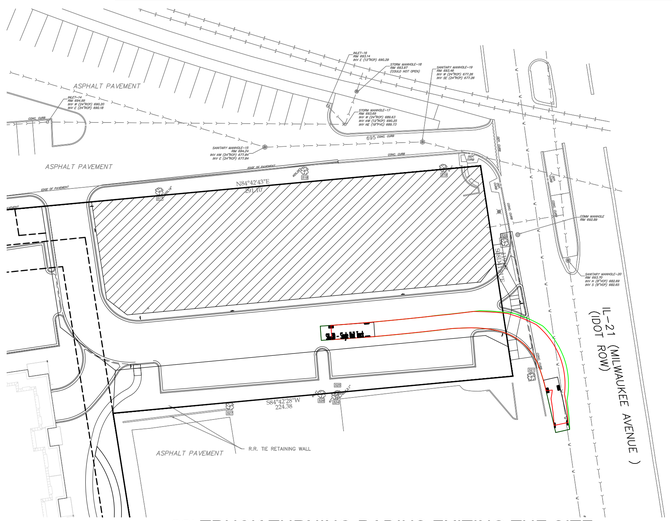
FIRE TRUCK TURNING RADIUS FROM BRAINERD EXITING TO MILWAUKEE AVE.



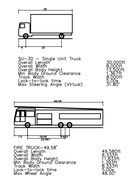
FIRE TRUCK TURNING RADIUS FROM MILWAUKEE AVE. EXITING TO BRAINERD



30' TRUCK TURNING RADIUS ENTERING THE SITE



30' TRUCK TURNING RADIUS EXITING THE SITE



FINAL P.D. SUBMISSION

REVISIONS		DATE
PRELIMINARY PLAN		10-09-2024
PRELIMINARY PLAN SUPPLEMENTAL SUBMISSION.	A	02-27-2025
FINAL PLANNED DEVELOPMENT SUBMISSION.	B	09-08-2025
	C	

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

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Phone 207.829.5016 Fax 207.829.5692 sme-engineers.com

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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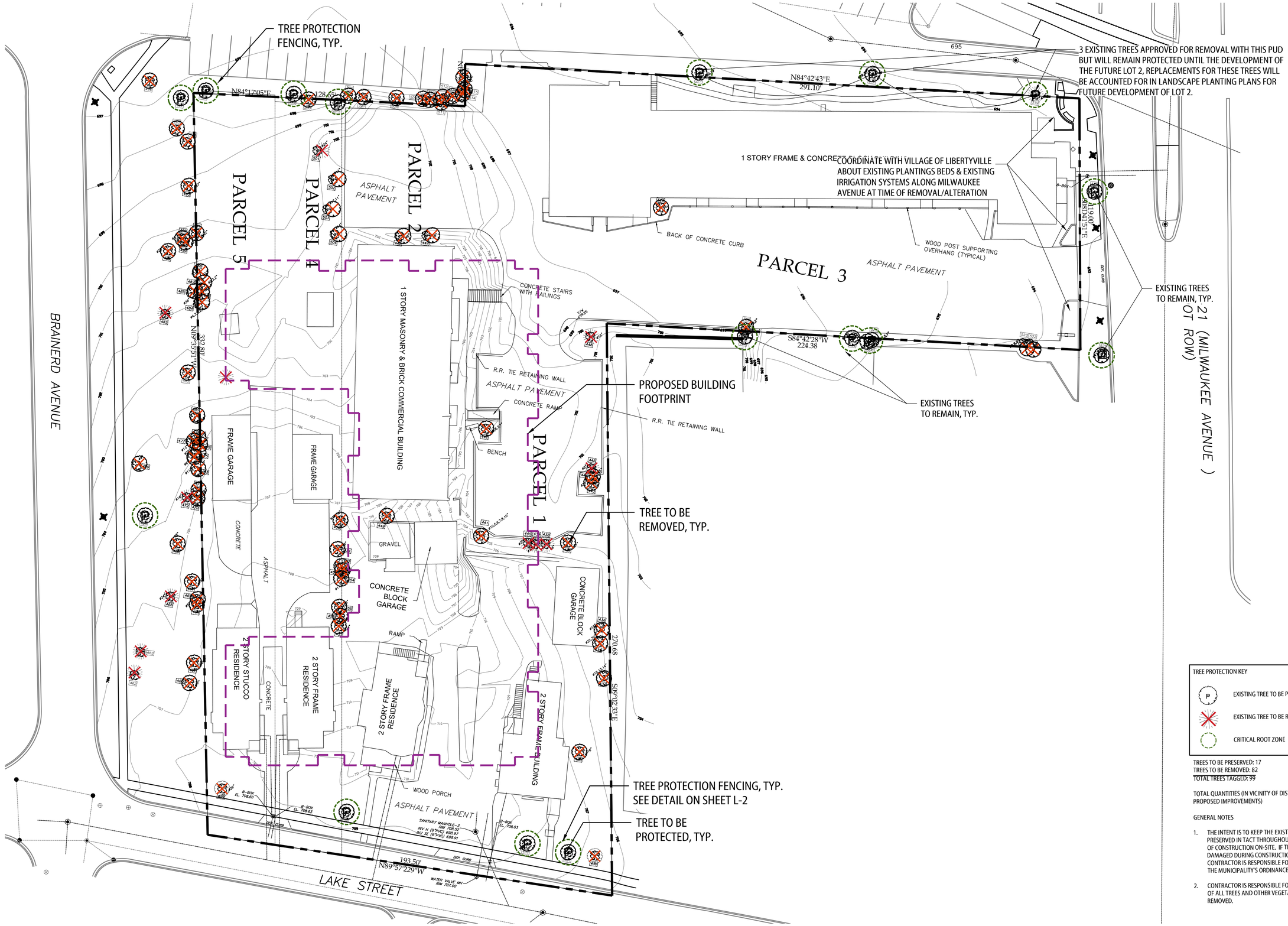
PROJECT NUMBER: 240973

START DATE: AUG. 01, 2024

GRAPHIC SCALE
40 0 40

SCALE: 1"=40'-0

SHEET NUMBER
13.1 OF 17


TREE PROTECTION FENCING, TYP.
3 EXISTING TREES APPROVED FOR REMOVAL WITH THIS PUD BUT WILL REMAIN PROTECTED UNTIL THE DEVELOPMENT OF THE FUTURE LOT 2, REPLACEMENTS FOR THESE TREES WILL BE ACCOUNTED FOR IN LANDSCAPE PLANTING PLANS FOR FUTURE DEVELOPMENT OF LOT 2.
COORDINATE WITH VILLAGE OF LIBERTYVILLE ABOUT EXISTING PLANTINGS BEDS & EXISTING IRRIGATION SYSTEMS ALONG MILWAUKEE AVENUE AT TIME OF REMOVAL/ALTERATION
EXISTING TREES TO REMAIN, TYP.
PROPOSED BUILDING FOOTPRINT
EXISTING TREES TO REMAIN, TYP.
TREE TO BE REMOVED, TYP.
TREE PROTECTION FENCING, TYP. SEE DETAIL ON SHEET L-2
TREE TO BE PROTECTED, TYP.
BRAINERD AVENUE
MILWAUKEE AVENUE (IL ROUTE 21)
LAKE STREET
PARCEL 1
PARCEL 2
PARCEL 3
PARCEL 4
PARCEL 5
N84°17'05"E 128.65'
N84°42'43"E 291.10'
S84°42'28"W 224.38'
N10°35'51"W 332.80'
S09°02'33"E 270.68'
N89°57'29"W 193.50'
1 STORY FRAME & CONCRETE BLOCK BUILDING
BACK OF CONCRETE CURB
WOOD POST SUPPORTING OVERHANG (TYPICAL)
ASPHALT PAVEMENT
CONCRETE STAIRS WITH RAILINGS
R.R. TIE RETAINING WALL
CONCRETE RAMP
BENCH
1 STORY MASONRY & BRICK COMMERCIAL BUILDING
FRAME GARAGE
CONCRETE
ASPHALT
GRAVEL
CONCRETE BLOCK GARAGE
RAMP
2 STORY STUCCO RESIDENCE
2 STORY FRAME RESIDENCE
2 STORY FRAME BUILDING
WOOD PORCH
SANITARY MANHOLE-3 RIM 708.52 INV N. (8"PVC) 698.97 INV SE (8"PVC) 698.91
B-BOX EL. 708.60
B-BOX EL. 708.43
B-BOX EL. 708.03
DEP. CURB
WATER VALVE MH RIM 707.80
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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.	Protect	
B	432	Norway Maple	*Acer platanoides*	21	3	3	Heavy dieback, decay, girdling roots.	Protect	
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.	Protect	
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.	Protect	
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		Remove	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.	Protect	
C	498	American Elm	*Ulmus americana*	8	2	4	Overtopped.	Protect	
B	499	Black Walnut	*Juglans nigra*	15	2	3	Codominant stems.	Protect	
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		Protect	
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
									157

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.	Protect	
D	518	Siberian Elm	*Ulmus pumila*	29,28	5	5	Heavy dieback, codiminant stems, trunk decay. Included bark, sap ooze.	Protect	
B	519	Colorado Spruce	*Picea pungens*	16	2	3	Dieback, one sided. NE corner of site.	Protect	
B	520	Honeylocust	*Gleditsia triacanthos*	2	2	2	Dieback, in planter on Milwaukee Ave.	Protect	
B	521	Hybrid Elm	*Ulmus spp.*	4	2	2	In planter on Milwaukee Ave.	Protect	
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		Protect	
D	525	Buckthorn	*Rhamnus cathartica*	2,2,2,1	2	3		Protect	
C	526	American Elm	*Ulmus americana*	4,2	2	3		Protect	
B	527	Black Walnut	*Juglans nigra*	7,6,5	2	3	Between parking lots.	Protect	
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
									4

KEY

Tree to be Protected
Tree to be Removed
Public Tree to be Removed
Tree Approved for Removal - To Remain Until Future Development

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)

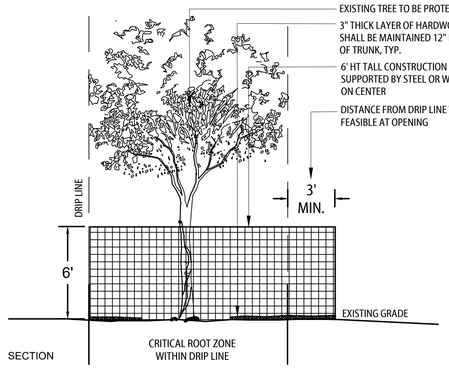
TREE REPLACEMENT SUMMARY

TOTAL NUMBER OF TREES TO BE REMOVED = 82
TOTAL NUMBER OF TREES TO BE PROTECTED = 17
REQUIRED NUMBER OF TREES TO BE REPLACED = 158
CREDIT FOR PROTECTED TREES = 17

TOTAL NUMBER OF TREES REQUIRED = 141
TOTAL NUMBER OF TREES PROVIDED = 152
(SEE SHEETS L-5 FOR PLANTING PLAN & SHEET L-8 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.



SECTION

PLEASE NOTE:

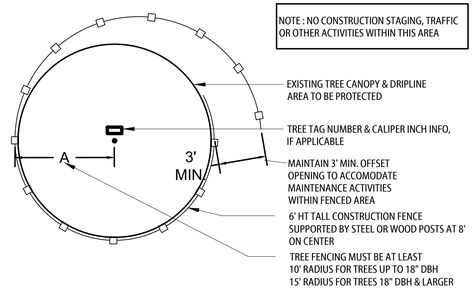
INSTALL & MAINTAIN 4'-0" TALL WOODEN SLAT SNOW OR CHAIN LINK FENCE SECURED TO METAL POSTS SPACED A MAXIMUM OF 6' APART.

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.

PLAN



2 TREE INVENTORY & PRESERVATION NOTES & DETAILS

PERMIT STAMP

FINAL P.D. SUBMISSION

SPACE
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2149 N. TALMAN AVENUE
CHICAGO, IL 60647
312 829 6666
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PARK RIDGE, IL 60068 FAX: (847) 823-3233
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

NO.	DESCRIPTION	DATE
2	SUPPLEMENTAL SUBMISSION	2.27.25
3	FINAL PLANNED DEVELOPMENT SUBMISSION	09.05.25

CERTIFICATION

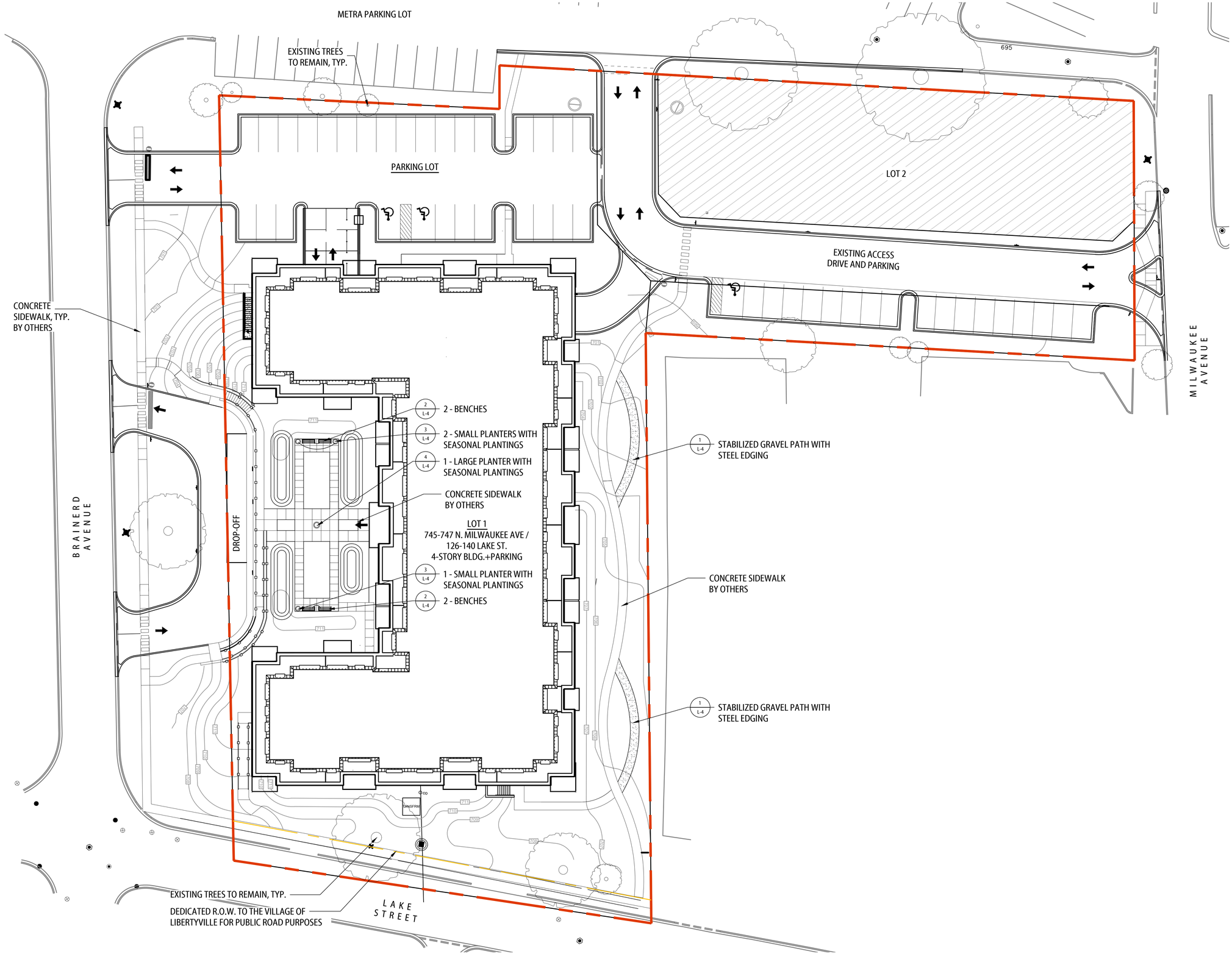
SHEET TITLE

TREE INVENTORY NOTES & DETAILS

SHEET #

L-2

September 2, 2025



3 SITE FURNISHINGS & MATERIALS PLAN

1" = 20'-0"

0 20' 40' 60' 80' feet

1" = 20'

PERMIT STAMP

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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

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PROJECT MANAGER - BB
ASSOCIATES - MB

NO.	DESCRIPTION	DATE
2	SUPPLEMENTAL SUBMISSION	2.27.25
3	FINAL PLANNED DEVELOPMENT SUBMISSION	09.05.25

CERTIFICATION

SHEET TITLE

SITE FURNISHINGS & MATERIALS

SHEET #

L-3

September 3, 2025

STABILIZED GRAVEL PATH

MANUFACTURER:	KAFKA GRANITE WITH ORGANIC-LOCK PATHWAY STABILIZING BINDER
WEBSITE:	https://www.kafkagranite.com/aggregate/american-heritage-granite-pathway/
ITEM:	STABILIZED PATHWAY AGGREGATE
FINISH/COLOR:	AMERICAN HERITAGE GRANITE WITH STABILIZER
DIMENSIONS:	¼" or less with fines

NOTES:
1. ASSEMBLE ACCORDING TO MANUFACTURER INSTALLATION INSTRUCTIONS.
2. CONTRACTOR TO PROVIDE COLOR SAMPLES PRIOR TO FABRICATION.

STEEL LANDSCAPE EDGING

MANUFACTURER:	EDGE RIGHT LANDSCAPE METAL EDGING
WEBSITE:	https://edgeright.com/
ITEM:	HAMMER-IN LANDSCAPE EDGING - COR-TEN STEEL - 4FT STRIPS - PLUS CONNECTOR CLIPS
DIMENSIONS:	6" HT.

NOTES:
1. ASSEMBLE ACCORDING TO MANUFACTURER INSTALLATION INSTRUCTIONS.
2. CONTRACTOR TO PROVIDE COLOR SAMPLES PRIOR TO FABRICATION.

1 STABILIZED GRAVEL PATH WITH STEEL EDGING

SCALE: NTS

COURTYARD BENCH

MANUFACTURER:	LANDSCAPE FORMS
WEBSITE:	https://www.landscapeforms.com/products/northport-bench
ITEM:	NORTHPORT BENCH
MATERIAL:	THERMALLY TREATED WOODEN SLATS, CAST ALUMINUM FRAME
FINISH/COLOR:	POWDERCOATED, TBD
DIMENSIONS:	69.75" L x 22.75" D x 33.25" H

NOTES:
1. ASSEMBLE ACCORDING TO MANUFACTURER INSTALLATION INSTRUCTIONS.
2. CONTRACTOR TO PROVIDE COLOR SAMPLES PRIOR TO FABRICATION.
3. BENCH TO BE ANCHORED TO CONCRETE PAVING.

2 BENCH

SCALE: NTS

COURTYARD SMALL PLANTER

MANUFACTURER:	LANDSCAPE FORMS
WEBSITE:	https://www.landscapeforms.com/products/northport-planter
ITEM:	NORTHPORT SMALL PLANTER
MATERIAL:	CAST ALUMINUM FRAME, STEEL RING TOP
FINISH/COLOR:	POWDERCOATED, BLACK
DIMENSIONS:	31" D x 19" H

NOTES:
1. ASSEMBLE ACCORDING TO MANUFACTURER INSTALLATION INSTRUCTIONS.
2. CONTRACTOR TO PROVIDE COLOR SAMPLES PRIOR TO FABRICATION.

COURTYARD LARGE PLANTER

MANUFACTURER:	LANDSCAPE FORMS
WEBSITE:	https://www.landscapeforms.com/products/northport-planter
ITEM:	NORTHPORT LARGE PLANTER
MATERIAL:	CAST ALUMINUM FRAME, STEEL RING TOP
FINISH/COLOR:	POWDERCOATED, BLACK
DIMENSIONS:	37" D x 25" H

NOTES:
1. ASSEMBLE ACCORDING TO MANUFACTURER INSTALLATION INSTRUCTIONS.
2. CONTRACTOR TO PROVIDE COLOR SAMPLES PRIOR TO FABRICATION.

3 SMALL PLANTER

SCALE: NTS

4 LARGE PLANTER

SCALE: NTS

4 SITE FURNISHINGS & MATERIALS DETAILS

PERMIT STAMP

FINAL P.D. SUBMISSION

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ASSOCIATES - MB

NO.	DESCRIPTION	DATE
2	SUPPLEMENTAL SUBMISSION	2.27.25
3	FINAL PLANNED DEVELOPMENT SUBMISSION	09.05.25

CERTIFICATION

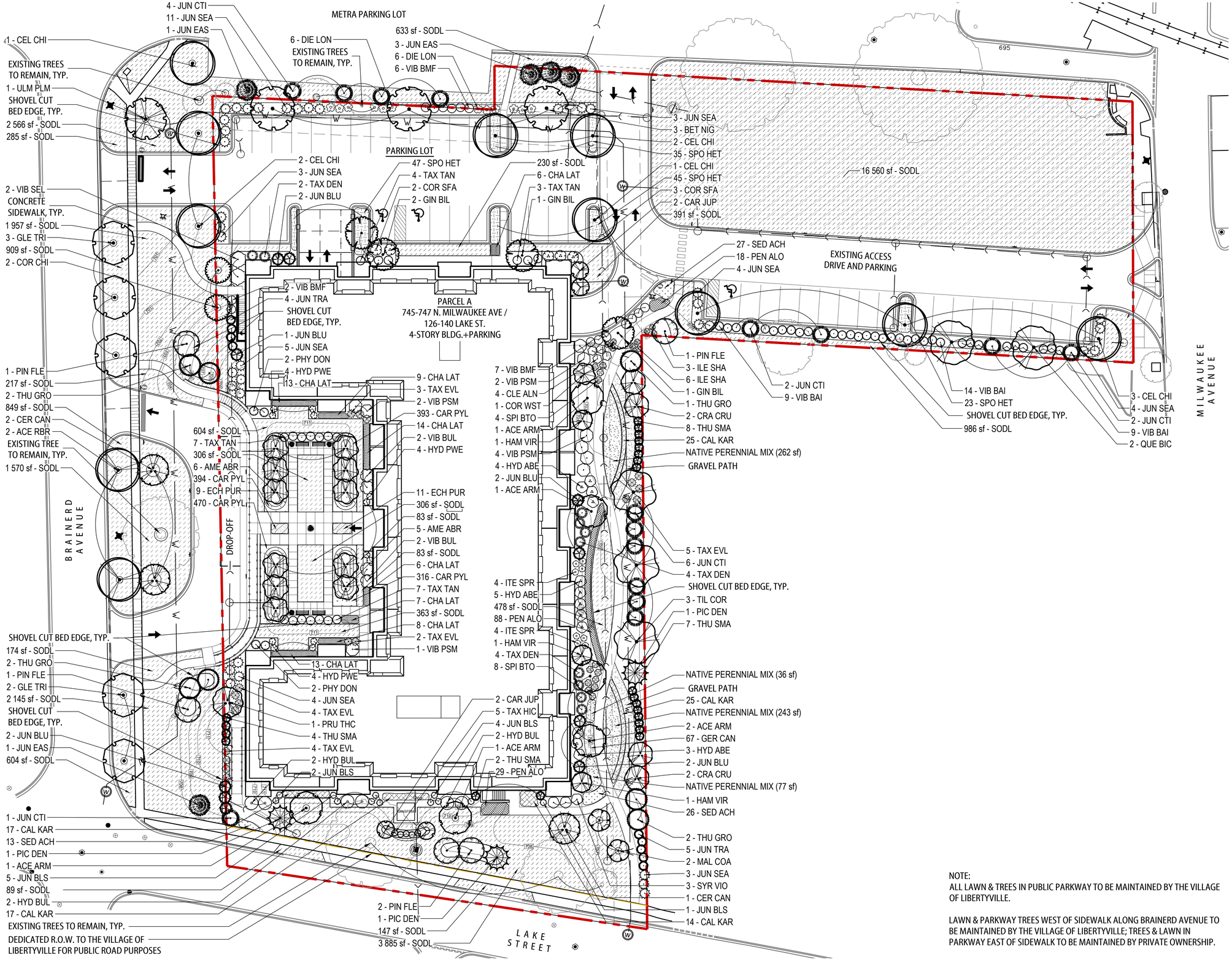
SHEET TITLE

SITE FURNISHINGS & MATERIALS DETAILS

SHEET #

L-4

September 3, 2025



5 LANDSCAPE PLAN
1" = 20'-0"

NOTE:
ALL LAWN & TREES IN PUBLIC PARKWAY TO BE MAINTAINED BY THE VILLAGE OF LIBERTYVILLE.

LAWN & PARKWAY TREES WEST OF SIDEWALK ALONG BRAINERD AVENUE TO BE MAINTAINED BY THE VILLAGE OF LIBERTYVILLE; TREES & LAWN IN PARKWAY EAST OF SIDEWALK TO BE MAINTAINED BY PRIVATE OWNERSHIP.

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

PERMIT STAMP

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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

NO.	DESCRIPTION	DATE
2	SUPPLEMENTAL SUBMISSION	2.27.25
3	FINAL PLANNED DEVELOPMENT SUBMISSION	09.05.25

CERTIFICATION

SHEET TITLE

LANDSCAPE PLAN

SHEET #

L-5

September 3, 2025

PLANT SCHEDULE WORK AREA

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	SIZE	CONTAINER
TREES					
	ACE RBR	2	ACER RUBRUM / RED MAPLE	4.5" CAL.	B&B
	ACE ARM	6	ACER RUBRUM 'ARMSTRONG' / ARMSTRONG RED MAPLE	2.5" CAL.	B&B
	BET NIG	3	BETULA NIGRA / RIVER BIRCH	4.5" CAL.	B&B
	CEL CHI	9	CELTIS OCCIDENTALIS 'CHICAGOLAND' / CHICAGOLAND HACKBERRY	3" CAL.	B&B
	GIN BIL	4	GINKGO BILOBA 'PNI 2720' / PRINCETON SENTRY® MAIDENHAIR TREE	2.5" CAL.	B&B
	GLE TRI	5	GLEDITSIA TRIACANTHOS INERMIS 'SUNCOLE' / SUNBURST® HONEY LOCUST	4" CAL.	B&B
	QUE BIC	2	QUERCUS BICOLOR / SWAMP WHITE OAK	3" CAL.	B&B
	TIL COR	3	TILIA CORDATA `GREENSPIRE` / GREENSPIRE LITTLELEAF LINDEN	4.5" CAL.	B&B
	ULM PLM	1	ULMUS X 'NEW HORIZON' / NEW HORIZON ELM	4.5" CAL.	B&B
ORNAMENTAL TREES					
	AME ABR	11	AMELANCHIER CANADENSIS `AUTUMN BRILLIANCE` / AUTUMN BRILLIANCE SERVICEBERRY	6` HT., MULTI-STEM	B&B
	CAR JUP	4	CARPINUS CAROLINIANA `J.N. UPRIGHT` / FIRESPIRE® AMERICAN HORNBEAM	6` HT.	B&B
	CER CAN	3	CERCIS CANADENSIS / EASTERN REDBUD	6` HT., MULTI-STEM	B&B
	COR WST	1	CORNUS ALTERNIFOLIA 'WSTACKMAN' / GOLDEN SHADOWS® DOGWOOD	6` HT.	B&B
	COR CHI	2	CORNUS FLORIDA 'CHEROKEE CHIEF' / CHEROKEE CHIEF DOGWOOD	6` HT.	B&B
	CRA CRU	4	CRATAEGUS CRUS-GALLI INERMIS / THORNLESS COCKSPUR HAWTHORN	6` HT., MULTI-STEM	B&B
	HAM VIR	3	HAMAMELIS VIRGINIANA / COMMON WITCH HAZEL	6` HT., MULTI-STEM	B&B
	MAL COA	2	MALUS X 'CORALCOLE' / CORALBURST® CRABAPPLE	6` HT.	B&B
	PRU THC	1	PRUNUS CERASIFERA 'THUNDERCLOUD' / THUNDERCLOUD PURPLE-LEAF PLUM	6` HT., MULTI-STEM	B&B
EVERGREEN TREES					
	JUN BLU	10	JUNIPERUS CHINENSIS `BLUE POINT` / BLUE POINT JUNIPER	6` HT.	B&B
	JUN CTI	15	JUNIPERUS CHINENSIS 'MOUNTBATTEN' / MOUNTBATTEN JUNIPER	12' HT.	B&B
	JUN TRA	9	JUNIPERUS CHINENSIS 'TRAUTMAN' / TRAUTMAN JUNIPER	6` HT.	B&B
	JUN EAS	5	JUNIPERUS VIRGINIANA / EASTERN REDCEDAR	6` HT.	B&B
	PIC DEN	3	PICEA GLAUCA `DENSATA` / BLACK HILLS SPRUCE	10' HT.	B&B
	PIN FLE	5	PINUS FLEXILIS 'VANDERWOLF'S PYRAMID' / VANDERWOLF'S PYRAMID LIMBER PINE	10' HT.	B&B
	THU SMA	22	THUJA OCCIDENTALIS `SMARAGD` / EMERALD GREEN ARBORVITAE	8.5' HT.	B&B
	THU GRO	7	THUJA PLICATA 'GROVPLI' / SPRING GROVE® WESTERN RED CEDAR	6` HT.	B&B

PLANT SCHEDULE WORK AREA

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	SIZE	CONTAINER	
SHRUBS						
	CLE ALN	4	CLETHRA ALNIFOLIA `HUMMINGBIRD` / SUMMERSWEET	18" HT.	B&B/CG	
	COR SFA	5	CORNUS SERICEA 'FARROW' / ARCTIC FIRE® RED TWIG DOGWOOD	24" HT.	B&B/CG	
	DIE LON	12	DIERVILLA LONICERA / DWARF BUSH HONEYSUCKLE	18" HT.	B&B/CG	
	HYD ABE	12	HYDRANGEA ARBORESCENS 'ABETWO' / INCREDIBALL® HYDRANGEA	36" HT.	B&B/CG	
	HYD BUL	6	HYDRANGEA PANICULATA 'BULK' / QUICK FIRE® PANICLE HYDRANGEA	36" HT.	B&B/CG	
	HYD PWE	12	HYDRANGEA QUERCIFOLIA `PEE WEE` / PEE WEE OAKLEAF HYDRANGEA	24" HT.	B&B/CG	
	ITE SPR	8	ITEA VIRGINICA 'SPRICH' / LITTLE HENRY® SWEETSPIRE	18" HT.	B&B/CG	
	PHY DON	4	PHYSOCARPUS OPULIFOLIUS 'DONNA MAY' / LITTLE DEVIL™ DWARF NINEBARK	36" HT.	B&B/CG	
	SPI BTO	12	SPIRAEA BETULIFOLIA 'TOR' / BIRCHLEAF SPIREA	18" HT.	B&B/CG	
	SYR VIO	3	SYRINGA PATULA 'JN UPRIGHT SELECT' / VIOLET UPRISING™ KOREAN LILAC	24" HT.	B&B/CG	
	VIB BMF	15	VIBURNUM DENTATUM `BLUE MUFFIN` / BLUE MUFFIN A-WOOD VIBURNUM	36" HT.	B&B/CG	
	VIB SEL	2	VIBURNUM DENTATUM 'J.N. SELECT' / RED FEATHER® ARROWWOOD VIBURNUM	36" HT.	B&B/CG	
	VIB BUL	4	VIBURNUM NUDUM 'BULK' / BRANDYWINE™ VIBURNUM	36" HT.	B&B/CG	
	VIB PSM	9	VIBURNUM PRUNIFOLIUM 'SUMMER MAGIC' / SUMMER MAGIC BLACKHAW VIBURNUM	36" HT.	B&B/CG	
	VIB BAI	32	VIBURNUM TRILOBUM `BAILEY COMPACT` / BAILEY`S COMPACT CRANBERRYBUSH	24" HT.	B&B/CG	
EVERGREEN SHRUBS						
	ILE SHA	9	ILEX GLABRA 'SHAMROCK' / SHAMROCK INKBERRY HOLLY	18" HT.	B&B/CG	
	JUN BLS	12	JUNIPERUS SQUAMATA `BLUE STAR` / BLUE STAR JUNIPER	24" WD.	B&B/CG	
	JUN SEA	37	JUNIPERUS X PFITZERIANA `SEA GREEN` / SEA GREEN PFITZER JUNIPER	18" HT.	B&B/CG	
	TAX TAN	21	TAXUS X MEDIA `TAUNTONI` / TAUTON YEW	18" HT.	B&B/CG	
	TAX DEN	10	TAXUS X MEDIA 'DENSIFORMIS' / DENSE YEW	18" HT.	B&B/CG	
	TAX EVL	18	TAXUS X MEDIA 'EVERLOW' / EVERLOW YEW	18" HT.	B&B/CG	
	TAX HIC	5	TAXUS X MEDIA 'HICKSII' / HICKS YEW	36" HT.	B&B/CG	
SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	SIZE	CONTAINER	SPACING
GROUND COVERS						
	CAR PYL	1 573	CAREX PENSYLVANICA / PENNSYLVANIA SEDGE	1 GAL.	POT	12" o.c.
	GER CAN	67	GERANIUM X CANTABRIGIENSE 'BIOKOVO' / BIOKOVO CRANESBILL	1 GAL.	POT	12" o.c.
		618 SF	NATIVE PERENNIAL MIX			
	ALL CER	33	ALLIUM CERNUUM / NODDING ONION	1 GAL.	POT	20% @ 24" o.c.
	ECH PAL	33	ECHINACEA PALLIDA / PALE PURPLE CONEFLOWER	1 GAL.	POT	20% @ 24" o.c.
	MON DID	33	MONARDA DIDYMA / BEE BALM	1 GAL.	POT	20% @ 24" o.c.
	RUD GO2	33	RUDBECKIA FULGIDA SULLIVANTII 'GOLDSTURM' / GOLDSTURM CONEFLOWER	1 GAL.	POT	20% @ 24" o.c.
	SES AUT	33	SESLERIA AUTUMNALIS / AUTUMN MOOR GRASS	1 GAL.	POT	20% @ 24" o.c.
PERENNIALS & ORNAMENTAL GRASSES						
	CAL KAR	98	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER' / KARL FOERSTER FEATHER REED GRASS	1 GAL.	POT	24" o.c.
	CHA LAT	76	CHASMANTHIUM LATIFOLIUM / NORTHERN SEA OATS	1 GAL.	POT	24" o.c.
	ECH PUR	20	ECHINACEA PURPUREA 'PRAIRIE SPLENDOR' / PRAIRIE SPLENDOR CONEFLOWER	1 GAL.	POT	24" o.c.
	PEN ALO	76	PENNISETUM ALOPECUROIDES `HAMELN` / HAMELN DWARF FOUNTAIN GRASS	1 GAL.	POT	24" o.c.
	SED ACH	38	SEDUM X 'AUTUMN CHARM' / AUTUMN CHARM SEDUM	1 GAL.	POT	24" o.c.
	SPO HET	150	SPOROBOLUS HETEROLEPIS / PRAIRIE DROPSEED	1 GAL.	POT	24" o.c.
SOD/SEED						
	SODL	37 561 SF	SOD LAWN / SOD LAWN	SOD		

6 PLANT SCHEDULE

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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

NO.	DESCRIPTION	DATE
2	SUPPLEMENTAL SUBMISSION	2.27.25
3	FINAL PLANNED DEVELOPMENT SUBMISSION	09.05.25

CERTIFICATION

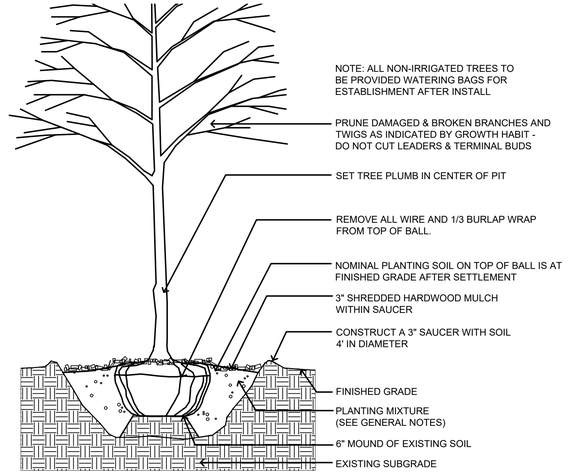
SHEET TITLE

PLANT SCHEDULE

SHEET #

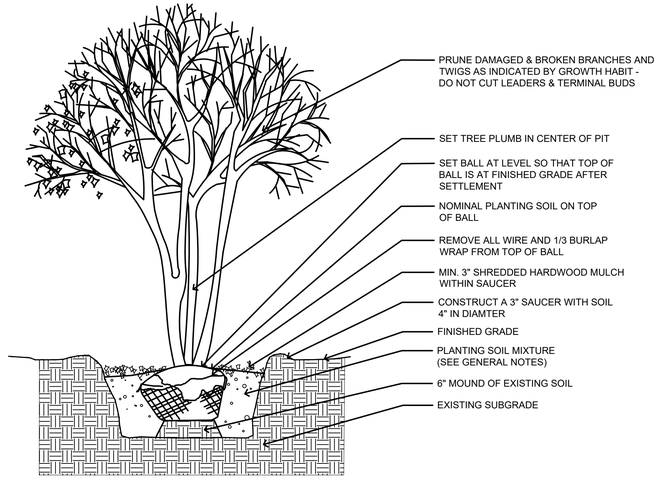
L-6

September 3, 2025



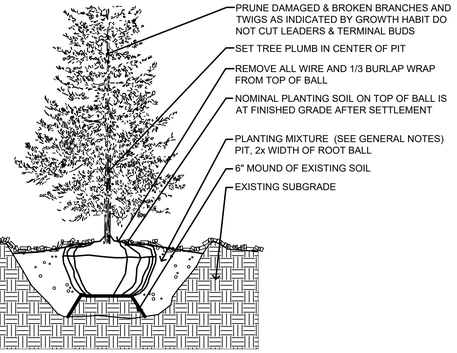
1 TYP. DECIDUOUS TREE PLANTING DETAIL

SCALE: NTS



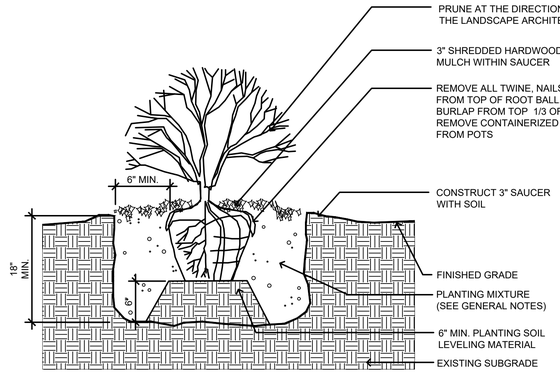
2 TYP. ORNAMENTAL TREE PLANTING DETAIL

SCALE: NTS



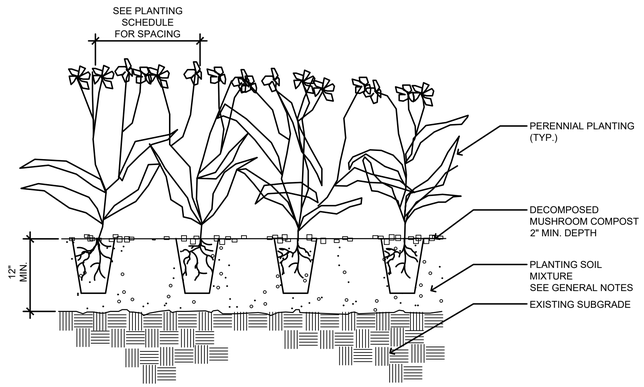
3 TYP. EVERGREEN TREE PLANTING DETAIL

SCALE: NTS



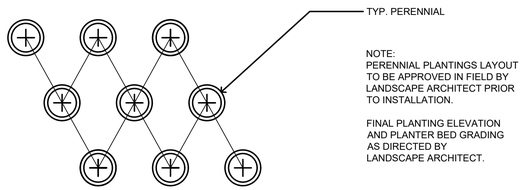
4 TYP. SHRUB PLANTING DETAIL

SCALE: NTS



5 TYP. PERENNIAL PLANTING DETAIL

SCALE: NTS



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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ARCH OF RECORD - JK
PROJECT MANAGER - BB
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3	FINAL PLANNED DEVELOPMENT SUBMISSION	09.05.25

CERTIFICATION

SHEET TITLE

LANDSCAPE NOTES & DETAILS

SHEET #

L-7

September 3, 2025

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 THE SOUTHWEST CORNER OF THE BUILDING WHERE THERE IS ONLY 9'-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 7" OF THE REQUIRED (10) FOOT DISTANCE IN THIS LOCATION 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 9,498 SF., 10% OF 9,498 = 950 SF.
PROPOSED INTERIOR LANDSCAPE APPROXIMATELY 974 SF. (10.2%)

(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 = 82
TOTAL NUMBER OF TREES TO BE PROTECTED = 17
REQUIRED NUMBER OF TREES TO BE REPLACED = 158
CREDIT FOR PROTECTED TREES = 17
TOTAL NUMBER OF TREES REQUIRED = 141
TOTAL NUMBER OF TREES PROVIDED = 150
(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 (215 LF):

SHADE TREE/ORNAMENTAL TREE REQUIREMENT (AT 1 TREE PER 50 LF)	= 4 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	*= 5 TREES*
PROPOSED EVERGREEN TREES	*= 8 TREES*
PROPOSED EVERGREEN SHRUBS	*= 11 SHRUBS*

SOUTH PROPERTY LINE ADJACENT TO LAKE STREET (193.5 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	*=7 TREES*
PROPOSED EVERGREEN TREES	*= 7 TREES*
PROPOSED EVERGREEN SHRUBS	*= 17 SHRUBS*

EAST PROPERTY LINE WITH PATH TO METRA (272 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	*= 7 TREES*
PROPOSED EVERGREEN TREES	*= 31 TREES*
PROPOSED EVERGREEN SHRUBS	*= 11 SHRUBS*

WEST PROPERTY LINE ADJACENT TO BRAINERD AVENUE (350 LF):

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	*= 15 TREES*
PROPOSED EVERGREEN TREES	*= 19 TREES*
PROPOSED EVERGREEN SHRUBS	*= 17 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	*= 5 SHADE TREES*
PROPOSED EVERGREEN TREES	*= 5 TREES*
PROPOSED EVERGREEN SHRUBS	*= 11 SHRUBS*

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

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

(B) SIZE AND DISTRIBUTION OF TREES AND SHRUBS. THE MINIMUM NUMBER OF SHADE OR ORNAMENTAL TREES AND EVERGREEN TREES AND SHRUBS REQUIRED FOR A PERIMETER LANDSCAPED OPEN SPACE, AS DETERMINED BY SUBSECTION 26-13-2.2(A), SHALL BE PROVIDED IN THE FOLLOWING SIZES:

SIZE AND DISTRIBUTION OF TREES AND SHRUBS

TYPE OF TREE	SIZE OF TREES	PERCENTAGE
SHADE TREES/SINGLE TRUNK ORNAMENTAL	2"—2.5" CALIPER	45% OF TOTAL NUMBER REQUIRED
	3"—4" CALIPER	35% OF TOTAL NUMBER REQUIRED
	4.5" CALIPER OR MORE	20% OF TOTAL NUMBER REQUIRED
MULTIPLE STEM ORNAMENTAL TREES	6' HEIGHT	100% OF TOTAL NUMBER REQUIRED
EVERGREEN TREES	6'—8' HEIGHT	40% OF TOTAL NUMBER REQUIRED
	8.5'—10' HEIGHT	40% OF TOTAL NUMBER REQUIRED
	10.5' HEIGHT OR MORE	20% OF TOTAL NUMBER REQUIRED
EVERGREEN SHRUBS	NOT TO EXCEED 3' MATURE HEIGHT	100%

PROPOSED

SHADE TREES & SINGLE STEM ORNAMENTAL TREES	QTY.	PERCENTAGE OF TOTAL REQUIRED TREES
2.5" CAL. & 6' HT. ORNAMENTAL TREES		
ACER RUBRUM 'ARMSTRONG'	6	
GINKGO BILOBA 'PNI 2720'	4	
CARPINUS CAROLINIANA `J.N. UPRIGHT`	4	
CORNUS ALTERNIFOLIA 'WSTACKMAN'	1	
CORNUS FLORIDA 'CHEROKEE CHIEF'	2	
MALUS X 'CORALCOLE'	2	
	19	45%
3" - 4" CAL.		
CELTIS OCCIDENTALIS 'CHICAGOLAND	9	
GLEDITSIA TRIACANTHOS INERMIS 'SUNCOLE'	5	
QUERCUS BICOLOR	2	
	16	35%
4.5" CAL		
BETULA NIGRA / RIVER BIRCH	3	
TILIA CORDATA `GREENSPIRE`	3	
ULMUS X 'NEW HORIZON	1	
ACER RUBRUM	2	
	9	20%
TOTAL SHADE& SINGLE STEM ORNAMENTAL TREES	44	100%

MULTI-STEM ORNAMENTAL TREES	QTY.	PERCENTAGE OF TOTAL REQUIRED TREES
6` HT., MULTI-STEM		
AMELANCHIER CANADENSIS `AUTUMN BRILLIANCE`	11	
HAMAMELIS VIRGINIANA	3	
CERCIS CANADENSIS	3	
PRUNUS CERASIFERA 'THUNDERCLOUD'	1	
CRATAEGUS CRUS-GALLI INERMIS	4	
	22	100%
TOTAL MULTI-STEM ORNAMENTAL TREES	22	100%

EVERGREEN TREES	QTY.	PERCENTAGE OF TOTAL REQUIRED TREES
6' HT.		
JUNIPERUS CHINENSIS `BLUE POINT`	10	
JUNIPERUS CHINENSIS 'TRAUTMAN'	9	
JUNIPERUS VIRGINIANA	5	
THUJA PLICATA 'GROVPLI'	7	
	31	40%
8.5' HT. - 10' HT.		
THUJA OCCIDENTALIS `SMARAGD`	22	
PICEA GLAUCA `DENSATA`	3	
PINUS FLEXILIS 'VANDERWOLF'S PYRAMID'	5	
	30	40%
12' HT. OR >		
JUNIPERUS CHINENSIS 'MOUNTBATTEN'	15	
	15	20%
TOTAL EVERGREEN TREES	76	100

PERMIT STAMP

FINAL P.D. SUBMISSION

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BCI BONO CONSULTING, INC. CIVIL ENGINEERS 1016 BUSSE HIGHWAY PARK RIDGE, IL 60068 PH: (847) 823-3300 FAX: (847) 823-3335 bbono@bonoconsultinginc.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

NO.	DESCRIPTION	DATE
2	SUPPLEMENTAL SUBMISSION	2.27.25
3	FINAL PLANNED DEVELOPMENT SUBMISSION	09.05.25

CERTIFICATION

SHEET TITLE

ORDINANCE SUMMARY

SHEET #

L-8

September 2, 2025

METRA PARKING LOT

LANDSCAPED BUFFER ALONG PARKING LOT PERIMETER

EXISTING TREES TO REMAIN, TYP.

PARKING LOT 29 SPACES

CONCRETE SIDEWALK, TYP.

LAWN AREA FOR FUTURE DEVELOPMENT

EXISTING ACCESS DRIVE AND PARKING

LANDSCAPED COURTYARD WITH BENCH SEATING, PLANTERS, AND EARTH BERMS OVER PARKING STRUCTURE DECK.

PARCEL A
745-747 N. MILWAUKEE AVE /
126-140 LAKE ST.
4-STORY BLDG.+PARKING

LANDSCAPED BUFFER ALONG PARKING LOT PERIMETER

GRAVEL PATH

BRAINERD AVENUE

DROP-OFF

MILWAUKEE AVENUE

695

SHOVEL CUT BED EDGE, TYP.

TYPICAL FOUNDATION PLANTINGS AGAINST PERIMETER OF BUILDING CONSISTING OF LARGE AND SMALL DECIDUOUS OR EVERGREEN SHRUBS, PERENNIALS, AND ORNAMENTAL GRASSES

COMPACTED GRAVEL PATH THROUGH PERENNIAL GARDEN AND LANDSCAPE BUFFER

LANDSCAPED BUFFER ALONG EAST PROPERTY LINE CONSISTING OF LARGE AND SMALL DECIDUOUS OR EVERGREEN SHRUBS, PERENNIALS, AND ORNAMENTAL GRASSES

SIDEWALK TO METRA STATION

TYPICAL FOUNDATION PLANTINGS AGAINST PERIMETER OF BUILDING CONSISTING OF LARGE AND SMALL DECIDUOUS OR EVERGREEN SHRUBS, PERENNIALS, AND ORNAMENTAL GRASSES

UTILITY AREAS TO BE SCREENED WITH LANDSCAPING

LAKE STREET

X ILLUSTRATIVE LANDSCAPE PLAN
1" = 20'-0"

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

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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

NO.	DESCRIPTION	DATE
2	SUPPLEMENTAL SUBMISSION	2.27.25
3	FINAL PLANNED DEVELOPMENT SUBMISSION	09.05.25

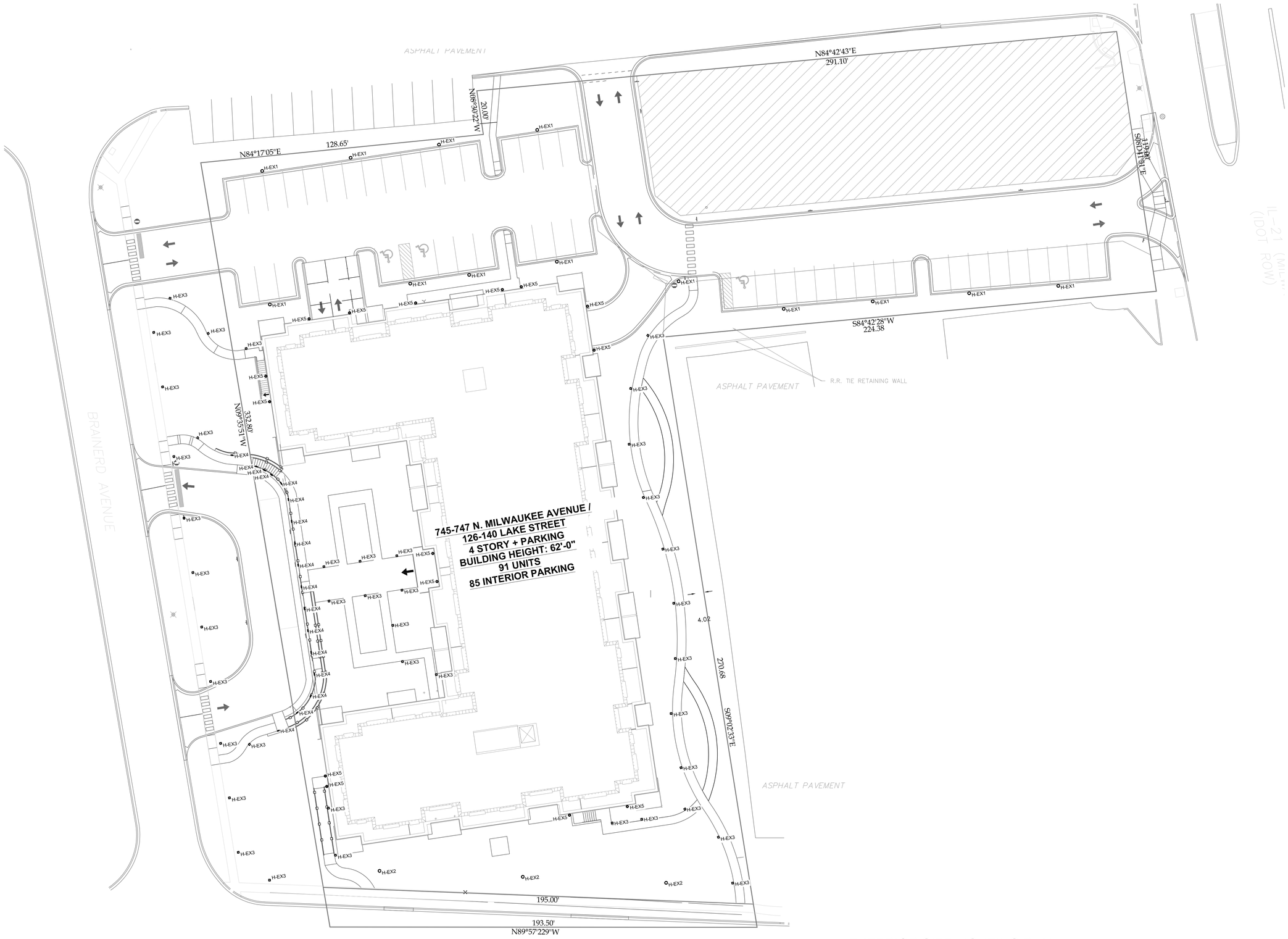
CERTIFICATION

SHEET TITLE

LANDSCAPE PLANS - ILLUSTRATIVE SITE PLAN

SHEET NO.

September 3, 2025



1 EXTERIOR SITE LIGHTING PLAN

1" = 20'-0"

0 10' 20' 40'

0 1" = 20'-0" 2'

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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

NO.	DESCRIPTION	DATE
1	ISSUED FOR DEVELOPMENT REVIEW	10.11.24
2	SUPPLEMENTAL SUBMISSION	2.27.25
3	FINAL PLANNED DEVELOPMENT SUBMISSION	09.05.25

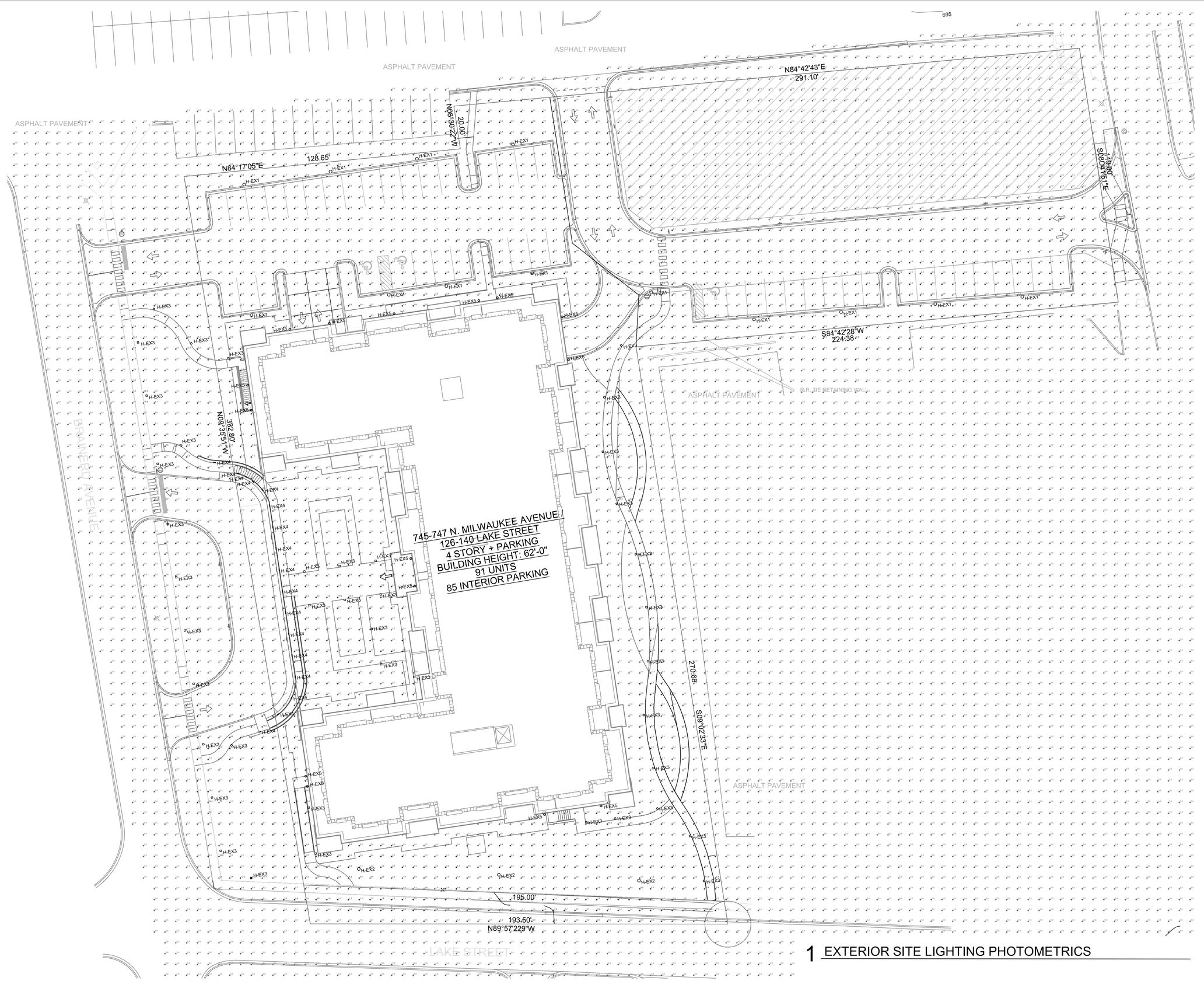
CERTIFICATION

SHEET TITLE

EXTERIOR SITE LIGHTING PLAN

SHEET #

LT-1



1 EXTERIOR SITE LIGHTING PHOTOMETRICS

PERMIT STAMP

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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

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1	ISSUED FOR DEVELOPMENT REVIEW	10.11.24
2	SUPPLEMENTAL SUBMISSION	2.27.25
3	FINAL PLANNED DEVELOPMENT SUBMISSION	09.05.25

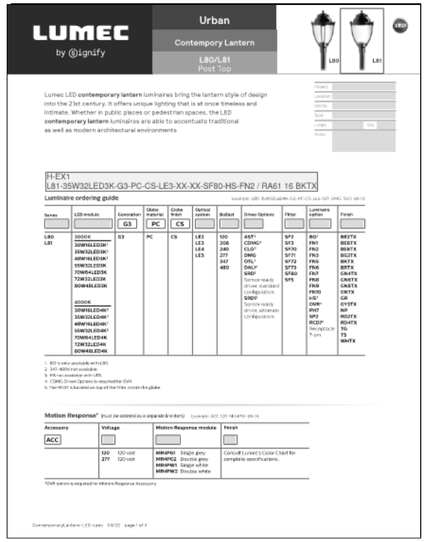
CERTIFICATION

SHEET TITLE

EXTERIOR SITE LIGHTING PHOTOMETRIC

SHEET #

LT-2



LUMEC by Signify

Urban

Contempory Lantern

L80/L81
Post Top

L80 L81

Project:
Location:
Cat.No:
Type:
Lamps: Qty:
Notes:

Lumec LED **contemporary lantern** luminaires bring the lantern style of design into the 21st century. It offers unique lighting that is at once timeless and intimate. Whether in public places or pedestrian spaces, the LED **contemporary lantern** luminaires are able to accentuate traditional as well as modern architectural environments

H-EX1
L81-35W32LED3K-G3-PC-CS-LE3-XX-XX-SF80-HS-FN2 / RA61 16 BKTX

Luminaire ordering guide

Example: L80-35W32LED4K-G3-PC-CS-LE5-120-DMG-SF0-BKTX

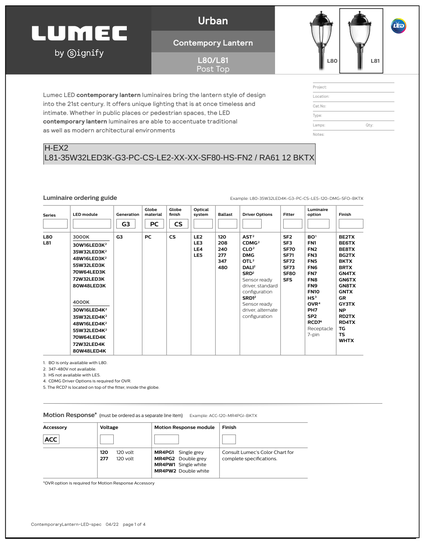
Series	LED module	Generation	Globe material	Globe finish	Optical system	Ballast	Driver Options	Fitter	Luminaire option	Finish
		G3	PC	CS	LE2 LE3 LE4 LE5	120 208 240 277 347 480	AST[1] CDMG[2] CLO[3] DMG DTL[1] DALP SROD[4] Sensor ready driver, standard configuration SRDP[4] Sensor ready driver, alternate configuration	SF2 SF3 SF70 SF71 SF72 SF73 SF80 SF5	BO[1] FN1 FN2 FN3 FN5 FN6 FN8 FN9 FN10 HS[1] OVR[5] PH7 PH8 RCCP[5] Receptacle 7-pin	BEZTX BEBTX BEBTX BGZTX BKTX BRTX GMTX GNBTX GNTX GR GYZTX NP NOTX ROHTX TG TS WHTX
L80 L81	1000K 3000K 35W9LED3K[1] 35W12LED3K[1] 48W16LED3K[1] 59W20LED3K 70W24LED3K 72W32LED3K 80W48LED3K									
	4000K 3000K 35W9LED4K[1] 35W12LED4K[1] 48W16LED4K[1] 59W20LED4K[1] 70W24LED4K 72W32LED4K 80W48LED4K									

1. BO is only available with LB3.
2. 347-480V not available.
3. HS not available with LE5.
4. CDMG Driver Options is required for OVR.
5. The RCCP is located on top of the fitter, inside the globe.

Motion Response* (must be ordered as a separate line item) Example: ACC-120-MR4PG1-BKTX

Accessory	Voltage	Motion Response module	Finish
ACC	120 120 volt 277 120 volt	MR4PG1 Single grey MR4PG2 Double grey MR4PW1 Single white MR4PW2 Double white	Consult Lumec's Color Chart for complete specifications.

*OVR option is required for Motion Response Accessory



LUMEC by Signify

Urban

Contempory Lantern

L80/L81
Post Top

L80 L81

Project:
Location:
Cat.No:
Type:
Lamps: Qty:
Notes:

Lumec LED **contemporary lantern** luminaires bring the lantern style of design into the 21st century. It offers unique lighting that is at once timeless and intimate. Whether in public places or pedestrian spaces, the LED **contemporary lantern** luminaires are able to accentuate traditional as well as modern architectural environments

H-EX2
L81-35W32LED3K-G3-PC-CS-LE2-XX-XX-SF80-HS-FN2 / RA61 12 BKTX

Luminaire ordering guide

Example: L80-35W32LED4K-G3-PC-CS-LE5-120-DMG-SF0-BKTX

Series	LED module	Generation	Globe material	Globe finish	Optical system	Ballast	Driver Options	Fitter	Luminaire option	Finish
		G3	PC	CS	LE2 LE3 LE4 LE5	120 208 240 277 347 480	AST[1] CDMG[2] CLO[3] DMG DTL[1] DALP SROD[4] Sensor ready driver, standard configuration SRDP[4] Sensor ready driver, alternate configuration	SF2 SF3 SF70 SF71 SF72 SF73 SF80 SF5	BO[1] FN1 FN2 FN3 FN5 FN6 FN8 FN9 FN10 HS[1] OVR[5] PH7 PH8 RCCP[5] Receptacle 7-pin	BEZTX BEBTX BEBTX BGZTX BKTX BRTX GMTX GNBTX GNTX GR GYZTX NP NOTX ROHTX TG TS WHTX
L80 L81	1000K 3000K 35W9LED3K[1] 35W12LED3K[1] 48W16LED3K[1] 59W20LED3K 70W24LED3K 72W32LED3K 80W48LED3K									
	4000K 3000K 35W9LED4K[1] 35W12LED4K[1] 48W16LED4K[1] 59W20LED4K[1] 70W24LED4K 72W32LED4K 80W48LED4K									

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3. HS not available with LE5.
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Accessory	Voltage	Motion Response module	Finish
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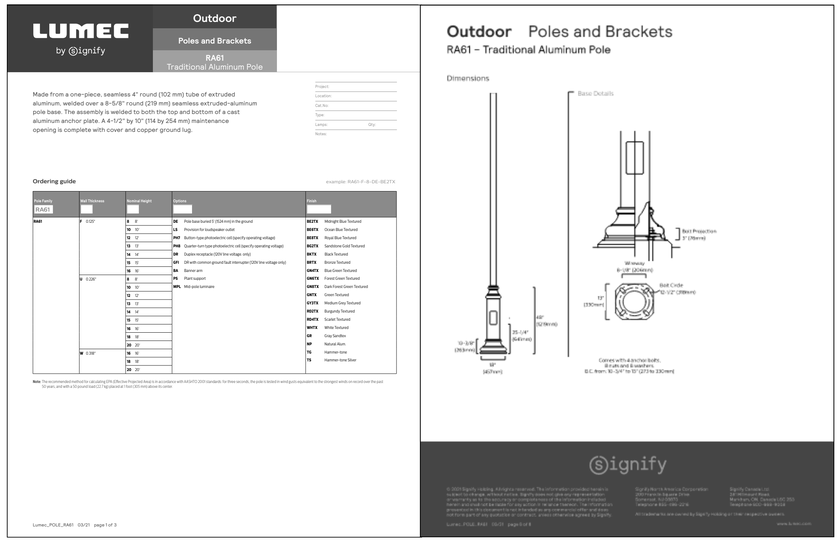
*OVR option is required for Motion Response Accessory



LUMEC by Signify

Outdoor

Poles and Brackets

RA61
Traditional Aluminum Pole

Project:
Location:
Cat.No:
Type:
Lamps: Qty:
Notes:

Made from a one-piece, seamless 4" round (102 mm) tube of extruded aluminum, welded over a 8-5/8" round (219 mm) seamless extruded-aluminum pole base. The assembly is welded to both the top and bottom of a cast aluminum anchor plate. A 4-1/2" by 10" (114 by 254 mm) maintenance opening is complete with cover and copper ground lug.

Ordering guide

example: RA61-F-B-DE-BEZTX

Pole Family	Wall Thickness	Nominal Height	Options	Finish
RA61	F 0.125"	8 8' 10 10' 12 12' 13 13' 14 14' 15 15' 16 16'	DE Pole base burned 7' (1524 mm) in the ground LS Provision for loudspeaker outlet PHO Button-type photoelectric cell (specify operating voltage) PHR Duplex twist-type photoelectric cell (specify operating voltage) DR Duplex receptacle (120V line voltage, only) SPI Off-with-common-ground fault interrupter (120V line voltage only) BA Banner arm PS Plant support MPA Mid-pole luminaire	BEZTX Midnight Blue Textured BEBTX Ocean Blue Textured BEBTX Royal Blue Textured BGZTX Sandstone Gold Textured BKTX Black Textured BRTX Bronze Textured GMTX Blue Green Textured GNBTX Forest Green Textured GNTX Dark Forest Green Textured GNTX Green Textured GYZTX Medium Grey Textured NOTX Burgundy Textured ROHTX Scarlet Textured WHTX White Textured GR Gray Sandtex NP Natural Alum. TG Hammer-tone TS Hammer-tone Silver
	D 0.091"	8 8' 10 10' 12 12' 13 13' 14 14' 15 15' 16 16'		
	W 0.081"	8 8' 10 10' 12 12' 13 13' 14 14' 15 15' 16 16' 18 18' 20 20'		

Note: The recommended method for calculating EPA (Effective Projected Area) is in accordance with AASHTO 2001 standards. For three seconds, the pole is tested in wind gusts equivalent to the strongest winds on record over the past 50 years, and with a 50 pound load (227 kg) placed at 1 foot (305 mm) above its center.

Outdoor Poles and Brackets

RA61 – Traditional Aluminum Pole

Dimensions

Base Details

Comes with 4 anchor bolts, 8 nuts and 8 washers.
B.C. from: 10 -3/4" to 13" (273 to 330mm)

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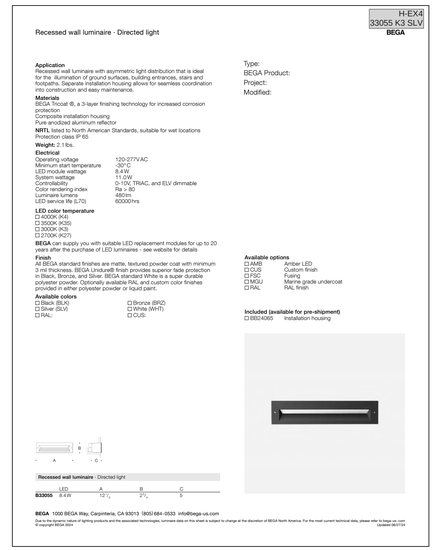

H-EX4
33055 K3 SLV
BEGA

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 Ticoat ®, 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	120-277VAC
Ambient temperature	-30° C
LED module wattage	8.4 W
System wattage	11.0W
Controllability	0-10V, TRIAC, and ELV dimmable
Color rendering index	Ra > 80
Luminaire lumens	482lm
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
The BEGA standard finishes are matte, textured powder coat with minimum 3 mil thickness. BEGA UrduvaⓇ 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) ☐ Bronze (BRZ)
☐ Silver (SLV) ☐ White (WHT)
☐ RAL: ☐ 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
833055	8.4 W	12 1/2	2 1/4	9

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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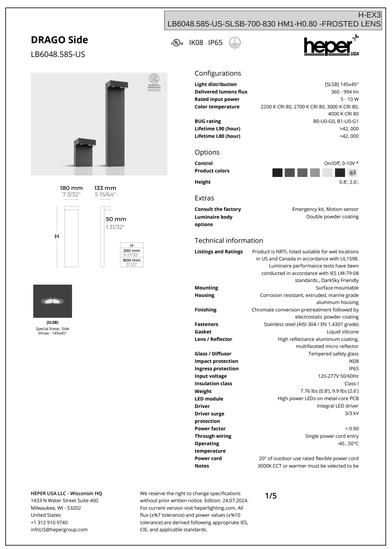


H-EX3
LB6048.585-US-SLSB-700-830 HM1-H0.80 -FROSTED LENS

DRAGO Side
LB6048.585-US

IK08 IP65

heper USA

180 mm
7 3/32"

133 mm
5 5/16"

50 mm
1 31/32"

H

H
250 mm
9 27/32"
800 mm
31 1/2"

(SLSB)
Special linear, Side
Wicker - 1.45x45°

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	0.6', 2.6',

Extras

Consult the factory	Emergency kit, Motion sensor
Luminaire body options	Double powder coating

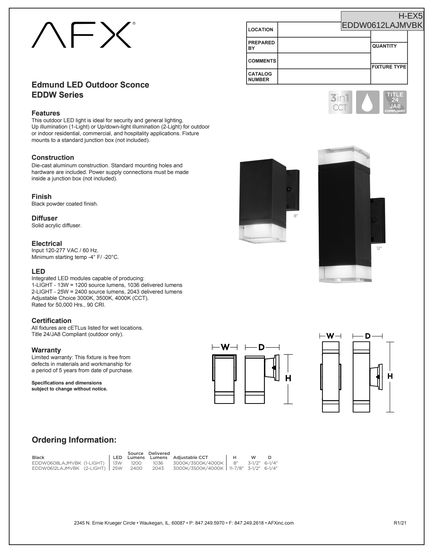
Technical information

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 aluminum coating, multifaceted micro reflector
Glass / Diffuser	Tempered safety glass
Impact protection	IK08
Ingress protection	IP65
Input voltage	120-277V 50/60Hz
Insulation class	Class I
Weight	7.76 lbs (3.81), 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

HEPER USA LLC - Wisconsin HQ
1433 N Water Street Suite 400
Milwaukee, WI - 53202
United States
+1 312 910 9740
info(US@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



H-EX5
EDDW0612LAJMVBK

AFX

Edmund LED Outdoor Sconce
EDDW Series

LOCATION			
PREPARED BY		QUANTITY	
COMMENTS		FIXTURE TYPE	
CATALOG NUMBER			

3in1 CCT

TITLE 24 JA8 COMPLIANT

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. 1038 delivered lumens
2-LIGHT - 25W = 2400 source lumens, 2043 delivered lumens
Adjustable Chose 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	1038	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"

2345 N. Ernie Krueger Circle • Waukegan, IL 60087 • P: 847.249.5970 • F: 847.249.2618 • AFXinc.com

R1/21

LIGHTING FIXTURE SCHEDULE

PROJECT: LIBERTYVILLE DEVELOPMENT
LOCATION: LIBERTYVILLE, IL
DATE: ORIGINAL
REVISED: **08/19/2025**

Hugh LIGHTING DESIGN

ARCHITECTURAL EXTERIOR LIGHTING

TYPE	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	LIGHT SOURCE	POWER SUPPLY	MOUNTING	FINISH	COMMENTS
H-EX1	**PARKING AREA LIGHT**	**LUMEC LIGHTING**	**L81-35W32LED3K-G3-PC-CS-LE3-XX-XX-SF80-HS-FN2 / RA61 16 BKTX**	**36 WATT 3000K LED**	**0-10V DIMMING**	**16' POLE**	**BLACK**	
H-EX2	PEDESTRIAN POLE	**LUMEC LIGHTING**	**L81-35W32LED3K-G3-PC-CS-LE2-XX-XX-SF80-HS-FN2 / RA61 12 BKTX**	**36 WATT 3000K LED**	**0-10V DIMMING**	12' POLE	BLACK	**65'-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	24" AFF, 10'-0" SPACING
H-EX5	WALL SCONCE	AFX LIGHTING	EDDW0612LAJMVBK	25 WATT 3000KED	0-10V DIMMING	SURFACE WALL	BLACK	MOUNTED AT 7'-0" AFF

GENERAL NOTES

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 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

1 LIGHTING FIXTURE CUTS

2 LIGHTING FIXTURE SCHEDULE

PERMIT STAMP

FINAL P.D. SUBMISSION

SPACE
ARCHITECTS + PLANNERS
2149 N. TALMAN AVENUE
CHICAGO, IL 60647
312 829 6666
www.spacearchplan.com

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CONSULTANTS

teska
BCI BONO CONSULTING, INC.
CIVIL ENGINEERS
1018 BUSSE HIGHWAY PH: (847) 803-3300
PARK RIDGE, IL 60068 FAX: (847) 803-3303
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

NO.	DESCRIPTION	DATE
1	ISSUED FOR DEVELOPMENT REVIEW	10.11.24
2	SUPPLEMENTAL SUBMISSION	2.27.25
3	FINAL PLANNED DEVELOPMENT SUBMISSION	09.05.25

CERTIFICATION

SHEET TITLE

EXTERIOR SITE LIGHTING FIXTURE CUTS AND SCHEDULE

SHEET #

LT-3

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

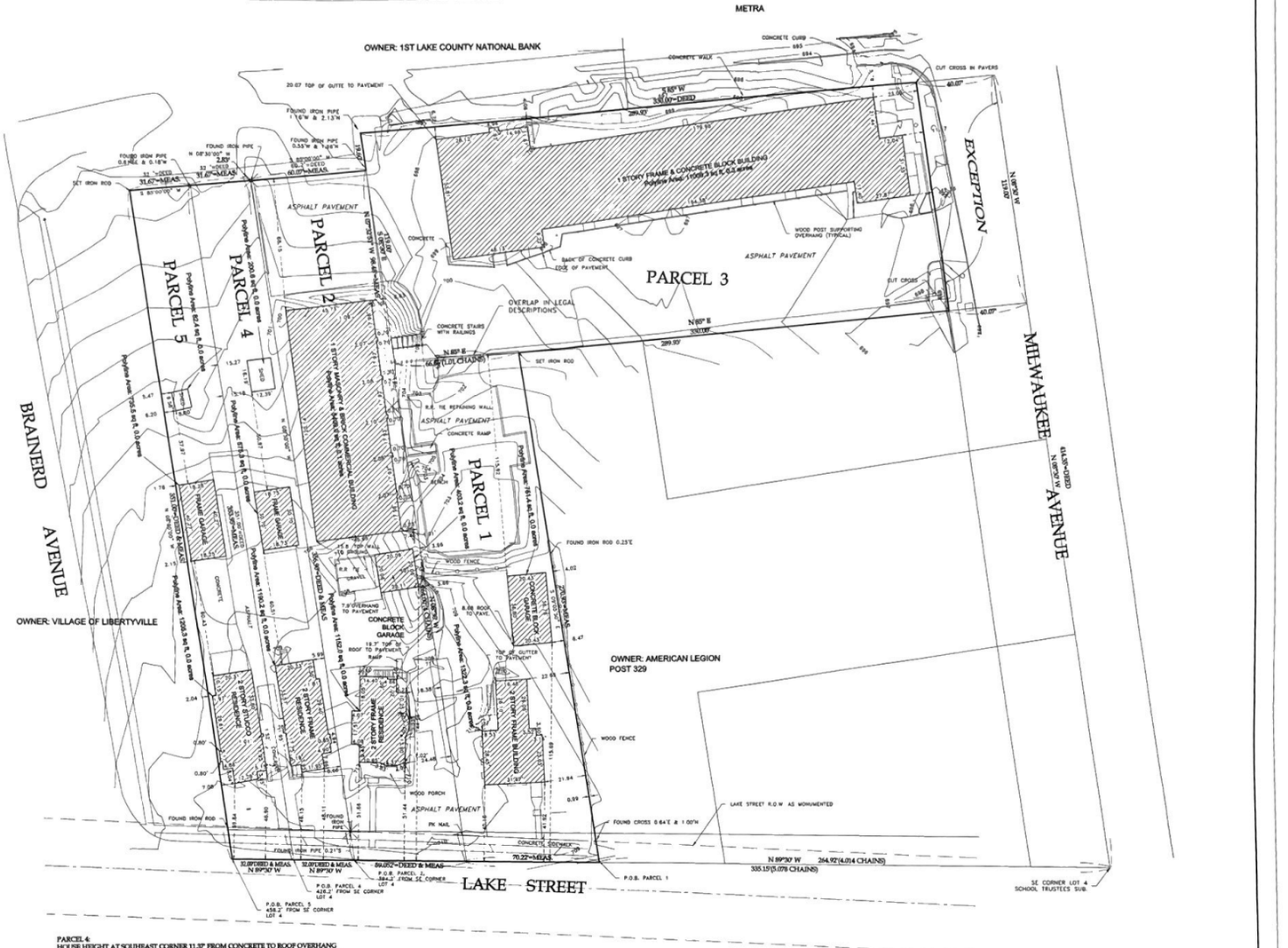
THAT PART OF LOT 4 IN SCHOOL TRUSTEE'S SUBDIVISION OF SECTION 16, TOWNSHIP 44 NORTH RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS COMMENCING IN THE CENTER OF MILWAUKEE AVENUE IN THE VILLAGE OF LIBERTYVILLE, AT A POINT NORTH 8 ½ DEGREES WEST 414 35 FEET FROM THE SOUTHEAST CORNER 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

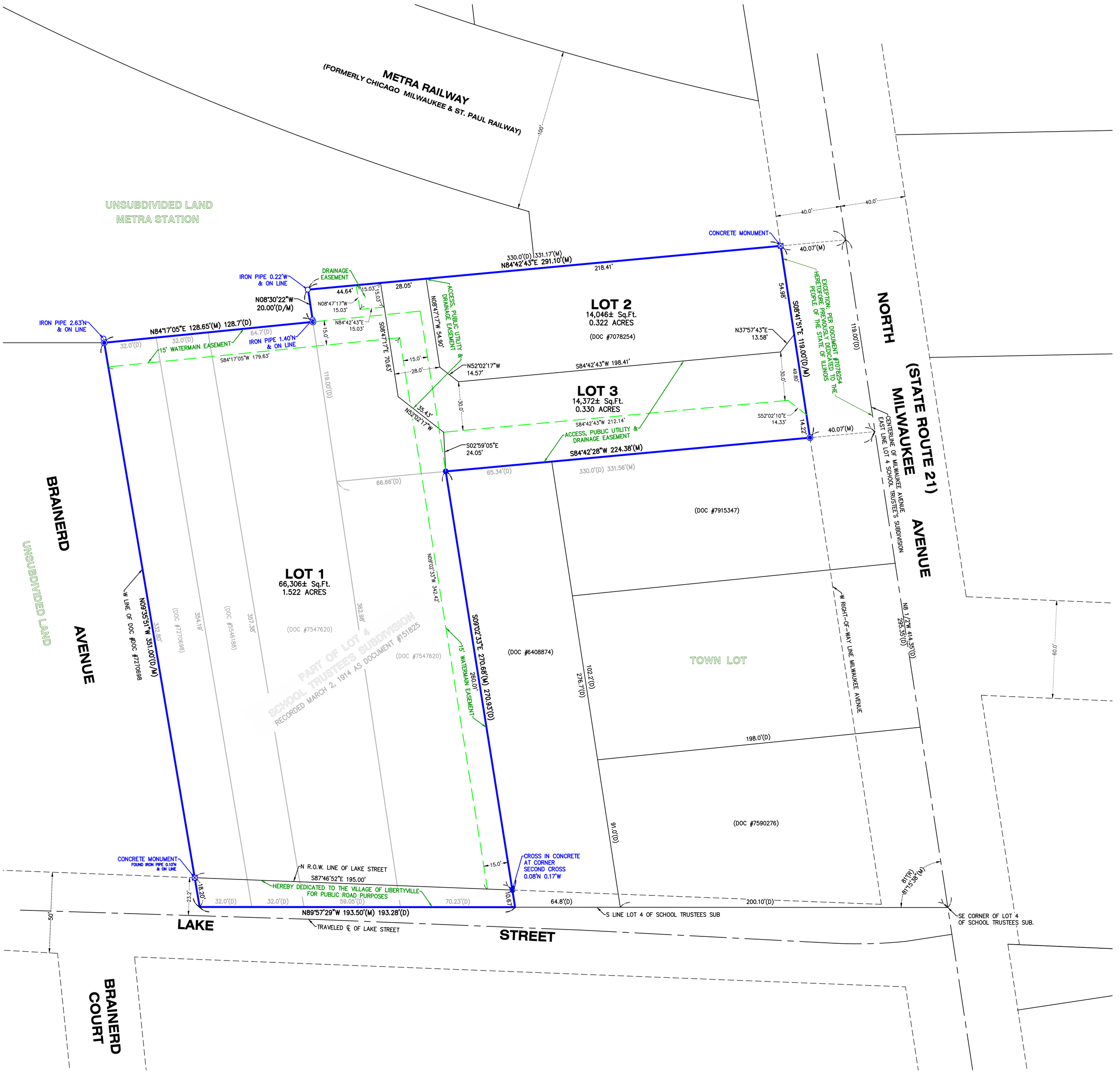

METRA
OWNER: 1ST LAKE COUNTY NATIONAL BANK
CONCRETE CURB
CONCRETE WALK
CUT CROSS IN PAVERS
20.07' TOP OF GUTTER TO PAVEMENT
FOUND IRON PIPE 1.16'W & 2.13'N
FOUND IRON PIPE 0.53'W & 1.69'N
FOUND IRON PIPE N 09°30'00" W 2.89'
FOUND IRON PIPE 0.82'E & 0.18'N
S 89°30'00" E 31.40'-MEAS 32 '+/-DEED
60.07'-MEAS
SET IRON ROD
ASPHALT PAVEMENT
PARCEL 2
PARCEL 4
PARCEL 5
PARCEL 3
PARCEL 1
1 STORY FRAME & CONCRETE BLOCK BUILDING
Polyline Area= 11008.3 sq ft, 0.25 acres
EXCEPTION
N 89°30' W 335.00'
WOOD POST SUPPORTING OVERHANG (TYPICAL)
BACK OF CONCRETE CURB
EDGE OF PAVEMENT
CUT CROSS
OVERLAP IN LEGAL DESCRIPTIONS
CONCRETE STAIRS WITH RAILINGS
N 85° E 330.00'
N 85° E 66.66'(4.01 CHAINS)
299.93'
40.07'
SET IRON ROD
MILWAUKEE AVENUE
N 08°30' W 2119.00'
R.R. TIE RETAINING WALL
CONCRETE RAMP
BRAINERD AVENUE
OWNER: VILLAGE OF LIBERTYVILLE
1 STORY MASONRY & BRICK COMMERCIAL BUILDING
Polyline Area= 6488.1 sq ft, 0.15 acres
Polyline Area= 1205.8 sq ft, 0.0 acres
Polyline Area= 1152.2 sq ft, 0.0 acres
Polyline Area= 1202.3 sq ft, 0.0 acres
Polyline Area= 1150.2 sq ft, 0.0 acres
Polyline Area= 1152.2 sq ft, 0.0 acres
Polyline Area= 1152.2 sq ft, 0.0 acres
Polyline Area= 1152

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 4 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, ILLINOIS.

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
⊛	SET CROSS
◉	SET IRON BAR

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

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

NOTES:
1. ANY/ALL PREVIOUS UTILITY EASEMENTS ASSOCIATED WITH PRIOR DEVELOPMENT ARE HEREBY VACATED BY THE SIGNING AND RECORDING OF THIS PLAT UNLESS OTHERWISE CONVEYED.

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-PPS-GRID.dwg-Layout1-9/4/2025 11:56 AM

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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 4 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, ILLINOIS.

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 subdivision as shown and platted 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 Franchises
and
AT&T, Grantees

their respective licensees, successors, and assigns, jointly and severally, to construct, operate, repair, maintain, modify, reconstruct, replace, supplement, relocate and remove, from time to time, poles, guys, anchors, wires, cables, conduits, manholes, transformers, pedestals, equipment cabinets or other facilities used in connection with overhead and underground transmission and distribution of electricity, communications, sounds and signals in, over, under, across, along and upon the surface of the property shown within the dashed or dotted lines (or similar designation) on the plat and marked "Easement", "Utility Easement", "Public Utility Easement", P.U.E."(or similar designation), the property designated in the Declaration of Condominium and/or on this plat as "Common Elements", and the property designated on the plat as "common area or areas", and the property designated on the plat for streets and alleys, whether public or private, together with the rights to install required service connections over or under the surface of each lot and common area or areas to serve improvements thereon, or on adjacent lots, and common area or areas, the right to cut, trim or remove trees, bushes, roots and saplings and to clear obstructions from the surface and subsurface as may be reasonably required incident to the rights herein given, and the right to enter upon the subdivided property for all such purposes. Obstructions shall not be placed over Grantees' facilities or in, upon or over the property within the dashed or dotted lines (or similar designation) marked "Easement", "Utility Easement", "Public Utility Easement", "P.U.E."(or similar designation) without the prior written consent of Grantees. After installation of any such facilities, the grade of the subdivided property shall not be altered in a manner so as to interfere with the proper operation and maintenance thereof.

The term "Common Elements" shall have the meaning set forth for such term in the "Condominium Property Act", Chapter 765 ILCS 605/2, 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 or as an apportionment to the separately owned lots, parcels or areas within the planned development, even though such be otherwise designated on the plat by terms such as "outlots", "common elements" "open space", "open area", "common ground", "parking", and "common area". The term "common area or areas" and "Common Elements" include 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, retention pond, or mechanical equipment.

Relocation of facilities will be done by Grantees at cost of Grantor/Lot Owner, upon written request.

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.

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

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.

SURVEYOR'S CERTIFICATE

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

I, Terry L. Van Alstine an 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.

I, 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.

I, 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.

I, 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.

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

I, 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

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
.	.	.	.

LAKE - MILWAUKEE DEVELOPMENT SHEET NO. 2 OF 2

Y:\PLATS\2024\0400-0599\240551_V-240551\240551-PPS-GRID.dwg-Sheet 2-9/4/2025 11:56 AM

1 LOGISTICS PLAN

FINAL P.D. SUBMISSION

SPACE

ARCHITECTS + PLANNERS

2149 N. TALMAN AVENUE
CHICAGO, IL 60647
312 829 6666
www.spacearchplan.com

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CONSULTANTS

teska

BCI BONO CONSULTING, INC. CIVIL ENGINEERS
1016 BUSSE HIGHWAY PARK RIDGE, IL 60068
PH : (847) 823-3300 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

NO.	DESCRIPTION	DATE
1	ISSUED FOR DEVELOPMENT REVIEW	10.11.24
2	SUPPLEMENTAL SUBMISSION	2.27.25
3	FINAL PLANNED DEVELOPMENT SUBMISSION	09.05.25

CERTIFICATION

SHEET TITLE

LOGISTICS PLAN

SHEET #

GC-1

Traffic Impact Study
Mixed-Use Development

Libertyville, Illinois

Prepared For:

Continuum Development, LLC

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

September 4. 2025

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 4,500 square-foot sit-down restaurant with approximately 18 parking spaces located in 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 the Brainerd Avenue/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:

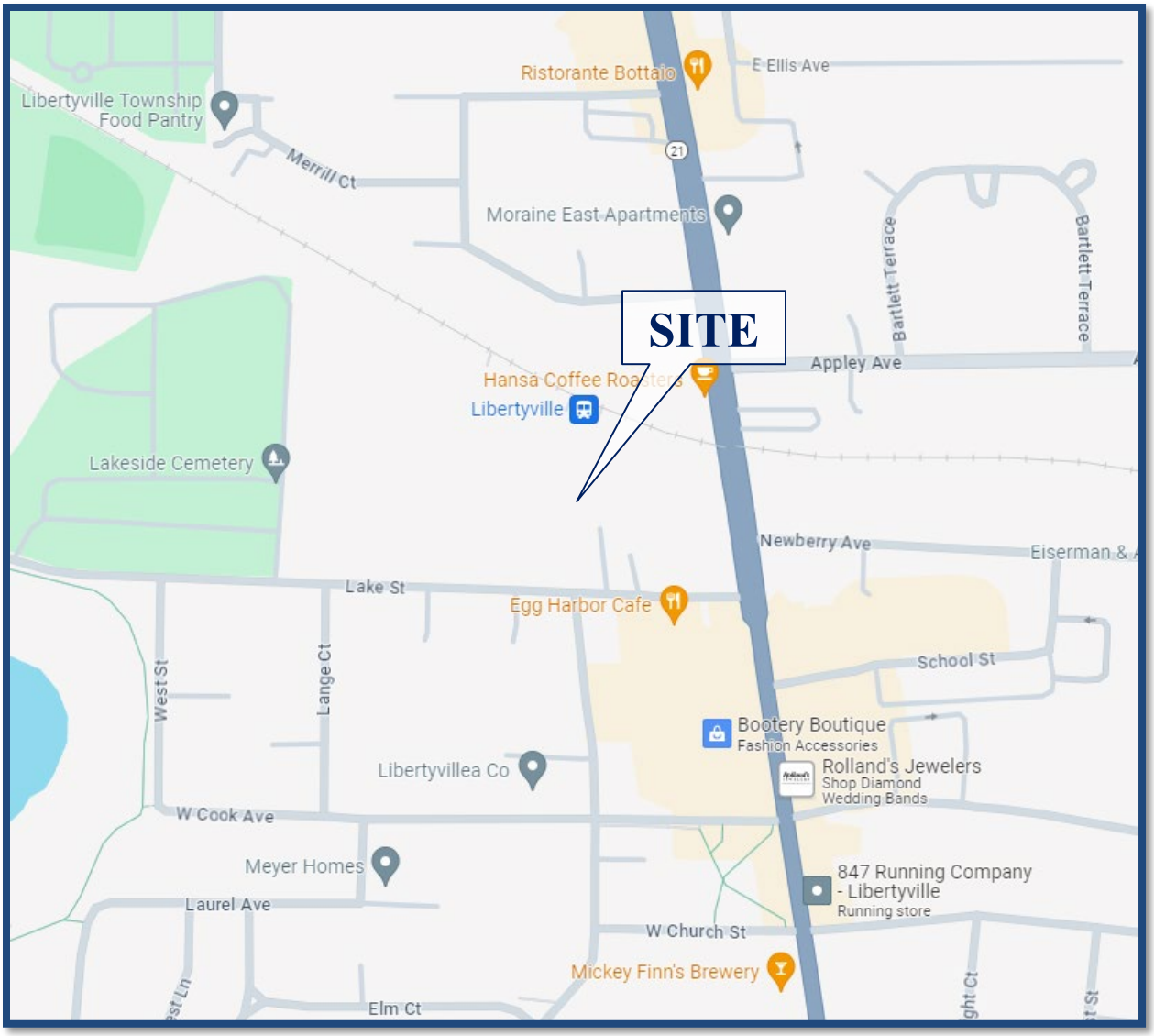
- Existing roadway conditions including vehicle, pedestrian, and bicycle traffic volumes for the weekday morning and weekday evening peak hours
- A detailed description of the proposed development
- Vehicle trip generation for the proposed development
- Directional distribution of development-generated 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.

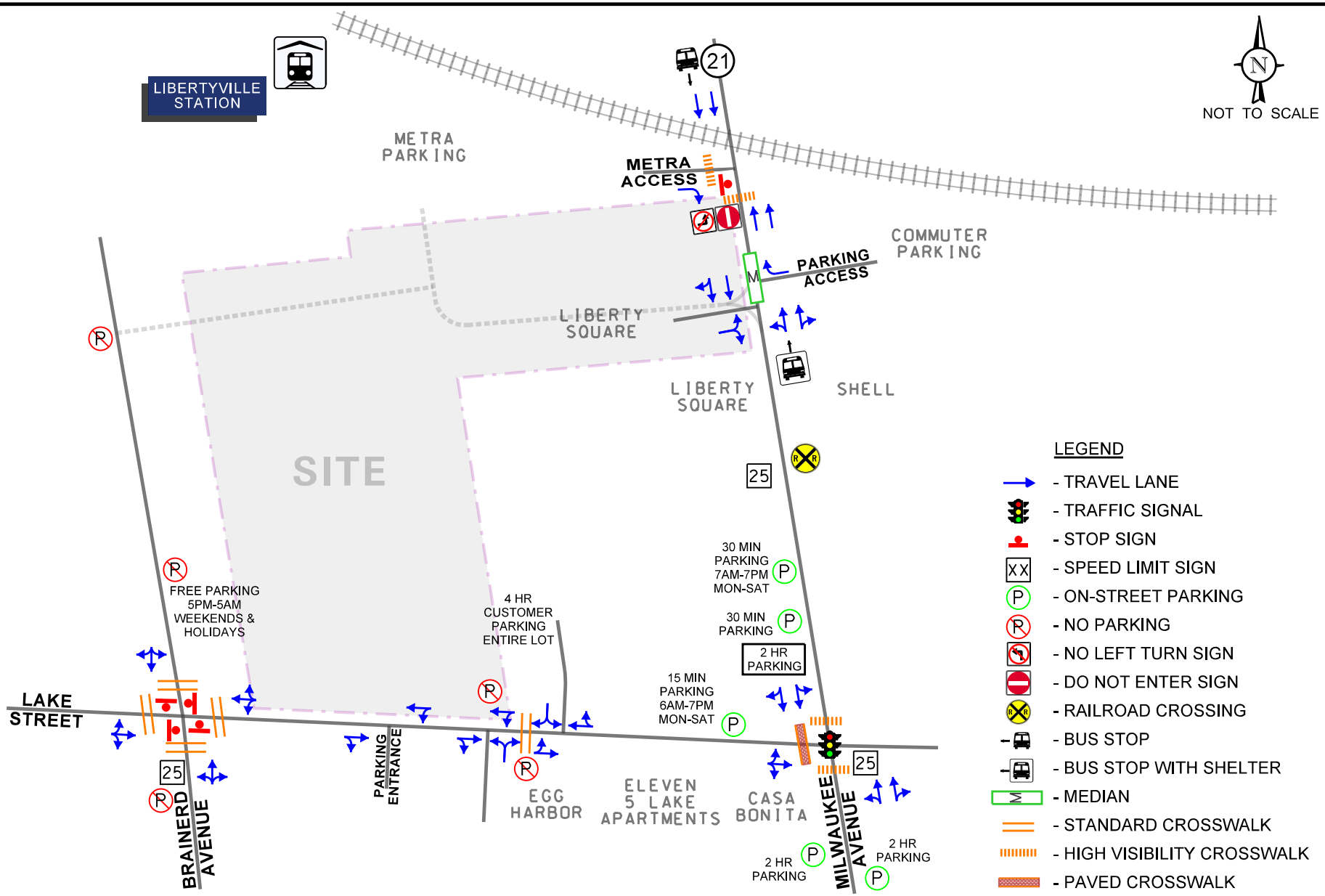
Site Location

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
Libertyville, Illinois

Existing Roadway Characteristics

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

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

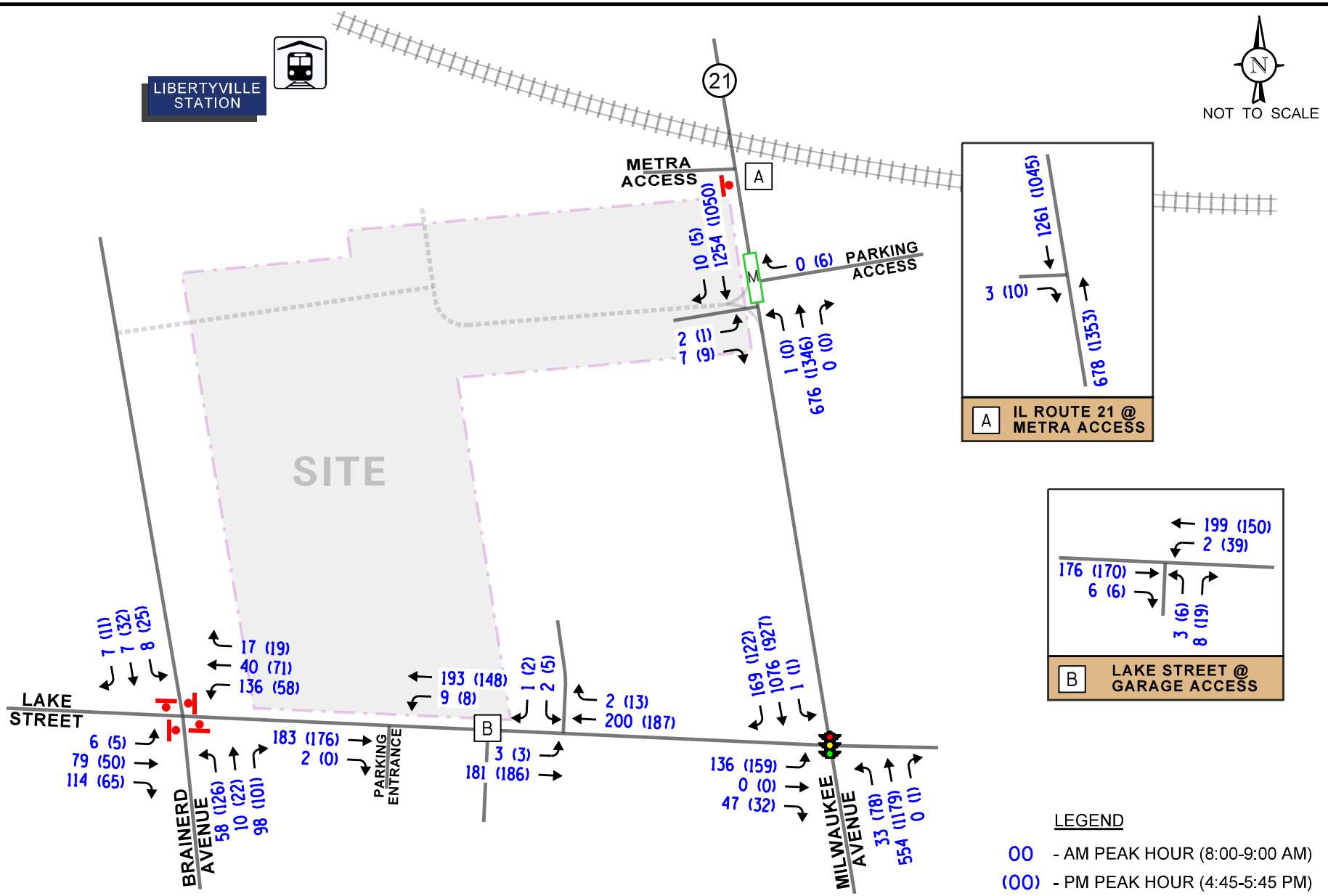
In order to determine current vehicle, pedestrian, and bicycle conditions within the study area, KLOA, Inc. conducted peak period traffic, pedestrian, and bicycle counts during the morning (7:00 A.M. to 9:00 A.M.) and evening (2:00 P.M. to 6:00 P.M.) peak periods on Thursday, May 23, 2024, at the following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

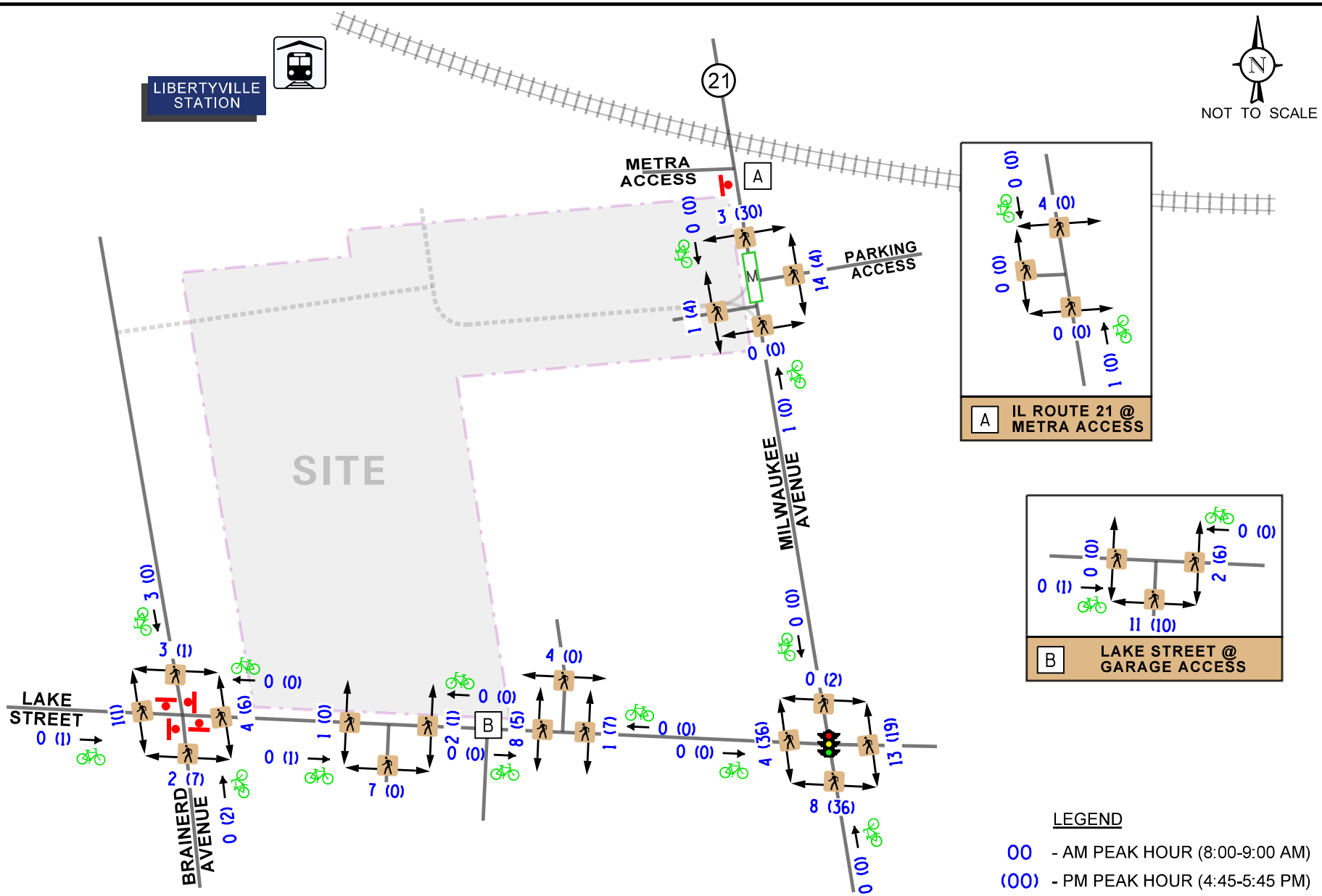


Mixed-Use Development
Libertyville, Illinois

Existing Traffic Volumes

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

Job No: 22-217 Figure: 4



Mixed-Use Development
Libertyville, Illinois

Existing Pedestrian and Bicycle Traffic Volumes

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

Job No: 22-217

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 4,500 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 Brainerd 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 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 and the apartment building below-grade parking. The outbound movements at this access drive should be under stop sign control.

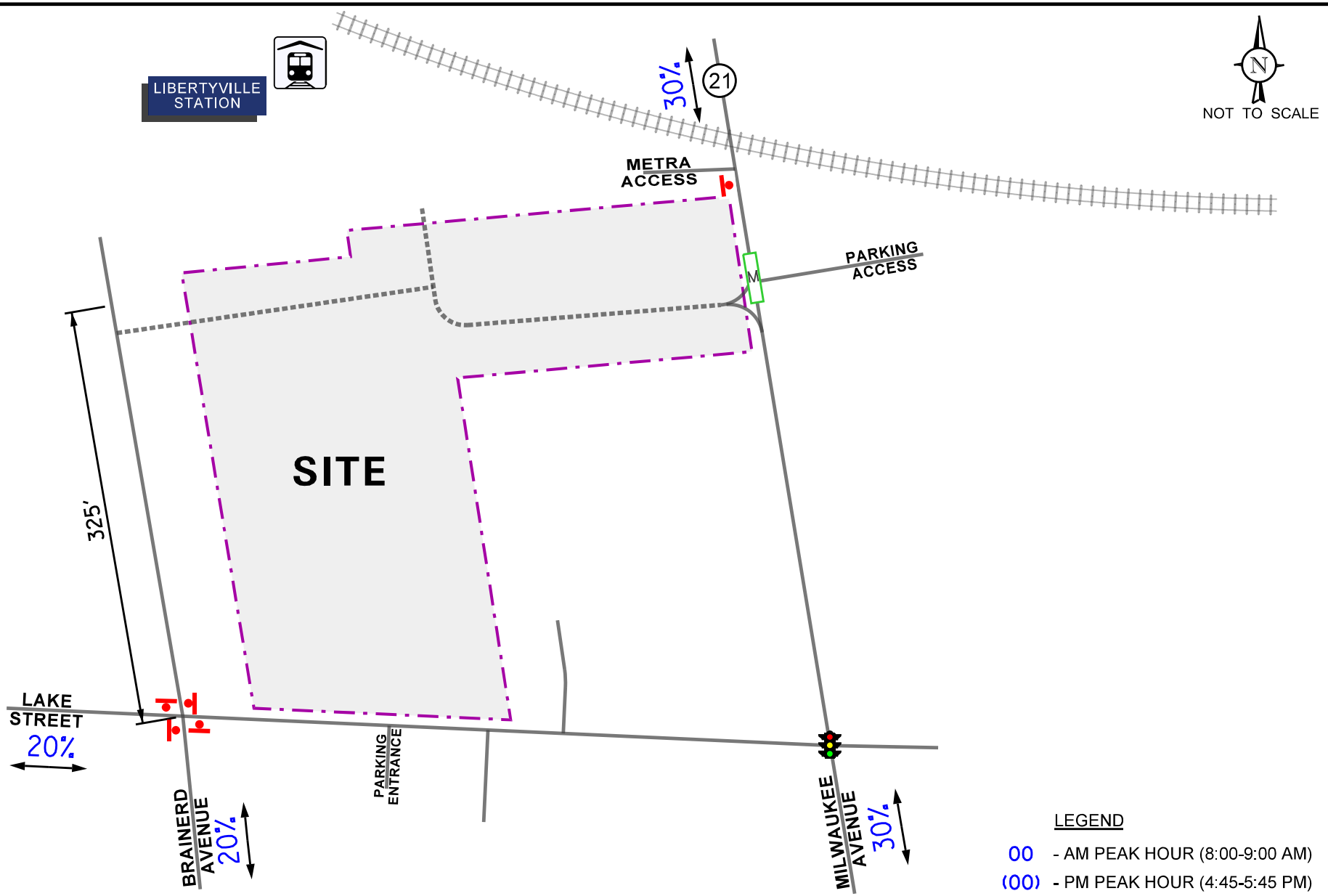
- Full-movement access drives to the apartment building below-grade parking, the apartment building surface parking lot, and the proposed restaurant parking lot will be located along the proposed circulation road. All the access drives will provide one inbound lane and one outbound lane with the outbound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



Mixed-Use Development
Libertyville, Illinois

Directional Distribution

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

Job No: 22-217 Figure: 6

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. Copies of the ITE trip generation sheets are included in the Appendix.

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 as follows 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 and adjacent to the residential portion of the development and based on other studies performed in suburban downtowns, a ten percent reduction was applied to the estimated trips to be generated by the proposed restaurant. To provide a worst-case analysis, no reductions were assumed in the trip generation estimates to account for pass-by trips to be generated by the restaurant.

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 (4,500 s.f.)	24	19	43	25	16	41	241	241	482
	10% Reduction	-2	-2	-4	-2	-2	-4	-24	-24	-48
	Subtotal	22	17	39	23	14	37	217	217	434
	Total	**28**	**35**	**63**	**42**	**26**	**68**	**382**	**382**	**764**

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

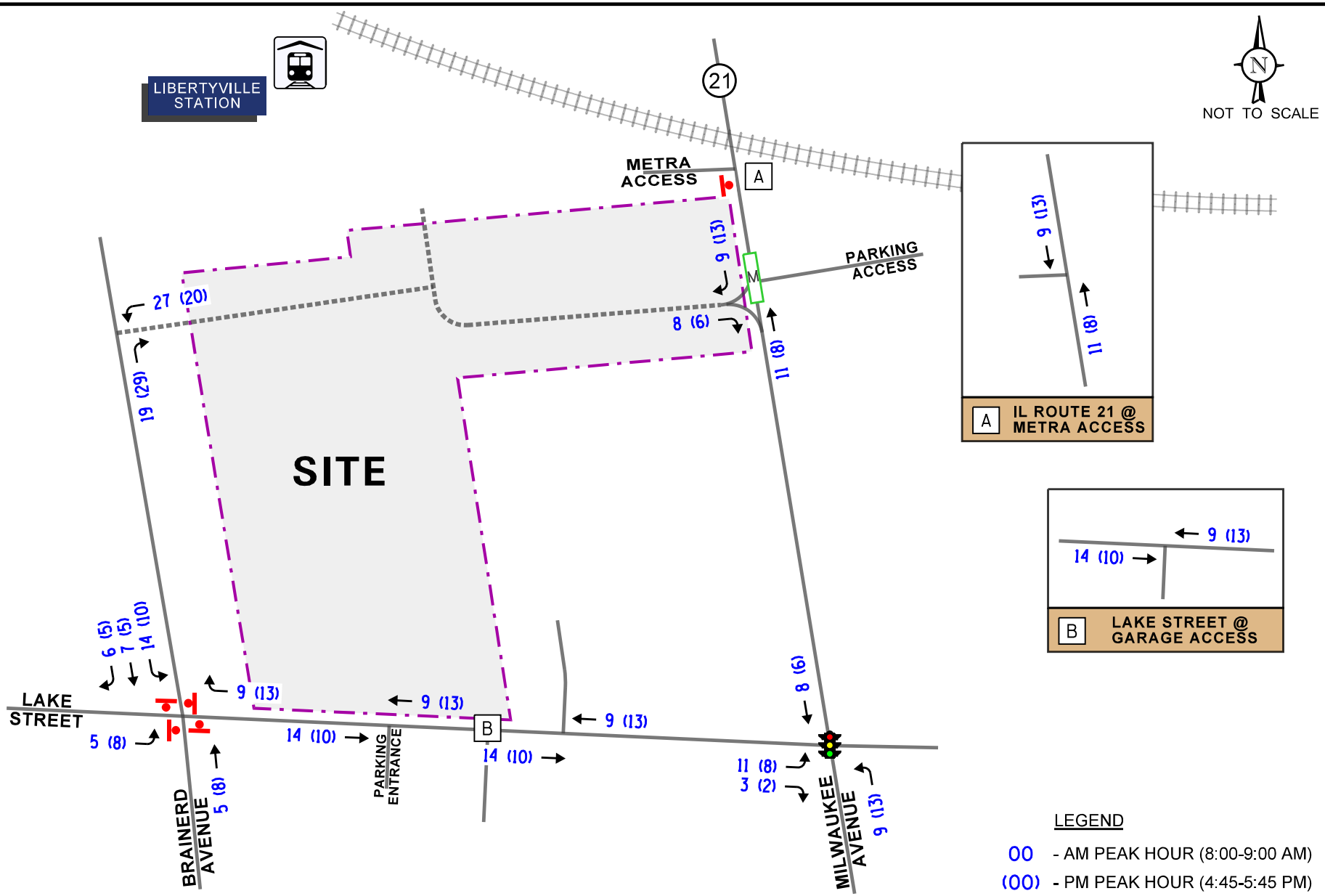
The existing traffic volumes (Figure 4) were increased by a regional growth factor to account for the increase in existing traffic related to regional growth in the area (i.e., not attributable to any particular planned development). Based on Annual Average Daily Traffic (AADT) projections provided by 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 Brainerd 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.

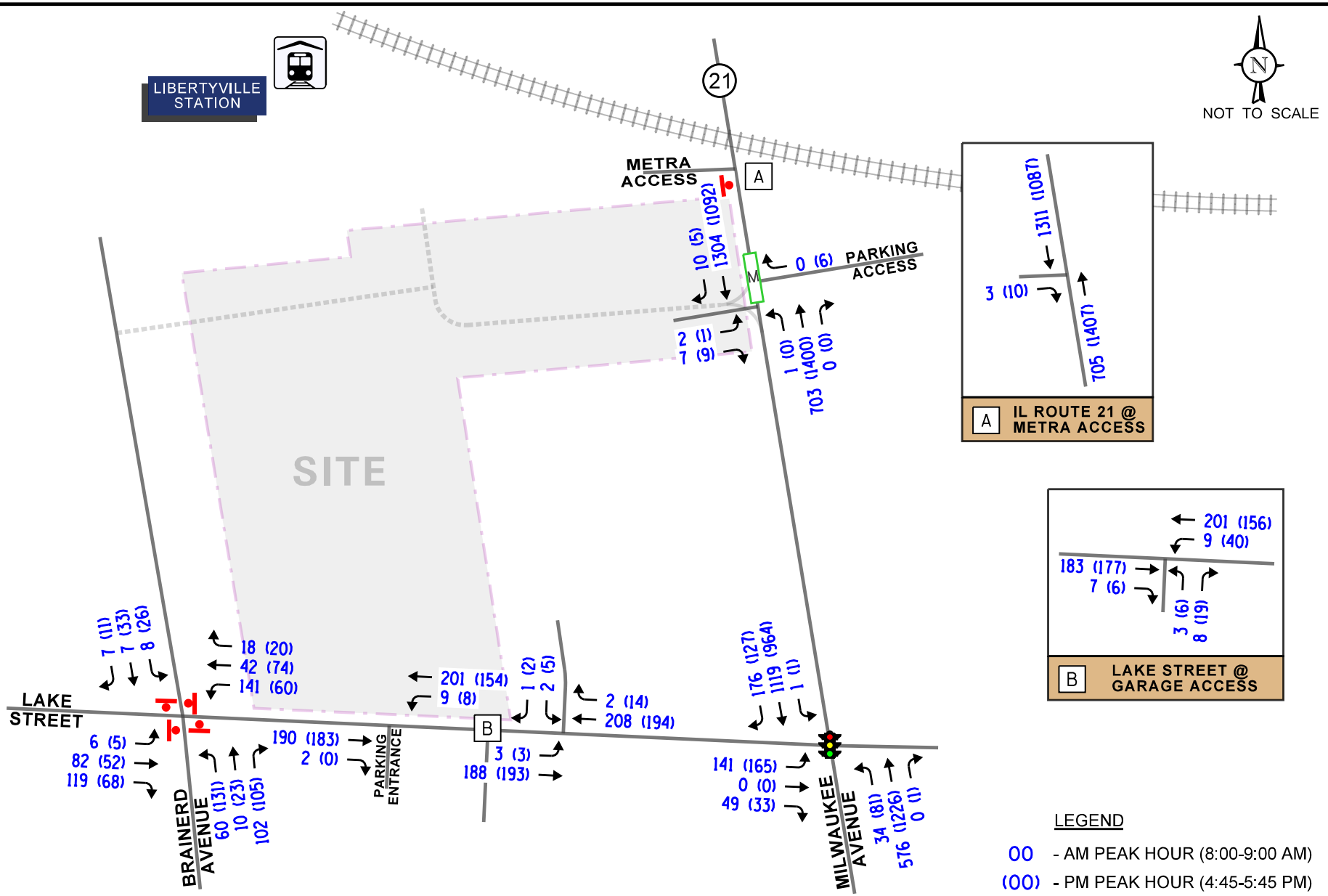


Mixed-Use Development
Libertyville, Illinois

Site-Generated Traffic Volumes

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

Job No: 22-217 Figure: 7

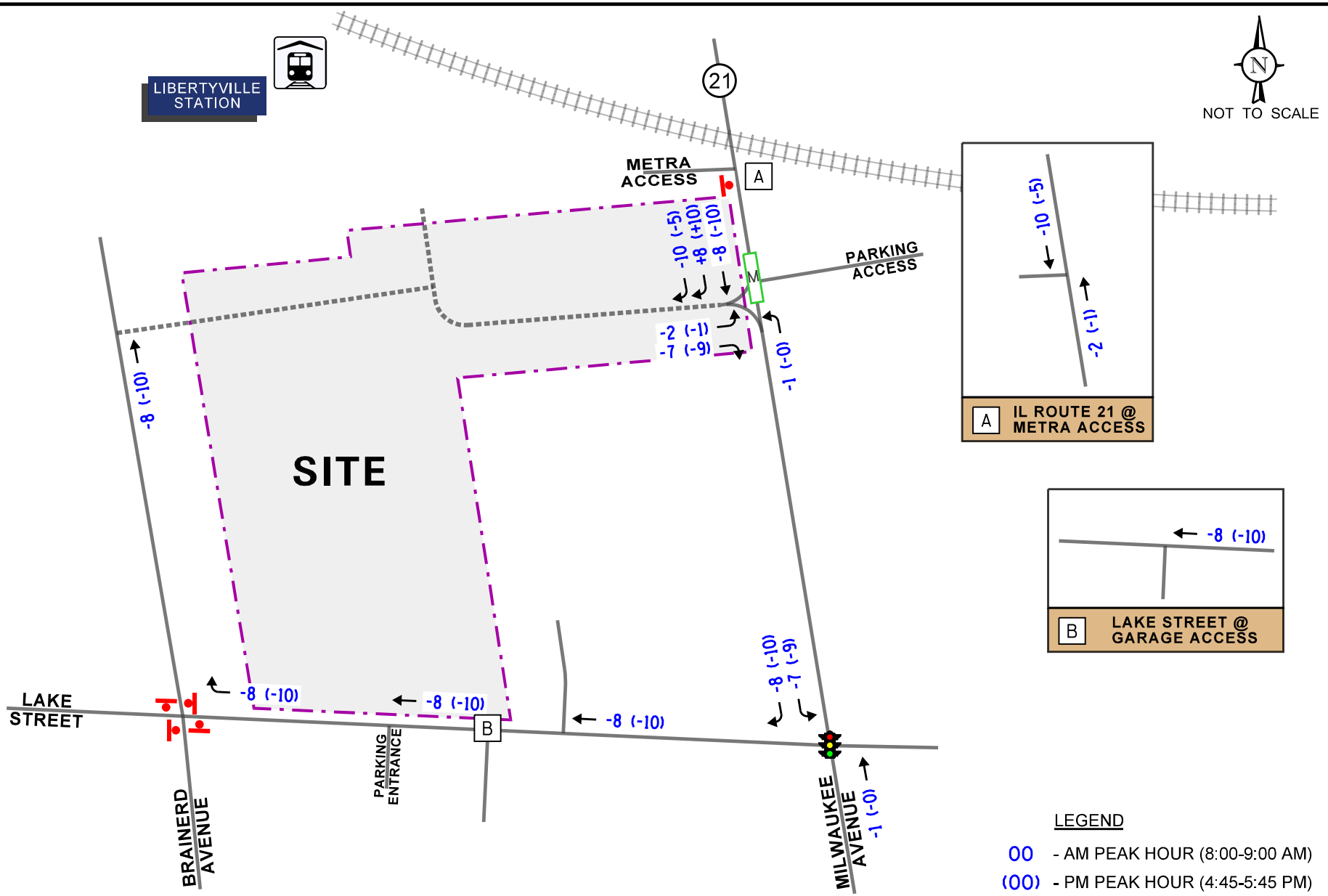


Mixed-Use Development
Libertyville, Illinois

Year 2030 No-Build Traffic Volumes

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

Job No: 22-217 Figure: 8

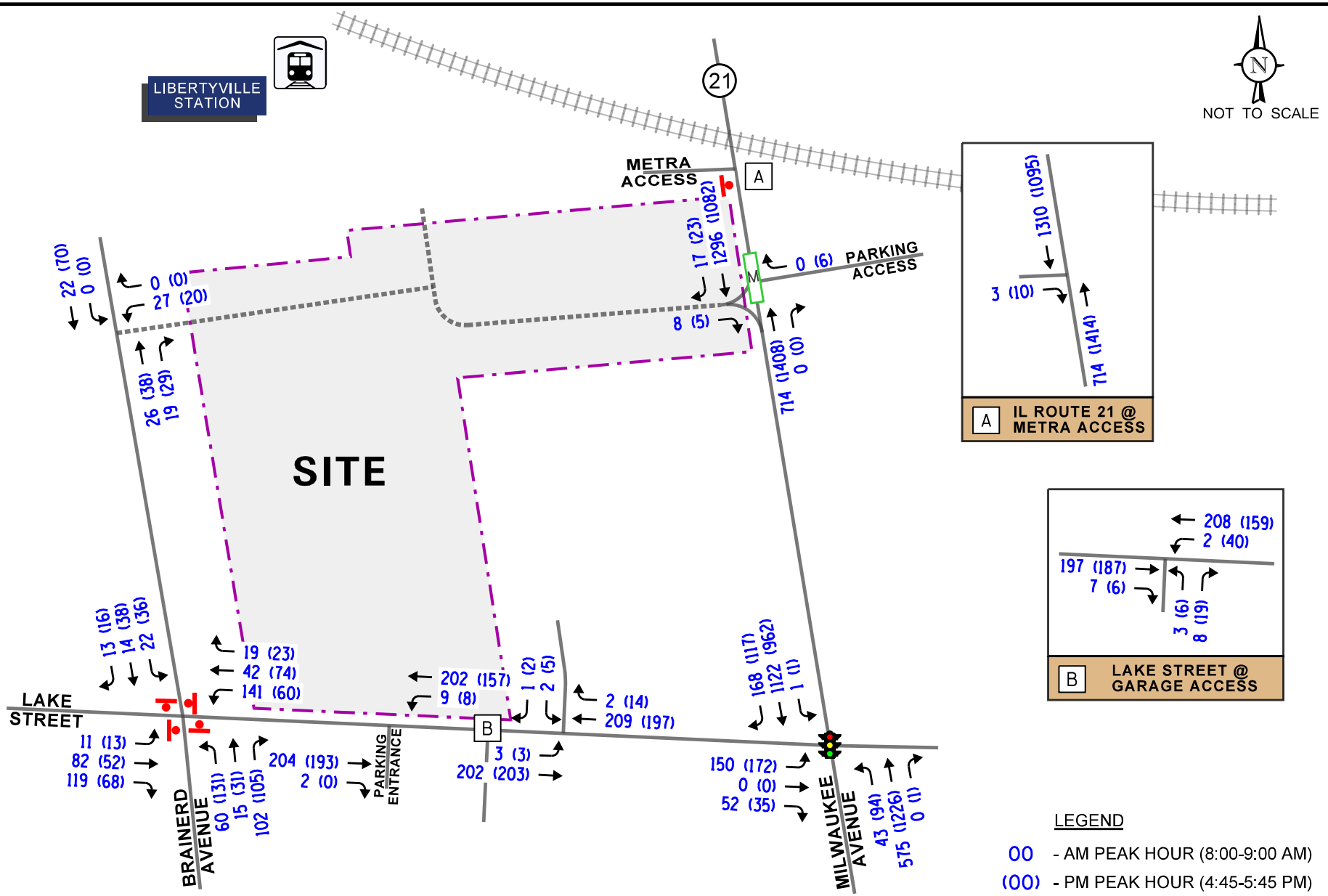


Mixed-Use Development
Libertyville, Illinois

Redistribution of Traffic Volumes

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

Job No: 22-217 Figure: 9



Mixed-Use Development
Libertyville, Illinois

Year 2030 Total Traffic Volumes

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

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 – 59.3	A – 6.5	C – 21.2	C 20.6
	Weekday Evening	E-55.2	B – 11.8	B – 18.0	B 17.8

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[2]				
• 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[2]				
• 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[2]				
• 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	9.7	B	12.3
• Eastbound Approach	A	9.5	B	10.6
• Westbound Approach	B	10.3	B	11.6
• Northbound Approach	A	9.6	B	14.2
• Southbound Approach	A	8.7	B	10.1
Lake Street with Access Drive to Parking Lot on South Side of Lake Street[2]				
• Southbound Approach	B	10.6	B	10.5
• 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				
•				
•				
• 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	14.4	B	13.2
Brainerd Avenue with Proposed Access Drive[1]				
• Westbound Approach	A	8.9	A	9.3
• 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 to operate at a 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 95th 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 95th 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

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 and total conditions, the westbound left-turn movement at this intersection are projected to operate at the same level of service as existing conditions.

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 Brainerd 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 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 and apartment building below-grade parking. 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.
9575 W. Higgins Rd., Suite 400

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						
	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
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	-	-

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: 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						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	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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(847)518-9990 sainkeshavarzi@kloainc.com

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						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	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	-	-	-	-	-	-	-	-

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: 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						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	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	-	-

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: 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	-	-

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 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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9575 W. Higgins Rd., Suite 400

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(847)518-9990 sainkeshavarzi@kloainc.com

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	-	-

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 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						
	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	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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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 (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	-	-

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 (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	-	-

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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					Int. Total
	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Left	Right	Peds	App. 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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9575 W. Higgins Rd., Suite 400

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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

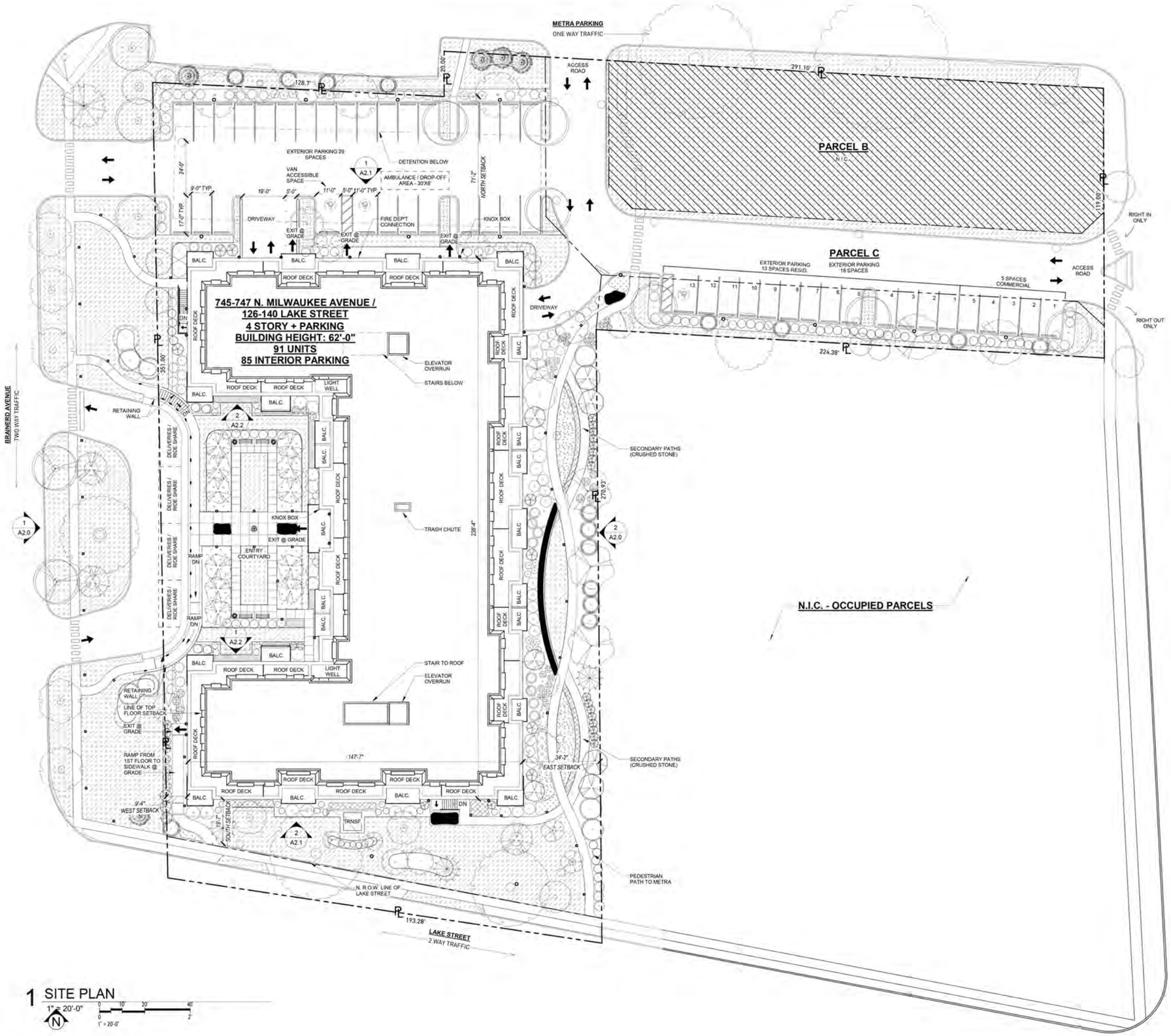
Rosemont, Illinois, United States 60018
(847)518-9990 sainkeshavarzi@kloainc.com

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



1 SITE PLAN
1" = 20'-0"
0 10 20 40
1" = 20'-0"

FINAL P.D. SUBMISSION

SPACE
ARCHITECTS + PLANNERS

2149 N. TALMAN AVENUE
CHICAGO, IL 60647
312 829 6666
www.spacearchplan.com

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CONSULTANTS:
teska
BCI BONO CONSULTING, INC.
Hugh LIGHTING DESIGN

PROJECT NAME:
MILWAUKEE & LAKE

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

PROJECT INFO:
PROJECT NO.: 24.014
PROJECT TEAM:
ARCH OF RECORD - JR
PROJECT MANAGER - BB
ASSOCIATES - ME

NO.	DESCRIPTION	DATE
	ISSUED FOR DEVELOPMENT REVIEW	10.11.24
2	SUPPLEMENTAL SUBMISSION	2.27.25
1	FINAL PLANNED DEVELOPMENT SUBMISSION	09.08.25

CERTIFICATION

SHEET TITLE
SITE PLAN OF PROPOSAL

SHEET #
A0.1

ITE Trip Generation Sheets

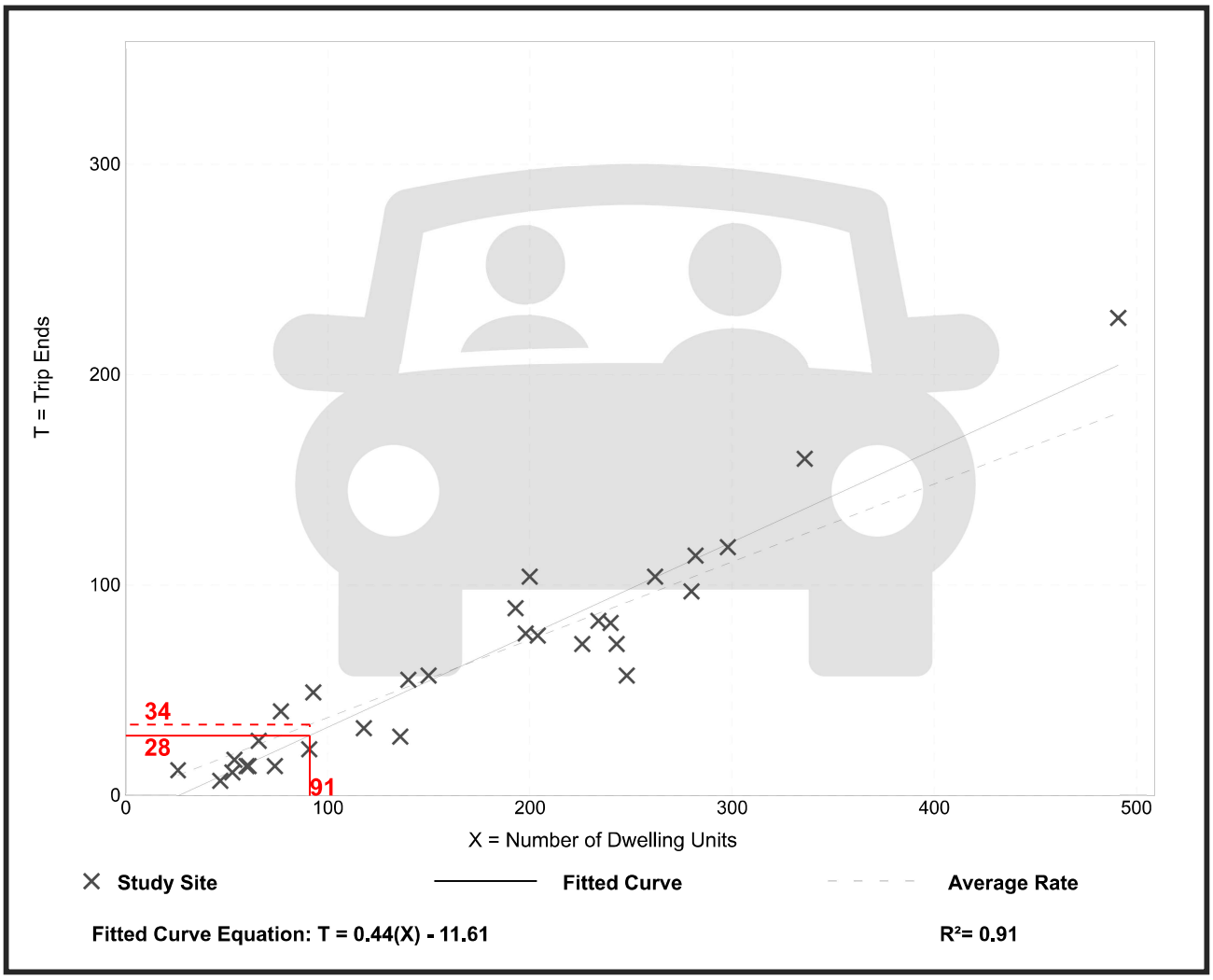
Multifamily Housing (Mid-Rise)
Not Close to Rail Transit (221)

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



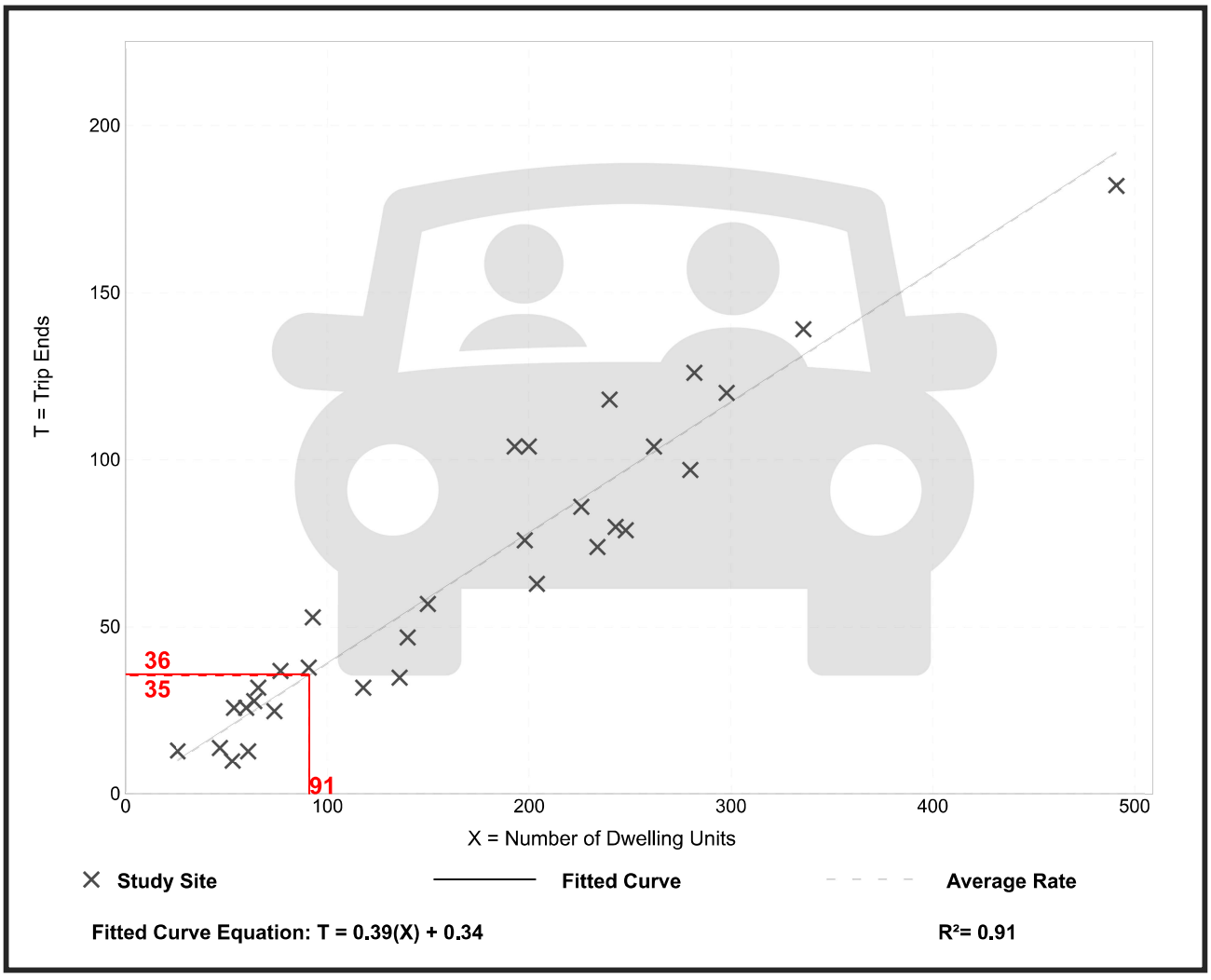
Multifamily Housing (Mid-Rise)
Not Close to Rail Transit (221)

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)

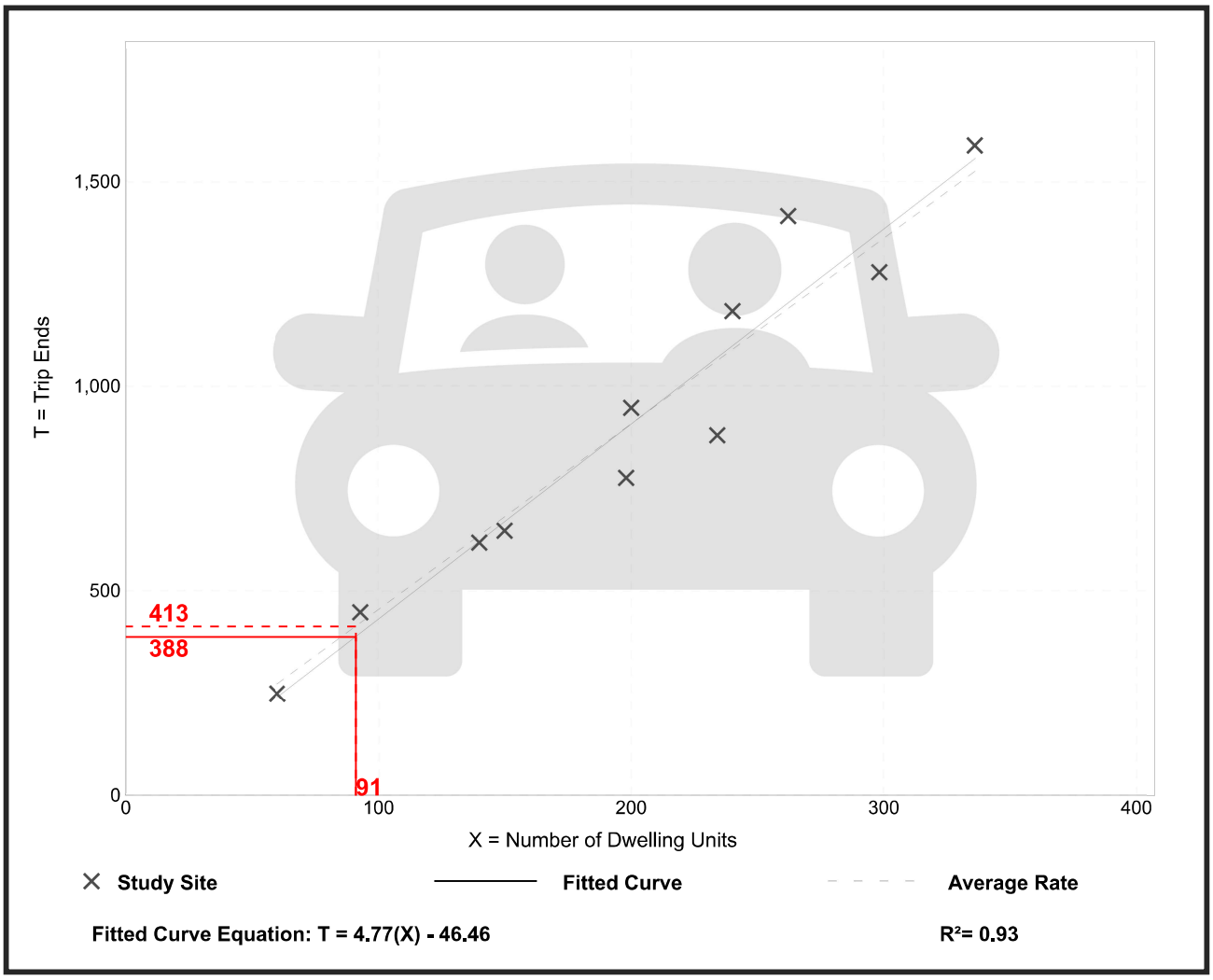
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

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



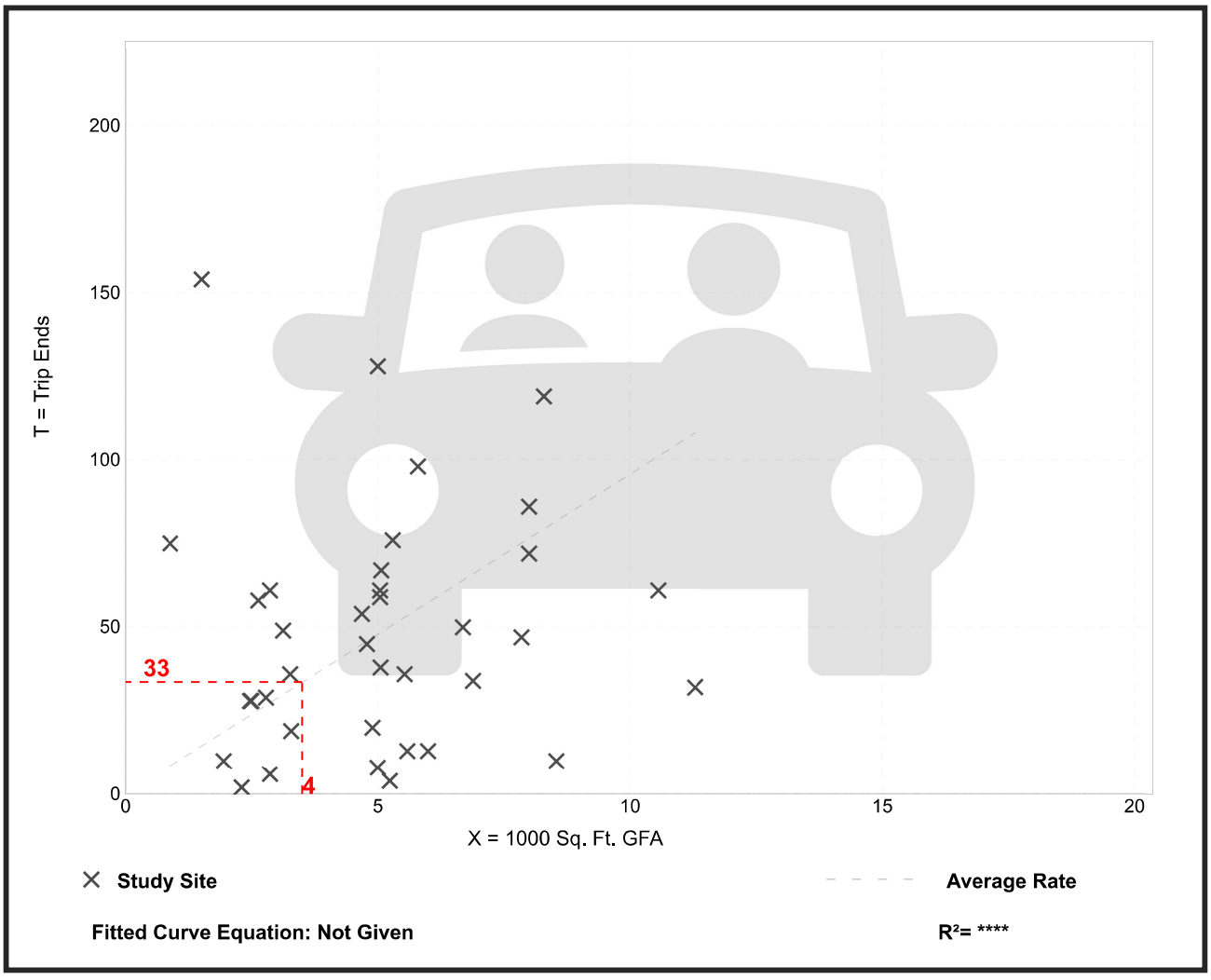
High-Turnover (Sit-Down) Restaurant
(932)

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



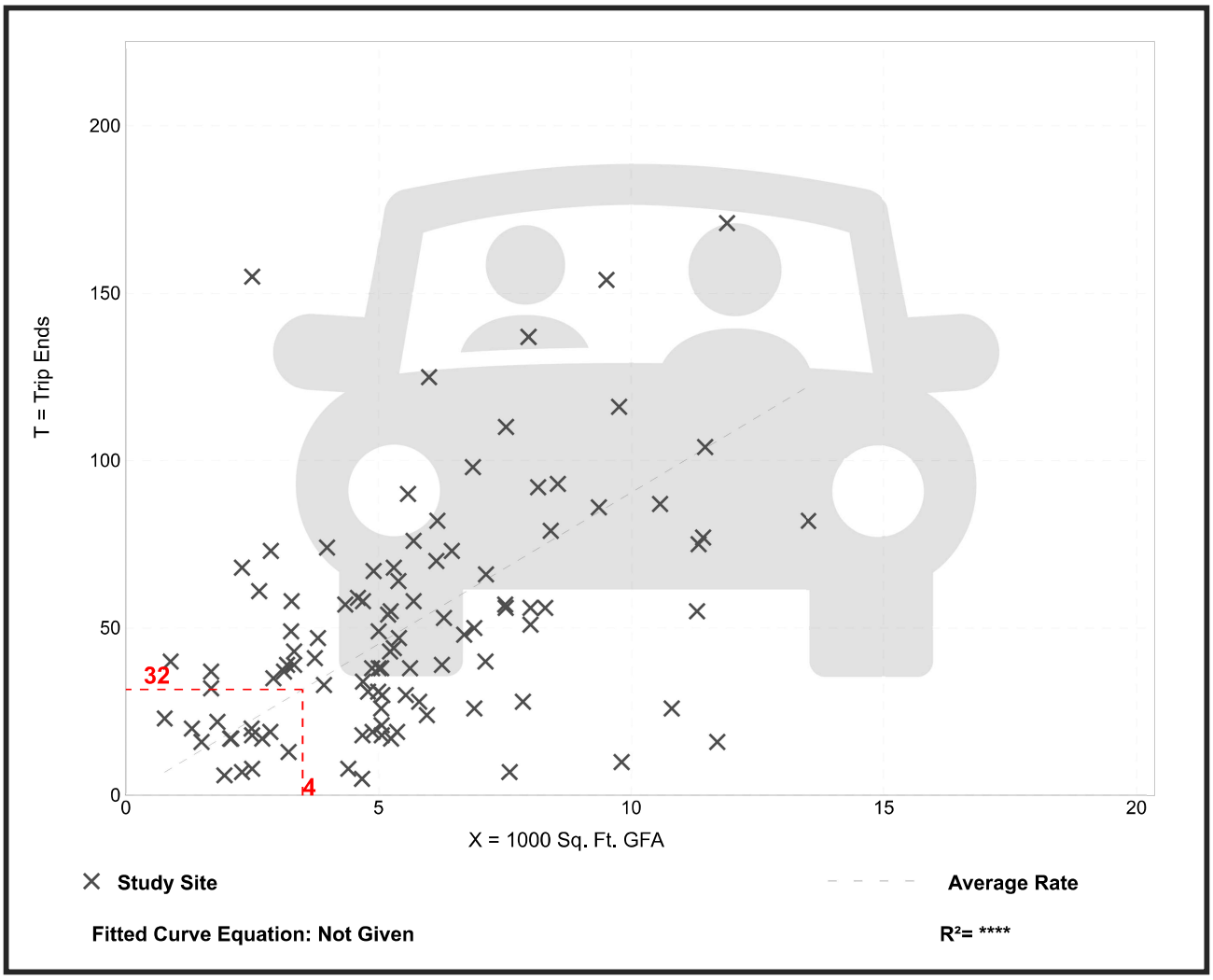
High-Turnover (Sit-Down) Restaurant
(932)

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)

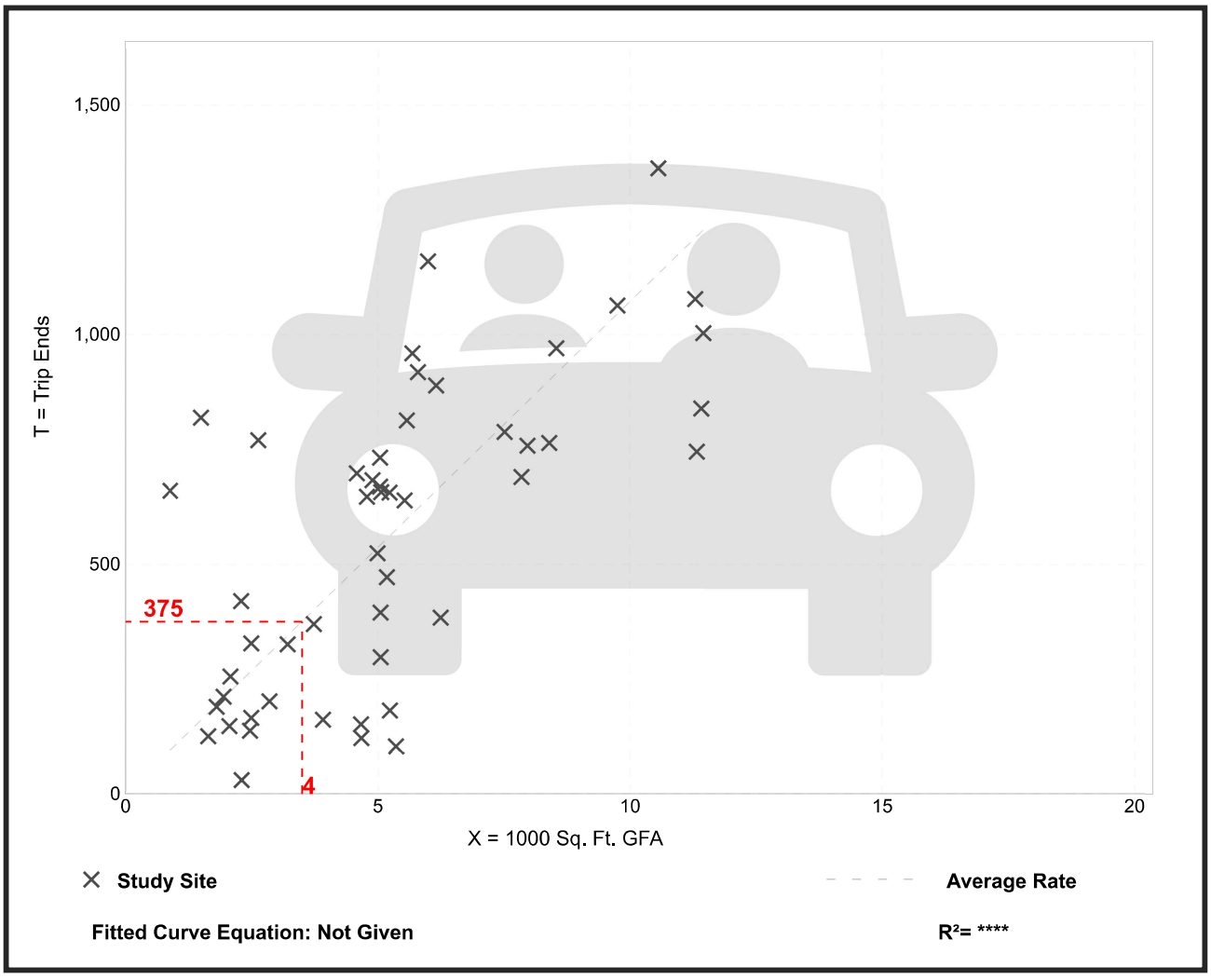
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday**

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

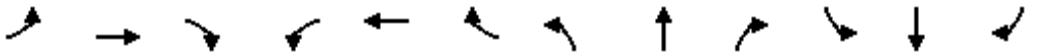
Signalized Intersections		
Level of Service	**Interpretation**	**Average Control Delay (seconds per vehicle)**
A	Favorable progression. Most vehicles arrive during the green indication and travel through the intersection without stopping.	≤10
B	Good progression, with more vehicles stopping than for Level 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



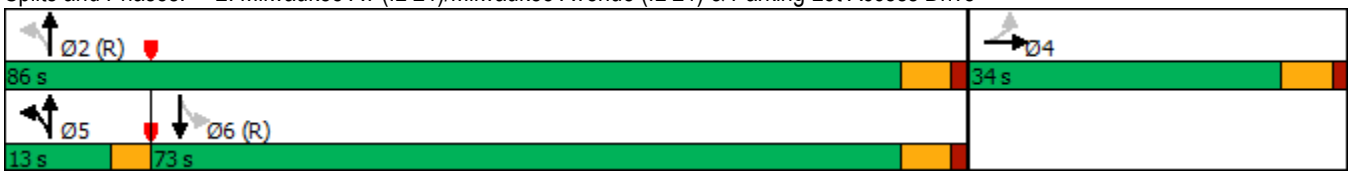
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	136	0	47	0	0	0	33	554	0	1	1076	169
Future Volume (vph)	136	0	47	0	0	0	33	554	0	1	1076	169
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	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

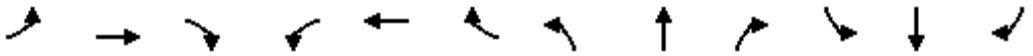
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	222	0	466	223
Stage 1	-	-	-	-	221	-
Stage 2	-	-	-	-	245	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1359	-	597	822
Stage 1	-	-	-	-	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



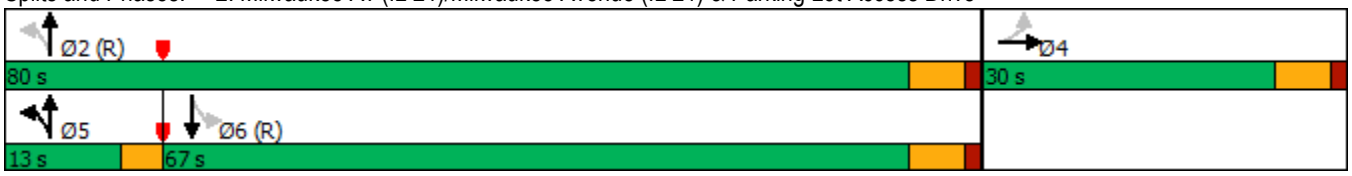
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	159	0	32	0	0	0	78	1179	1	1	927	122
Future Volume (vph)	159	0	32	0	0	0	78	1179	1	1	927	122
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	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

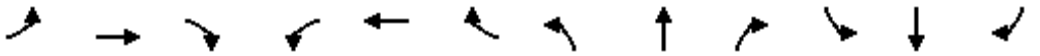
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	217	0	420	218
Stage 1	-	-	-	-	217	-
Stage 2	-	-	-	-	203	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1365	-	623	827
Stage 1	-	-	-	-	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



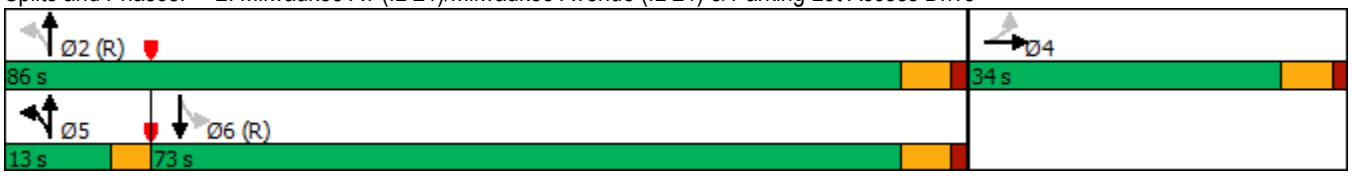
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	141	0	49	0	0	0	34	576	0	1	1119	176
Future Volume (vph)	141	0	49	0	0	0	34	576	0	1	1119	176
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	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

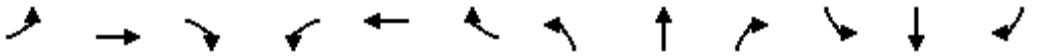
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	231	0	485	232
Stage 1	-	-	-	-	230	-
Stage 2	-	-	-	-	255	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1349	-	587	812
Stage 1	-	-	-	-	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



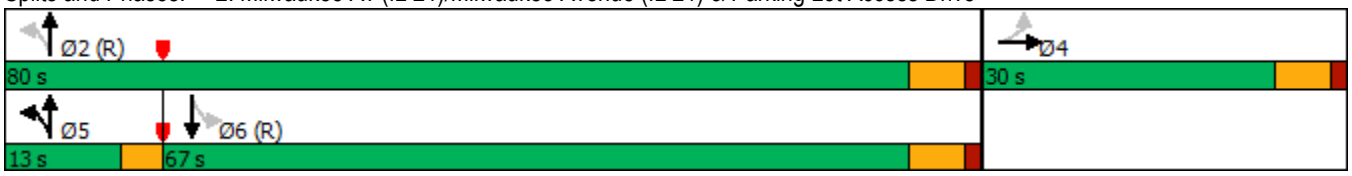
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	165	0	33	0	0	0	81	1226	1	1	964	127
Future Volume (vph)	165	0	33	0	0	0	81	1226	1	1	964	127
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	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

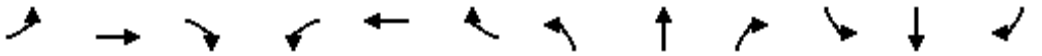
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	226	0	436	227
Stage 1	-	-	-	-	226	-
Stage 2	-	-	-	-	210	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1354	-	619	817
Stage 1	-	-	-	-	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



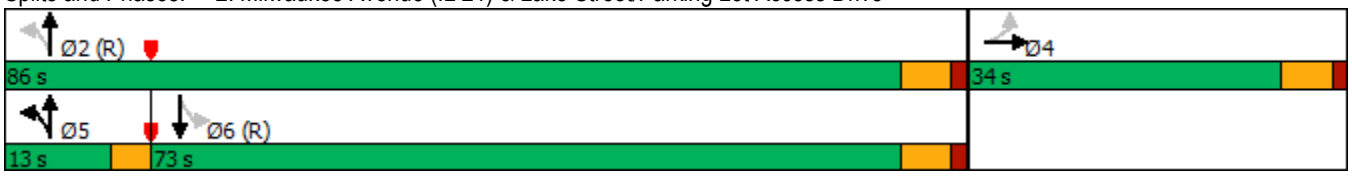
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	152	0	52	0	0	0	43	575	0	1	1122	168
Future Volume (vph)	152	0	52	0	0	0	43	575	0	1	1122	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	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		0.966									0.980	
Flt Protected		0.964						0.997				
Satd. Flow (prot)	0	1727	0	0	0	0	0	3480	0	0	3420	0
Flt Permitted		0.964						0.743			0.955	
Satd. Flow (perm)	0	1727	0	0	0	0	0	2594	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	212	0	0	0	0	0	644	0	0	1345	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)		20.8						87.2			69.7	
Actuated g/C Ratio		0.17						0.73			0.58	
v/c Ratio		0.71						0.33			0.71	
Control Delay		59.3						6.5			21.2	
Queue Delay		0.0						0.0			0.0	
Total Delay		59.3						6.5			21.2	
LOS		E						A			C	
Approach Delay		59.3						6.5			21.2	
Approach LOS		E						A			C	
Queue Length 50th (ft)		156						77			393	
Queue Length 95th (ft)		226						124			481	
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						1969			1895	
Starvation Cap Reductn		0						0			0	
Spillback Cap Reductn		0						0			0	
Storage Cap Reductn		0						0			0	
Reduced v/c Ratio		0.53						0.33			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: 20.6		Intersection LOS: C	
Intersection Capacity Utilization 71.9%		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	9.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	82	119	141	42	19	60	15	102	22	14	13
Future Vol, veh/h	11	82	119	141	42	19	60	15	102	22	14	13
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	13	93	135	160	48	22	68	17	116	25	16	15
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	9.5	10.3	9.6	8.7
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	34%	5%	70%	45%
Vol Thru, %	8%	39%	21%	29%
Vol Right, %	58%	56%	9%	27%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	177	212	202	49
LT Vol	60	11	141	22
Through Vol	15	82	42	14
RT Vol	102	119	19	13
Lane Flow Rate	201	241	230	56
Geometry Grp	1	1	1	1
Degree of Util (X)	0.267	0.3	0.316	0.08
Departure Headway (Hd)	4.784	4.487	4.951	5.199
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	744	795	721	682
Service Time	2.856	2.553	3.019	3.29
HCM Lane V/C Ratio	0.27	0.303	0.319	0.082
HCM Control Delay	9.6	9.5	10.3	8.7
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	1.1	1.3	1.4	0.3

Intersection	
Int Delay, s/veh	2.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	27	0	26	19	0	22
Future Vol, veh/h	27	0	26	19	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	28	0	27	20	0	23

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	60	37	0	0	47	0
Stage 1	37	-	-	-	-	-
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	947	1035	-	-	1560	-
Stage 1	985	-	-	-	-	-
Stage 2	1000	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	947	1035	-	-	1560	-
Mov Cap-2 Maneuver	947	-	-	-	-	-
Stage 1	985	-	-	-	-	-
Stage 2	1000	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	947	1560	-
HCM Lane V/C Ratio	-	-	0.03	-	-
HCM Control Delay (s)	-	-	8.9	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	3	0	714	1310	0
Future Vol, veh/h	0	3	0	714	1310	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	760	1394	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	697	-	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	202	209	2	2	1
Future Vol, veh/h	3	202	209	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	238	246	2	2	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	252	0	-	0	498	259
Stage 1	-	-	-	-	251	-
Stage 2	-	-	-	-	247	-
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	1358	-	-	-	578	888
Stage 1	-	-	-	-	851	-
Stage 2	-	-	-	-	799	-
Platoon blocked, %	1	-	-	-	1	1
Mov Cap-1 Maneuver	1353	-	-	-	573	879
Mov Cap-2 Maneuver	-	-	-	-	573	-
Stage 1	-	-	-	-	846	-
Stage 2	-	-	-	-	797	-

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)	1353	-	-	-	648
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	197	7	2	208	3	8
Future Vol, veh/h	197	7	2	208	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	229	8	2	242	3	9

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	249	0	491	247
Stage 1	-	-	-	-	245	-
Stage 2	-	-	-	-	246	-
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	-	-	1244	-	584	797
Stage 1	-	-	-	-	800	-
Stage 2	-	-	-	-	856	-
Platoon blocked, %	-	-		-	1	
Mov Cap-1 Maneuver	-	-	1232	-	577	788
Mov Cap-2 Maneuver	-	-	-	-	577	-
Stage 1	-	-	-	-	792	-
Stage 2	-	-	-	-	854	-

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)	717	-	-	1232	-
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	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	8	0	0	0	0	714	0	0	1296	17
Future Vol, veh/h	0	0	8	0	0	0	0	714	0	0	1296	17
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	9	0	0	0	0	760	0	0	1379	18

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1772	2164	700	-	-	398	1398	0	0	-	-	0
Stage 1	1389	1389	-	-	-	-	-	-	-	-	-	-
Stage 2	383	775	-	-	-	-	-	-	-	-	-	-
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	*153	*212	-	0	0	-	-	-	-	0	-	-
Stage 2	*738	*646	-	0	0	-	-	-	-	0	-	-
Platoon blocked, %	1	1				1		-	-		-	-
Mov Cap-1 Maneuver	*88	*55	386	-	-	*771	495	-	-	-	-	-
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)	495	-	-	386	-	-	-
HCM Lane V/C Ratio	-	-	-	0.022	-	-	-
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	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	204	2	9	202	0	0
Future Vol, veh/h	204	2	9	202	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	237	2	10	235	0	0

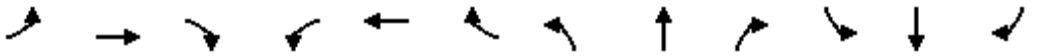
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	247	0	502	248
Stage 1	-	-	-	-	246	-
Stage 2	-	-	-	-	256	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1331	-	574	796
Stage 1	-	-	-	-	800	-
Stage 2	-	-	-	-	846	-
Platoon blocked, %	-	-		-	1	
Mov Cap-1 Maneuver	-	-	1322	-	564	789
Mov Cap-2 Maneuver	-	-	-	-	564	-
Stage 1	-	-	-	-	794	-
Stage 2	-	-	-	-	838	-

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)	-	-	-	1322	-
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 – Projected Conditi



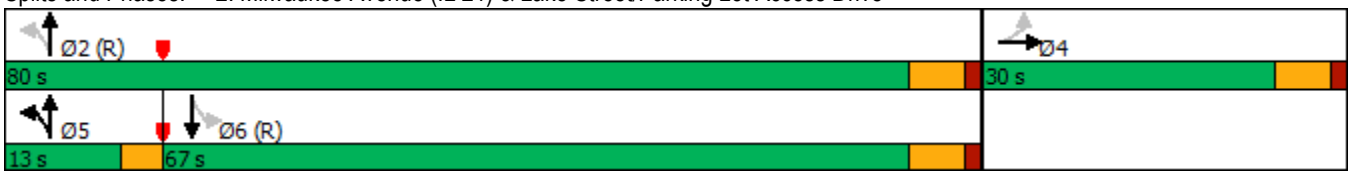
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	173	0	35	0	0	0	94	1226	1	1	962	117
Future Volume (vph)	173	0	35	0	0	0	94	1226	1	1	962	117
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	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						0.996				
Satd. Flow (prot)	0	1760	0	0	0	0	0	3562	0	0	3501	0
Flt Permitted		0.960						0.668			0.954	
Satd. Flow (perm)	0	1755	0	0	0	0	0	2389	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	213	0	0	0	0	0	1348	0	0	1102	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						0.73			0.60	
Control Delay		55.2						11.8			18.0	
Queue Delay		0.0						0.0			0.0	
Total Delay		55.2						11.8			18.0	
LOS		E						B			B	
Approach Delay		55.2						11.8			18.0	
Approach LOS		E						B			B	
Queue Length 50th (ft)		143						201			258	
Queue Length 95th (ft)		213						293			323	
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						1843			1852	
Starvation Cap Reductn		0						0			0	
Spillback Cap Reductn		0						0			0	
Storage Cap Reductn		0						0			0	
Reduced v/c Ratio		0.56						0.73			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: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 17.8		Intersection LOS: B	
Intersection Capacity Utilization 98.5%		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	12.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	52	68	60	74	23	131	31	105	36	38	16
Future Vol, veh/h	13	52	68	60	74	23	131	31	105	36	38	16
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	19	74	97	86	106	33	187	44	150	51	54	23
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	10.6	11.6	14.2	10.1
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	49%	10%	38%	40%
Vol Thru, %	12%	39%	47%	42%
Vol Right, %	39%	51%	15%	18%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	267	133	157	90
LT Vol	131	13	60	36
Through Vol	31	52	74	38
RT Vol	105	68	23	16
Lane Flow Rate	381	190	224	129
Geometry Grp	1	1	1	1
Degree of Util (X)	0.544	0.284	0.348	0.201
Departure Headway (Hd)	5.13	5.378	5.579	5.639
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	702	665	641	634
Service Time	3.173	3.432	3.632	3.698
HCM Lane V/C Ratio	0.543	0.286	0.349	0.203
HCM Control Delay	14.2	10.6	11.6	10.1
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	3.3	1.2	1.6	0.7

Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	0	38	29	0	70
Future Vol, veh/h	20	0	38	29	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	21	0	40	31	0	74

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	130	56	0	0	71	0
Stage 1	56	-	-	-	-	-
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	864	1011	-	-	1529	-
Stage 1	967	-	-	-	-	-
Stage 2	949	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	864	1011	-	-	1529	-
Mov Cap-2 Maneuver	864	-	-	-	-	-
Stage 1	967	-	-	-	-	-
Stage 2	949	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.3	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	864	1529	-
HCM Lane V/C Ratio	-	-	0.024	-	-
HCM Control Delay (s)	-	-	9.3	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	10	0	1414	1095	0
Future Vol, veh/h	0	10	0	1414	1095	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	1554	1203	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	602	-	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	203	197	14	5	2
Future Vol, veh/h	3	203	197	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	223	216	15	5	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	231	0	-	0	462	231
Stage 1	-	-	-	-	224	-
Stage 2	-	-	-	-	238	-
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	1381	-	-	-	606	914
Stage 1	-	-	-	-	873	-
Stage 2	-	-	-	-	806	-
Platoon blocked, %	1	-	-	-	1	1
Mov Cap-1 Maneuver	1381	-	-	-	604	908
Mov Cap-2 Maneuver	-	-	-	-	604	-
Stage 1	-	-	-	-	871	-
Stage 2	-	-	-	-	806	-

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)	1381	-	-	-	668
HCM Lane V/C Ratio	0.002	-	-	-	0.012
HCM Control Delay (s)	7.6	0	-	-	10.5
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	187	6	40	159	6	19
Future Vol, veh/h	187	6	40	159	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	217	7	47	185	7	22

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	235	0	511	239
Stage 1	-	-	-	-	232	-
Stage 2	-	-	-	-	279	-
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	-	-	1260	-	553	805
Stage 1	-	-	-	-	811	-
Stage 2	-	-	-	-	806	-
Platoon blocked, %	-	-		-	1	
Mov Cap-1 Maneuver	-	-	1248	-	525	793
Mov Cap-2 Maneuver	-	-	-	-	525	-
Stage 1	-	-	-	-	804	-
Stage 2	-	-	-	-	772	-

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)	706	-	-	1248	-
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	5	0	0	6	0	1408	0	0	1082	23
Future Vol, veh/h	0	0	5	0	0	6	0	1408	0	0	1082	23
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	5	0	0	7	0	1530	0	0	1176	25

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1991	2727	605	-	-	802	1205	0	0	-	-	0
Stage 1	1193	1193	-	-	-	-	-	-	-	-	-	-
Stage 2	798	1534	-	-	-	-	-	-	-	-	-	-
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	586	-	-	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	584	-	-	-	-	-
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)	584	-	-	445	474	-	-
HCM Lane V/C Ratio	-	-	-	0.012	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	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	193	0	8	157	0	0
Future Vol, veh/h	193	0	8	157	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	238	0	10	194	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	238	0	452	239
Stage 1	-	-	-	-	238	-
Stage 2	-	-	-	-	214	-
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	-	-	1341	-	604	805
Stage 1	-	-	-	-	806	-
Stage 2	-	-	-	-	869	-
Platoon blocked, %	-	-		-	1	
Mov Cap-1 Maneuver	-	-	1341	-	599	804
Mov Cap-2 Maneuver	-	-	-	-	599	-
Stage 1	-	-	-	-	806	-
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)	-	-	-	1341	-
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	-