

# Petition for Public Hearing PLANNED DEVELOPMENTS

YOU MUST PROVIDE THE FOLLOWING INFORMATION: IF ADDITIONAL SPACE IS NEEDED, ATTACH EXTRA PAGES TO THE PETITION.

Name of Development: Keystone Apartments				
Address/Location of Development: 1106 Madison Street, Oak Park, IL 60302  Please confirm address. Address form can be found at: https://www.oak-park.us/sites/default/files/forms/address-assignment-request-form.pdf				
Property Identification Number(s)(PIN): $\underline{16-07-322-024-0000}$ , $\underline{16-07-322-025-0000}$ , $\underline{16-07-322-026-0000}$				
Name of Property Owner(s): The Interfaith Housing Development Corporation of Chicago				
Address of Property Owner(s): 1106 Madison Street, Oak Park, IL 60302				
If Land Trust, name(s) of all beneficial owners: (A Certificate of Trust must be filed.) n/a				
Name of Applicant(s): The Interfaith Housing Development Corporation of Chicago (IHDC)  Applicant's Address: 411 S Wells Street, Suite 401, Chicago, IL 60607  Applicant's Phone Number: (312) 274-8200 x 25  E-Mail pvietti@ihdc.org				
Other:				
Project Contact: (if Different than Applicant) Perry Vietti				
Contact's Address: (same)  Contact's Phone Number: (same)  E-Mail (same)				
Other:				
Property Interest of Applicant:OwnerLegal Representative XContract PurchaserOther (Describe): IHDC has executed a Purchase and Sale agreement with the current owners, Fellowship Christian Church.				
Existing Zoning: MS - Madison Describe Proposal: Planned development that would allow IHDC to demolish the existing structure at 1106 Madison Street and newly construct a 5-story affordable housing development in its place.				

Proposed Planned Development Type:		
☑ Residential PD	☐ Non-Residential PD	☐ Mixed Use PD
Size of Parcel (from Plat of Survey): 8,5	925	Square Feet
Adjacent: Zoning Districts	Land Uses	
To the North: R-7	Alley and Residen	tial (single-family dwellings)
To the South:	Madison Street	
To the East: MS - Madison	Al's Grill (restaura	nt)
To the West: MS - Madison		urant)
	ntial ☐ Mixed Use ☐ 0	OTHER: story, currently used as worship space and offices
for Fellowship Christian Ch	nurch	
If Yes, how?		Planned Development?Yes XNo
Is the subject property located within an	v Historic District?	Yes X No
If Yes: ☐ Frank Lloyd Wright	•	□Gunderson
From what Section(s) of the Zoning Ordi	inance are you requesting (see attached)	approval / relief?
Explain why, in your opinion, the grant of contrary to the intent and purpose of the		prehensive Plan;

I (we) certify that all the above statements and the statements contained in any papers or plans submitted herewith are true to the best of my (our) knowledge and belief.

I (we) consent to the entry in or upon the premises described in this application by any authorized official of the Village of Oak Park for the purpose of securing information, posting, maintaining and removing such notices as may be required by law.

Perry Vietti

(Printed Name) Applicant

(Signature) Applicant

06/20/2024

Date

Wiley Samuels

(Printed Name) Owner

(Signature) Owner

MON., 24th- JUNE, 2024: 10:25 Am

Owner's Signature must be notarized

SUBSCRIBED AND SWORN TO BEFORE ME THIS

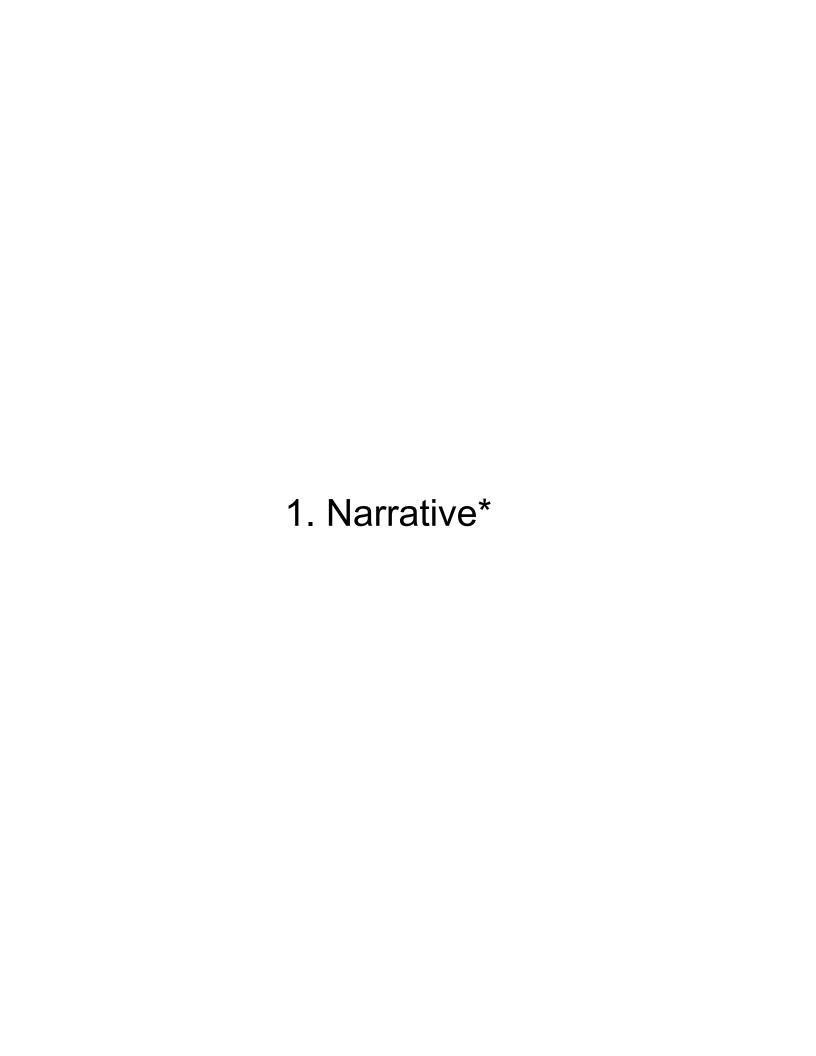
DAY OF JUNE 202

(Notary Public)

MAUREEN KANTER
OFFICIAL SEAL
Notery Public, State of Illinois
My Commission Expires
July 22, 2025

Updated August 2021

Petition for Public Hearing Page 3 of 3



## **Keystone Apartments**

1106 Madison Street, Oak Park, IL

#### **Background on Development Partnership**

Interfaith Housing Development Corporation's (IHDC) mission is to promote and develop long-term affordable housing for low-income, underserved populations in collaboration with local communities. IHD is recognized by the U.S. Department of Housing and Urban Development as a Community Housing Development Organization (CHDO). As a nonprofit 501(c)3 CHDO, IHDC develops or facilitates the development of high-quality, financially and environmentally sustainable, affordable housing for low-income individuals and families that provide a safe, healthy and thriving environment with supportive services as a foundational strategy.

In its 31-year history, IHDC has created 20 affordable housing developments, contributing 1,103 affordable rental units to the Chicago metropolitan area. Capital budgets have ranged from a total development cost of \$1.5 million to \$22.4 million. In line with IHDC's commitment to the long-term success of its developments, IHDC's property management affiliate, Interfaith Management Services (IMS), currently operates 15 of the developments which IHDC has created.

Housing Forward was founded in 1992 by a group of congregations and lay people to provide emergency shelter services for those experiencing homelessness in the communities of Oak Park, River Forest and Forest Park. Housing Forward's mission has since evolved from simply responding to the symptoms of homelessness to providing a wide range of permanent solutions to prevent the occurrence or reoccurrence of homelessness. Today, their mission is to transition people from housing crisis to housing stability to further the effort of ending homelessness in west suburban Cook County.

Housing Forward is a recognized leader in suburban Cook County in offering a coordinated response that allows people experiencing a housing crisis to quickly resolve their situation. They offer comprehensive, wrap-around support from the onset of a financial or housing crisis to its resolution,

preventing homelessness whenever possible and providing permanent, stable housing for the most vulnerable members of our community. Each year, more than 2,000 individuals and families rely on Housing Forward's services. Since Housing Forward's inception, they have served over 20,000 individuals experiencing homelessness or at risk of homelessness.

IHDC and Housing Forward not only have a combined sixty years of experience serving Cook County's most vulnerable, but also have experience working with each other on a 72-unit housing development in the Village of Maywood.

#### **Project Description**

IHDC and Housing Forward propose developing the site where Fellowship Christian Church currently resides, 1106 Madison Street in Oak Park, into a 5-story building that contains 36 affordable studio and one-bedroom apartments. As depicted in the attached plan, The units of this building will be targeted to provide permanent supportive housing to individuals with a chronic disability through community partnerships and onsite social services coordinated and provided by Housing Forward.

# of Units	Area Medium Income (AMI)	Unity Type (Subsidy)	Rent
12	50%	Studios	\$966
4	50%	One- Bedroom	\$1,035
20	30%	One-Bedroom (BCBSIL)	\$1,250

#### **Zoning Relief**

In order to develop 1106 Madison Street into 36 affordable housing units for the Village of Oak Park, IHDC and Housing Forward request the following relief based upon the Zoning Summary (attached) conducted by Weese Langley Weese LTD Architects:

Standard	MS District Guidelines	Proposed	Relief
Minimum Lot Area	750 sq. ft./DU	248 sq. ft./DU	502 sq. ft./DU
Maximum Building Height	50'-0''	56'-4"	6'-4"
Street Setback	3' to 5'	0'-0"	3'
Car Parking	36 space (1 per DU)	6 spaces (1 per 6 DU)	30 spaces
Maximum Light Regulations	1.0 fc	5.7 fc	4.7 fc





#### **Compensating Benefits**

Meetings with the Village Planning Staff indicated that IHDC and Housing Forward meet the compensating benefits requirement of the Village Zoning Ordinance by making the proposed development 100% affordable, supportive housing. This aligns with the Village's incentive priority of creating more affordable housing opportunities.

#### Village Improvement

Meetings with Village Staff and other public entities identified the following necessary Village improvements that IHDC and Housing Forward agree to take on during the development of Keystone Apartments on Madison Street:

- IHDC will repair of the sidewalk in front of the development site on Madison Street,
- IHDC will repair the alley in the rear of the property from the site's Western property line to Wisconsin Street, to the East,
- IHDC will work with the Public Works Department to approve an entry site on Wisconsin Street for all construction vehicles/equipment to minimize damage to the surrounding roadways.

#### **Public Art**

IHDC and Housing Forward propose to meet the public art requirement of the Village of Oak Park Zoning Ordinance, Article 14.5, Section E(2), by incorporating artist-designed tiles on the South (front) elevation of the building into the architectural design of the building.

#### **Sustainability Standards**

The proposed development, Keystone Apartments, will meet the Village of Oak Park's sustainability standards by incorporating the following optional elements to achieve certification as an Enterprise 2020 Green Community:

- Qualifying as an increased compact development by exceeding the residential density of the census block group,
- Ensuring all units and common spaces have broadband internet access,
- Incorporating water saving fixtures,
- Including photovoltaic-ready space on the roof,
- Being an all-electric building,
- Selecting environmentally responsible building materials

#### Other Planned Development Standards

- 1. The proposed development and the use or combination of uses is consistent with the goals and objectives of the Comprehensive Plan and has been considered in relation to any other plans adopted by the Village Board. This development creates more affordable housing opportunities, which is a stated goal of the Comprehensive Plan. All 36 units in the development will be affordable to individuals who are at or below 30% of the area median income.
- 2. The establishment, maintenance, or operation of the use or combination of uses will not be materially detrimental to or endanger the public health, safety and welfare of the Village.

  This development has carefully contemplated a construction logistics plan that will have the most minimal possible

This development has carefully contemplated a construction logistics plan that will have the most minimal possible impact on its neighbors and the public. Furthermore, the operations of this development include budgeting for a 24/7 crisis intervention staff member that will contribute to the overall public health, safety and welfare of the neighborhood. Moreover, the overall goal of this project is to provide permanent supportive housing for individuals who currently live on the streets or places not meant for human habitation.

3. Adequate utilities, road access, parking, drainage, police and fire service, and other necessary facilities already exist or will be provided to serve the proposed development, including access for fire, sanitation, and maintenance equipment.

Meetings with the Police Chief and Fire Chief have been conducted to approve our proposed safety measures. Furthermore, the project engineer has worked with information provided by village staff to create adequate utility connections for this project site that are easily accessible for routine maintenance and safety inspections.

4. Adequate ingress and egress to the planned development site already exists or will be provided in a manner that adequately addresses additional traffic congestion in the public streets and promotes a safe and comfortable pedestrian environment.

Per the traffic impact study conducted for this application, it is not anticipated that this development will significantly impact the traffic congestion in the area. That being said, we will provide parking on site and through additional off-site leases to minimize the impact this project will have on the surrounding parking availability, and we will maintain a well-kept, uninhibited sidewalk in front of the property to ensure safe and comfortable pedestrian foot traffic. During construction, deliveries and removals from the project site will all be conducted from the alley in the back of the site.

- 5. The proposed use or combination of uses will not substantially diminish the use or enjoyment of other property in the vicinity for those uses or combination of uses that are permitted by the Zoning Ordinance of the Village. The direct neighbors to our property include two restaurants and the RUSH Oak Park Hospital campus. Our development proposes to increase the amount of pedestrian foot traffic for these three institutions by creating healthy living space that provides easy access to healthcare opportunities for those who need it, as well as walking access to neighborhood necessities such as grocery, retail and restaurants.
- 6. The proposed design and use or combination of uses will complement the character of the surrounding neighborhood.

The architectural plan of this building incorporates features of neighboring properties, including the height of the building which is complementary to that of other buildings on the street within a couple blocks radius, and the design and art features of the building which are similar to those found elsewhere in the neighborhood. This synergy has been confirmed by the consulting architects recommended by the Village for the PD application process.

- 7. The applicant has the financial and technical capacity to complete the proposed use or combination of uses. In the request for a waiver from item #3e on the Application Submittal list, a table detailing the proposed sources for the project is included. As detailed in the letter of request, these financial sources cannot be committed until proper zoning is awarded to the site. A timeline of applications and awards is included in the table.
- 8. The proposed development is economically feasible and does not pose a current or potential burden upon the services, tax base, or other economic factors that affect the financial operations of the Village, except to the extent that such burden is balanced by the benefit derived by the Village from the proposed use.

  All funding for this development will come from public sources specifically set aside for the development of affordable housing opportunities in Cook County. There will be no tax or service burden upon the Village, and any Village sources devoted to this project will be applied for and awarded based on the criteria set forth by the awarding agency.

3b. Sustainability Standards*



### **CRITERIA CHECKLIST**

This checklist provides an overview of the technical requirements within the Enterprise Green Communities Criteria. To achieve Enterprise Green Communities Certification, all projects must achieve compliance with the Criteria mandatory measures applicable to that construction type. **New Construction projects must also achieve at least 40 optional points, and Substantial and Moderate Rehab projects must also achieve at least 35 optional points.** 

These projects that also comply with Criterion 5.2b or Criterion 5.4 will be recognized with Enterprise Green Communities Certification Plus.

			Communities Certification Plus.
YES / NO	OPTIONAL POINTS		1. INTEGRATIVE DESIGN
Yes		М	1.1 Integrative Design: Project Priorities Survey Complete the Project Priorities Survey, which can be found in the Appendix.
Yes		M	1.2 Integrative Design: Charrettes and Coordination Meetings
			Develop an integrative design process that moves the outputs of the Project Priorities Survey into action through a series of collaborative meetings. Prioritize multi-benefit strategies. Assign responsibility within your design and development teams for accountability.
Yes		М	1.3 Integrative Design: Documentation
			Include Enterprise Green Communities Criteria information in your contract documents and construction specifications (Division 1 Section 01 81 13 Sustainable Design Requirements) as necessary for the construction team to understand the requirements and how they will be verified. Ensure, and indicate, that the drawings and specifications have been generated to be compliant and meet the certification goals.
Yes		М	1.4 Integrative Design: Construction Management Create, implement, and document your contractor/subcontractor education plan to ensure that all persons working on-site fully understand their role in achieving the project objectives. Include a summary of the Project Priorities Survey (Criterion 1.1), the sustainability goals, and anticipated roles of each party in regards to the performance expected of the project. Attach and reference this training plan to Division 1 Section 01 81 13 Sustainable Design Requirements. Include timeline estimates for performance testing and verification schedules in the overall construction schedule. As relevant, review requirements for Criteria 8.1, 8.2, and 8.3, and begin populating these documents with relevant information from design and construction.
		12 or 15	1.5 Design for Health and Well-Being: Health Action Plan Follow Steps 1-6 of the Health Action Plan framework per the full criterion. [12 points with extra 3 points for Step 7] This includes: 1) Commit to embedding health into the project lifecycle; 2) Partner with a project health professional; 3) Collect and analyze community health data; 4) Engage with community stakeholders to prioritize health data and strategies; 5) Identify strategies to address those health issues; 6) Create an implementation plan; and 7) Create a monitoring plan.
		10	1.6 Resilient Communities: Multi-Hazard Risk/Vulnerability Assessment
			Conduct a four-part assessment (social, physical, functional, strategy) to identify critical risk factors of your property and implement at least two sets of strategies to enable the project to adapt to, and mitigate, climate related or seismic risks. See full criterion for more guidance.
		8	1.7 Resilient Communities: Strengthening Cultural Resilience Integrate community and resident participation in the development processes so that the built environment honors cultural identities, resident voices, and community histories. Option 1: Complete a Cultural Resilience Assessment OR Option 2: Convene a Cultural Advisory Group
_			CRITERIA 1 SUBTOTAL  4 of 4 Mandatory Criteria 0 Optional Points
YES / NO	OPTIONAL POINTS		2. LOCATION + NEIGHBORHOOD FABRIC
Yes		M	<ul> <li>2.1 Sensitive Site Protection</li> <li>All projects must:</li> <li>1. Protect floodplain functions (e.g., storage, habitat, water quality) by limiting new development within the 100-year floodplain of all types of watercourses.</li> <li>2. Conserve and protect aquatic ecosystems, including wetlands and deepwater habitats, that provide critical ecosystem functions for fish, other wildlife, and people.</li> <li>3. Protect ecosystem function by avoiding the development of areas that contain habitat for plant and animal species identified as threatened or endangered.</li> <li>4. Conserve the most productive agricultural soils by protecting prime farmland, unique farmland, and farmland of statewide or local importance.</li> <li>If your site contains any of these ecologically sensitive features, follow the specific Requirements under that subheading.</li> </ul>
Yes		М	2.2 Connections to Existing Development and Infrastructure (Mandatory for New Construction projects that do not qualify as Rural/Tribal/Small Town)  Locate the project on a site with access to existing roads, water, sewers, and other infrastructure and within or contiguous to (having at least 25% of the perimeter bordering) existing development. Connect the project to the existing pedestrian network. For sites over 5 acres, provide connections to the adjacent street network at least every 800 feet. Tie all planned bike paths to existing bike paths.
Yes		М	2.3 Compact Development (Mandatory for New Construction) At a minimum, build to the residential density (dwelling units/acre) of the census block group where the project is located. In Rural/Tribal/Small Town locations that do not have zoning requirements: Build to a minimum net density of 5 units per acre for single-family houses; 10 units per acre for multifamily buildings, single and two-story; and 15 units per acre for multifamily buildings greater than two-stories.
	7	5 or 7	2.4 Increased Compact Development  Exceed the residential density (dwelling units/acre) of the census block group in which your project is located. Exceed by 2x for [5 points]; exceed by 3x for [7 points]. In Rural/Tribal/Small Towns that do not have zoning requirements, build to a minimum net density of 7.5 units per acre for single-family houses; 12 units per acre for multifamily buildings, single and two-story; and 20 units per acre for multifamily buildings greater than two stories. [5 points]

buildings greater than two stories. [5 points]

Yes		М	2.5 Proximity to Services and Community Resources (Mandatory for New Construction) Locate the project within a 0.5-mile walk distance of at least four, or a 1-mile walk distance of at least seven, of the listed services. For projects that qualify as Rural/Tribal/Small Town, locate the project within 5 miles of at least four of the listed services.
NA		М	2.6 Preservation of and Access to Open Space for Rural/Tribal/Small Town (Mandatory for New Construction Rural/Tribal/Small Town) Option 1: Locate the project within a 0.25-mile walk distance of dedicated public open space that is a minimum of 0.75 acres; at least 80% of which unpaved.  OR Option 2: Set aside a minimum of 4.0% (minimum of 0.25 acres) of the total position are set as a set as a side of the set as a minimum of 0.75 acres; at least 80% of which unpaved.
			Option 2: Set aside a minimum of 10% (minimum of 0.25 acres) of the total project acreage as open and accessible to all residents; at least 80% of which unpaved.
		6 max	<ul> <li>2.7 Preservation of and Access to Open Space</li> <li>Option 1: Locate the project within a 0.25-mile walk distance of dedicated open space that is a minimum of 0.75 acres; at least 80% of which unpaved.</li> <li>OR</li> <li>Option 2: Set aside a percentage of permanent open space for use by all residents; at least 80% of which unpaved. 25% [2 points]; 35% [4 points]; 45% + written statement of preservation/ conservation policy [6 points].</li> </ul>
Yes			2.8 Access to Transit  (Mandatory for New Construction projects that do not qualify as Rural/Tribal/Small Town; Optional for all other project types)
		M	Mandatory: New Construction, not Rural/Tribal/Small Town  Locate projects within a 0.5-mile walk distance of transit services (bus, rail and/or ferry), constituting at least 45 or more transit rides per weekday, with some type of weekend service.
		2	Optional: New Construction, not Rural/Tribal/Small Town  Locate the project along dedicated bike trails or lanes (Class I, II, or IV) that lead to high-quality transit services (100 trips per day) within 3 miles. [2 points]
		2, 6, 8	Optional: Rehabilitation, not Rural/Tribal/Small Town  Locate projects within a 0.5-mile walk distance of public transit services (bus, rail and/or ferry), constituting at least 45 or more transit rides per weekday, with some type of weekend service. [6 points] Locate the project along dedicated bike trails or lanes (Class I, II, or IV) that lead to high-quality transit services (100 trips per day) within 3 miles. [2 points]
		6	Optional: New Construction and Rehabilitation, Rural/Tribal/Small Town  Locate the project within 0.5 mile walk distance of public transit services with at least 45 rides per weekday and some weekend service. OR, Install at least two charging stations for electric vehicles. OR, Locate the project with 5 miles of one of the following transit options:  1) vehicle share program; 2) dial-a-ride program; 3) employer vanpool; 4) park-and-ride; 5) public/private regional transportation.
		2-8	2.9 Improving Connectivity to the Community  Improve access to community amenities through at least one of the options incentivizing biking mobility or improving access to transit.
		5 max	2.10 Passive Solar Heating/Cooling  Design and build with passive solar design, orientation, and shading that meet the guidelines specified.
		6	2.11 Adaptive Reuse of Buildings Rehabilitate and adapt an existing structure that was not previously used as housing. Design the project to adapt, renovate, or reuse at least 50% of the existing structure and envelope.
		6	2.12 Access to Fresh, Local Foods Provide residents and staff with access to fresh, local foods through one of the following options: Option 1: Neighborhood Farms and Gardens Option 2: Community-Supported Agriculture Option 3: Proximity to Farmers Market
		8	2.13 Advanced Certification: Site Planning, Design and Management  Locate building(s) within a community that is certified in LEED for Neighborhood Development, LEED for Cities and Communities, Living  Community Challenge, or SITES.
		6 max	2.14 Local Economic Development and Community Wealth Creation
		2	Demonstrate that local preference for construction employment and subcontractor hiring was part of your bidding process, and how it functioned during construction.
		3	OR Demonstrate that you achieved at least 20% local employment. OR
		3	Provide physical space for small business, nonprofits, and/or skills and workforce education.
Yes		М	2.15a Access to Broadband: Broadband Ready (Mandatory for New Construction and Substantial Rehab Projects in Rural/Tribal/Small Town Locations) Incorporate broadband infrastructure so that when broadband service comes to a community, the property can be easily connected. Include a network of mini-ducts or conduit throughout the building, extending from the expected communications access point to each network termination point in the building.
	6	6	2.15b Access to Broadband: Connectivity  Ensure all units and common spaces in the property have broadband internet access with at least a speed of 25/3 mbs.
-			#REF! Mandatory Criteria  13 Optional Points
YES / NO	OPTIONAL POINTS		3. SITE IMPROVEMENT
Yes		M	3.1 Environmental Remediation  Determine whether there are any hazardous materials present on the site through one of the four methods listed. Mitigate any contaminants found.

Yes				
	]	M	3.2 Minimization of Disturbance during Staging and Construction  For sites >1 acre, implement EPA's National Pollutant Discharge Elimination System Stormwater Discharges from Construction Activities guidance, or local requirements, whichever is more stringent. For sites with an area <= 1, follow guidance in full criterion.	
Yes		M	3.3 Ecosystem Services/Landscape (Mandatory, if providing landscaping)	
	]		If providing plantings, all must be native or climate-appropriate (adapted) to the region and appropriate to the site,Äôs soil and microclimate. Do not introduce any invasive plant species. Plant, seed, or xeriscape all disturbed areas.	
Yes		M	3.4 Surface Stormwater Management (Mandatory for New Construction; Mandatory for Substantial and Moderate Rehab projects if land disturbed is >= 5,000 sq.ft.)	
			Treat or retain on-site precipitation equivalent to the 60th percentile precipitation event. Where not feasible due to geotechnical issues, soil conditions, or the size of the site, treat or retain the maximum volume possible.	
		10 max	3.5 Surface Stormwater Management Through on-site infiltration, evapotranspiration, and rainwater harvesting, retain precipitation volume from 70% precipitation event [6 points], 80% precipitation event [8 points], or 90% precipitation event [10 points].	
Yes		M	3.6 Efficient Irrigation and Water Reuse	
			(Mandatory, if permanent irrigation is utilized)  If irrigation is utilized, install an efficient irrigation system per the requirements listed.	
		4 or 6	3.7 Efficient Irrigation and Water Reuse (Optional, if irrigation is utilized) Meet the requirements of Criterion 3.6	
			AND:  Option 1: Install an efficient irrigation system equipped with a WaterSense labeled weather- based irrigation controller (WBIC)	
			OR  Option 2: At least 50% of the site's irrigation satisfied by water use from the sources listed.	
			CRITERIA 3 SUBTOTAL 5 of 5 Mandatory Criteria 0 Optional Points	
			o Optional Folities	
YES / NO	OPTIONAL POINTS		4. WATER	
Wa.a				
Yes		M	4.1 Water-Conserving Fixtures	
			Reduce total indoor water consumption by at least 20% compared to baseline indoor water consumption chart. Any new toilet, showerhead, and/or lavatory faucet must be WaterSense certified. For all single-family homes and all dwelling units in buildings three stories or fewer, the supply pressure may not exceed 60 psi.	
	3			
		6 max	4.2 Advanced Water Conservation  Reduce total indoor water consumption by at least 30% compared to baseline indoor water consumption chart. Any new toilet, showerhead,	
			and/or lavatory faucet must be WaterSense certified.	
Yes		NA 2	4.3 Water Quality	
		M, 3	Mandatory/Optional: Mandatory for Substantial Rehabs of buildings built before 1986; Optional for all other building types: Replace lead service lines [3 points]	
		M	Mandatory: For multifamily buildings with either a cooling tower, a centralized hot water system, or 10+ stories: Develop a Legionella water management program	
		8	Optional: Test and remediate as indicated for lead, nitrates, arsenic, and coliform bacteria	
		4	4.4 Monitoring Water Consumption and Leaks	
			Conduct pressure-loss tests and visual inspections to determine if there are leaks; fix leaks.  AND	
			Install an advanced water monitoring and leak detection system capable of identifying and shutting water off during anomalous water events.	
			OR Install a device to separately monitor water consumption of each cold branch off the apartment line riser for each dwelling unit or each cold	
			water riser and the domestic hot water cold water feed for each building or each toilet that allows remote monitor readings; common laundry facilities; boiler makeup water; outdoor water consumption; and water consumption in any non- residential space.	
			45.5%	
		4	4.5 Efficient Plumbing Layout and Design  Store no more than 0.5 gallon of water in any piping/manifold between the fixture and the water heating source or recirculation line. No	
			more than 0.6 gallon of water shall be collected from the fixture before a 10-degree Fahrenheit rise in temperature is observed. Recirculation systems must be demand-initiated.	
		6 max	4.6 Non-Potable Water Reuse	
			Harvest, treat, and reuse rainwater and/or greywater to meet a portion of the project,Äôs non-potable water needs: 10% reuse [3 points]; 20% reuse [4 points]; 30% reuse [5 points]; 40% reuse [6 points].	
		8	4.7 Access to Potable Water During Emergencies	
		0	Provide residents with ready access to potable water in the event of an emergency that disrupts normal access to potable water, including disruptions related to power outages that prevent pumping water to upper floors of multifamily buildings or pumping of water from on-site wells, per one of the three options listed.	
			CRITERIA 4 SUBTOTAL	
			2 of 2 Mandatory Criteria 3 Optional Points	
YES / NO	OPTIONAL POINTS		5. OPERATING ENERGY	
Yes		M	5.1a Building Performance Standard	

_			(Mandatory for New Construction) Certify all buildings with residential units in the project through either ENERGY STAR Multifamily New Construction, ENERGY STAR Manufactured Homes, and/or ENERGY STAR Certified Homes as relevant. AND Provide projected operating energy use intensity and projected operating building emissions intensity.
No		M	5.1b Building Performance Standard (Mandatory for Rehab)
			Provide projected operating energy use intensity and projected operating building emissions intensity.
			AND Conduct commissioning for compartmentalization, insulation installation, and HVAC systems as indicated.
			AND one of the following options: - ERI Option: <= HERS 80 for each dwelling unit. Exception for some Rehabs built before 1980.
			- ASHRAE Option: Energy performance of the completed building equivalent to, or better than, ASHRAE 90.1-2013 using an energy model created by a qualified energy services provider according to Appendix G 90.1-2016.
		12 max	5.2a Moving to Zero Energy: Additional Reductions in Energy Use (Not available for projects using prescriptive path for Criterion 5.1a or for projects following Criterion 5.2b or 5.4.)
			Projects in CZ 1-4A following this criterion must also comply with Criterion 7.8.  Design and construct a building that is projected to be more efficient than what is required by Criteria 5.1a/b. Achieve HERS score of 5 lower
			than required by 5.1a/b if following ERI path for compliance OR 5% greater efficiency than required if following ASHRAE path for 5.1a/b compliance [5 points].
			Additional 1 point for each additional 2-point decrease in HERS score required by Criteria 5.1a/b if following ERI path for compliance OR for 1% greater efficiency if following ASHRAE path for Criteria 5.1a/b, up to a maximum of 12 optional points.
		12-15	5.2b Moving to Zero Energy: Near Zero Certification
			[Automatic Qualification for Enterprise Green Communities Certification Plus] (Not available for projects following Criterion 5.2a or 5.4.)
			Projects in CZ 1-4A following this criterion must also comply with Criterion 7.8. Certify the project in a program that requires advanced levels of building envelope performance such as DOE ZERH [12 points] and/or PHI Classic or PHIUS+ [15 points].
	3	3-6	5.3a Moving to Zero Energy: Photovoltaic/Solar Hot Water Ready
			(Not available for projects following Criterion 5.3b or 5.4.)  Orient, design, engineer, wire, and/or plumb the development through the Photovoltaic Ready pathway or Solar Hot Water Ready Pathway to accommodate installation of photovoltaic (PV) or solar hot water system in the future.
		8 max	5.3b Moving to Zero Energy: Renewable Energy
			(Not available for projects following Criterion 5.3a or 5.4) Install renewable energy source to provide a specified percentage of the project's estimated source energy demand. See full criterion for
		4-8	allowable sources.  Option 1: For percentage of total project energy consumption provided by renewable energy.
		1-5	OR  Option 2: For percentage of common area meter energy consumption provided by renewable energy.
		24	5.4 Achieving Zero Energy
			[Automatic Qualification for Enterprise Green Communities Certification Plus] (Not available for projects following Criterion 5.2a, 5.2b, 5.3a, or 5.3b.) Projects in CZ 1-4A following this criterion must also comply with Criterion 7.8. Achieve Zero Energy performance through one of the following options:
			Option 1: Certify each building in the project to DOE Zero Energy Ready Home program or PHI Plus AND Either install renewables and/or procure renewable energy, which in sum will produce as much, or more, energy in a given year than the project is modeled to consume.  OR
			Option 2: Certify each building in the project in a program that requires zero energy performance such as PHIUS+ Source Zero, PHI Plus, PHI Premium, ILFI,Äôs Zero Energy Petal, Zero Carbon Petal, or Living Building Certification.
		5 max	5.5a Moving to Zero Carbon: All-Electric Ready
			(Not available for projects following Criterion 5.5b) Ensure the project has adequate electric service and has been designed and wired to allow for a seamless switch to electricity as a fuel source in the future for the following uses: space heating [1 point], space cooling [1 point], water heating (DHW) [1 point], clothes dryers [1 point], equipment for cooking [1 point].
	15	15	5.5b Moving to Zero Carbon: All Electric
		15	(Not available for projects following Criterion 5.5a)  No combustion equipment used as part of the building project; the project is all-electric.
Yes		M	5.6 Sizing of Heating and Cooling Equipment (Mandatory for Substantial and Moderate Rehabs that include replacement of heating and cooling equipment. Not relevant for projects following 5.1a, 5.2b, or 5.4.)  Size and select heating and cooling equipment in accordance with ACCA manuals J and S OR in accordance with the ASHRAE Handbook of Fundamentals
Yes		M	5.7 ENERGY STAR Appliances (Mandatory for Substantial and Moderate Rehabs providing appliances. Not relevant for projects following 5.1a, 5.2b, or 5.4.) Install ENERGY STAR clothes washers, dishwashers, and refrigerators. If appliances will not be installed or replaced at this time, specify that at the time of installation or replacement, ENERGY STAR models must be used via Criterion 8.1 and Criterion 8.4.
		M	5.8 Lighting (Mandatory for all lighting within New Construction and Substantial Rehab projects. Mandatory for new lighting in Moderate Rehab projects.) Follow the guidance for high-efficacy permanently installed lighting and other characteristics for recessed light fixtures, lighting controls, lighting power density, and exterior lighting.
		8	5.9 Resilient Energy Systems: Floodproofing
			(Not relevant for Rehab projects in Special Flood Hazard Areas)  Conduct floodproofing of lower floors, including perimeter floodproofing (barriers/shields). Design and install building systems as specified by the full criterion so that the operation of those systems will not be grossly affected in case of a flood.
		8	5.10 Resilient Energy Systems: Critical Loads Loads Provide emergency power to serve at least three critical energy loads as described by the full criterion.  Option 1: Islandable PV system OP
-			OR Option 2: Efficient generator

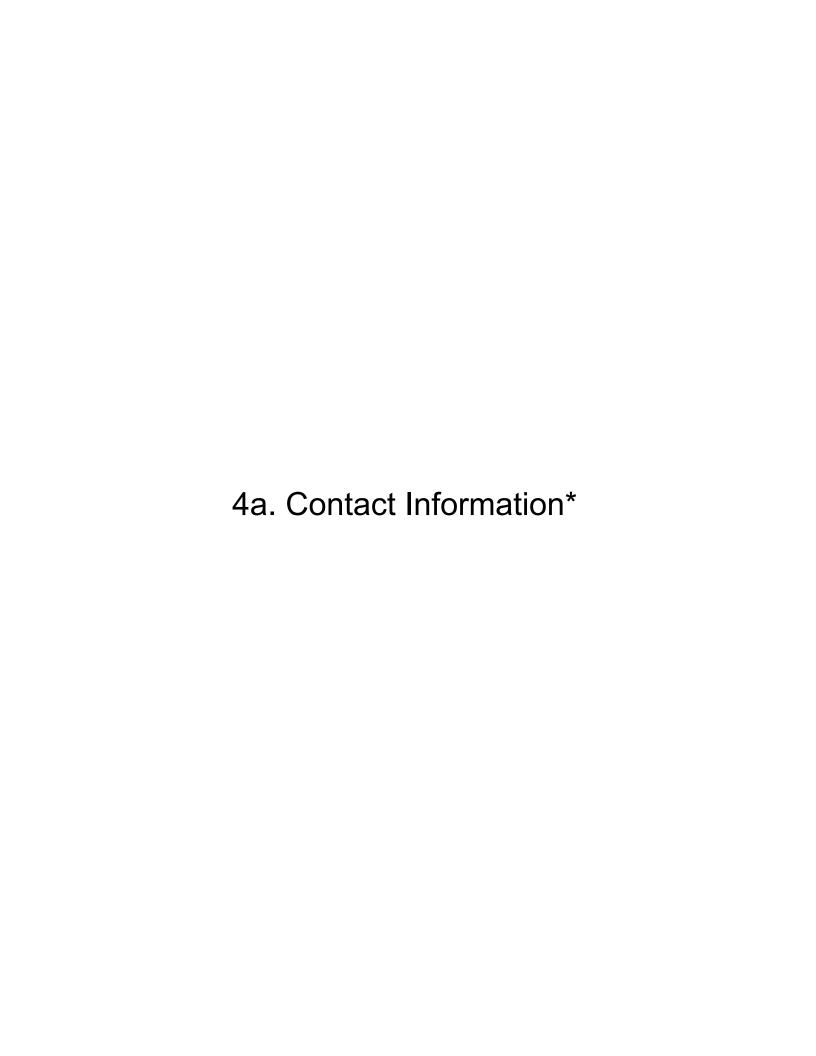
CRITERIA 5 SUBTOTAL
4 of 5 Mandatory Criteria
18 Optional Points

YES / NO	OPTIONAL POINTS		6. MATERIALS
		8 max	6.1 Ingredient Transparency for Material Health Install products that have publicly disclosed inventories characterized and screened to 1,000 ppm or better:  1 point per 5 installed Declare or HPD products from at least three different product categories  1 point per 2 installed Declare or HPD products in any of these categories: adhesives, sealants, windows  1 point per each product with third-party verified HPD or third-party verified Declare label  2 points per each product with third-party verified HPD or third-party verified Declare label
		3 max	6.2 Recycled Content and Ingredient Transparency  Use building products that feature, and disclose, their recycled content. The building product must make up 75% by weight or cost of a project category for the project and be composed of at least 25% post-consumer recycled content.
		8 max	6.3 Chemical Hazard Optimization Install products that have third-party verification of optimization to 100 ppm or better per the options listed within the full criterion.
Yes		M 15 max	6.4 Healthier Material Selection Select all interior paints, coatings, primers, and wallpaper; interior adhesives and sealants; flooring; insulation; and composite wood as specified. Optional points also available.
	6	<b>12</b> max	6.5 Environmentally Responsible Material Selection Select concrete, steel, or insulation with a publicly disclosed EPD [3 points], Install a green or cool roof [3 points], use reflective paving [3 points], and/or use FSC certified wood [3 points]. Refer to criterion for specifics.
Yes		M	6.6 Bath, Kitchen, Laundry Surfaces (Mandatory for New Construction and Substantial Rehab. Moderate Rehabs that do not include work in the shower and tub areas are exempt from the shower and tub enclosure requirement.)  Use materials that have durable, cleanable surfaces throughout bathrooms, kitchens, and laundry rooms.  Use moisture-resistant backing materials per ASTM # D 6329 or 3273 behind tub/shower enclosures, apart from one-piece fiberglass enclosures which are exempt.
		4 max	<ul> <li>6.7 Regional Materials</li> <li>Use products that were extracted, processed, and manufactured within 500 miles of the project for a minimum of 90%, based on weight or on cost, of the amount of the product category installed. Select any or all of these options (every two compliant materials can qualify for 1 point):</li> <li>Framing Cladding (e.g. siding, masonry, roofing)</li> <li>Flooring Concrete/cement and aggregate</li> <li>Drywall/interior sheathing</li> </ul>
Yes		M	6.8 Managing Moisture: Foundations (Mandatory for all New Construction projects and all Rehab projects with either basement and/or crawl space foundations) Install capillary breaks and vapor retarders that meet specified criteria appropriate for the foundation type.
Yes		M	6.9 Managing Moisture: Roofing and Wall Systems  (Mandatory for all Rehab projects that include deficiencies in or include replacing particular assemblies called out below. New Construction projects are considered compliant per Criterion 5.1.)  Provide water drainage away from walls, window, and roofs by implementing the list of techniques.
Yes		M	6.10 Construction Waste Management
			(6 max) Develop and implement a waste management plan that reduces non-hazardous construction and demolition waste through recycling,
		6 max	salvaging, or diversion strategies through one of the three options. Achieve optional points by going above and beyond the requirement.
		2	6.11 Recycling Storage For projects with municipal recycling infrastructure and/or haulers, provide separate bins for the collection of trash and recycling for each dwelling unit and all shared community rooms.
			OR  For projects without that infrastructure, advocate to the local waste hauler or municipality for regular collection of recyclables.
_			CRITERIA 6 SUBTOTAL 5 of 5 Mandatory Criteria 6 Optional Points
YES / NO	OPTIONAL POINTS		7. HEALTHY LIVING ENVIRONMENT
Yes		M	7.1 Radon Mitigation (Mandatory for New Construction and Substantial Rehab) For New Construction in EPA Zone 1 areas, install passive radon-resistant features below the slab and a vertical vent pipe with junction box within 10 feet of an electrical outlet in case an active system should prove necessary in the future. For Substantial Rehab projects in EPA Zone 1, test before and after the retrofit and mitigate per the specified protocols.
Yes		M	7.2 Reduce Lead Hazards in Pre-1978 Buildings (Mandatory for Substantial Rehab of Buildings Constructed Before 1978)  Conduct lead risk assessment or inspection to identify lead hazards. Control identified lead hazards using lead abatement or interim controls, using lead-safe work practices that minimize and contain dust.
Yes		M	7.3 Combustion Equipment

For New Construction and Rehab projects: Specify power-vented or direct-vent equipment when installing any new combustion appliance for space or water heating that will be located within the conditioned space. If there are any combustion appliances within the conditioned space, install one hard-wired carbon monoxide (CO) alarm with battery backup function for each sleeping zone, placed per National Fire Protection Association (NFPA) 72. For Rehabs: If there is any combustion equipment located within the conditioned space for space or water heating that is not powervented or direct-vent and that is not scheduled for replacement, conduct combustion safety testing prior to and after the retrofit; remediate Yes M 7.4 Garage Isolation • Provide a continuous air barrier between the conditioned space and any garage space to prevent the migration of any contaminants into the living space. Visually inspect common walls and ceilings between attached garages and living spaces to ensure that they are air-sealed before insulation is installed. • Do not install ductwork or air handling equipment for the conditioned space in a garage. • Fix all connecting doors between conditioned space and garage with gaskets or make airtight. • Install one hard-wired CO alarm with battery backup function for each sleeping zone of the project, placed per NFPA 72 unless the garage is mechanically ventilated or an open parking structure. Yes M 7.5 Integrated Pest Management Seal all wall, floor, and joint penetrations with low-VOC caulking or other appropriate nontoxic sealing methods to prevent pest entry. Yes 7.6 Smoke-Free Policy (Mandatory and Optional) Mandatory: Implement and enforce a smoke-free policy in all common areas and within a 25-foot perimeter around the exterior of all residential buildings. Lease language must prohibit smoking in these locations and provide a graduated enforcement policy. Make the smokefree policy readily available. 10 Optional: Expand the policy above to include all indoor spaces in the property. Yes M 7.7 Ventilation (Mandatory for New Construction and Substantial Rehab; Optional for Moderate Rehab) For each dwelling unit in full accordance with ASHRAE 62.2-2010, install: 12 max • A local mechanical exhaust system in each bathroom [3 points if Moderate Rehab] • A local mechanical exhaust system in each kitchen [3 points if Moderate Rehab] A whole-house mechanical ventilation system [3 points if Moderate Rehab] Verify these flow rates are either within +/- 15 CFM or +/- 15% of design value. For each multifamily building of four or more stories, in full accordance with ASHRAE- $\pm$ 62.1-2010, install: • A mechanical ventilation system for all hallways and common spaces [3 points if Moderate Rehab] For all project types, in addition to the above requirements: • All systems and ductwork must be installed per manufacturer's recommendations 2 All bathroom fans must be ENERGY STAR-labeled and wired for adequate run-time. • If using central ventilation systems with rooftop fans, each fan must be direct-drive and variable-speed with speed controller mounted near the fan. Fans with design CFM 300-2000 must also have an ECM motor. Yes M or 5 7.8 Dehumidification (Mandatory for properties in Climate Zones 1A, 2A, 3A, and 4A following Criterion 5.2a, 5.2b, or 5.4. Optional for all other Option 1: Design, select, and install supplemental dehumidification equipment to keep relative humidity OR Option 2: Equip all dwelling units with dedicated space, drain, and electrical hook-ups for permanent supplemental dehumidification systems to be installed if needed and install interior RH monitoring equipment as described. 7.9 Construction Pollution Management 3 Option 1: Earn the EPA Indoor airPlus label OR Option 2: In all dwelling units, seal all heating, cooling, and ventilation return and supply floor ducts and returns throughout construction to prevent construction debris from entering. Flush all dwelling units after completion of construction and prior to occupancy for either 48 hours or with at least 14,000 ft3 per ft2 of floor area, then replace all air handling equipment filters. 3 7.10 Noise Reduction Option 1: Test and demonstrate that noise levels in bedrooms meet 30 dB LAeq (continuous) and 45 dB LAmax, (single sound). Option 2: Provide a noise abatement plan specific to the site covering general noise mitigation techniques in accordance with 24 CFR 51B. OR Option 3: Ensure all exterior wall and party wall penetrations are sealed with acoustical sealant, all party walls and floor/ceiling assemblies Must comply with 7.11, 7.12, or have an STC rating of at least 55, and exterior windows and doors in projects near a significant exterior noise source have an STC rating of at least 35 7.13 8 7.11 Active Design: Promoting Physical Activity (All projects must comply with at least one of either Criterion 7.11, 7.12, or 7.13. Points are not available for that criterion, but, are available for projects that meet two or three of these criteria.) Option 1: Encouraging Everyday Stair Usage (buildings that include stairs as the only means to travel from one floor to another are not eligible for this option.) Provide a staircase that is accessible and visible from the main lobby and is visible within a 25-foot walking distance from any point in the lobby per the specifications listed. Place point-of-decision signage. Option 2: Activity Spaces. Provide on-site dedicated recreation space with exercise or play opportunities for adults and/or children that is open and accessible to all residents; see criterion for specifics. 8 7.12 Beyond ADA: Universal Design (All projects must comply with at least one of either Criterion 7.11, 7.12, or 7.13. Points are not available for that criterion, but, are available for projects that meet two or three of these criteria.) Select and implement at least one of the Options with at least three different strategies in at least 75% units. Option 1: Create welcoming and accessible spaces that encourage equitable use and social connections. Option 2: Create spaces that are easy and intuitive to use and navigate. Option 3: Promote safety and create spaces that allow for human error. Option 4: Create spaces that can be accessed and used with minimal physical effort. Option 5: Create spaces with the appropriate size and space to allow for use, whatever the user's form of mobility, size, or posture. 7.13 Healing-Centered Design (All projects must comply with at least one of either Criterion 7.11, 7.12, or 7.13. Points are not available for that criterion, but, are available for projects that meet two or three of these criteria.) Select and implement at least two of the Options with at least two different strategies listed in at least 75% units. Option 1: Provide an environment that promotes feelings of real and perceived safety. Option 2: Create flexible spaces that allow for personalization and/or manipulation to meet individual and community needs. Option 3: Connect residents and staff to a living landscape and the natural environment. Option 4: Utilize art and culture in project design and programming and promote social connectedness.

YES / NO	OPTIONAL POINTS		8. OPERATIONS, MAINTENANCE + RESIDENT ENGAGEMENT
Yes		M	8.1 Building Operations & Maintenance Manual and Plan (For all Multifamily projects) Develop a manual with thorough building operations and maintenance (O&M) guidance and a complementary plan. The manual and plan should be developed over the course of the project design, development, and construction stages, and should include sections/chapters addressing the list of topics.
Yes		M	8.2 Emergency Management Manual (For all Multifamily projects) Provide a manual on emergency operations targeted toward operations and maintenance staff and other building-level personnel. The manual should address responses to various types of emergencies, leading with those that have the greatest probability of negatively affecting the project. The manual should provide guidance as to how to sustain the delivery of adequate housing throughout an emergency and cover a range of topics, including but not limited to:  • communication plans for staff and residents • useful contact information for public utility and other service providers • infrastructure and building, "shutdown" procedures
Yes		М	<ul> <li>plan for regular testing of backup energy systems, if these exist</li> <li>8.3 Resident Manual</li> <li>Provide a guide for homeowners and renters that explains the intent, benefits, use, and maintenance of their home's green features and practices. The Resident Manual should encourage green and healthy activities per the list of topics.</li> </ul>
Yes		M	8.4 Walk-Throughs and Orientations to Property Operation  Provide a comprehensive walk-through and orientation for all residents, property manager(s), and buildings operations staff.
Yes		М	8.5 Energy and Water Data Collection and Monitoring  For rental properties, upload project energy and water performance data in an online utility benchmarking platform annually for at least five years from time of construction completion per one of the four methods provided; grant Enterprise view access for that period. For owner-occupied units, collect and monitor utility data in a manner that allows for easy access and review.
			CRITERIA 8 SUBTOTAL 5 of 5 Mandatory Criteria 0 Optional Points
			TOTAL #REF! Mandatory Criteria 40 Optional Points

4.	Owner	Information*



#### **Contact Information**

#### Applicant: The Interfaith Housing Development Corporation of Chicago

Represented by: Perry Vietti, President

Address: 411 S. Wells Street, Suite 401, Chicago, IL 60607

Phone Number: 312/274-8200 ext. 25

E-mail: pvietti@ihdc.org

#### Social Services Partner: Housing Forward

Represented by: Lynda Schueler, CEO

Address: 1851 S. 9th Avenue, Maywood, IL 60153

Phone Number: 708/338-1724 ext. 223 E-mail: lschueler@housingforward.org

#### **Property Owner: Fellowship Christian Church**

Represented by: Heriberto (Ed) Ruiz

Address: 1106 Madison Street, Oak Park, IL 60301

Phone Number: 312/610-0370

E-mail: <a href="mailto:eruiz@r4cre.com">eruiz@r4cre.com</a>

5. Property Information\*

5a. Property Restrictions\* - N/A

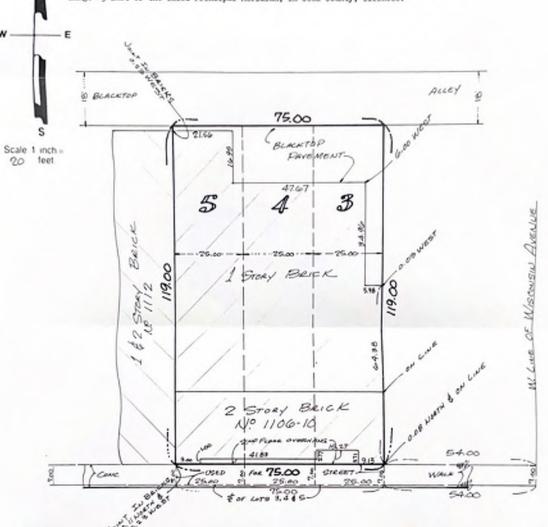
5b. Plat of Survey\*

## PLAT OF SURVEY NORTHWEST SURVEY SERVICE

685-4077 685-4078

4425 W. IRVING PARK RD. CHICAGO, ILLINOIS 60641

Lots 3, 4 and 5 in Subdivision of Lots 65 to 68 both inclusive, 71, 72 and Alley between in Block 5 in Scoville and Niles Addition to Cak Park in Section 7, Township 39 North, Range 13 East of the Third Principal Meridian, in Cook County, Illinois.



MADISON

STREET

Order No	97607	_
Date	gust20, 1997	_
0.0.00	Datwicis H. Lan S. Suppl	

State of Binors
County of Cook

I. John A. Way: a Prof.

II. Land Surveyor do hereby certify that a survey of
the above described property has been made under
my supervision and that the pital hereon drawn is a
correct representation of said survey corrected to a
temperature of 52° Fahrenheil.

PROFILL LAND SUPPREYOR

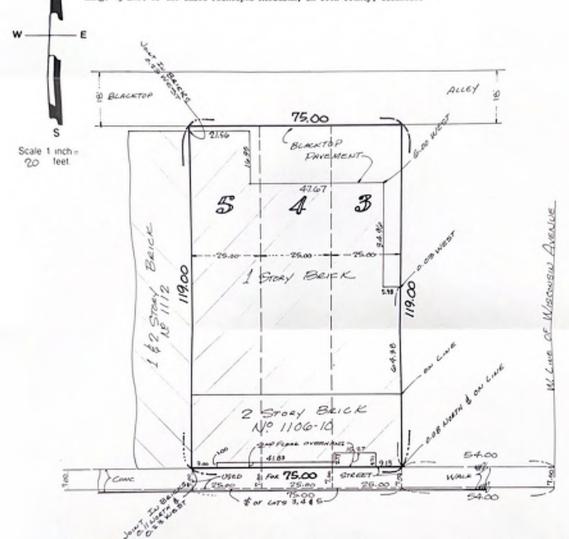
Compare all points before building and at once report any difference

## PLAT OF SURVEY SERVICE

685-4077 685-4078

4425 W. IRVING PARK RD. CHICAGO, ILLINOIS 60641

Lote 3, 4 and 5 in Subdivision of Lote 65 to 68 both inclusive, 71, 72 and Alley between in Block 5 in Scoville and Niles Addition to Oak Park in Section 7, Township 39 North, Earge 13 East of the Third Principal Meridian, in Cook County, Illinois.



MADISON

STREET

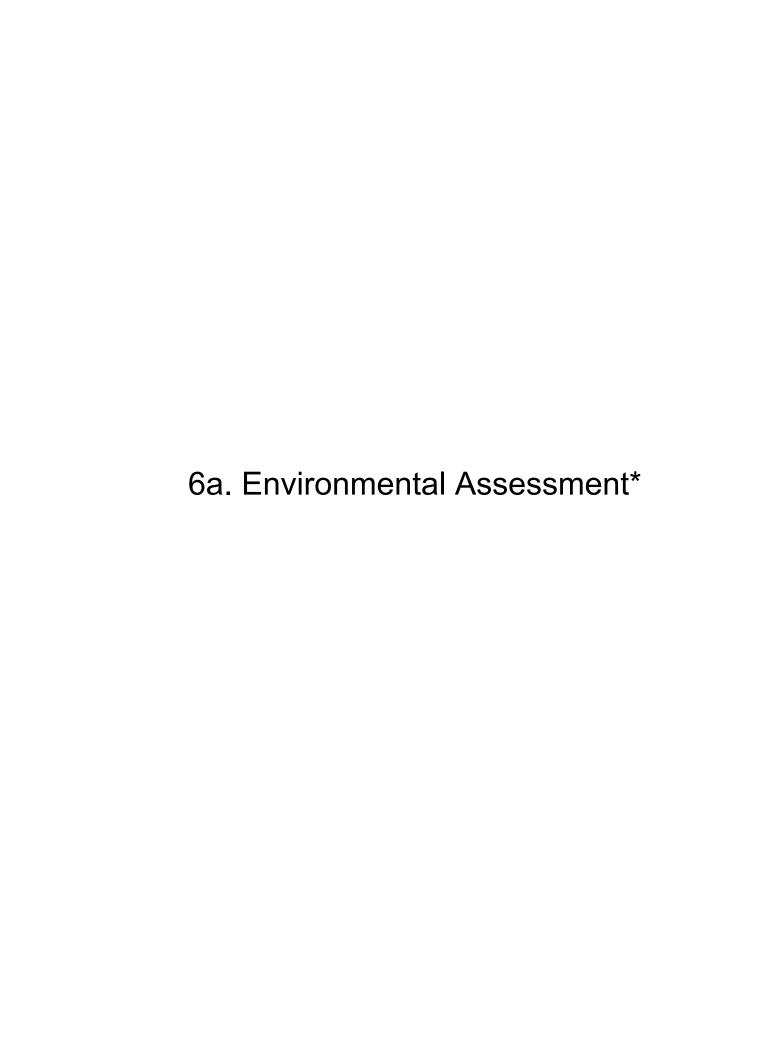
State of Illinois

Order No.	97607	
Date&	gust20, 1997	
	Supplied to Lond Language	

John a Nay



6. Reports and Studies\*





Direct Dial: 312.207.5700 E-Mail: dan@kplus.com

February 21, 2024

Interfaith Housing Development Corporation of Chicago Suite 401 411 S. Wells Chicago, IL 60607

Re: Asbestos Inspection 1106 Madison Street Oak Park, IL 60302

A Pre-Renovation Asbestos Survey was implemented in accordance with the Asbestos National Emissions Standard for Hazardous Air Pollutants (NESHAP) as the Subject Property is slated for renovations. The purpose of the Asbestos NESHAP regulation is to protect the public's health by minimizing the release of asbestos fibers during activities that would disturb asbestos-containing materials (ACMs) as well as to make sure the proper work practices are conducted during such activities.

During the asbestos investigation, K Plus looked for evidence of any asbestos containing materials. Specifically, K-Plus concentrated on identifying suspect materials sprayed or troweled on ceilings and walls; insulation on pipes, boilers, and other mechanical equipment; and miscellaneous materials such as ceiling and floor tiles. During the asbestos investigation, Ms. Jessica Madsen, a certified asbestos inspector (License No. 100-10448) worked to assess suspect ACM, categorize and characterize the suspect ACM, and collect representative samples of select materials to laboratory testing. Inaccessible areas (those locations where inspection access is not permitted or requires a considerable amount of mechanical or structural disassembly) were not evaluated during this Phase I ESA. Inaccessible areas include, but are not limited to, pipe chases behind solid walls and ceilings, the interiors of machinery and equipment, and the interior of the building's water sewer system, which may contain transite piping.

Asbestos NESHAP regulations classify ACMs as either Friable or Non-Friable ACMs. Friable ACMs are those materials that, when dry, can be crushed, pulverized, or reduced to powder by mere hand pressure. Non-Friable ACMs are those materials that, when dry, cannot be crushed, pulverized, or reduced to powder by hand pressure alone. Non-Friable ACMs are further classified as either Category I or Category II. Category I Non-Friable ACMs include floor coverings, mastic for floor coverings, and asphalt roofing materials among other things. Category II Non-Friable ACMs include all other non-friable ACMs, such as transite-type panels.

1106 Madison Street, Oak Park, IL Project No. 34003 February 21, 2024 Page 2 of 3

During the assessment of the property, suspect building materials were identified, sampled, and tested for asbestos. The lab data is provided in Appendix 1. Below is a summary table of the sampling and analysis conducted at the Subject Property:

Sample No.	Material (Classification)	Location of Material	Condition Friable Yes/No		NESHAP Category	Asbestos Content
S1	Drywall Ceiling (M)	1 <sup>st</sup> floor – W meeting area	Damaged	amaged N I		ND
S2	Drywall Ceiling brown back (M)	Same as above 2 <sup>nd</sup> layer above	Damaged	N	I	ND
S3	12" brown VFT (M)	1 <sup>st</sup> floor rear entrance/hall	Damaged	N	I	15%
S3M	Mastic for above (M)	Same as above	Damaged	N	I	ND
S4	Red brick pattern over brown VFT (M)	1 <sup>st</sup> floor rear entrance/hall	Damaged	N	I	20%
S5	Hot Water Heater elbow (T)	1st floor furnace room Damaged N I		I	ND	
S6	Fireproof brick ceiling (T)	1st floor furnace room	Damaged	N	I	ND
S7	12" Tan VFT (M)	2 <sup>nd</sup> floor – furnace room	Damaged	N	I	ND
S7M	Mastic for above (M)	Same as above	Damaged	N	I	5%
S8	12" Green VFT (M)	2 <sup>nd</sup> floor – furnace room	Damaged	N	I	ND
S8M	Mastic for above (M)	Same as above	Damaged	N	I	15%
S9	Top layer white linoleum	2 <sup>nd</sup> floor — kitchen	Damaged	N	I	ND
S10	Bottom layer yellow linoleum	2 <sup>nd</sup> floor - kitchen	Damaged	N	I	20%

s.f./l.f. = square feet/linear feet, ND = Non Detect, NA = No Analysis, NS = Not Sampled , VFT = Vinyl Floor Tile, \* = Positive ACM by association, M= Miscellaneous, S= Surfacing, T= Thermal System Insulation, RACM= Regulated ACM, Cat. I= Category I Non-friable ACM, Cat. II= Category II Non-friable ACM.



1106 Madison Street, Oak Park, IL Project No. 34003 February 21, 2024 Page 3 of 3

As noted in the above summary table and attached laboratory report, in cases where the mastic is positive but the Vinyl Floor Tile (VFT) is not or floor tile is positive and mastic is not; as they not able to be separated during the removal process; K-Plus recommends treating all the floor tile found at the Subject Property as positive for ACM containing materials.

If you have any questions concerning this matter, please call me.

Sincerely,

K-PLUS ENGINEERING

Daniel M. Caplice, P.E.

License No. 100-0488

Attachment (1)





## Bulk Asbestos Analysis

(EPA Method 40CFR, Part 763, Appendix E to Subpart E and EPA 600/R-93-116, Visual Area Estimation)

K-Plus Engineering Services, LLC **Client ID:** L2068 Jessica Report Number: B356909 15 Salt Creek Lane **Date Received:** 02/15/24 Suite 410 **Date Analyzed:** 02/16/24 Hinsdale, IL 60521 **Date Printed:** 02/16/24 First Reported: 02/16/24

Job ID/Site: 34003 Fellowship Christian  Date(s) Collected: 02/09/2024	Church - Oak	Park, IL			SGSFL Job II Total Samples Total Samples	Submitted:	10 10
Sample ID	Lab Number	Asbestos r Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
S1 Layer: White Paint Layer: Beige Plaster Layer: Tan Plaster	91023371		ND ND ND				
Total Composite Values of Fibrous Com	ponents:	Asbestos (ND)					
S2 Layer: Brown Fibrous Backing Layer: White Drywall	91023372		ND ND				
Total Composite Values of Fibrous Com Cellulose (7 %)	ponents:	Asbestos (ND)					
S3 Layer: Brown Tile Layer: Black Mastic	91023373	Chrysotile	15 % ND				
Total Composite Values of Fibrous Com	nponents:	Asbestos (15%)					
S4 Layer: Red Tile Total Composite Values of Fibrous Com	91023374 apponents:	Chrysotile <b>Asbestos (20%)</b>	20 %				
S5  Layer: Yellow Fibrous Material  Layer: Brown Fibrous Backing  Layer: Silver Foil	91023375		ND ND ND				
Total Composite Values of Fibrous Com Cellulose (10 %) Fibrous Glass (80	•	Asbestos (ND)					
S6 Layer: White Plaster Layer: Grey Plaster	91023376		ND ND				
Total Composite Values of Fibrous Com Cellulose (Trace)	nponents:	Asbestos (ND)					

**Report Number:** B356909 **Date Printed:** 02/16/24

Client Name: K-Plus H	Engineering	Services,	LLC
-----------------------	-------------	-----------	-----

Sample ID I	Lab Number		Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
S7 9	01023377						
Layer: Grey Tile			ND				
Layer: Black Mastic		Chrysotile	5 %				
Total Composite Values of Fibrous Compo	onents: A	Asbestos (Trace)					
<b>S8</b>	01023378						
Layer: Green Tile			ND				
Layer: Black Mastic		Chrysotile	15 %				
Total Composite Values of Fibrous Compo	onents: A	Asbestos (Trace)					
<b>S9</b>	1023379						
Layer: White Veneer			ND				
Layer: White Linoleum			ND				
Total Composite Values of Fibrous Compo Cellulose (40 %)	onents: A	Asbestos (ND)					
<b>S10</b>	01023380						
Layer: Yellow Veneer			ND				
Layer: Beige Linoleum		Chrysotile	20 %				
Total Composite Values of Fibrous Compo Cellulose (40 %)	onents: A	Asbestos (14%)					



Karen Buehler, Laboratory Supervisor, Chicago Laboratory

Note: Limit of Quantification ('LOQ') = 1%. 'Trace' denotes the presence of asbestos below the LOQ. 'ND' = 'None Detected'.

Analytical results and reports are generated by SGS Forensic Laboratories (SGSFL) at the request of and for the exclusive use of the person or entity (client) named on such report. Results, reports or copies of same will not be released by SGSFL to any third party without prior written request from client. This report applies only to the sample(s) tested. Supporting laboratory documentation is available upon request. This report must not be reproduced except in full, unless approved by SGSFL. The client is solely responsible for the use and interpretation of test results and reports requested from SGSFL. This report must not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. Government. SGSFL is not able to assess the degree of hazard resulting from materials analyzed. SGS Forensic Laboratories reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified. All samples were received in acceptable condition unless otherwise noted.



### PHASE I ENVIRONMENTAL SITE ASSESSMENT

Fellowship Christian Church 1106 Madison Street Oak Park, Illinois 60302 Cook County



Interfaith Housing Development Corporation of Chicago 411 S. Wells Street, Suite 401 Chicago, Illinois 60607

February 20, 2024

#### **EXECUTIVE SUMMARY**

K-Plus Engineering Services, LLC (K-Plus) has completed a Phase I Environmental Site Assessment (ESA) of the commercial property located at 1106 Madison Street in Oak Park, Illinois. This Phase I ESA was conducted in conformance with ASTM Practice E 1527-21, Standard Practice for Environmental Site Assessments. The purpose of this Phase I ESA was to determine whether any Recognized Environmental Conditions (RECs), as defined in ASTM 1527-21, exist on the Subject Property.

**Visual Reconnaissance** - The Subject Property was located within an MS (business) zoned area of Oak Park, Illinois. At the time of our site reconnaissance, the Subject Property consisted of approximately 0.2 acres and was developed with a partial two-story and single-story structure. The Subject Property appeared to be in fair overall condition, with no evidence of significant spills or staining noted on the asphalt/concrete paved areas.

**Historical Information** – Historical information reviewed indicated the Subject Property has a history of development dating back to the 1940s. The current building/site features have been noted as developed at the site since the early 1960s. The current building was noted as previously occupied by a funeral home from the 1960s to 1990s, and by a religious organization from the late 1990s through at least 2020.

**Database Information** – The Subject Property was not identified on the environmental databases. No off-site properties were noted as posing a significant environmental risk to the Subject Property.

#### FINDINGS/CONCLUSIONS/RECOMMENDATIONS

Per ASTM Practice E1527-21, Recognized Environmental Condition (REC) means "(1) the presence of hazardous substances or petroleum products in, on or at the subject property due to a release to the environment; (2) the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment; or (3) the presence of hazardous substances or petroleum products in, on, or at the subject property under conditions that pose a material threat of a future release to the environment."

K-Plus did not identify any evidence or RECs

Per ASTM Practice E1527-21, Controlled Recognized Environmental Condition means a REC "that has been addressed to the satisfaction of the applicable regulatory authority or authorities, with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls."

• K-Plus did not identify any evidence of CRECs.

### Phase I Environmental Site Assessment

Fellowship Christian Church 1106 Madison Street Oak Park, Cook County, Illinois 60302

Per ASTM Practice E1527-21, Historical Recognized Environmental Condition means "a previous release of hazardous substances or petroleum products affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities and meeting unrestricted use criteria established by the applicable regulatory authority or authorities without subjecting the subject property to any required controls."

• K-Plus did not identify any evidence of HRECs.

The following de minimis risk was identified for the Subject Property:

• Asbestos containing materials were identified at the Subject Property; specifically, the floor tile and mastic found in various locations on both the first and second floors were identified as positive for asbestos. Any materials of these materials encountered during renovations should be handled by a licensed abatement contractor.

Details of our evaluation and recommendations are discussed in the following sections of this report. The Executive Summary, while an integral part of a Phase I ESA report, is not intended to be a stand-alone report, and thus the entire report must be read to fully understand the findings and recommendations for the Subject Property.

6c. Market Feasibility Report\*

Mr. Perry Vietti, President Interfaith Housing Development Corporation 411 S. Wells Street, Suite 401 Chicago, Illinois 60607

And

Illinois Housing and Development Authority 111 E Wacker Dr. Ste 1000 Chicago, Illinois 60601

February 2, 2024

Re: Site and Market (Feasibility) Study for the proposed 36-unit Keystone Apartments 1106 Madison Street Oak Park, IL 60302

At your request, we have performed a Site and Market Study of the multifamily rental market in southeastern Cook County, Illinois. This study meets the requirements of the Illinois Housing Development Authority Standards for Site and Market Studies (Updated 2024-2025). We certify that we are members of the National Council of Housing Market Analysts (NCHMA), formerly the National Council of Affordable Housing Market Analysts.

The focus of this report is to research the market conditions of the affordable rental housing market in the delineated Primary Market Area, encompassing portions of the near west Cook County Municipalities of, Oak Park, Cicero, Berwyn, Maywood, Melrose Park, and a small western most portion of the City of Chicago. We have focused our research surrounding the major thoroughfares connecting all of these municipalities which include Harlem Avenue, North Avenue Eisenhower Expressway and Cicero Avenue. The designated Primary Market Area (PMA) has delineated boundaries of just north of the North Avenue and Harlem Avenue intersection to the north, the Cicero Avenue and Eisenhower Expressway intersection to the east, just south of the Harlem Avenue and Roosevelt Road intersection to the south and just west of the 25th Avenue and Eisenhower Expressway intersection to the west. The delineated Primary Market Area covers approximately 17.9 square miles.

It is important to mention that the north side of the Village of Oak Park (zip code 60302) and the north side of neighboring Forest Park (zip code 60305) are somewhat affluent areas with median household incomes of \$88,147 and \$89,284 respectively. These household income benchmarks exceed the identical benchmarks for Cook County and exceed the identical benchmarks for the immediate submarket as well. Therefore, our delineation of the PMA seeks to somewhat mitigate these areas in this analysis.

The developer, Interfaith Housing Development Corporation and Housing Forward propose the new construction of a 5-story, 36-unit affordable housing development at 1106 Madison Street targeted toward homeless individuals with a chronic disability. The following unit mix has been designed for this space.

The proposed subject property will be known as the Keystone Apartments, 1106 Madison Street Oak Park, IL 60302. This development will comprise new construction of 36 total units: (12)

Studio-1 BA units measuring 420 SF, (4) 1 BR-1 BA units measuring 544 SF and (20) 1 BR-1 BA units (BCBS) measuring 525 SF in a single, 5-story building, on a redevelopment site which formerly a place of worship. The proposed subject property has a gross site size of 8,925 (0.205 acres) and is comprised of three main property identification numbers: 16-07-322-024-0000, 16-07-322-025-0000, and 16-07-322-026-0000. The subject site has 75 feet of frontage along the north side of Madison Street and is 190 feet deep.

Interfaith Housing Development Corporation (IHDC) and Housing Forward have partnered on this development project in suburban Cook County to improve access to affordable housing in the Village of Oak Park.

In its 31-year tenure, IHDC has created 20 affordable housing developments, contributing 1,103 affordable rental units to the Chicago metropolitan area. Housing Forward is a recognized leader in suburban Cook County in offering a coordinated response that allows people experiencing a housing crisis to quickly resolve their situation.

In December of 2023, Blue Cross Blue Shield of Illinois (BCBS) committed an unprecedented \$300,000, renewing every year for 5 years for a total of \$1.5 million in rental subsidies for this development. This funding will provide rental assistance for 20 of the one-bedroom units under the condition that they target homeless individuals that are Medicaid eligible through BCBS and have an annual income of 30% AMI.

Housing Forward intends to apply to Suburban Cook County Continuum of Care (CoC) for the remaining 16 rental subsidies. Until those subsidies are awarded, the unsubsidized units will be designated to serve individuals with an income of 50% AMI.

The delineated Primary Market Area, encompassing portions of the near west Cook County Municipalities of, Oak Park, Cicero, Berwyn, Maywood, Melrose Park, and a small western most portion of the City of Chicago. The delineated Primary Market Area covers approximately 17.9 square miles.

Based on the findings of this study, Great Realty Advisors recommends that the subject property to be approved, as proposed. As the subject is a proposed affordable housing development located in Cook County, the present demand for affordable housing in Cook County is particularly germane to this analysis.

The newest release of the State of Rental Housing in Cook County (Institute for Housing Studies at DePaul University, Chicago, Illinois), updates key data on changing rental demand, the supply of rental housing, and how these dynamics are affecting access to affordable rental housing for Cook County's lowest income households. Countywide, changes in the affordability gap continue to be driven by reduced demand for affordable rental units. Throughout the recession and recovery period, IHS has documented the mismatch between the number of households in Cook County that need affordable rental housing and the number of units that are affordable. This "affordability gap" is defined as the difference between the demand for rental housing by lower-income households earning 150 percent of poverty, or \$37,641 annually, and the supply of units that would be affordable at 30 percent of a lower-income household's income—about \$940 per month. Affordable demand also includes renter households earning more than 150 percent of the poverty level, but live in affordable units.

The affordability gap is useful as a broad indicator to highlight the mismatch between the supply of and demand for affordable rental housing countywide, but the affordability gap does not

necessarily directly translate to the number of units that need to be built to solve the region's affordability challenges. Rather, a range of policy interventions are needed to address this issue including helping to stabilize lower-income households through increased access to voucher-based subsidy, new construction of affordable units in stronger markets, and different innovative solutions to preserving existing affordable units in neighborhoods with a shrinking affordable supply.

The DePaul University Institute for Housing Studies report shows "Chicago's declining affordable rental stock has contributed to the city's large affordability gap, exacerbating housing cost burdens and limiting housing opportunities for lower-income renter households. Affordability pressures rooted in a shrinking affordable rental stock may also undermine neighborhood diversity, contribute to growing inequities, and heighten displacement risk. Within the last few years, 12 out of 13 Chicago submarkets with a shrinking share of affordable rentals also lost lower-income renters.

This report contains, to the fullest extent possible and practical, explanations of the data, reasoning, and analyses that were used to develop the opinions contained herein. The report also includes a thorough analysis of the scope of work of the study, regional and local demographic and economic studies, and, market analyses including conclusions. The depth of discussion contained in this report is specific to the needs of our client.

We are competent to prepare this market rent study having over 15 years of experience in the affordable housing market in Chicago. We are under contract for this specific assignment and we have no other side deals, agreements, or financial considerations with the lender or others in connection with this transaction.

Respectfully Submitted,

Richard I. Knitter, MAI, CPM

Principal

IL State Certified Appraiser # 553-000586

Sherman T. Baker

Appraiser

IL State Certified Appraiser # 553-002238

## **Table of Contents**

I. Project Summary Information	5
II. Field Observations	8
III. Market Area Characteristics	6
IV. Housing Market Characteristics	4
V. Affordability/Demand	7
VI. Impact on Other Affordable Housing and Market Rate Housing	2
VII. Conclusions and Recommendations	2
VIII Enclosures	3
Subject site and neighborhood photographs	
IHDA's Site and Market Study Summary Form	
2024 IHDA Multi-Family Production (Surrounding Municipalities Areas)	
IX. 2024-2025 Site and Market Study Summary Form/ Site and Market Review	6

Surrounding 2024 IHDA Multi-Family Production PMA Census Tracts IllinoisReportCard.com School Data; Oak Park ESD 97 Project Location Map Qualifications NCHMA Certificate of Professional Designation

### I. PROJECT SUMMARY INFORMATION

<u>Developer Information</u>: The developer is Interfaith Housing Development Corporation (IHDC). IHDC's mission is to promote and develop long term affordable housing for low-income, underserved populations in collaboration with local communities. IHDC is recognized by the U.S. Department of Housing and Urban Development as a Community Housing Development Organization or CHDO. As a nonprofit 501(c)3 CHDO, IHDC develops or facilitates the development of high-quality, financially and environmentally sustainable, affordable housing for low-income individuals and families that provide a safe, healthy and thriving environment with supportive services as a foundational strategy.

In all its developments, IHDC raises the capital funding, moves the development through financial closing, oversees the construction, and the leases-up the building upon construction completion. As the managing member of the Limited Liability Company that will hold this development, Interfaith makes a long-term commitment to the asset management of the development upon qualified occupancy.

IHDC created an affiliate organization in 2012 called Interfaith Management Services (IMS). IMS was designed to manage the portfolio of projects for which IHDC has an ownership interest. Currently IMS manages all 12 properties for which IHDC holds an ownership interest, a total of 724 units. By 2021, IMS will manage two additional properties that will bring the total units under management to 821. In the future, IMS will be open to third party fee management of affordable properties owned by other organizations. Although all units created to date have been in the Chicago metropolitan area, IHDC's mission is not restricted by geography. Interfaith Housing Development operates at; 411 S. Wells Suite 401, Chicago, Illinois 60607.

<u>Project Description:</u> The developer, Interfaith Housing Development Corporation and Housing Forward propose the new construction of a 5-story, 36-unit affordable housing development at 1106 Madison Street targeted toward homeless individuals with a chronic disability. The following unit mix has been designed for this space. Interfaith Housing Development Corporation (IHDC) and Housing Forward have partnered on this development project in suburban Cook County to improve access to affordable housing in the Village of Oak Park.

The proposed subject property will be known as the Keystone Apartments, 1106 Madison Street Oak Park, IL 60302. This development will comprise new construction of 36 total units: (12) Studio-1 BA units measuring 420 SF, (4) 1 BR-1 BA units measuring 544 SF and (20) 1 BR-1 BA units (BCBS) measuring 525 SF in a single, 5-story building, on a redevelopment site which formerly a place of worship. The proposed subject property has a gross site size of 8,925 (0.205 acres) and is comprised of three main property identification numbers: 16-07-322-024-0000, 16-07-322-025-0000, and 16-07-322-026-0000. The subject site has 75 feet of frontage along the north side of Madison Street and is 190 feet deep.

In December of 2023, Blue Cross Blue Shield of Illinois (BCBS) committed an unprecedented \$300,000, renewing every year for 5 years for a total of \$1.5 million in rental subsidies for this development. This funding will provide rental assistance for 20 of the one-bedroom units under the condition that they target homeless individuals that are Medicaid eligible through BCBS and have an annual income of 30% AMI.

Housing Forward intends to apply to Suburban Cook County Continuum of Care (CoC) for the remaining 16 rental subsidies. Until those subsidies are awarded, the unsubsidized units will be designated to serve individuals with an income of 50% AMI.

The subject, as proposed, will contain 31,451 SF± (gross). The ground floor of the subject will contain a 736 SF community room (with kitchen), a case management office, administrative offices, conference room, bike storage, and laundry room. The remaining first floor space will contain a mechanical room, fire pump, maintenance storage, electric room, trash room and additional storage. Exterior site improvements will include a concrete patio and walkways, loading space and onsite parking for 6 cars will be provided on the north side of the property, accessed from directly from the public alley. One of the 6 spaces will be ADA accessible.

The targeted demographic lessens the need for additional parking at the subject. The site is transit rich and well situated for an affordable housing development.

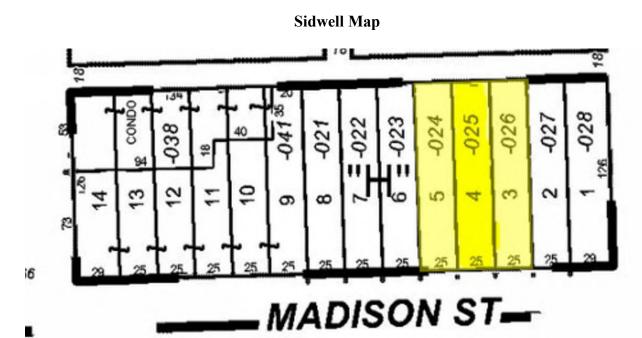
Location: The proposed subject property will be located on the north side of Madison Street, east of Harlem Avenue and west of Wisconsin Avenue in the Village of Oak Park, Cook County, Illinois. Oak Park is located immediately west of the City of Chicago. The municipal boundaries of Oak Park are Austin Boulevard (east), North Avenue (north), Harlem Avenue (west), and Roosevelt Road (south). Oak Park shares boundaries with the City of Chicago, Village of River Forest, Village of Forest Park, City of Berwyn, and the Town of Cicero. The proposed location of the subject property is located just south of what is considered the traditional Downtown Oak Park neighborhood along Lake Street. The Madison Street corridor is the secondary commercial Oak Park Corridor (behind North Avenue) between Austin Avenue and Harlem Avenue. Harlem Avenue is the municipal boundary separating Oak Park from its western neighbor Forest Park. Austin Boulevard is the municipal boundary separating Oak Park from its eastern neighbor, the City of Chicago. Specifically, the subject property is located ½ mile north of 2.5 miles north of I-290 (Eisenhower Expressway) and 600 feet east of Harlem Avenue (IL 43). The subject property is located 10 miles west of the Chicago "Loop".

Site Description: The subject property has a gross site size of 8,925 (0.205 acres). The subject property is comprised of three main property identification numbers: 16-07-322-024-0000, 16-07-322-025-0000, and 16-07-322-026-0000. The subject site has 75 feet of frontage along the north side of Madison Street and is 190 feet deep. Improvements cover 91% of the subject site with 6 surface parking spaces located in the rear alley that runs parallel to Madison Street. According to the Village of Oak Park the subject property is zoned MS-Madison Street Zoning District. According to the Village of Oak Park "the MS Madison Street Zoning District is intended to focus the orientation of the Madison Street corridor to create an aesthetically appealing, vibrant mixed-use district that is pedestrian friendly and accommodates all Village residents and visitors to the community". The entire Oak Park Madison Street Corridor west of Austin Boulevard and east of Harlem Avenue is designated MS. The subject site has good accessibility and good visibility commensurate with other commercial sites along this corridor.

PIN#	Address	Frontage/Street
16-07-322-024-0000	1110 Madison St.	25 ft. Madison Street
16-07-322-025-0000	1108 Madison St.	25 ft. Madison Street
16-07-322-026-0000	1106 Madison St.	25 ft. Madison Street

The subject improvements are proposed to cover the entire site with 75 feet of frontage along Madison Street. The proposed project's site layout is very good especially in light of the intended tenant base to provide affordable housing in an area that has above-average demand and a lack of supply in the immediate neighborhood.

The subject site is a desirable location for an affordable housing development. Oak Park's centralized location along the I-290 (Eisenhower Expressway) Corridor provides for an abundance of public transportation options. Two Chicago Transit Authority (CTA) elevated rail lines (Blue and Green) run parallel to the Eisenhower Expressway ½ miles south of the subject property. 500 feet west of the subject at the intersection of Harlem Avenue and Madison Street, PACE Bus Line 307 runs north-south along Harlem Avenue connecting the Elmwood Park Milwaukee District West Line South to the CTA Blue and Green 1 Lines and connecting Midway Airport to the south. Also, at this stop PACE Bus Line 307 provides daily service between the CTA Blue Line Forest Park Transit Center to the west and North/Wolf in Northlake. Other CTA Bus routes (CTA - 72, 86, 90, 91) can be accessed along Oak Parks eastern boundary along Austin Avenue. The Sidwell Map Appears below, the subject is highlighted. (North).



<u>Building Description:</u> The subject, as proposed, will contain 31,451 SF± (gross). The ground floor of the subject will contain a 736 SF community room (with kitchen), a case management office, administrative offices, conference room, bike storage, and laundry room. The remaining first floor space will contain a mechanical room, fire pump, maintenance storage, electric room, trash room and additional storage. Exterior site improvements will include a concrete patio and walkways, loading space and onsite parking for 6 cars will be provided on the north side of the property, accessed directly from the public alley. One of the 6 spaces will be ADA accessible.

The building construction will be of the most modern materials, tentatively with a steel frame with masonry frame with concrete paneled exterior. Building the plans also include a 2,500 lb. five stop elevator.

The appropriateness of the proposed building renovation plans is very good considering the proposed tenant base. The unit sizes are competitive in the market and the costs will be kept at a minimum to be able to keep rents lower while still being able to operate the development. The subject has three floors and will be considered a low-rise residential development.

<u>Apartment Details/Rent Schedule:</u> The development will be a single five-story building. The upper floors will be mostly residential with 9 units on floors 2-5. All floors will be accessed by common areas including corridors, stairwells and the elevator lobby. The subject will have a

single elevator servicing all five floors. All units and the elevator will be accessed from a single common 1<sup>st</sup> floor entrance.

In December of 2023, Blue Cross Blue Shield of Illinois (BCBS) committed an unprecedented \$300,000, renewing every year for 5 years for a total of \$1.5 million in rental subsidies for this development. This funding will provide rental assistance for 20 of the one-bedroom units under the condition that they target homeless individuals that are Medicaid eligible through BCBS and have an annual income of 30% AMI.

Housing Forward intends to apply to Suburban Cook County Continuum of Care (CoC) for the remaining 16 rental subsidies. Until those subsidies are awarded, the unsubsidized units will be designated to serve individuals with an income of 50% AMI.

Rents will be based on the following matrix.

#### Income Monthly Rent **Unit Type** # Units Restriction Rent **\$/SF Unit SF** 0 BR-1 BA (Homeless) 50% AMI \$925 420 SF \$2.20/SF 12 (Homeless) 30% AMI (BCBS) 1 BR-1 BA 20 \$1,250 525 SF \$2.38/SF 1 BR-1 BA 4 (Homeless) 50% AMI \$1,000 544 SF \$1.84/SF 36

## **Proposed Rent Schedule**

The rents above were supposed for the purposes of this report. The data above was provided by the developer and these programs will be enacted for the subject operations ongoing. Depending on the completed construction date the rents could change over time. The impact on the number of eligible households in the Primary Market Area will be negligible or miniscule.

Heat, electricity, and all other utilities (except telephone service and cable) will be included in monthly rents.

<u>In-Unit Amenities:</u> Each unit will have a brand-new bathroom and kitchen. The kitchen will be a full kitchen with a stove, oven, refrigerator, and ample cabinet space. The proposed amenities will exceed market standards.

<u>Development Amenities and Parking:</u> The ground floor of the subject will contain a 736 SF community room (with kitchen), a case management office, administrative offices, conference room, bike storage, and laundry room. The remaining first floor space will contain a mechanical room, fire pump, maintenance storage, electric room, trash room and additional storage.

Miscellaneous amenities are proposed to include free internet access for each unit, secured, indoor bike parking, energy star rated appliances, microwave ovens included in each unit, large community room, community kitchen, 24-hour security camera and front desk.

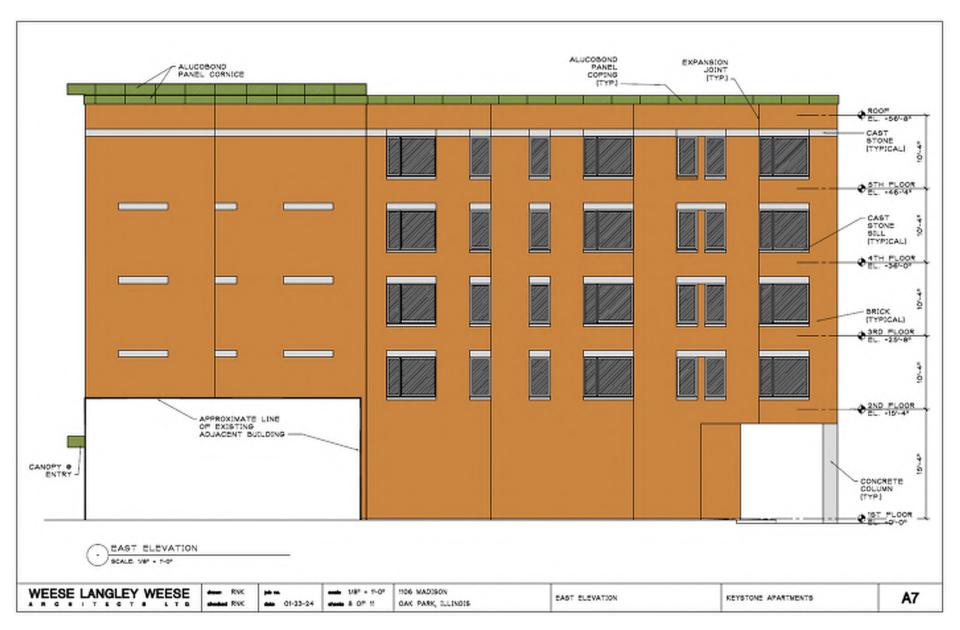
Exterior site improvements will include a concrete patio and walkways, loading space and onsite parking for 6 cars will be provided on the north side of the property, accessed directly from the public alley. One of the 6 spaces will be ADA accessible.

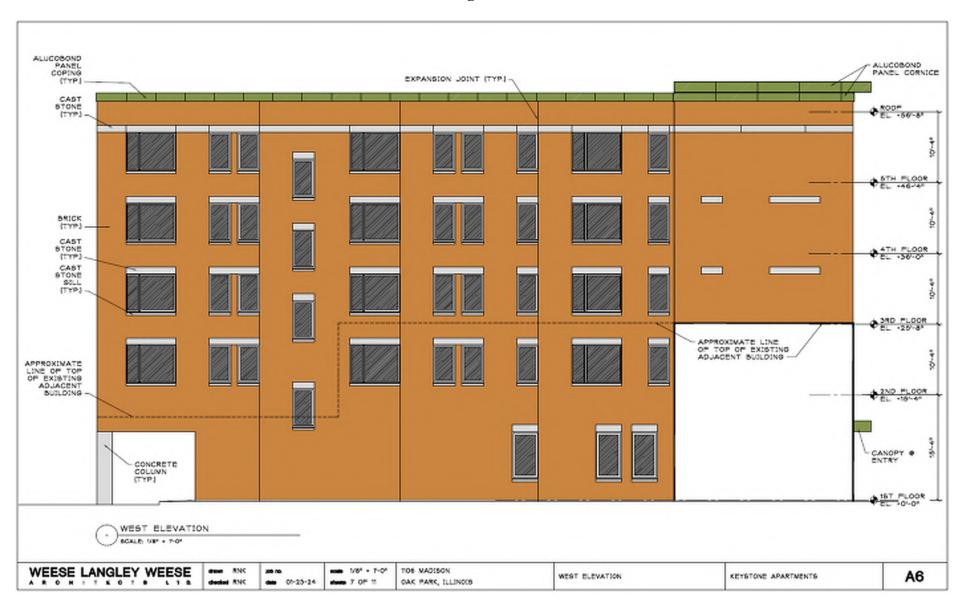
It is unlikely that any tenants would have the financial feasibility to make use of a parking space. The subject is targeted to those with annual incomes mostly at 50% (and below) area median income. The development amenities and in unit amenities will be sufficient in quality and quantity when compared to the market.

<u>Construction/Rehab</u>: The appropriateness of the proposed building renovation plans are very good considering the proposed tenant base. The unit sizes are competitive in the market and the costs will be kept at a minimum to be able to keep rents lower while still being able to operate the development. The subject will be new construction of modern materials, contained in a four-story elevator low-rise residential development. The building construction will be excellent (new). The new construction will heighten the overall aesthetics of the surrounding neighborhood. No issues with market acceptance are anticipated.

<u>Parking:</u> Proposed for the exterior are 6 onsite parking spaces (one ADA accessible) and a secured resident yard. The targeted demographic lessens the need of additional parking at the subject. It is unlikely that any tenants would have the financial feasibility to make use of a parking space. The subject is targeted to those with annual incomes at 50% (and below) area median income.

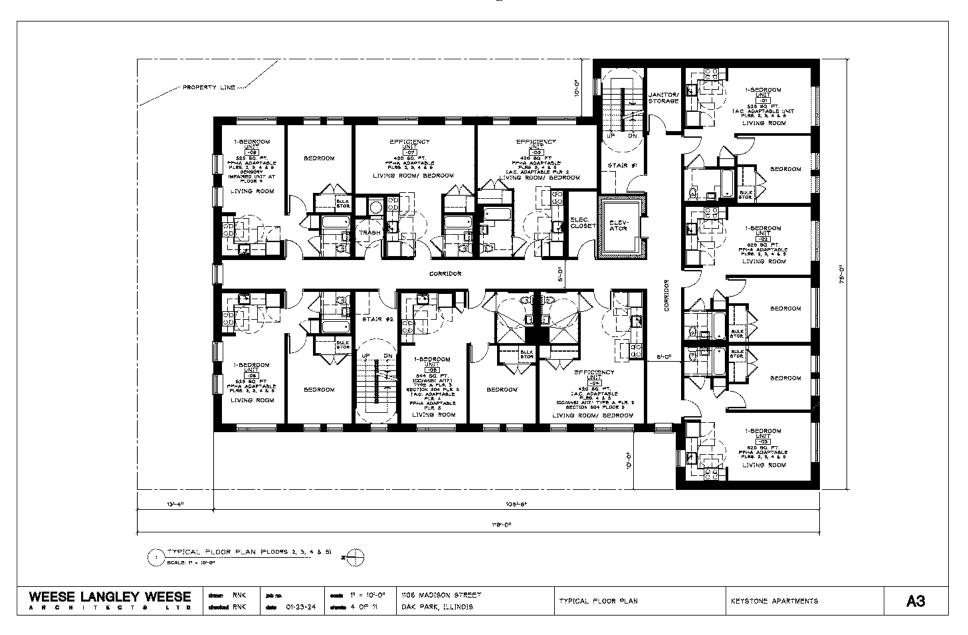




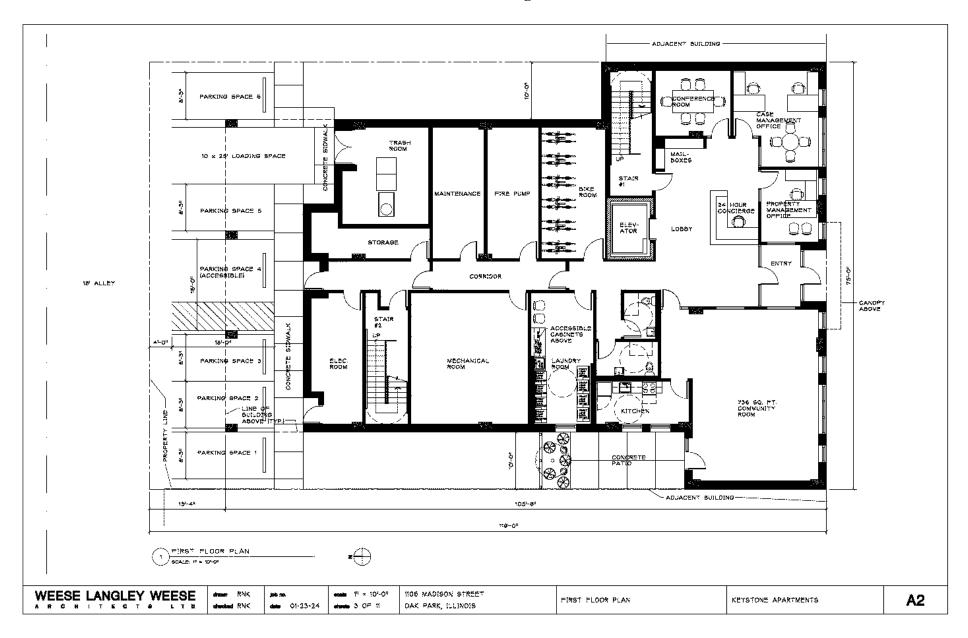




## Floor Diagrams



## 1st Floor/Site Diagram



<u>Density:</u> According to the Village of Oak Park the subject property is zoned MS-Madison Street Zoning District. According to the Village of Oak Park "the MS Madison Street Zoning District is intended to focus the orientation of the Madison Street corridor to create an aesthetically appealing, vibrant mixed-use district that is pedestrian friendly and accommodates all Village residents". General Bulk Standards for the MS-Madison Street Zoning District are as follows.

	Table 5-1: Commercia	Districts Dimensional Standards	
Commercial Districts	MS	NA	NC
Bulk Standards			
Minimum Lot Area Minimum Building Height	Non-Residential & Mixed-Use: None Multi-Family: 750 sq. ft./du Townhouse: 5,000 sq. ft.	Non-Residential: None Mixed-Use: 750 sq. ft./du Multi-Family: 1,000 sq. ft./du Townhouse: 5,000 sq. ft. N/A	Non-Residential: None Mixed-Use: 750 sq. ft./du Multi-Family: 1,500 sq. ft./du Townhouse: 5,000 sq. ft. N/A
Maximum Building Height	Non-Residential & Mixed-Use: 50' Multi-Family: 50' Townhouse: 35'	45'	45' Places of worship, cultural facility, educational facility: 45' but may go to 55' if building set back 1 additional foot from each required setback for each additional 2 feet of building height above 45'

On the table below the subjects current zoning standards have been compared to the subjects proposed development standards. As illustrated by the table below it will be necessary to secure zoning variances of the subject to be developed as planned.

#### WEESELANGLEYWEESE

1106 Madison St. Oak Park, IL

Zoning Summary				
PIN:	16-07-3	22-025-0000 (and 16-07-32	2-024-00	000; 16-07-322-026-0000)
Zoning Code:	MS			
Zoning District:	Madisor	n Street Zoning District		
Historical District:	2006 M	adison Steet Survey		
Use:	Dwelling	g above ground floor is a Pe	rmitted	Use in the MS District
Site Areac	8,925 sc	quare feet		
Proposed Building Area:	31,451	sq. ft.		
<b>Bulk Standards:</b>				
		Per MS District:		Proposed:
Minimum Lot Area:		750 sq. ft./du		248 sq. ft./du
Minimum Building Height	:	20'-0"		61'-3"
Maximum Building Height	t:	50'-0"		56'-4" (to top of flat roof deck)
Required Setbacks:				
Street Setback:		Build-to zone of 3' to 5'		0'-0"
Interior Side Setback:		None Required		0'-0"
Rear Setback:		25'-0"		31'-4"
Off-Street Parking & Load	ding:			
Car Parking:		36 spaces (1 per DU)		6 spaces
Bicycle Parking:		9 (1 per 4 du); 8 long term		12 spaces, all long-term
Loading Space		1 loading space		1 loading space

The proposed density for the subject considers 36 units on five floors. The subject's proposed density: (36 units/8,926 SF site) equals 4.04 units per 1,000 SF of site area (which projects to 176 units per acre overall or 248 SF per dwelling unit).

One block east of the subject on the opposite side of the street at **1035 Madison Street Oak Park**, IL is the 100,000 SF Belmont Village Senior Living building featuring 131 units comprised of private studio and one-bedroom apartments and common areas. This property is a relatively new property constructed in 2019. This property is situated on a 27,073 SF site (131 units/27,073 site) equals 4.83 units per 1,000 SF of site area (which projects to 211 units per acre overall or **206 SF per dwelling unit**).

Farther east along Madison Street is another newer residential development. At **711 Madison St Oak Park**, **IL** American House Oak Park opened in 2022. There are 76 independent living apartments of one or two bedrooms; 66 assisted living spaces, which include studios, one- and two-bedroom units; and 35 memory care units which include studios and some shared options. A total of 177 units. This property is the newest property in the corridor. This property is situated on a 47,874 SF site, <u>3.70 units per 1,000 SF of site area</u> (which projects to 161 units per acre overall or **270 SF per dwelling unit**).

Located just outside of the Madison Street Corridor is the development at **1105 Pleasant St. Oak Park IL** (0.5 miles north of the subject). The project will be known as 203 S Marion Street and is the re-development of a 34,000 SF site that will consist of approximately 153 apartment units plus retail. The underlying zoning prior to entitlements was DT-3. This property is situated on a 34,000 SF site, <u>4.50 units per 1,000 SF of site area</u> (which projects to 196 units per acre overall or **222 SF per dwelling unit**).

The subject's desired density appears to be in line with other approved developments in the subject's market area and in line with other approved developments along the Madison Street Corridor. The subject property's low-rise profile at five stories will easily conform to the surrounding neighborhood and will be similar to the density of new construction on the area.

The remaining zoning variances, if granted, would have minimal impact to any of the surrounding properties.

<u>Tenant Displacement.</u> The subject property is proposed new/renovated construction and therefore a discussion of tenant displacement is not applicable.

Other Structures: None

#### II. FIELD OBSERVATIONS

Access to Site: The subject property has a gross site size of 8,925 (0.205 acres). The subject property is comprised of three main property identification numbers: 16-07-322-024-0000, 16-07-322-025-0000, and 16-07-322-026-0000. The subject site has 75 feet of frontage along the north side of Madison Street and is 1190 feet deep. Improvements cover 91% of the subject site with 6 surface parking spaces located in the rear alley that runs parallel to Madison Street. According to the Village of Oak Park the subject property is zoned MS-Madison Street Zoning District. According to the Village of Oak Park "the MS Madison Street Zoning District is intended to focus the orientation of the Madison Street corridor to create an aesthetically appealing, vibrant mixed-use district that is pedestrian friendly and accommodates all Village residents and visitors to the community". The entire Oak Park Madison Street Corridor west of Austin Boulevard and east of Harlem Avenue is designated MS. The subject site has good accessibility and good visibility commensurate with other commercial sites along this corridor.

The proposed project's site layout is very good especially in light of the intended tenant base to provide affordable housing in an area that has above-average demand and a lack of supply in the immediate neighborhood. Therefore, access to the site will be very good. Public streets along the east and north elevations will provide ingress and egress to the subject site. Madison Street is one of three primary Village of Oak Park mixed use/commercial corridors (in addition to North Avenue and Roosevelt Road). Development in these corridors includes commercial uses or a mix of commercial and residential uses. In many cases, development is characterized by substantial areas dedicated to parking, setback commercial structures, single-story commercial structures placed along the street, or limited multi-story mixed use structures. Multi-family structures with no ground-floor commercial are developed on a case-by-case basis.

Madison Street runs from the City of Chicago Central Business District (unimpeded) west all the way to 25<sup>th</sup> Avenue in Maywood. The closest major arterial streets (Roadways that serve as the primary streets within the city and connect areas of activity to one another.) is Harlem Avenue (SR 43) located 575 feet to the west. According to the Illinois Department of Transportation average daily traffic counts are 32,700 vehicles per day along Harlem Avenue and 13,500 vehicles per day along Madison Street directly in front of the subject.

Specifically, the subject property is located ½ mile north of I-290 (Eisenhower Expressway) and 600 feet east of Harlem Avenue (IL 43). The subject property is located 10 miles west of the Chicago "Loop". Chicago Midway Airport is located 9.5 miles southeast of the subject property.

The site is transit rich and well situated. Oak Park's centralized location along the I-290 (Eisenhower Expressway) Corridor provides for an abundance of public transportation options. Two Chicago Transit Authority (CTA) elevated rail lines (Blue and Green) run parallel to the Eisenhower Expressway ½ miles south of the subject property.

500 feet west of the subject at the intersection of Harlem Avenue and Madison Street, PACE Bus Line 307 runs north-south along Harlem Avenue connecting the Elmwood Park Milwaukee District West Line South to the CTA Blue and Green 1 Lines and connecting Midway Airport to the south. Also, at this stop PACE Bus Line 307 provides daily service between the CTA Blue Line Forest Park Transit Center to the west and North/Wolf in Northlake. Other CTA Bus routes (CTA - 72, 86, 90, 91) can be accessed along Oak Parks eastern boundary along Austin Avenue.

Site Marketability: The subject property has a gross site size of 8,925 (0.205 acres). The subject property is comprised of three main property identification numbers: 16-07-322-024-0000, 16-07-322-025-0000, and 16-07-322-026-0000. The subject site has 75 feet of frontage along the north side of Madison Street and is 1190 feet deep. Improvements cover 91% of the subject site with 6 surface parking spaces located in the rear alley that runs parallel to Madison Street. According to the Village of Oak Park the subject property is zoned MS-Madison Street Zoning District. According to the Village of Oak Park "the MS Madison Street Zoning District is intended to focus the orientation of the Madison Street corridor to create an aesthetically appealing, vibrant mixed-use district that is pedestrian friendly and accommodates all Village residents and visitors to the community". The entire Oak Park Madison Street Corridor west of Austin Boulevard and east of Harlem Avenue is designated MS. The subject site has good accessibility and good visibility commensurate with other commercial sites along this corridor. The subject site is identified with the following Permanent Index Numbers (PIN):

PIN#	<u>Address</u>	Frontage/Street
16-07-322-024-0000	1110 Madison St.	25 ft. Madison Street
16-07-322-025-0000	1108 Madison St.	25 ft. Madison Street
16-07-322-026-0000	1106 Madison St.	25 ft. Madison Street

The subject improvements are proposed to cover the entire site with 75 feet of frontage along Madison Street. The proposed project's site layout is very good especially in light of the intended tenant base to provide affordable housing in an area that has above-average demand and a lack of supply in the immediate neighborhood.

The subject site is a desirable location for an affordable housing development. Public transportation is abundant, and because of the density of Oak Park, there are dozens of supportive services within close proximity, the most notable being Rush Oak Park Hospital located directly across the street from the subject. The subject site encompasses an interior orientation; however, this has minimal if no impact of site marketability. Accessibility and visibility are considered to be good, and there is no external obsolescence noted. It should be noted that vehicle parking in Oak Park is in high demand. It is not unusual in the Madison Street Corridor that there is residential uses that have minimal or no parking requirements.

Therefore, there are no encumbrances on the marketability of the site. There are no visibility/marketing issues with the subject site.

Adjacent Land Use: As stated above, the subject site encompasses three adjacent parcels on the north side of Madison Street. The site has a total frontage of 75 feet on the north side of Madison Street and is 125 feet deep. There is a public alley running parallel to Madison Street along the subject's north property line.

According to the Village of Oak Park the subject property is zoned MS-Madison Street Zoning District. According to the Village of Oak Park "the MS Madison Street Zoning District is intended to focus the orientation of the Madison Street corridor to create an aesthetically appealing, vibrant mixed-use district that is pedestrian friendly and accommodates all Village residents and visitors to the community". As such, Madison Street is a densely developed street with a myriad of commercial and residential uses within the immediate areas surrounding the subject.

As stated above there is a public alley running parallel to Madison Street along the subject's north property line. Immediately **north** of the subject and north of this public alley the uses are exclusively residential. The uses immediately north of the subject are indicative of the majority of residential in Oak Park. To the north of the subject are a formerly single-family residence converted to duplex or triplex use, next door to a vintage, three story multi-family apartment building with 8-10 units. Northwest of the subject are some larger (20-30 unit) vintage multi-family apartment buildings. The residential uses in the subject neighborhood are the appropriate representation of residential character in the Oak Park Market.

**South** of the subject is Madison Street. Farther south on the south side of Madison Street is the Rush Oak Park Hospital. RUSH Oak Park has a 55,000 SF emergency department with 22 private rooms, serving 40,000 patients per year. The campus also features a newly built Electrophysiology Lab that is fully equipped to treat patients with arrhythmias and other heart-related conditions closer to home, as well as a Cancer Care Center with a new linear accelerator that provide accurate radiation treatment in less time.

**East** of the subject is a single story commercial building housing a restaurant that has been at this location for several decades. Farther east of the subject is a 19-unit condominium building at the northeast corner of Madison Street and Wisconsin Street.

West of the subject are three commercial buildings (single story to three-story) with mixed uses that include a restaurant and a gallery at street level with residential and offices above. Farther west of the subject is the Madison Street and Harlem Avenue intersection 500 feet west of the subject site.

Neighborhood Description: The subject property encompasses three parcels located on the north on the north side of Madison Street, east of Harlem Avenue and west of Wisconsin Avenue in the Village of Oak Park, Cook County, Illinois. Oak Park is located immediately west of the City of Chicago. The municipal boundaries of Oak Park are Austin Boulevard (east), North Avenue (north), Harlem Avenue (west), and Roosevelt Road (south). Oak Park shares boundaries with the City of Chicago, Village of River Forest, Village of Forest Park, City of Berwyn, and the Town of Cicero. The subject property is located just south of what is considered the traditional Downtown Oak Park neighborhood along Lake Street. The Madison Street corridor is the secondary commercial Oak Park Corridor (behind North Avenue) between Austin Avenue and Harlem Avenue. Harlem Avenue is the municipal boundary separating Oak Park from its western neighbor Forest Park. Austin Boulevard is the municipal boundary separating Oak Park from its eastern neighbor, the City of Chicago. Specifically, the subject property is located ½ mile north of 2.5 miles north of I-290 (Eisenhower Expressway) and 600 feet east of Harlem Avenue (IL 43). The subject property is located 10 miles west of the Chicago "Loop".

The population of the Cook County Region is estimated at 5.1 million as of January 1, 2023, reflecting overall population loss since 2010 (Table 3). Population trends in the Cook County Region do not always respond directly to economic trends, because the Cook County Region is the central county in the larger Chicago MSA, and households may move to suburban locations for reasons that are not entirely job related. During the COVID-19 pandemic, significant numbers of people moved away from the more densely populous central areas, including the Downtown Core of Chicago, which generally has higher housing costs and smaller units. Some people who moved away during the early stages of the COVID-19 pandemic have since returned, and although net out-migration has continued, it has slowed considerably. Nevertheless, the net population is declining; net migration is away from the Cook County Region, and general

demographic trends include a decline in the number of births and an aging population. The COVID-19 virus also contributed to recent declines in net natural change.

Table 3. Cook County HMA Population and Household Quick Facts

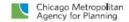
		2010	Current	Forecast
Population	Population	5,194,675	5,100,000	5,033,000
Quick Facts	Average Annual Change	-18,200	-7,400	-22,300
	Percentage Change	-0.3	-0.1	-0.4
		2010	Current	Forecast
Household	Households	2010 1,966,356	Current 2,096,400	Forecast 2,099,000
Household Quick Facts	Households Average Annual Change	70% Jay	5-0-1 Lig. 1 Lip.	74. Janes 19

Notes: Average annual changes and percentage changes are based on averages from 2000 to 2010, 2010 to current, and current to forecast. The forecast period is from the current date (January 1, 2023) to January 1, 2026.

Sources: 2000 and 2010-2000 Census and 2010 Census; current and forecast-estimates by the analyst

According to preliminary 2022 US Census figures Oak Park's total population went from 51,878 in 2010 to 53,834 in 2022 — an increase of 3.78%. On the pages below we have attached the Chicago Metropolitan Agency for Planning (CMAP)Community Data Snapshot for the Village of Oak Park, Illinois (July 2023 Release).

### Community Data Snapshot | Oak Park



### **Population and Households**

The population and household tables include general demographic, social, and economic characteristics summarized for Oak Park.

#### **General Population Characteristics, 2020**

	Oak Park	Cook County	CMAP Region
Total Population	54,583	5,275,541	8,577,735
Total Households	23,915	2,086,940	3,266,741
Average Household Size	2.3	2.5	2.6
Percent Population Change, 2010-20	5.2	1.6	1.7
Percent Population Change, 2000-20	3.9	-1.9	5.3

Source: 2000, 2010 and 2020 Census.

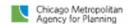
#### Age Cohorts, 2017-2021

	0	Oak Park		Cook County		tegion
	Count	Percent	Count	Percent	Count	Percent
Under 5	2,886	5.3	312,408	5.9	502,928	5.9
5 to 19	11,114	20.5	964,227	18.3	1,662,052	19.4
20 to 34	8,929	16.5	1,176,731	22.3	1,774,853	20.7
35 to 49	12,332	22.8	1,056,786	20.1	1,724,098	20.1
50 to 64	10,290	19.0	980,967	18.6	1,659,323	19.4
65 to 74	5,273	9.7	455,547	8.7	746,030	8.7
75 to 84	2,468	4.6	218,495	4.1	347,665	4.1
85 and Over	808	1.5	100,237	1.9	153,584	1.8
Median Age	39.9		37.3		37.9	

Source: 2017-2021 American Community Survey five-year estimates.

Universe: Total population

### Community Data Snapshot | Oak Park



#### Household Size, 2017-2021

	Oak Park		Cook County		CMAP Region	
	Count	Percent	Count	Percent	Count	Percent
1-Person Household	8,180	35.9	684,709	33.5	948,087	29.4
2-Person Household	6,839	30.0	613,454	30.0	993,509	30.8
3-Person Household	3,073	13.5	302,975	14.8	503,236	15.6
4-or-More-Person Household	4,701	20.6	443,520	21.7	775,919	24.1

Source: 2017-2021 American Community Survey five-year estimates.

Universe: Occupied housing units

#### Household Type, 2017-2021

	Oa	Oak Park		Cook County		CMAP Region	
	Count	Percent	Count	Percent	Count	Percent	
Family	13,227	58.0	1,207,289	59.0	2,062,968	64.1	
Single Parent with Child	1,548	6.8	171,747	8.4	257,853	8.0	
Non-Family	9,566	42.0	837,369	41.0	1,157,783	35.9	

Source: 2017-2021 American Community Survey five-year estimates.

Universe: Occupied housing units

### Household Income, 2017-2021

	Oak Park		Cook County		CMAP Region	
	Count	Percent	Count	Percent	Count	Percent
Less than \$25,000	2,872	12.6	370,516	18.1	486,172	15.1
\$25,000 to \$49,999	2,714	11.9	368,765	18.0	532,670	16.5
\$50,000 to \$74,999	3,316	14.5	317,344	15.5	491,960	15.3
\$75,000 to \$99,999	2,737	12.0	252,760	12.4	407,959	12.7
\$100,000 to \$149,999	3,626	15.9	330,041	16.1	575,992	17.9
\$150,000 and Over	7,528	33.0	405,232	19.8	725,998	22.5
Median Income	\$98,081		\$72,121		\$81,102	
Per Capita Income*	\$60,973		\$41,706		\$43,128	

Source: 2017-2021 American Community Survey five-year estimates.

Universe: Occupied housing units 'Universe: Total population

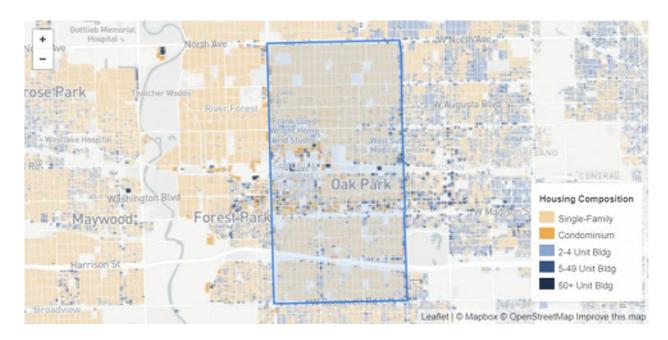
#### Household Computer and Internet Access, 2017-2021

	Oak Park		Cook County		CMAP Region	
	Count	Percent	Count	Percent	Count	Percent
One or More Computing Devices	22,051	96.7	1,892,469	92.6	3,019,317	93.7
Smartphone(s) Only	979	4.3	179,898	8.8	240,075	7.5
No Computing Devices	742	3.3	152,189	7.4	201,434	6.3
Internet Access	21,598	94.8	1,828,303	89.4	2,935,545	91.1
Broadband Subscription	20,616	90.4	1,768,389	86.5	2,855,152	88.6
No Internet Access	1,195	5.2	216,355	10.6	285,206	8.9

Source: 2017-2021 American Community Survey five-year estimates.

Universe: Occupied housing units

Analyzing the (CMAP) Community Data Snapshot for the Village of Oak Park, exhibits that the population for Oak Park has trended upward in the last decade and continues to trend upward. This bodes well for the proposed subject development as the targeted market for the subject will be pulled locally from within Oak Park and from the closely surrounding communities of Forest Park, Berwyn, Maywood, Elmwood Park, the City of Chicago, and others. The target population for the subject is a critically underserved population with the supply of units only representing a miniscule percentage of the demand.



According to the DePaul University Institute on Housing Studies 8.9% of the Oak Park Area housing stock is in buildings with 2-4 units or larger. The table taken from the DePaul University Institute on Housing Studies indicates, the remainder of the Oak Park Area Housing Stock is comprised of single-family (39.8%), Condos (19.6%), 2-4-unit buildings (8.9%), and buildings with 5+ units (31.6%).

#### HOUSING UNITS BY PROPERTY TYPE

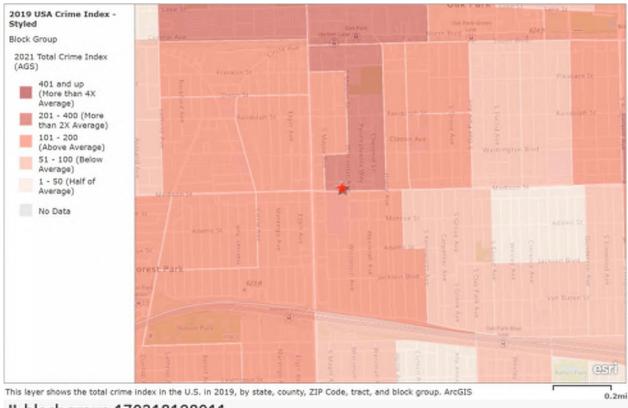
Property Type	2021
Single Family	39.8%
Condominium	19.6%
Building with 2-4 Units	8.9%
Building with 5+ Units	31.6%

Source: DePaul Institute of Housing Studies 2021

The above map of the surrounding Near West Suburban Chicago communities illustrates by color, that the composition of the housing stock in the immediate subject market area trends more densely as one moves west to east towards the City of Chicago municipal boundaries.

<u>Public Safety Issues:</u> —The map below shows a comparable measure of crime in the United States, based on data provided by ESRI and AGS (Applied Geographic Solutions). The crime index compares the average local crime level to that of the United States as a whole. **The subject area's crime index of 219, which is considered above average**. An index of 100 is average. A crime index of 120 indicates that crime in that area is 20 percent above the national average. The block group and higher-level geographic database consists of a series of standardized indexes for a range of serious crimes against both persons and property. The data is derived from an

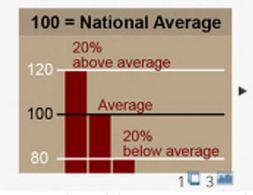
extensive analysis of several years of crime reports from the vast majority of law enforcement jurisdictions nationwide. The crimes included in the database are murder, rape, robbery, assault, burglary, theft, and motor vehicle theft. These categories are the primary reporting categories used by the FBI in its Uniform Crime Report (UCR). While this provides a useful measure of the relative "overall" crime rate in an area, it must be recognized that these are unweighted indexes, in that a murder is weighted no more heavily than a purse snatching in the computation.



## IL block group 170318128011

In comparison to the national average of 100, the overall crime index in this area is 219.

Click the arrow to explore additional crime indices.



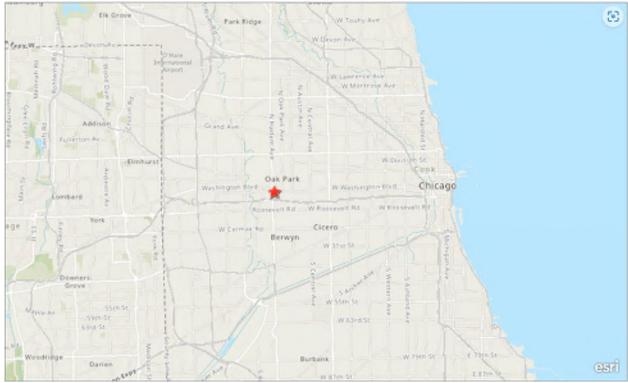
Great Realty Advisors are not experienced in the dissemination of crime statistics and these statistics are retrieved solely based on the requirements of the requirements of the Illinois Housing Development Authority Standards for Site and Market Studies (Updated 2024-2025).

<u>High Risk Area for Lead Exposure</u> – According to data released from The Illinois Department of Public Health the subject is situated in a zip code (60302) determined to be a "high risk area" for lead exposure. The Illinois Department of Public Health all Chicago sip codes as "high risk areas". This

should be considered with the fact that the subject property is proposed new construction and exposure to lead at the subject will be highly unlikely.

The Project Location Map is attached below.

# **Project Location Map**



**North**

### III. MARKET AREA CHARACTERISTICS

Market Area: The National Housing & Rehabilitation Association published White Paper; Determining Market Area (Updated: June 2016) indicates; "The primary market area is the geographic area that a proposed or existing housing community serves. The market area should consider both the proposed target market and the location of alternate housing opportunities that are similar in characteristics and linkage to employment centers, community facilities, and services". The paper indicates that common factors used in market area determination include; commuting patterns and drive-time analysis, employment centers, housing product characteristics, jurisdictional and local agency service boundaries, location of competitive housing alternative, natural boundaries, non-geographic factors, regional amenities, target market and transportation linkages and market perceptions. Factors excluded from determining market area include; radii market area, county-wide or city-wide market areas and gerrymandered market areas.

The proximity of transportation options including major traffic arteries and mass transit options can influence the size of the market. Mass transit can have a significant impact on projects addressing target markets for which transportation options may be limited. Finally, a market area should be somewhat contiguous, following transportation networks, political and natural boundaries.

The subject market area was determined by several of the criteria outlined in the National Housing & Rehabilitation Association guidelines.

- Market perceptions, whether or not grounded in reality, market perceptions can be a significant determinant of market area boundaries. People that inhabit a community often move, but within a close proximity to the community they are moving from. This is due to residents in a community maintaining connections to social groups, religious groups, recreational areas, family and friends. It is assumed that the subject property will in fact draw many residents from within close proximity of the proposed subject location.
- Target market and transportation linkages, are somewhat intertwined. Proposed developments targeting a special needs population such as seniors generally draw from a larger geographic region. According to The Chicago Metropolitan Agency for Planning, Fifty-seven percent of the region's workers live and work in suburban areas. This indicates that a majority of the targeted residents will commute to and from work staying in close proximity to where they live. This provides additional support that the subject delineated market area should appropriately be in closer proximity to the subject site.
- Housing product characteristics, it is assumed that with the introduction of a unique product type (i.e., the subject with a modern design with onsite parking) may increase the draw to a particular site or submarket. It is expected that the subject being on a highly traveled street will initially attract people from within close proximity of the subject site perhaps already commuting or living along the subject street or in the subject neighborhood.

**Project's Target Market Base:** 

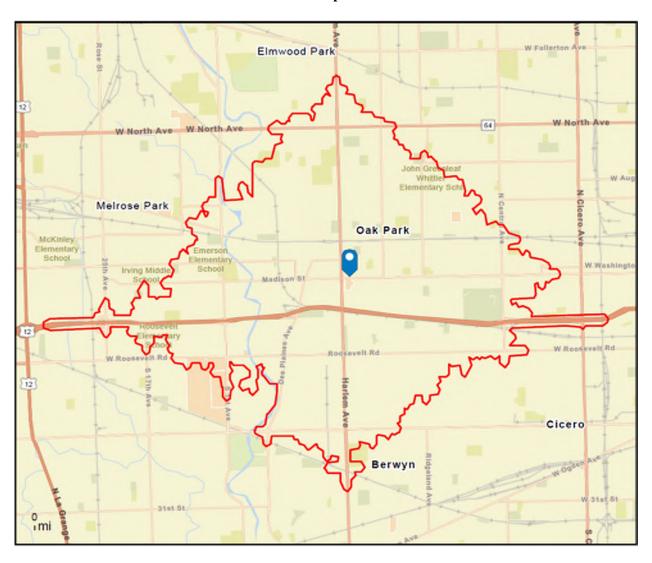
The subject developers are proposing the new construction of this 5-story, 36-unit affordable housing development at 1106 Madison Street which will be targeted toward

homeless individuals with a chronic disability. More specifically, future funding by Blue Cross Blue Shield of Illinois (BCBS) is being committed at \$300,000 annually, renewing every year for 5 years contingent on the condition that 20 units target homeless individuals that are Medicaid eligible through BCBS and have an annual income of 30% AMI. Housing Forward intends to apply to Suburban Cook County Continuum of Care (CoC) for the remaining 16 rental subsidies. Until those subsidies are awarded, the unsubsidized units will be designated to serve individuals with an income of 50% AMI.

**Primary Market Area:** 

The Primary Market Area, encompassing portions of the near west Cook County Municipalities of, Oak Park, Cicero, Berwyn, Maywood, Melrose Park, and a small western most portion of the City of Chicago. We have focused our research surrounding the major thoroughfares connecting all of these municipalities which include Harlem Avenue, North Avenue Eisenhower Expressway and Cicero Avenue. The designated Primary Market Area (PMA) has delineated boundaries of just north of the North Avenue and Harlem Avenue intersection to the north, the Cicero Avenue and Eisenhower Expressway intersection to the east, just south of the Harlem Avenue and Roosevelt Road intersection to the south and just west of the 25<sup>th</sup> Avenue and Eisenhower Expressway intersection to the west. The delineated Primary Market Area covers approximately 17.9 square miles. The PMA Map appears on the following page.

### Map



It is important to mention that the north side of the Village of Oak Park (zip code 60302) and the north side of neighboring Forest Park (zip code 60305) are somewhat affluent areas with median household incomes of \$88,147 and \$89,284 respectively. These household income benchmarks exceed the identical benchmarks for Cook County and exceed the identical benchmarks for the immediate submarket as well. Therefore, our delineation of the PMA seeks to somewhat mitigate these areas in this analysis.

Comparable Properties – According to the National Council of Housing Market Analyst's (NCHMA) Market Study Terminology, a comparable property is "A property that is representative of the rental housing choices of the subject's Primary Market Area and that is similar in construction, size, amenities, or age. These comparable properties and Competitive Properties are generally used to derive market rent." A competitive property is "A property that is comparable to the subject and that competes at nearly the same rent levels, and tenant profile, such as age, family or income". Location plays the final role in selecting comparable properties. In a large city, there may be several comparable properties in walking distance, while in a small rural town, properties further away may be considered.

As previously stated, the Primary Market Area (PMA) is the area from which potential tenants for the project are likely to be drawn. Although the subject property is proposed to be located

within the Village of Oak Park, the Primary Market Area from which potential tenants will come is comprised of portions of the municipalities of, Oak Park, Cicero, Berwyn, Maywood, Melrose Park, and a small western most portion of the City of Chicago.

Subsequently we will, present a mix of comparable properties that are;

- 1. Near or within the Village of Oak Park and;
- 2. The central portion of Western Cook County including portions of the municipalities of, Cicero, Berwyn, Maywood, Melrose Park, and a small western-most portion of the City of Chicago.

These rent comparables were deemed most germane to this analysis when considering the appropriate rent and appropriate services offered.

## **Rent Comparable Photographs and Summaries**

## Rent Comparable #1



La Estancia 1155 N. California Ave. & 3228 & 3248 W. Division Street Chicago, IL 60622

This comparable is located 7.0 miles east of the subject in the Humboldt Park Community Area. La Estancia is an affordable housing community developed by the Bickerdike Redevelopment Corporation. The property is actually three buildings at three different sites all in proximity to each other and was completed in 2007. There is a waiting list with approximately 15 households. Building amenities include intercom entry, daycare, clubhouse/meeting room. There is no parking, and no utilities are included. The rents below were taken from a 2022 La Estancia Marketing Document indicating 2022 Maximum Income Guidelines ranging from \$36,500 (1 Person) to \$68,800 (8 Person).

Year	Total	Unit	Units	<b>Income Level</b>	Rent	Sq. Ft.	\$ Rent/SF
<b>Built</b>	<u>Units</u>	<b>Type</b>	By Type	(% of AMI)	Range	Range	Range
2007	57	1 BR-1 BA	8	50% AMI	\$718	650 SF	\$1.10/SF
		2 BR-1 BA	27	50% AMI	\$865	950 SF	\$0.91/SF
		3 BR-1.5 BA	14	50% AMI	\$1,002	1,200 SF	\$0.84/SF
		4 BR-2.0 BA	8	50% AMI	\$1,114	1,350 SF	\$0.83/SF

Total Units: 57

Project Occupancy: 100% w/waitlist

Charges in Addition to Rent: None

Subsidies and Restrictions at Project: 50% AMI (maximum)

Other Comments: No parking, no utilities included

Date Information Verified: 01/26/2024 Weighted Average Rent per SF: \$0.89/SF



The 801 801-807 S. Oak Park Ave. Oak Park, IL

The 801 was developed by the Community Builders (TCB) and was completed in 2021. The 801 is a four-story, 12,500-square-foot transit-oriented development targeted to individuals at 60% AMI. (There are two market rate units limited to 140% AMI) Half of the 801's apartments have a residency preference for Oak Parkers, meaning that someone moving in would need to either already live in Oak Park or work in the community. The 801 includes 35 affordable apartments (plus 2 market rate apartments), ground floor retail space, and two live/work units that offer a storefront workspace and attached living quarters — one of which is income-restricted. The 801 includes three studio apartments (435 square feet), 30 one-bedroom apartments (535-575 square feet), and two two-bedroom apartments (865 square feet) for residents earning up to 60% of the Area Median Income (AMI). The units are targeting people who work full time and make roughly \$18 to \$21 dollars an hour or around \$37,400 a year to \$42,800 a year. Tenants are responsible for paying for their own gas, electricity, phone, and internet. Water service, trash, and recycling are included at no cost

Year	Total	Unit	Units	<b>Income Level</b>	Rent	Sq. Ft.	\$ Rent/SF
<b>Built</b>	<u>Units</u>	<b>Type</b>	By Type	(% of AMI)	Range	Range	Range
2021	37	0 BR-1 BA	3	60% AMI	\$905	435 SF	\$2.08/SF
		1 BR-1 BA	30	60% AMI	\$953	575 SF	\$1.66/SF
		2 BR-1 BA	2	60% AMI	\$1,137	865 SF	\$1.31/SF

Total Units:37Project Occupancy:100%Charges in Addition to Rent:None

Subsidies and Restrictions at Project: 60% AMI (Market Rate rent was unavailable)

Other Comments: Street only
Date Information Verified: 01/26/2024
Weighted Average Rent per SF: \$1.65/SF



Fifth Avenue Apartments 806 S. 5<sup>th</sup> Ave. Maywood, IL 60153

This comparable was developed by the client and the Illinois Housing Development Authority (IHDA). The Fifth Avenue Apartments is comprised of 72 units targeted to the following groups; (16) 0 BR-1 BA units targeted to those at 30% AMI and below, (32) 1 BR-1 BA units targeted to those at 50% AMI and 60% AMI (16 each); (16) 2 BR-1 BA targeted to those at 50% AMI and 60% AMI (8 each); and (8) 3 BR-1.5 BA targeted to those at 50% AMI and 60% AMI (4 each).

Year	Total	Unit	Units	Income Level	Rent	Sq. Ft.	\$ Rent/SF
<u>Built</u>	<u>Units</u>	<b>Type</b>	By Type	(% of AMI)	Range	Range	<b>Range</b>
2023	72	0 BR - 1 BA	6	30% AMI	\$422	350 SF	\$1.21/SF
		0 BR - 1 BA	10	50% AMI	\$684	350 SF	\$1.95/SF
		1 BR - 1 BA	10	30% AMI Section	\$1,043	568 SF	\$1.84/SF
		1 BR - 1 BA	6	50% AMI	\$706	568 SF	\$1.24/SF
		1 BR - 1 BA	9	60% AMI	\$854	568 SF	\$1.50/SF
		1 BR - 1 BA	7	60% AMI	\$1,023	568 SF	\$1.80/SF
		2 BR - 1 BA	8	50% AMI	\$865	834 SF	\$1.04/SF
		2 BR - 1 BA	7	50% AMI	\$969	834 SF	\$1.16/SF
		2 BR - 1 BA	1	60% AMI	\$1,086	834 SF	\$1.30/SF
		3 BR - 1.5 BA	4	50% AMI	\$1,045	1,015 SF	\$1.03/SF
		3 BR - 1.5 BA	4	60% AMI	\$1,188	1,242 SF	\$0.96/SF

Total Units: 72
Project Occupancy: 99%
Charges in Addition to Rent: None

Restrictions at Project: 60% AMI and below

Other Comments: None
Date Information Verified: 01/26/2024
Weighted Average Rent per SF: \$1.36/SF



100 Forest Place 100 Forest Place Oak Park, IL 60301

100 Forest Place is one of the focal Oak Park, market rate, multifamily residential properties. This property is located 0.75 miles north of the subject anchoring the traditional Downtown Oak Park neighborhood. This is a 234-unit apartment community comprised of a 16-story tower and nine 3-story townhome buildings, including 7,895 SF of commercial space. This property was constructed in the 1987 and has some onsite parking throughout the development. Tenants do not pay any utilities and this is a property that establishes the high end of the market rents in the subject market area.

Year	Total	# of Unit	Units	Income Level	Avg. Rent	Sq. Ft.	\$ Rent/SF
<u>Built</u>	<u>Units</u>	Type	By Type	(% of AMI)	Range	Range	Range
1987	234	3	0 BR - 1 BA	Market	\$1,712	600 SF	\$2.85/SF
		115	1 BR - 1 BA	Market	\$2,058	781 SF	\$2.64/SF
		116	2 BR - 1 BA	Market	\$2,660	1,044 SF	\$2.55/SF

Total Units: 234

Project Occupancy: Not available
Charges in Addition to Rent: No utilities included

Restrictions at Project: Market

Other Comments: Some dedicated parking

Date Information Verified: 01/26/2024 Weighted Average Rent per SF: \$2.59/SF



Austin United Alliance 5206-24 W. Chicago Avenue Chicago, IL

This comparable is located 3.5 miles east of the subject and is the newly constructed Austin United Alliance development located at 5200 W. Chicago Avenue adjacent to the Laramie State Bank building. Heartland Housing Alliance and Oak Park Regional Housing are the developers. The property is a six-story, 78-unit residential complex a containing 60 affordable and 18 market-rate units. Tenants pay for electric cooking and other electric likely through a utility allowance. Construction has been delayed after all approvals were secured and a new developer has been added to this comparable. Construction was to commence 01/2024.

Year	Total	Unit	Units	<b>Income Level</b>	Rent	*Sq. Ft.	\$ Rent/SF
<u>Built</u>	<u>Units</u>	<u>Type</u>	By Type	(% of AMI*)	Range	Range	Range
2023	78	1 BR-1 BA	8	50% AMI	\$928	800 SF	\$0.86/SF
		1 BR-1 BA	20	60% AMI	\$985	800 SF	\$0.81/SF
		1 BR-1 BA	9	Market rate	\$1,047	800 SF	\$0.76/SF
		2 BR-1 BA	5	50% AMI	\$1,055	950 SF	\$0.90/SF
		2 BR-1 BA	22	60% AMI	\$1,208	950 SF	\$0.79/SF
		2 BR-1 BA	9	Market rate	\$1,316	950 SF	\$0.72/SF
		3 BR-2 BA	2	50% AMI	\$1,287	1,085 SF	\$0.84/SF
		3 BR-2 BA	3	60% AMI	\$1,395	1,085 SF	\$0.78/SF

Total Units: 78

Project Occupancy:

Charges in Addition to Rent:

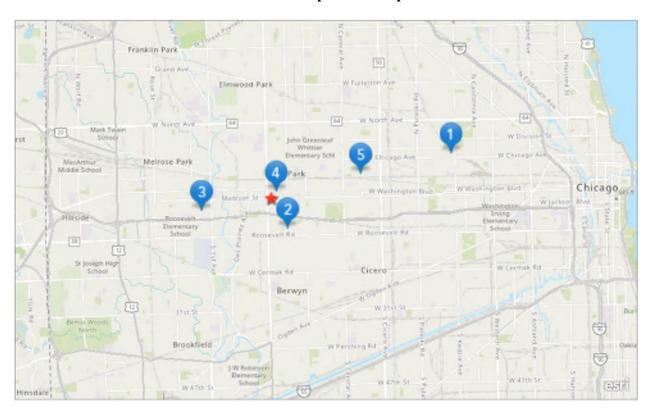
Subsidies and Restrictions at Project:

Under Construction

Electric and Cooking Fuel
60% AMI (maximum)

Other Comments: Street only
Date Information Verified: 01/26/2024
Weighted Average Rent per SF: \$0.80/SF

# **Rent Comparable Map**



# **Comparable Rental Summary**

Unit	Income Level	Rent	Sq. Ft.	\$ Rent/SF
<b>Type</b>	(% of AMI)	Range	Range	Range
0 BR - 1 BA	30% AMI	\$422	350 SF	\$1.21/SF
0 BR - 1 BA	50% AMI	\$684	350 SF	\$1.95/SF
0 BR-1 BA	60% AMI	\$905	435 SF	\$2.08/SF
0 BR - 1 BA	Market	\$1,712	600 SF	\$2.85/SF
Comparables	Varied	\$422-\$1,712	350 SF-600 SF	\$1.21/SF-\$2.85/SF
Subject 0 BR	(Homeless) 50% AMI	\$925	420 SF	\$2.20/SF
1 BR - 1 BA	50% AMI	\$706	568 SF	\$1.24/SF
1 BR-1 BA	50% AMI	\$718	650 SF	\$1.10/SF
1 BR - 1 BA	60% AMI	\$854	568 SF	\$1.50/SF
1 BR-1 BA	50% AMI	\$928	800 SF	\$0.86/SF
1 BR-1 BA	60% AMI	\$953	575 SF	\$1.66/SF
1 BR-1 BA	60% AMI	\$985	800 SF	\$0.81/SF
1 BR - 1 BA	60% AMI	\$1,023	568 SF	\$1.80/SF
1 BR - 1 BA	30% AMI Section 811	\$1,043	568 SF	\$1.84/SF
1 BR-1 BA	Market	\$1,047	800 SF	\$0.76/SF
1 BR - 1 BA	Market	\$2,058	781 SF	\$2.64/SF
Comparables	Varied	\$706-\$2,058	568 SF-800 SF	\$0.76/SF-\$2.64/SF
Subject 1 BR	(Homeless) 30% AMI (BCBS)	\$1,250	525 SF	\$2.38/SF
Subject 1 BR	(Homeless) 50% AMI	\$1,000	544 SF	\$1.84/SF

Upon completed renovation the subject property will be very competitive with respect to amenities, condition and overall appeal. There is an abundance of multi-unit apartment buildings in the immediate subject market area, and the surrounding apartment market is very competitive. We have researched the comparable rents of other properties in the subject market. The majority of the comparables on the preceding pages are similar apartment buildings, with similar proximity to area services, and links to public transportation. Based on the survey of comparable properties above, the average rents (including affordable/market rate properties) for similar unit types (including the subject neighborhood) are all on the low end of the ranges but appropriate.

The village of Oak Park has seen an uptick in multifamily development. Examples of new and proposed developments in the market are summarized below.

**7 Van Buren St.** is a six-story, 45-unit apartment building at the corner of Austin and Van Buren Street. The plan was put forth by the nonprofit Oak Park Residence Corporation, which will tear down its existing two-story, 12-unit midcentury apartment building on the site at 7 Van Buren Street. Twenty percent of the building's units will be preserved for individuals earning at or below 50% of area median income (AMI) while the remaining 80% will be rented at prevailing market rates.

Previously mentioned is the development at **1105 Pleasant St.** Oak Park IL (0.5 miles north of the subject). The project will be known as 203 S Marion Street and is the re-development of a 34,000 SF site that will consist of approximately 159 units, 153 apartments and 6 maisonette

units. The building will offer a mix of studio, 1- and 2-bed units and the 6 maisonette homes will offer private direct access along Marion Street, the first of its type in Oak Park.

The subject property will assume an advantageous position in a minimally served segment of the rental market, as evidenced by the table above, the subject property will offer appropriately sized units at affordable rates. All of the proposed subject rents are at the low end of the range, on a square foot of living area basis, when compared to the market rate properties in, or very near the subject PMA. The subject property will be in high demand as the subject is proposed construction and will be constructed of the most modern materials. The subject will function adequately as an affordable multi-unit property, and the amenities will conform to the surrounding rental market.

Affordable Properties within the Primary Market Area — As stated above the Primary Market Area (PMA) is the area from which potential tenants for the project are likely to be drawn. The designated Primary Market Area (PMA) has delineated boundaries of just north of the North Avenue and Harlem Avenue intersection to the north, the Cicero Avenue and Eisenhower Expressway intersection to the east, just south of the Harlem Avenue and Roosevelt Road intersection to the south and just west of the 25th Avenue and Eisenhower Expressway intersection to the west. The delineated Primary Market Area covers approximately 17.9 square miles.

The subject development will comprise new construction of 36 total units: (12) Studio-1 BA units measuring 420 SF, (4) 1 BR-1 BA units measuring 544 SF and (20) 1 BR-1 BA units (BCBS) measuring 525 SF in a single, 5-story building, on a redevelopment site formerly the location of a place or worship.

The affordable housing development at 1106 Madison Street will be targeted toward homeless individuals with a chronic disability. More specifically, future funding by Blue Cross Blue Shield of Illinois (BCBS) is being committed at \$300,000 annually, renewing every year for 5 years contingent on the condition that 20 units target homeless individuals that are Medicaid eligible through BCBS and have an annual income of 30% AMI. Housing Forward intends to apply to Suburban Cook County Continuum of Care (CoC) for the remaining 16 rental subsidies. Until those subsidies are awarded, the unsubsidized units will be designated to serve individuals with an income of 50% AMI.

While the subject property will not have any age restrictions, the subject property could attract tenants that are in fact eligible to live in an age restricted property. Therefore, age restricted properties are included in our analysis.

The delineated Primary Market Area covers approximately 17.9 square miles. Even within this large primary market area there was a paucity of affordable housing units based on the IHDA Multifamily Project List (01/29/2024). It was necessary to incorporate City of Chicago properties located in the closest zip codes just outside the PMA (60644 and 60651). Likewise several additional Cook County properties located in Northlake and Melrose Park were incorporated in an effort to make our analysis more comprehensive.

According to our research of the IHDA Multifamily Project List 01/29/2024, there are only 1,866 affordable units in the subject market area.

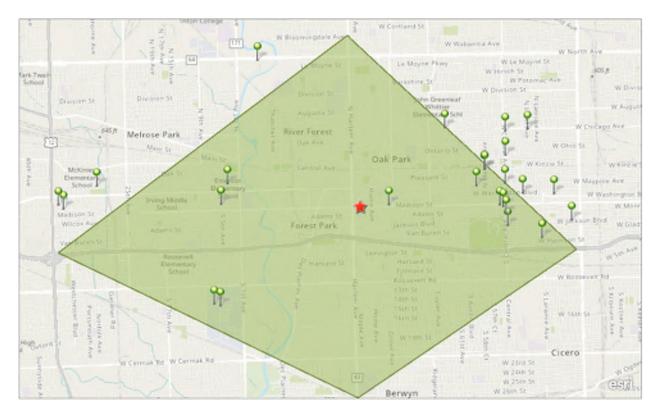


# **IHDA Financed Apartment List**

County	<b>Development</b>	→ Address	- City -	State	→ Zip → S	Sec8 - Family	<b>y</b> Seniors	Special Needs	■ Number of Apartments       ■ ■ Partments       ■ ■ ■ Partments       ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■
Cook	SENIOR SUITES OF BELLWOOD, LLC	3131-3201 Randolph Street	CHICAGO METRO	Bellwood	60104 N	I N	Υ	N	89
Cook	GREENWOOD APTS	3819 W. Warren Ave.	CHICAGO METRO	Bellwood	60104 N	l Y		N	7
Cook	PRAIRIE VIEW APTS. PHASE II	3936 Georgina Ln.	CHICAGO METRO	Bellwood	60104 N	I N	Y	N	36
Cook	FREEDOMS PATH	5000 S. 5Th Avenue	CHICAGO METRO	Hines	60141 N	I N		Υ	72
Cook	FREEDOM'S PATH AT HINES III	5000 South 5Th Avenue, Building 14	CHICAGO METRO	Hines	60141 Y	/ N		N	28
Cook	COOKE'S MANOR	5000 South 5Th Avenue	CHICAGO METRO	Hines	60141 N	I N		Υ	42
Cook	BISHOP GOEDERT RESIDENCE	53 Tripp Avenue	CHICAGO METRO	Hines	60141 N	I N	Y	Υ	71
Cook	FIFTH AVENUE APARTMENTS	806-820 South 5Th Avenue	CHICAGO METRO	Maywood	60153 N	I Y		N	72
Cook	MAYWOOD SUPPORTIVE LIVING	316 Randolph Street	CHICAGO METRO	Maywood	60153 N	I N		N	100
Cook	VICTORY CENTRE OF RIVER WOODS FKA VICTORY	CEN 1800 Riverwood Drive	CHICAGO METRO	Melrose Park	60160 N	I N	Y	N	109
Cook	TRINITY PARK VISTA	220 South Wolf Road	OTHER METRO	Northlake	60164 N	I Y		N	16
Cook	WISDOM VILLAGE OF NORTHLAKE	33 S. Wolf Road	CHICAGO METRO	Northlake	60164 Y	/ N	Y	N	71
Cook	DONALD W. KENT RESIDENCES	126 - 208 S. Wolf Road	CHICAGO METRO	Northlake	60164 N	I N	Y	N	73
Cook	GROVE APARTMENTS	820 West Madison	AHPAA	Oak Park	60302 N	I Y		N	51
Cook	NEW MOMS OAK PARK	206-212 Chicago Avenue	CHICAGO METRO	Oak Park	60302 N	I Y		N	18
Cook	AUSTIN/RENAISSANCE	5401 W. Washington	CITY OF CHICAGO	Chicago	60644 Y	′ Y		N	71
Cook	PINE & CENTRAL APARTMENTS	557-65 N. Pine & 743-55 N. Central	CITY OF CHICAGO	Chicago	60644 Y	′ Y		N	78
Cook	MAE SUITES APTS	148 N. Mayfield Ave.	CITY OF CHICAGO	Chicago	60644 N	I Y		Y	39
Cook	AUSTIN YMCA	501 N. Central	CITY OF CHICAGO	Chicago	60644 N	I N		Y	284
Cook	MENARD APTS.	334 N. Menard	CITY OF CHICAGO	Chicago	60644 Y	/ N		Y	57
Cook	FOCUS APARTMENTS	165 N. Central Ave	CITY OF CHICAGO	Chicago	60644 Y	/ N		Y	10
Cook	THRESHOLDS RAD2 CONVERSION	334 North Menard	CITY OF CHICAGO	Chicago	60644 N	I Y		N	146
Cook	CENTRAL COACH HOUSE	504 S. Laramie Ave.	CITY OF CHICAGO	Chicago	60644 N	I Y		N	6
Cook	CENTRAL PINE LTD	315 S. Central	CITY OF CHICAGO	Chicago	60644 N	I Y		N	31
Cook	CENTRAL TERRACE APTS.	504 S. Laramie Ave.	CITY OF CHICAGO	Chicago	60644 N	I Y		N	13
Cook	H.I.C.A REDEV	5042 W. Washington	CITY OF CHICAGO	Chicago	60644 Y	′ Y		N	120
Cook	JACKSON TERRACE	4900 W. Jackson Blvd.	CITY OF CHICAGO	Chicago	60644 N	I Y		N	29
Cook	MADISON RENAISSANCE	5629 W. Madison St.	CITY OF CHICAGO	Chicago	60644 N	I Y		N	30
Cook	SOUTH CENTRAL PLAZA FKA 16 SOUTH CENTRAL	16-20 S. Central Ave.	CITY OF CHICAGO	_	60644 N	I Y		N	19
Cook	SOUTH CENTRAL VISTA	133-145 S. Central Ave.	CITY OF CHICAGO	Chicago	60644 N	I Y		N	25
Cook	NEW MOMS INC NSP	5327 W. Chicago Ave	CITY OF CHICAGO	_	60651 N			Υ	40
Cook	WEST HUMBOLDT PLACE	3533 West Chicago Ave	CITY OF CHICAGO	Chicago	60651 Y	/ N		Υ	13
		Ĭ.		J					1866

The Affordable Property Map for the Primary Market Area is attached below.

# Affordable Property Map Primary Market Area



<u>Area Services</u> – Area services are adequate in proximity, number, and choice. Listed below are general categories for area services that are of significant importance to residential users of the proposed subject property. This list is not intended to be all-inclusive. Additional services may be applicable, while some of those listed may not.

Grocery Stores	Address, Distance from Subject
Jewell-Osco	7525 Lake St, River Forest, IL 1.7 mi. NW
Pete's Fresh Market (Opening in 2024)	640-728 Madison St. Oak Park, IL 0.5 mi. E
<u>Pharmacies</u>	
Walgreen's	811 Madison St, Oak Park, IL 0.5 mi. E
Walgreen's	7251 Lake St, River Forest, IL 60305 0.8 mi. NW
Department Stores	
Target	1129 Lake St, Oak Park, IL 0.7 mi N
Walmart Super Center	1300 Des Plaines Ave, Forest Park, IL 1.9 mi. SW
<u>Libraries</u>	
River Forest Public Library	735 Lathrop Ave, River Forest, IL 1.6 mi NW
Oak Park Public Library	834 Lake St, Oak Park, IL 1.0 mi N
<u>Hospitals</u>	
Rush Oak Park Hospital	520 S Maple Ave, Oak Park, IL Across the street S.
Hines VA Medical Center	5000 5th Ave, Hines, IL 8.2 mi. W
Loyola Outpatient Center	2160 S 1st Ave, Maywood, IL 8.2 mi. W
Social Security Administration	
Field Office	7222 Cermak Rd. Ste. 600, N. Riverside, IL2.5 mi. S
U.S. Post Offices	
Full-Service Office	901 Lake St. Oak Park, IL 60301 0.9 mi. N
Public Transportation	
Metra - Metra UP-W Line	1115 W. North Blvd. Oak Park, IL 0.2 mi N
CTA – Green Line Harlem/Lake Street	1 S Harlem Avenue Oak Park, IL 0.2 mi N
CTA - Blue Line Harlem (Forest Park)	Interstate 88/Harlem Avenue 0.5 mi S
Parks, Recreation, Community Centers	
Scoville Park	800 Lake St, Oak Park, IL 1.0 mi. NE
Park District of Forest Park Aquatic Center	7501 Harrison St, Forest Park, IL 1.0 mi SW
Community Recreation/Senior Center	229 Madison Street Oak Park, IL 1.1 mi E

District public schools and community charter schools are summarized below.

Elementary Schools	Address, Distance from Subject
Gwendolyn Brooks Middle School	325 S Kenilworth Ave, Oak Park, IL 0.5 mi NE
Junior High/Secondary Schools	
Julian Middle School	416 S Ridgeland Ave, Oak Park, IL 1.2 mi E
High Schools	
Oak Park and River Forest High School	201 N Scoville Ave, Oak Park, IL 1.5 mi. NE
Fenwick High School	505 Washington Blvd, Oak Park, IL 0.8 mi E

Shopping and Related Services: Grocery stores are within a convenient proximity to the subject property with Jewell-Osco, 7525 Lake St, River Forest, IL located 1.7 mi. NW of the subject and the Pete's Fresh Market (Opening in 2024) located even closer at 640-728 Madison St. Oak Park, IL only 0.5 mi. E. The closest pharmacies are both Walgreen's located at 811 Madison St, Oak

Park, IL 0.5 mi. E and 7251 Lake St, River Forest, IL 60305 0.8 mi. NW of the subject. There are good department store options within close proximity to the subject which includes Target located at 1129 Lake St, Oak Park, IL 0.7 mi N and the Walmart Super Center, 1300 Des Plaines Ave, Forest Park, IL only 1.9 mi. SW of the subject.

<u>Transportation:</u> The site is transit rich and well situated. Oak Park's centralized location along the I-290 (Eisenhower Expressway) Corridor provides for an abundance of public transportation options. Two Chicago Transit Authority (CTA) elevated rail lines (Blue and Green) run parallel to the Eisenhower Expressway ½ miles south of the subject property.

500 feet west of the subject at the intersection of Harlem Avenue and Madison Street, PACE Bus Line 307 runs north-south along Harlem Avenue connecting the Elmwood Park Milwaukee District West Line South to the CTA Blue and Green I Lines and connecting Midway Airport to the south. Also, at this stop PACE Bus Line 307 provides daily service between the CTA Blue Line Forest Park Transit Center to the west and North/Wolf in Northlake. Other CTA Bus routes (CTA - 72, 86, 90, 91) can be accessed along Oak Parks eastern boundary along Austin Avenue.

Educational Facilities: The subject is located within the Oak Park ESD 97 Public School District. The closest schools to the subject property are; Gwendolyn Brooks Middle School 325 S. Kenilworth Ave, Oak Park, IL (0.5 mi NE), Julian Middle School 416 S Ridgeland Ave, Oak Park, IL (1.2 mi E), Oak Park and River Forest High School 201 N Scoville Ave, Oak Park, IL (1.5 mi. NE) and Fenwick High School 505 Washington Blvd, Oak Park, IL (0.8 mi E). The 2022 IllinoisReportCard.com School Data for the Oak Park ESD 97 Public School District is attached in the addenda.

Recreation: Located 1.5 miles east of the subject is the newly constructed Community Recreation Center (CRC) **229 Madison Street Oak Park, IL** opened in 2023. The center has a three-lane, indoor track, for walkers and runners, overlooks the gymnasium, a 12,244 sq. ft. gymnasium with 12 basketball hoops, with courts also lined for pickleball, badminton and volleyball. There is a 4,500 sq. ft. fitness center which includes a variety of cardio and strength training equipment including treadmills, ellipticals, rowers, free weights, and pin-select machines. There is a fitness & dance studio that host fee-based classes including Aerobic, HIIT, and Yoga classes. Fee-based dance classes for youth and adults will take place in this space as well. Also included are the Esports lounge, 1,500 sq. ft. community room for meetings or gatherings, a multipurpose room and the Community Mental Health Board suite which is available to all CRC visitors.

Scoville Park 800 Lake St, Oak Park, IL 1.0 mi. NE is Oak Park's "Village Green" serving as the gathering place for various community activities, both organized and spontaneous. The World War I "Peace Triumphant" Monument is the park's focal point and is surrounded by a plaza area. Park visitors have access to three tennis courts and tot lot and large meadow is a popular destination for Frisbee enthusiasts. Scoville is home to many Oak Park traditions including weekly summer concerts, the Art in the Park Art Fair and the annual Day In Our Village event.

<u>Healthcare:</u> As stated previously, across the street south of the subject is the Rush Oak Park Hospital. RUSH Oak Park **520 S Maple Ave, Oak Park, IL**, has a 55,000 SF emergency department with 22 private rooms, serving 40,000 patients per year. The campus also features a newly built Electrophysiology Lab that is fully equipped to treat patients with arrhythmias and other heart-related conditions closer to home, as well as a Cancer Care Center with a new linear accelerator that provide accurate radiation treatment in less time.

The Loyola University Medical Center 2160 S 1<sup>st</sup> Ave. Maywood, IL 8.2 mi. W is a quaternary care facility with 547 licensed beds, a Level I Trauma Center, nationally recognized Burn Center, renowned Transplant Center and a special 20-bed unit for patients undergoing stem cell transplant. The center provides top hospital care in all medical specialties, including orthopedics, nephrology, cardiology, cancer, ophthalmology and surgery. The medical center has been designated a Level III Perinatal Center by the Illinois Department of Public Health, a designation recognizing centers that have demonstrated the highest level of expertise in caring for women with high-risk pregnancies, their unborn babies and critically ill newborns.

Many smaller facilities offering offer health screenings, classes, support groups and other services, many of them at no charge, to the community are dispersed, at a lower scale, throughout the community.

Population/Demographic Characteristics: Primary Market Area, encompassing portions of the near west Cook County Municipalities of, Oak Park, Cicero, Berwyn, Maywood, Melrose Park, and a small western most portion of the City of Chicago. We have focused our research surrounding the major thoroughfares connecting all of these municipalities which include Harlem Avenue, North Avenue Eisenhower Expressway and Cicero Avenue. The designated Primary Market Area (PMA) has delineated boundaries of just north of the North Avenue and Harlem Avenue intersection to the north, the Cicero Avenue and Eisenhower Expressway intersection to the east, just south of the Harlem Avenue and Roosevelt Road intersection to the south and just west of the 25th Avenue and Eisenhower Expressway intersection to the west. The delineated Primary Market Area covers approximately 17.9 square miles. All demographic information is provided by U.S. Census Bureau, 2017-2021 American Community Survey and Esri forecasts for 2023 and 2028. U.S. Census Bureau 2020 decennial Census in 2020 geographies.

# Population

In the PMA, the current year population is 142,454. In 2020, the Census count in the area was 144,287. The rate of change since 2020 was -0.39% annually. The five-year projection for the population in the area is 140,086 representing a change of -0.33% annually from 2023 to 2028. Currently, the population is 47.2% male and 52.8% female.

## Households by Income

Current median household income is \$72,965 in the PMA, compared to \$72,603 for all U.S. households. Median household income is projected to be \$82,323 in five years, compared to \$82,410 for all U.S. households Current average household income is \$116,224 in this area, compared to \$107,008 for all U.S. households. Average household income is projected to be \$131,614 in five years, compared to \$122,048 for all U.S. households Current per capita income is \$48,374 in the area, compared to the U.S. per capita income of \$41,310. The per capita income is projected to be \$55,781 in five years, compared to \$47,525 for all U.S. households.

Employment: Total nonfarm employment for the Chicago-Naperville-Elgin, IL-IN-WI, metropolitan area stood at 4,832,300 in November 2023 compared to 4,789,000 a year ago, the U.S. Bureau of Labor Statistics reported today. Regional Commissioner Jason Palmer noted that the employment change over the year was not statistically significant. Nationally, employment rose 1.8 percent over the year.

According to the Illinois Department of Employment Security (not seasonally adjusted) unemployment rates for the sixcounty area were all down with Cook County unemployment down to 4.0% down from 4.4% from December one year ago. On the table below we have attached more focused (older) unemployment data for Oak Park as researched by the CMAP Community Data Snapshot.

Labor Market Area	Dec 2023	Dec 2022	Over-the- Year Change
Chicago-Naperville-Arlin	gton Height	s, IL Metro	Division
Cook County	4.0 %	4.4 %	-0.4
DuPage County	3.1 %	3.2 %	-0.1
Grundy County	4.4 %	4.9 %	-0.5
Kendall County	3.5 %	3.8 %	-0.3
McHenry County	3.6 %	3.8 %	-0.2
Will County	4.0 %	4.3 %	-0.3

#### Employment Status, 2017-2021

	Oal	Oak Park		Cook County		CMAP Region	
	Count	Percent	Count	Percent	Count	Percent	
In Labor Force	30,397	70.9	2,809,310	66.2	4,614,158	67.3	
Employed1*	28,870	95.0	2,603,767	92.7	4,306,443	93.3	
Unemployed*	1,478	4.9	203,970	7.3	295,199	6.4	
Not in Labor Force	12,466	29.1	1,434,949	33.8	2,237,246	32.7	

Source: 2017-2021 American Community Survey five-year estimates.

Does not include employed population in the Armed Forces.

Universe: Population 16 years and older \*Universe: In labor force

#### Private Sector Employment\*, 2022

	Oak Park		Cook County		6-County Region**	
	Count	Percent	Count	Percent	Count	Percent
Private Sector Employment	16,181	N/A	2,192,974	N/A	3,497,215	N/A
Job Change, 2012-22	1,542	10.5	119,416	5.8	235,962	7.2
Job Change, 2002-22	-1,678	-9.4	-23,984	-1.1	138,855	4.1
Private Sector Jobs per Household***	0.71		1.07		1.09	

Source: Illinois Department of Employment Security, Where Workers Work report (2022).

<sup>\*\*\*</sup>Based on households from 2017-2021 American Community Survey five-year estimates.

Employmen	t of Oak	Park Residen/	s*, 2019
-----------	----------	---------------	----------

TOP INDUSTRY SECTORS	Count	Percent
1. Health Care	3,822	15.0
2. Education	3,288	12.9
3. Professional	3,039	11.9
4. Finance	1,866	7.3
5. Administration	1,831	7.2
TOP EMPLOYMENT LOCATIONS		
1. Chicago	12,373	48.4
2. Oak Park	2,341	9.2
3. Maywood	447	1.7
4. Oak Brook	381	1.5
5. Downers Grove	321	1.3

Emplo	yment	in O	ak P	ark".	2019
-------	-------	------	------	-------	------

Employment in Oak Park*, 2019		
TOP INDUSTRY SECTORS	Count	Percent
1. Health Care	4,031	26.0
2. Education	2,476	16.0
3. Accommodation and Food Service	1,830	11.8
4. Retail Trade	1,307	8.4
5. Professional	1,195	7.7
TOP RESIDENCE LOCATIONS		
1. Chicago	4,892	31.5
2. Oak Park	2,341	15.1
3. Berwyn	479	3.1
4. Forest Park	359	2.3
5. Cicero	287	1.9

Source: U.S. Census Bureau, Longitudinal Employer-Household Dynamics program (2019).

According to the CMAP Community Data Snapshot the top two employment sectors for Oak Park are Health Care, Education, Professional and Finance.

<sup>&</sup>quot;Figures exclude employees not covered by unemployment insurance. Data not available for all communities in the CMAP region.

<sup>&</sup>quot;Data is not available for Kendall County.

<sup>&</sup>quot;Excludes residents working autside of, and workers living autside of, the seven-county CMAP region.

#### IV. HOUSING MARKET CHARACTERISTICS

General Housing Characteristics - The household count in the PMA has changed from 59,233 in 2020 to 59,264 in the current year, a change of 0.02% annually. The five-year projection of households is 59,368, a change of 0.04% annually from the current year total. Average household size is currently 2.37, compared to 2.40 in the year 2020. The number of families in the current year is 34,092 in the specified area.

Currently, 51.6% of the 64,759 housing units in the PMA are owner occupied; 39.9%, renter occupied; and 8.5% are vacant. Currently, in the U.S., 58.5% of the housing units in the area are owner occupied; 31.7% are renter occupied; and 9.8% are vacant. In 2020, there were 64,419 housing units in the area and 8.0% vacant housing units. The annual rate of change in housing units since 2020 is 0.16%. Median home value in the area is \$347,496, compared to a median home value of \$308,943 for the U.S. In five years, median value is projected to change by 1.51% annually to \$374,484.

## PMA Housing by Age

In the subject PMA 60.3% of the housing is 74 years or older. On the table below we have attached a summary of the age of the housing stock per U.S. Census Bureau, 2017-2021 American Community Survey. With this small percentage of new construction, the subject should be well received upon completion.

Housing Units by Year Structure Built	#	%
Total	63,725	100.00%
Built 2020 or later	4	0.0%
Built 2010 to 2019	1,128	1.8%
Built 2000 to 2009	2,301	3.6%
Built 1990 to 1999	1,177	1.8%
Built 1980 to 1989	1,994	3.1%
Built 1970 to 1979	5,715	9.0%
Built 1960 to 1969	6,285	9.9%
Built 1950 to 1959	6,027	9.5%
Built 1940 to 1949	5,376	8.4%
Built 1939 or earlier	33,719	52.9%
Median Year Structure Built	1940	

According to the DePaul University Institute on Housing Studies 8.9% of the Oak Park Area housing stock is in buildings with 2-4 units or larger. The table taken from the DePaul University Institute on Housing Studies indicates, the remainder of the Oak Park Area Housing Stock is comprised of single-family (39.8%), Condos (19.6%), 2-4-unit buildings (8.9%), and buildings with 5+ units (31.6%). The Housing Composition Table is attached in Section II Field Observations.

**Housing Composition Table for Surrounding Community Areas** 

	Single Family	Condo	2-4 Units	5+ Units
Cook County Total	42.4%	18.6%	18.0%	21.0%
Oak Park	39.8%	19.6%	8.9%	31.6%
Forest Park	23.0%	26.0%	20.2%	30.7%

		GREAI	KEALIY	ADVISOR	<u>(S</u>
Berwyn	46.3%	3.2%	31.0%	19.5%	
River Forest	62.7%	27.6%	3.8%	5.9%	İ
Bellwood	73.1%	1.7%	10.4%	14.8%	

The subject property is located in an area where single family residences are by far the most prevalent housing type. This would indicate a high degree of competition for the subject property, which is proposed as a multi-unit, elevator, low rise property with 30+ units.

<u>Comparison of Market Area Rental Market</u> – Below we have provided a comparison summary of the proposed development rents and the competing market-area rental developments. The proposed rents for the subject were compared to the comparable rents with respect to total monthly rent, total unit size and total monthly rent per square foot (SF).

# **Proposed Subject Rent Schedule**

		Income	Monthly		Rent
<u>Unit Type</u>	# Units	Restriction	Rent	<b>Unit SF</b>	<u>\$/SF</u>
0 BR-1 BA	12	(Homeless) 50% AMI	\$925	420 SF	\$2.20/SF
1 BR-1 BA	20	(Homeless) 30% AMI (BCBS)	\$1,250	525 SF	\$2.38/SF
1 BR-1 BA	4	(Homeless) 50% AMI	\$1,000	544 SF	\$1.84/SF
	36	Weighted Avg. \$/SF		\$2.26/SF	

The income restrictions as stated above depend on the timing of the rental assistance funding. Interfaith may have to revisit once the rental award is secured.

Based on the analysis below the subject property should be well received and highly competitive in the local market area. Upon completed construction, the subject property will be newly renovated of modern materials and in overall good condition. Furthermore, the above analysis indicates that the subject property will have units that are appropriately sized when compared to similar units in the subject market.

#### **Comparison of Market Area Rental Market**

Unit	Income Level	Rent	Sq. Ft.	\$ Rent/SF
<b>Type</b>	<u>(% of AMI)</u>	<b>Range</b>	Range	Range
Comparables	Varied	\$422-\$1,712	350 SF-600 SF	\$1.21/SF-\$2.85/SF
Subject 0 BR	(Homeless) 50% AMI	\$925	420 SF	\$2.20/SF
Comparables	Varied	\$706-\$2,058	568 SF-800 SF	\$0.76/SF-\$2.64/SF
Subject 1 BR	(Homeless) 30% AMI (BCBS)	\$1,250	525 SF	\$2.38/SF
Subject 1 BR	(Homeless) 50% AMI	\$1,000	544 SF	\$1.84/SF

The subjects monthly rent ranges are in acceptable ranges when compared to market rents. The subjects monthly rent per square foot is appropriately on the high end as the size of the subject units distort that number. The subject units will be somewhat smaller than similar comparable units found in the market. The subject property will be new construction from a repositioned building shell and maximizing the density of the units was a goal of the developer. The subject unit mix is commensurate with the persons per household benchmark for the subject market area.

It is notable that the units are on the low end of the range but not such that the appeal of the units is impacted. The size difference would be negligible to most observers. It is deemed that the units are both sized and priced appropriately for the market. These properties were located within an area where they will be in direct competition with the subject as completed. The weighted average rent rates for the subject equates to \$2.26/SF. The comparables (which included market rate developments) had units which had weighted average rent rates that ranged from \$0.80/SF to \$2.59 SF with an average, weighted average of \$1.46/SF.

<u>Foreclosed, Vacant, and Abandoned Properties</u> – According to data released by the DePaul Institute on Housing, the community areas that comprise a substantial portion of the subject PMA have seen a drastic decline in the number of foreclosures since the height of the credit/housing crisis in 2010. According to the extracted data charts (attached below) foreclosure filings have plummeted, completed foreclosure auctions have also began to follow suit.

#### TOTAL FORECLOSURE FILINGS ACTIVITY - ALL RESIDENTIAL PROPERTIES This is the total number of new foreclosure filings in a given year. In Cook County, data are broken out separately for foreclosure filing activity on single family homes, condominium units, two-to-four unit buildings, and in buildings with five or more units. Outside of Cook County, data are for all residential Source: IHS Calculations of Data from County Circuit Courts via Property Insight, Record Information Services, County Assessor's Offices 1 Trend High Geography Low Avg 297 21 148 Oak Park 2005 2021 18 190 Bellwood 383 2005 2021 27 62 3 River Forest 2021 2005 Berwyn 767 13 323 2005 2021 369 25 209 Maywood 2005 Melrose Park 227 6 2021

There were no noted negative factors that appeared to impact the subject any greater than other properties in the city. The subject immediate neighborhood is densely populated and fully developed. Any vacant properties were limited to commercial properties that were either for sale or sold pending redevelopment. No boarded-up properties were observed along Madison Street or Harlem Avenue. Both corridors are highly desirable commercial corridors and long vacant properties are extremely rare.

#### Conclusions

Considering there has been perpetual gap in the supply and demand for affordable housing in the Primary Market Area, when affordable properties are taken completely out of the market because that cannot be occupied, further exacerbates the supply and demand gap. Properties taken out of the market due to foreclosure are tied up in legal issues becoming more deteriorated over time

and even more expensive to add back to the housing stock. The number of foreclosed, vacant, and abandoned properties in the immediate subject market area is inconsequential and certainly not a detriment to the marketability of the subject property or the future demand.

#### V. AFFORDABILITY/DEMAND

A. Affordable Rent Analysis – Provide a comparison of the proposed gross rent for all applicable unit types, size and income levels to the applicable program gross rent limits and denote how far under the limit the rents are positioned.

	ILLINOIS HOUSING DEVELOPMENT AUTHORITY'S						
SCHEDULE OF MAXIMUM MONTHLY GROSS RENTS FOR MULTIFAMILY PROGRAMS *							
	Effective May 15, 2023						
CHICAGO							
(Cook, Du Page, Lake,							
Kane, McHenry & Will)	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR	
REGULAR RENTS	Gross Rent	Gross Rent	<b>Gross Rent</b>	<b>Gross Rent</b>	<b>Gross Rent</b>	<b>Gross Rent</b>	
(120%)	\$2,319	\$2,484	\$2,979	\$3,442	\$3,840	\$4,236	
(80%)	\$1,545	\$1,655	\$1,986	\$2,295	\$2,560	\$2,824	
(60%)	\$1,352	\$1,449	\$1,737	\$2,008	\$2,240	\$2,471	
(50%)	\$1,159	\$1,242	\$1,489	\$1,721	\$1,920	\$2,118	
(40%)	\$966	\$1,035	\$1,241	\$1,434	\$1,600	\$1,765	
(30%)	\$773	\$828	\$993	\$1,147	\$1,280	\$1,412	
(20%)	\$579	\$621	\$744	\$860	\$960	\$1,059	
(10%)	\$386	\$414	\$496	\$573	\$640	\$706	

The development will be a single five-story building. The upper floors will be mostly residential with 9 units on floors 2-5. All floors will be accessed by common areas including corridors, stairwells and the elevator lobby. The subject will have a single elevator servicing all five floors. All units and the elevator will be accessed from a single common 1<sup>st</sup> floor entrance.

In December of 2023, Blue Cross Blue Shield of Illinois (BCBS) committed \$300,000, renewing every year for 5 years for a total of \$1.5 million in rental subsidies for this development. This funding will provide rental assistance for 20 of the one-bedroom units under the condition that they target homeless individuals that are Medicaid eligible through BCBS and have an annual income of 30% AMI.

Housing Forward intends to apply to Suburban Cook County Continuum of Care (CoC) for the remaining 16 rental subsidies. Until those subsidies are awarded, the unsubsidized units will be designated to serve individuals with an income of 50% AMI. Rents will be based on the following matrix.

#### **Proposed Rent Schedule**

		Income	Monthly		Rent
<u>Unit Type</u>	# Units	<b>Restriction</b>	Rent	<u>Unit SF</u>	<u>\$/SF</u>
0 BR-1 BA	12	(Homeless) 50% AMI	\$925	420 SF	\$2.20/SF
1 BR-1 BA	20	(Homeless) 30% AMI (BCBS)	\$1,250	525 SF	\$2.38/SF
1 BR-1 BA	4	(Homeless) 50% AMI	\$1,000	544 SF	\$1.84/SF
	36				

The rents above were supposed for the purposes of this report. The data above was provided by the developer and these programs will be enacted for the subject operations ongoing. Depending on the completed construction date the rents could change over time. The impact on the number of eligible households in the Primary Market Area will be negligible or miniscule.

Overall Demand: There are 19,579 eligible households in the PMA that would qualify for affordable housing at 50% AMI or lower. With only 1,866 other affordable IHDA units identified in the subject PMA, a substantial affordable housing gap exists. Even with the additional (individual units in multiple buildings) participating in other Section 8 (tenant based) voucher programs the difference between the targeted demographic (demand) and available supply is vast.

The following properties are NOT included on the IHDA Multifamily Project List 01/29/2024:

Oak Park Residence Corporation (OPRC) is a locally based, non-profit community development corporation that exists exclusively for charitable purposes. OPRC controls more than 32 multi-family Oak Park buildings containing nearly 700 units of rental housing. Although all these units may not all be traditionally "affordable housing" these units do not reflect traditional market (rent) activity and is assumed that the rent is reflective of long-term tenancy and/or has been held artificially low given the ownership's affordable housing objectives.

**7 Van Buren St.** is a proposed six-story, **45-unit** apartment building at the corner of Austin and Van Buren Street. The plan was put forth by the nonprofit Oak Park Residence Corporation, which will tear down its existing two-story, 12-unit midcentury apartment building on the site at 7 Van Buren Street. Twenty percent of the building's units will be preserved for individuals earning at or below 50% of area median income (AMI) while the remaining 80% will be rented at prevailing market rates.

We have also identified seven additional Oak Park Buildings that contain affordable units. We have only included buildings that are substantially affordable, and we have excluded buildings with small ratios of affordable units which were likely constructed adhering to the affordable housing ordinance. The total number of affordable units in these buildings is **569** units.



Currently there are 9,451 renter occupied housing units in **Oak Park (only).** Moreover, the overall (rental) vacancy rate for Oak Park is 6.1%. Therefore, it is estimated that 576 renter units in the subject market area are vacant. If it were assumed that most of these vacant units were affordable, this still does little to address the vast gap between the eligible affordable households and available affordable units.

<u>Capture Rate</u> – Below we have calculated the capture rate for the proposed subject property. The acceptable calculation divides the total number of the proposed units, within each income strata, by the total number of income/age eligible households (not only the renter households) within the PMA only. The number of households are determined by the range between the minimum

annual income that a household must earn in order for the proposed rents to be considered "affordable", up to the maximum income level for a given income strata. Given that the subject units will be mixed in type and income eligibility we have used the table below to designate the appropriate income strata to the appropriate unit type.

<u>Unit Type</u>	<b>Household Size</b>
0-Bedroom	1-Person
1-Bedroom	1-Person
1-Deditoolii	2-Person

We have utilized the above information in conjunction with the following recently published Table of Income Limits,

<b>Household Size</b>	30% AMI	<u>50% AMI</u>
1 person	\$23,190	\$38,650
2 persons	\$26,490	\$44,150

The 50% & 80% limits were published by HUD. the 10%, 20%, 30%, 40%, 60%, 70% & 120% limits are calculated in a manner consistent with the IRS's methodology for the LIHTC program.

Therefore, the income eligibility for the proposed subject units would be based on the following;

		Income	
<b>Unit Type</b>	<u>#Units</u>	Restriction	<b>Household Income</b>
0 BR-1 BA	12	(Homeless) 50% AMI	\$0-\$38,650
1 BR-1 BA	20	(Homeless) 30% AMI (BCBS)	\$0-\$26,490
1 BR-1 BA	4	(Homeless) 50% AMI	\$26,491-\$44,150

Therefore, the total number of eligible households in the subject PMA can be extracted from the table below based on the level of income. As of 2023 the PMA had the following number of households sorted by their income levels. **The households in bold would qualify for at least one or more** of the subject units at the proposed area median income restrictions as identified by the subject developer.

<b>Household Income</b>	# Households	% of All Households
Less than \$10,000	3,684	6.22%
\$10,000 to \$14,999	3,684	6.22%
\$15,000 to \$19,999	2,213	3.73%
\$20,000 to \$24,999	2,213	3.73%
\$25,000 to \$29,999	2,103	3.55%
\$30,000 to \$34,999	2,103	3.55%
\$35,000 to \$39,999	1,789	3.02%
\$40,000 to \$44,999	1,790	3.02%
\$45,000 to \$49,999	1,790	3.02%
\$50,000 to \$59,999	4,396	7.42%
\$60,000 to \$74,999	4,396	7.42%

\$75,000 to \$99,999	7,059	11.91%
\$100,000 to \$124,999	4568	7.71%
\$125,000 to \$149,999	4,568	7.71%
\$150,000 to \$199,999	4672	7.88%
\$200,000 or more	8240	13.90%
	59,264	100%

**Bold** income groups = eligible households

Therefore, we will divide the total number of the proposed units, within each income strata, by the total number of income/age eligible households within the PMA.

	Subject	PMA Eligible	Capture
Capture Rate Calculation	<u>Units</u>	<b>Households</b>	Rate
(Homeless) 30% AMI (BCBS)	20	11,794	.0017
50% AMI	<u>16</u>	<u>7,785</u>	.0021
Overall	36	19,579	.0018

The overall capture rate is calculated by taking the total number of proposed units 36 divided by the total PMA eligible households (19,579). This equates to an overall capture rate of **0.18%**.

For the purposes of this report the capture rates are at acceptable percentages. Given a historical benchmark of 5% for family projects the subject capture rate is significantly lower and indicated a substantial need for affordable housing such as the subject property.

<u>Penetration Rate</u> – The Penetration Rate for the subject property is somewhat distorted. With multiple tiers of maximum income restrictions, the individuals qualifying for units at 30% of AMI also may meet the qualifications for 50% AMI. Therefore with 36 units at the subject property plus the existing (IHDA) units already in the PMA (1,866), plus an additional 1,296 affordable units in service through other agencies divided by the total number of income qualifying households with annual incomes ranging from \$0 to \$44,150 equates to a 1.63% (36+1,866+1,296/19,579) penetration rate.

<u>Absorption Rate</u> – The Absorption Rate is estimated at six months or (6 units per month) to achieve stabilized occupancy estimated to be 94%. Substantial preleasing and pre-screening by the subject developer will occur during the construction period. Upon completed construction it is expected that the subject property will be substantially pre-leased. The subject property will be new construction and will have substantial appeal.

<u>Historical absorption for other developer projects in the PMA:</u>

#### 442 S. Grove Avenue, Oak Park, IL

Year Placed in Service: 2013

Total number of units and unit mix: 51 Units: ALL 1-BRs

(3 months/17 units absorbed per month)

# 800 S. 5th Avenue Maywood, IL

Year Placed in Service: 2021

Total number of units and unit mix: 72 Units: 16 studios, 32 1-BRs, 16 2-BRs, 8 3-BRs

(5 months/14 units absorbed per month)

It is notable to mention that the subject developer believes that the potential subject unit subsidies are more appealing and advantageous and the lease up of the subject will be quicker than the other projects developed in the area.

While the immediate subject market is substantially developed and densely populated our research of the area income statistics indicates that the subject will be in substantial demand as an affordable property.

#### Residual Demand – Village of Oak Park (only)

On the table below we have calculated residual demand for the proposed subject property with a more focused view limited to the municipal boundaries of the Village of Oak Park. As evidenced by this basic demand calculation, the subject property will be in significant demand as an income restricted property.

Residual Demand Calculations Village of Oak Park							
Line ID	Demand Forecast	Current	End of Year 5	Comment			
1	Population forecast	53,834	54,361	CMAP Historical 0.195 annually 2000-2020			
2	Persons per household	2.31	2.31	Analyst's forecast			
3	Occupied housing unit demand (total households)	23,305	23,650	Line 1 ÷ Line 2			
4	Renter-occupied ratio	40.5%	40.5%	US Census 2022: ACS 5-Year Estimates			
5	Renter households	9,438	9,578	Line 3 × Line 4			
6	Percentage of renter households occupying apartments	86.0%	86.0%	US Census 2022: ACS 5-Year Estimates			
7	Demand for apartment units	8,117	8,237	Line 5 × Line 6			
8	Percentage of apartment demand attributable to subject's economic segment (Oak Park Median Houseold Incomes \$10,000-\$44,999)	33.0%	33.0%	Based on minimum and maximum income			
9	Competitive apartment demand	2,682	2,722	Line 7 × Line 8			
10	Adjustment for equilibrium vacancy (6% Renter Vacancy for Oak Park US Cenus)	÷ 0.94	÷ 0.94	1.0 – equilibrium vacancy rate			
11	Supportable (adjusted) demand	2,856	2,898	Line 9 ÷ Line 10			
12	Current Affordable Supply (Oak Park Only)	1,338	1,338	Analyst's research			
13	Forecasted additional supply		81	Analyst's forecast			
14	Forecasted reductions in supply			Analyst's forecast			
15	Total supply	1,338	1,419	Line 12 + 13 + 14			
16	Residual demand	1,518	1,479	Line 11 – Line 15			
17	Ratio of demand to supply (market occupancy rate)	2.00	1.92	Line 9 ÷ Line 15			

A ratio of one indicates that supply and demand are balanced. A ratio of less than one indicates supply outweighs demand, while a ratio greater than one indicates excess demand

All demographic data was obtained from U.S. Census 2022: American Community Survey (ACS) 5-Year Estimates Comparison Profiles. Supply data was researched though CoStar and other Village of Oak Park sources.

#### VI. IMPACT ON OTHER AFFORDABLE HOUSING AND MARKET RATE HOUSING

A. Impact on Other IHDA Properties – None.

There are 19,579 eligible households in the PMA that would qualify for affordable housing at 50% AMI or lower. With only 1,866 other affordable IHDA units identified in the subject PMA, a substantial affordable housing gap exists.

B. Impact on Other Assisted/Affordable Housing (non-IHDA properties) – Minimal to none as there are 19,579 eligible households in the PMA that would qualify for affordable housing at 50% AMI (and below).

The other affordable housing properties that we contacted had high occupancy rates and waiting lists. Some even stop taking names for their waiting lists. Some affordable housing developments are taking names on the waiting list that signed up four years prior.

C. Impact on Market Rate Housing – While the subject could draw tenants that qualify from market rate apartments in the immediate market area, in the longer term this will subside as new people come live in the area closer to where they work. The proposed property will not significantly reduce the tenancy of established market rate properties as the subject's tenants will have to qualify and the subject is not adding a large market share to the overall market.

#### VII. CONCLUSIONS AND RECOMMENDATIONS

A. Conclusions – The strengths of the proposed subject property is the proposed new construction which will heighten the appeal of the subject to prospective tenants and will heighten the aesthetic appeal of the surrounding neighborhood. A substantial need will be met as the subject will be affordable rental housing, located in a market area that has a shortage of affordable rental housing. The weaknesses of the subject property are inconsequential as the demand is substantial. The demand for affordable rental is strong with high occupancy percentages and waiting lists. The supply of competing affordable rental developments is very low. The subject's market of income restricted population is high in the immediate area. The proposal to construct the subject to meet affordable housing demand in the subject PMA is supported by the research of the demographic and housing trends mentioned in this study.

There are 19,579 eligible households in the PMA that would qualify for affordable housing at 50% AMI or lower. With only 1,866 other affordable IHDA units identified in the subject PMA, a substantial affordable housing gap exists.

B. Recommendations - We are recommending the subject property as proposed. The unit mix is reflective of the demand in the market and the proposed rents are adequately affordable when compared to market rate properties. Market standard amenities will be easily achievable as the PMA rental market is minimally demanding (with respect to the type and quality of amenities). Competing with the surrounding market will be easy as the surrounding rental stock is dated, and the subject will be superior in quality.

# VIII Enclosures

Subject site and neighborhood photographs

IHDA's Site and Market Study Summary Form

# **Subject Photographs**



View of the subject from Madison Street facing northeast



View of the subject from Madison Street facing northeast

# **Subject Photographs**



View of Madison Street facing east the subject is on the left



View of the entrance to the subject

# **Site and Market Study Summary Form**

	d Market Study Su	ımmarıı Form	
(Please complete <u>al</u> I highlighted (in yellow) sections of this fo			enial of your application)
	1.6 3	** 1 ' 1 '	0.1.16
	Information	Mark appropriate box /	Other information / Page Number
Required Information:	Requested on	Include required	Where information can be found in Site
	this form:	information:	and Market Study:
Name of Development:	Keystone Apart	ments	•
Location of the Proposed (City/County):	1106 Madison	Street Oak Park, IL 60302	2
	Family	X	If Other please indicate targeted population:
Targeted Tenant Type:	Elderly	X	
	Other	X	Homeless
Other affordable units that target the same tenant type in the PMA:  Number of Units  (should include IHDA, HUD, Rural Housing, chicago Tax Credits, etc.)	Number of Units	1866	Page number:
,,			38
Total Number of other affordable units in the PMA: (should include IHDA, HUD, Rural	Number of Units	3198	Page number:
Housing, Chicago Tax Credits, etc.)	Number of onits		50
Rent Schedule (including unit sizes) for Proposed Development:	Included	X	Page number:
	Not Included		8
	Included	х	Page number:
Occupancy levels for existing affordable properties in PMA:	Not Included		20.24
and the first country to the second country	Included		30-34 Page number:
Rent Schedule for Comparable Properties:		Х	
	Not included		30-34
	Lower		Evaluation and Explanation found on page:
Evaluation of the proposed rents to comparable properties in the PMA:	Comparable	х	Evaluation and Explanation found on page.
	Higher		4
Demographic (population) trending for PMA and for targeted tenant population:	Increase Stable		Evaluation and Explanation found on page:
	Decrease		
	Decrease	X	45
	Increase	x	7
Demographic (households) trending for PMA and for targeted tenant population:	Stable		Evaluation and Explanation found on page:
	Decrease		44
			44
Evaluation of the proposed unit mix to the PMA standard:	Superior		Evaluation found on page:
···	Meets	x	-
	Inferior	Λ	45
	Superior		Evaluation found on page:
Evaluation of the proposed unit sizes (sq. ft.) to the PMA standard:	Superior	x	Evaluation found on page.
	Inferior	A	45
List of Proposed Development Amenities:	Included	х	Page number:
List of Proposed Development Amenities:		x	Page number:
List of Proposed Development Amenities:	Included	х	
List of Proposed Development Amenities:  Evaluation of proposed amenities to PMA standard:	Included Not Included	x	8
	Included Not Included Superior		8
	Included Not Included Superior Equal		8 Evaluation and Explanation found on page:
Evaluation of proposed amenities to PMA standard:	Included  Not included  Superior  Equal  Inferior		8 Evaluation and Explanation found on page:
	Included Not Included Superior Equal Inferior Units per month		8 Evaluation and Explanation found on page:
Evaluation of proposed amenities to PMA standard:	Included  Not included  Superior  Equal  Inferior	X	8 Evaluation and Explanation found on page:  8 Explanation of absorption estimate found on

	Good	X	Explanation found on page:
Marketability/Visibility of the Site:	Average		Explanation found on page.
	Poor		6-7
Affordable units market penetration including the proposed in the PMA	Rate	1.63%	Page number:
(use ALL income qualified households for PMA ONLY):			50
Proposed projects' required rate of capture within the PMA (use ALL income qualified	Rate	0.18%	Page number:
households for PMA ONLY):	Kate		50
Overall Market Demand (the additional number of units needed within the market area to meet demand from targeted populations. The analysis should	Units needed	1,518	Page number:
determine if there is sufficient demand to support the proposed project):	Sufficient Demand (y/n)?	Yes	51
Public Safety Issues (Provide an analysis of public safety issues including information or statistics on crime in the PMA. Address any local perceptions of crime or safety issues in the	Included	x	Page number:
PMAJ:	Not Included		24
List of major employers in PMA (not required of some projects, see requirements):	Included	X	Page number:
	Not included		43
Economic Stability Analysis / Evaluation of PMA employment (not required of some projects,	Growth		Analysis found on page:
see requirements):	Stability	x	, and the page.
	Decline		43

#### IX. Site and Market Review

<u>Target Population as related to the PMA</u> – Exceeds Expectations - the 36 units of affordable housing equates to 0.18% of the total houshholds that would be targeted by the proposed subejet targeted population of 50% AMI and below. The threshold for exceeding expectations is 0% and 15% of the affordable units in PMA.

<u>Targeted Income Levels as related to the PMA</u> - Meets Expectations - The proposed targeted income levels (50% AMI and below) currently comprises 0.18% of the households in the subejct PMA. With only 1,866 units of affordable housing in the PMA the proposed targeted income level(s) are not well represented by the affordable/rent-restricted units in the PMA, and on the contrary wofully defficient.

<u>Marketability/Visibility of Site</u> - Exceeds Expectations - The subject property has a gross site size of 8,925 (0.205 acres). The subject property is comprised of three main property identification numbers: 16-07-322-024-0000, 16-07-322-025-0000, and 16-07-322-026-0000.

The subject site is a desirable location for an affordable housing development. Oak Park's centralized location along the I-290 (Eisenhower Expressway) Corridor provides for an abundance of public transportation options. Two Chicago Transit Authority (CTA) elevated rail lines (Blue and Green) run parallel to the Eisenhower Expressway ½ miles south of the subject property. 500 feet west of the subject at the intersection of Harlem Avenue and Madison Street, PACE Bus Line 307 runs north-south along Harlem Avenue connecting the Elmwood Park Milwaukee District West Line South to the CTA Blue and Green 1 Lines and connecting Midway Airport to the south. Also, at this stop PACE Bus Line 307 provides daily service between the CTA Blue Line Forest Park Transit Center to the west and North/Wolf in Northlake. Other CTA Bus routes (CTA - 72, 86, 90, 91) can be accessed along Oak Parks eastern boundary along Austin Avenue. Therefore, there are no encumbrances on the marketability of the site. The site's marketability is considered to be good.

<u>Unit Mix</u> - Exceeds Expectations - the subejet property is proposed to offer two unit types (0 BR, 1 BR). The subejet is being targeted to families so the varied unit type is appropriate. As evidenced by the comparable unit summary, the subject unit mix is appropriate for the subject PMA.

<u>Unit Sizes</u> – Meets Expectations - All of the subject unit sizes are within acceptable ranges when compared to the market units summarized for this study (as illustrated on the table below).

Unit	Income Level	Sq. Ft.
<u>Type</u>	<u>Type</u> (% of AMI)	
Comparables	Varied	350 SF-600 SF
Subject 0 BR	(Homeless) 50% AMI	420 SF
Comparables	Varied	568 SF-800 SF
Subject 1 BR	(Homeless) 30% AMI (BCBS)	525 SF
Subject 1 BR	(Homeless) 50% AMI	544 SF

<u>Proposed Rent Structure</u> - Exceeds Expectations - The subjects monthly rent ranges are in acceptable ranges when compared to market rents. The subejets monthly rent per square foot is on the high end with respect to the market and that is mostly due to the unit sizes being on

the low end of the range. It is deemed that the units appropriately sized as indicated above, the units are also appropriately priced. The weighted average rent rates for the subject equate to \$1.25/SF. The comparables (which included market rate developments) had units which had weighted average rent rates that ranged from \$0.85/SF to \$1.54 SF with an average, weighted average of \$1.21/SF.

Unit	Income Level	Rent	Sq. Ft.	\$ Rent/SF	
<u>Type</u>	(% of AMI)	<b>Range</b>	Range	Range	
Comparables	Varied	\$422-\$1,712	350 SF-600 SF	\$1.21/SF-\$2.85/SF	
Subject 0 BR	(Homeless) 50% AMI	\$925	420 SF	\$2.20/SF	
Comparables	Varied	\$706-\$2,058	568 SF-800 SF	\$0.76/SF-\$2.64/SF	
Subject 1 BR	(Homeless) 30% AMI (BCBS)	\$1,250	525 SF	\$2.38/SF	
Subject 1 BR	(Homeless) 50% AMI	\$1,000	544 SF	\$1.84/SF	

<u>Development Amenities</u> – Meets Expectations - The ground floor of the subject will contain a 736 SF community room (with kitchen), a case management office, administrative offices, conference room, bike storage, and laundry room. The remaining first floor space will contain a mechanical room, fire pump, maintenance storage, electric room, trash room and additional storage.

Miscellaneous amenities are proposed to include free internet access for each unit, secured, indoor bike parking, energy star rated appliances, microwave ovens included in each unit, large community room, community kitchen, 24-hour security camera and front desk.

Exterior site improvements will include a concrete patio and walkways, loading space and onsite parking for 6 cars will be provided on the north side of the property, accessed directly from the public alley. One of the 6 spaces will be ADA accessible.

It is unlikely that any tenants would have the financial feasibility to make use of a parking space. The subject is targeted to those with annual incomes mostly at 50% (and below) area median income. The development amenities and in unit amenities will be sufficient in quality and quantity when compared to the market.

<u>Unit Amenities</u> – Meets Expectations - The proposed amenities are in the most preliminary stages as of the writing of this report. In-Unit Amenities: Each unit will have a brand-new bathroom and kitchen. The kitchen will be a full kitchen with a stove, oven, refrigerator, and ample cabinet space. The proposed amenities will exceed market standards. The subject is targeting families and therefore the subject PMA having an average household size of 2.31 supports the notion of the appropriateness of the subjects target market and subsequent unit sizes and design.

<u>Demographic Projections</u> - Households –Meets Expectations - The household count in the PMA has changed from 59,233 in 2020 to 59,264 in the current year, a change of 0.02% annually. The five-year projection of households is 59,368, a change of 0.04% annually from the current year total. Average household size is currently 2.37, compared to 2.40 in the year 2020. The number of families in the current year is 34,092 in the specified area. The subject minimally meets expectations as the threshold for meeting expectations is 0% to 5% projected household growth in the subject PMA. The subject PMA is forcasted to have 0.04% positive household growth in the next five years.

<u>Demographic Projections</u> - Population – Does Not Meet Expectations - In the PMA, the current year population is 142,454. In 2020, the Census count in the area was 144,287. The rate of change since 2020 was -0.39% annually. The five-year projection for the population in the area is 140,086 representing a change of -0.33% annually from 2023 to 2028. Currently, the population is 47.2% male and 52.8% female. The subejet does not meet expectations as the threshold for meeting expectations is 0% to 5% projected population growth in the subejet PMA. The subject PMA has forcasted negative population growth for the next five years.

<u>Job Growth</u> – Meets Expectations The most recent figured from the Illinois Department of Employment Security indicates Total nonfarm jobs in the Chicago Metro were up +0.8% or +31,600 in December 2023. Employment growth forcasts for the area for the next 10 years (2020-2030) for Local Workforce Innovation Area #7 is forcasted to be 9.23%. The subejet exceeds expectations as there are employment centers in the subejet PMA and employment growth is anticipated.

<u>Penetration Rate</u> – Exceeds Expectations - The Penetration Rate for the subject property is somewhat distorted. With multiple tiers of maximum income restrictions, the individuals qualifying for units at 30% of AMI also may meet the qualifications for 50% AMI. Therefore with 36 units at the subject property plus the existing (IHDA) units already in the PMA (1,866), plus an additional 1,296 affordable units in service through other agencies divided by the total number of income qualifying households with annual incomes ranging from \$0 to \$44,150 equates to a 1.63% (36+1,866+1,296/19,579) penetration rate.

<u>Capture Rate</u> – Exceeds Expectations - The overall capture rate is calculated by taking the total number of proposed units 36 divided by the total PMA eligible households (19,579). This equates to an overall capture rate of 0.18%.

For the purposes of this report the capture rates are at acceptable percentages. Given a historical benchmark of 5% for family projects the subject capture rate is significantly lower and indicated a substantial need for affordable housing such as the subject property. The threshold for exceeding expectations is Capture Rates less than: 2% for family and deals, 5% for elderly deals, and 10% for SLFs.

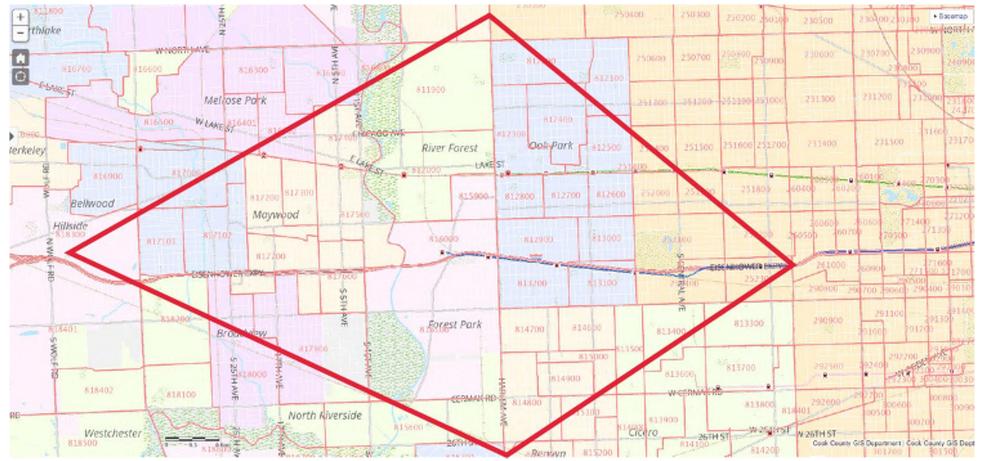
# **Surrounding 2024 IHDA Multi-Family Production**



# **IHDA Financed Apartment List**

County	□ Development	Address	City	State	→ Zip →	Sec8	Family -	Seniors	Special Needs	Number of Apartments
Cook	SENIOR SUITES OF BELLWOOD, LLC	3131-3201 Randolph Street	CHICAGO METRO	Bellwood	60104	N	N	Υ	N	89
Cook	GREENWOOD APTS	3819 W. Warren Ave.	CHICAGO METRO	Bellwood	60104	N	Y		N	7
Cook	PRAIRIE VIEW APTS. PHASE II	3936 Georgina Ln.	CHICAGO METRO	Bellwood	60104	N	N	Υ	N	36
Cook	FREEDOMS PATH	5000 S. 5Th Avenue	CHICAGO METRO	Hines	60141	N	N		Y	72
Cook	FREEDOM'S PATH AT HINES III	5000 South 5Th Avenue, Building 14	CHICAGO METRO	Hines	60141	Υ	N		N	28
Cook	COOKE'S MANOR	5000 South 5Th Avenue	CHICAGO METRO	Hines	60141	N	N		Y	42
Cook	BISHOP GOEDERT RESIDENCE	53 Tripp Avenue	CHICAGO METRO	Hines	60141	N	N	Υ	Y	71
Cook	FIFTH AVENUE APARTMENTS	806-820 South 5Th Avenue	CHICAGO METRO	Maywood	60153	N	Y		N	72
Cook	MAYWOOD SUPPORTIVE LIVING	316 Randolph Street	CHICAGO METRO	Maywood	60153	N	N		N	100
Cook	VICTORY CENTRE OF RIVER WOODS FKA VICTORY CE	1800 Riverwood Drive	CHICAGO METRO	Melrose Park	60160	N	N	Y	N	109
Cook	TRINITY PARK VISTA	220 South Wolf Road	OTHER METRO	Northlake	60164	N	Y		N	16
Cook	WISDOM VILLAGE OF NORTHLAKE	33 S. Wolf Road	CHICAGO METRO	Northlake	60164	Υ	N	Y	N	71
Cook	DONALD W. KENT RESIDENCES	126 - 208 S. Wolf Road	CHICAGO METRO	Northlake	60164	N	N	Y	N	73
Cook	GROVE APARTMENTS	820 West Madison	AHPAA	Oak Park	60302	N	Y		N	51
Cook	NEW MOMS OAK PARK	206-212 Chicago Avenue	CHICAGO METRO	Oak Park	60302	N	Y		N	18
Cook	AUSTIN/RENAISSANCE	5401 W. Washington	CITY OF CHICAGO	Chicago	60644	Υ	Y		N	71
Cook	PINE & CENTRAL APARTMENTS	557-65 N. Pine & 743-55 N. Central	CITY OF CHICAGO	Chicago	60644	Υ	Y		N	78
Cook	MAE SUITES APTS	148 N. Mayfield Ave.	CITY OF CHICAGO	Chicago	60644	N	Y		Υ	39
Cook	AUSTIN YMCA	501 N. Central	CITY OF CHICAGO	Chicago	60644	N	N		Υ	284
Cook	MENARD APTS.	334 N. Menard	CITY OF CHICAGO	Chicago	60644	Υ	N		Υ	57
Cook	FOCUS APARTMENTS	165 N. Central Ave	CITY OF CHICAGO	Chicago	60644	Υ	N		Υ	10
Cook	THRESHOLDS RAD2 CONVERSION	334 North Menard	CITY OF CHICAGO	Chicago	60644	N	Y		N	146
Cook	CENTRAL COACH HOUSE	504 S. Laramie Ave.	CITY OF CHICAGO	Chicago	60644	N	Y		N	6
Cook	CENTRAL PINE LTD	315 S. Central	CITY OF CHICAGO	Chicago	60644	N	Y		N	31
Cook	CENTRAL TERRACE APTS.	504 S. Laramie Ave.	CITY OF CHICAGO	Chicago	60644	N	Y		N	13
Cook	H.I.C.A REDEV	5042 W. Washington	CITY OF CHICAGO	Chicago	60644	Υ	Y		N	120
Cook	JACKSON TERRACE	4900 W. Jackson Blvd.	CITY OF CHICAGO	Chicago	60644	N	Y		N	29
Cook	MADISON RENAISSANCE	5629 W. Madison St.	CITY OF CHICAGO		60644	N	Υ		N	30
Cook	SOUTH CENTRAL PLAZA FKA 16 SOUTH CENTRAL	16-20 S. Central Ave.	CITY OF CHICAGO		60644	N	Υ		N	19
Cook	SOUTH CENTRAL VISTA	133-145 S. Central Ave.	CITY OF CHICAGO		60644	N	Υ		N	25
Cook	NEW MOMS INC NSP	5327 W. Chicago Ave	CITY OF CHICAGO		60651	N	N		Υ	40
Cook	WEST HUMBOLDT PLACE	3533 West Chicago Ave	CITY OF CHICAGO		60651	Υ	N		Y	13
		<b>3</b>		, , , , , , , , , , , , , , , , , , ,						186

# **PMA Census Tracts**



The PMA is outlined in red

# IllinoisReportCard.com School Data

# Oak Park ESD 97



**District Superintendent** 

Dr. Ushma Shah ushah@op97.org **Address** 

260 Madison St Oak Park IL 60302 (708)524-3000

http://www.op97.org

**District Provided Statement** 

Not available.

# **About the Report Card**

State and federal laws require public school districts to release report cards to the public each year.

The federal Every Student Succeeds Act requires that states annually assign schools a summative designation that meaningfully differentiates school performance based on multiple performance measures. All states were offered a waiver of this requirement for school year 2020–2021 due to the impact of COVID-19. For more information about Illinois' accountability system please visit www.isbe.net/summative.

For additional information, refer to the Public Business Rules for 2021 Report Card Metrics and the 2021 Glossary of Terms.

# **District Snapshot**

Percent of Adequacy: 95.4% Chronic Absenteeism: 15.0%

Principal Turnover: 2 Schools in District: 10

Senate District: 39 House District: 78

**TABLE OF CONTENTS** 

02 | Academic Progress

69 I NAEP

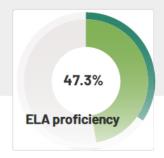
Date: 01/25/24 19:28:46 -06:00

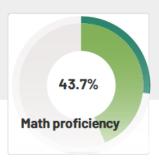
VISIT ILLINOISREPORTCARD.COM FOR MORE INFORMATION.

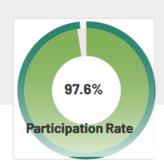
# **Academic Progress**

# **About the data**

Academic progress data includes information regarding assessments, such as student participation rates, proficiency rates, and mean student growth percentile. Other information regarding academics may include certain touchstones, such as eighth-graders passing Algebra 1, graduation rate, and various advanced coursework information. Academic progress often is disaggregated further into demographic student groups.



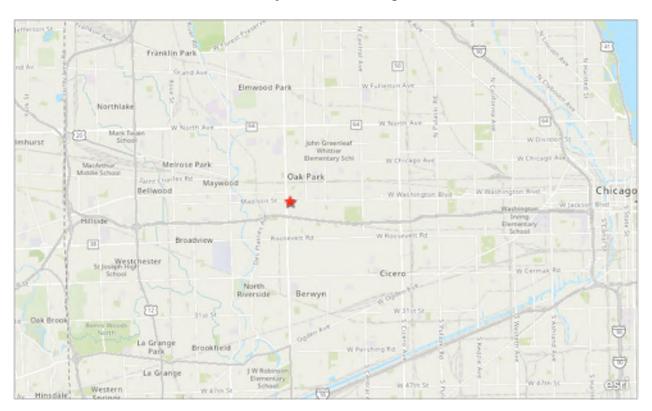




06-016-0970-02 | OAK PARK ESD 97

PAGE 02

# **Project Location Map**



# Qualifications of Richard Knitter, MAI, CPM, FRICS, R/W-AC

**Education:** Master of Business Administration

University of Southern California

Los Angeles, CA

Bachelor of Science, Finance-Real Estate

University of Illinois Champaign-Urbana, IL

Professional Affiliations:

MAI - Member of the Appraisal Institute Designation

CPM - Certified Property Manager of the Institute of Real

Estate Management

FRICS- Fellow of the Royal Institute of Chartered Surveyors

R/W-AC International Right of Way Association Chicago Real Estate Council – Past President

Appraisal Institute - Admissions Committee, Young Advisory Council Appointment, Demonstration Report Grader, National Research Committee, Ethics and

Counseling, and local Chapter Board of Directors

International Council of Shopping Centers Licensed Real Estate Managing Broker

Urban Land Institute – Chicago Executive District Board American Real Estate Society – past Fellow, author, speaker University of IL Real Estate Alumni Forum - Past President

NICAR – Past board member

Appraisal Standards Board Member of the Appraisal

Foundation

**Experience:** 

Expert witness and valuation consulting experience on a variety of assignments for retail, office, industrial, mixed-use,

and special-use projects.

State Certified Real Estate Appraiser in: Illinois, Indiana, Iowa, Kentucky, Michigan, Minnesota, Missouri, Ohio, and

Wisconsin

**Articles Published And Presentations Made**  "What Clients Want From Appraisal Reports"

Five Nation-wide Annual Surveys of Appraisal Clients

Presented research at multiple American Real Estate Society

Meetings; Teach online university courses since 2000

Presented seminars at the National IREM and National

Appraisal Institute Conferences

Selected to make presentations at the annual Chicago Market

Update Meetings

Selected to make presentation at national CMBS meeting in

Atlanta and Chicago

Appraisal issue presentations to banks

Have provided expert witness testimony in an array of cases

involving real estate valuation issues concerning

environmental contamination, financial, market, tenancy, and

other real estate valuation issues.

#### **Qualifications of Sherman T. Baker**

<u>Professional Experience</u> 2021 – Fee Appraiser, Great Realty Advisors 2005-2021 Great Realty Advisors Staff Appraiser

## **Professional Affiliations / Designations**

Certified General Appraiser (State of MI #1201074624) Certified General Appraiser (State of IL #553-002238)

#### **General Educational Background**

Bachelor of Business Administration, Finance 92' Eastern Michigan University Ypsilanti, MI

## **Appraisal Education**

Uniform Standards of Professional Appraisal Practice 2012-2022

Principals and Fundamental Concepts of Real Estate

Appraisal Application and Methods of Real Estate Appraisal

Real Estate Finance Statistics and Valuation Modeling

General Appraiser Report Writing & Case Studies

Income Capitalization Approach Part I

Income Capitalization Approach Part II

General Market Analysis and Highest & Best Use

General Appraiser Sales Comparison Approach

General Appraiser Site Valuation & Cost Approach

Advanced Applications

**Quantitative Analysis** 

Advanced Income Capitalization Approach

Case Studies in Appraising Green Commercial Buildings

Excel Applications for Valuation Online

Uniform Appraisal Standards for Fed Land Acquisitions (YELLOW BOOK) Online

Appraisal Of Medical Office Buildings Online

Adv. Land Valuation: Sound Solutions to Perplexing Problems

On-Line Analyzing of Operating Expenses

U. S. Department of Housing and Urban Development Multi-Family Accelerated

Processing (MAP) Training Multi-Family Preservation Basic and Advanced Training

#### Scope of Work

Single And Multiple Tenant Retail

Convenience stores/gas stations

Hotel/Motel Facilities

Single And Multiple Tenant Office

Self-Storage Facilities

Single and Multiple Tenant Industrial Manufacturing, Distribution, R&D

Mixed-use facilities

Vacant Land, Easements,

**Private Airports** 

Going Concern Valuations

Student Housing

Assisted Living /Skilled Nursing Facilities

Special purpose properties including parking garage/lots, funeral homes, churches, schools manufactured home parks

Lease-by-lease analysis (argus) market studies

Rent Comparability Studies (HUD)

Commercial Land Development Condominium Land Development Single-Family Land Development

# **NCHMA Certificate of Professional Designation**



7. Traffic and Parking Study\*

# Traffic Impact and Parking Study

Oak Park Housing Development 1106 Madison Street Oak Park, Illinois

May 24, 2024

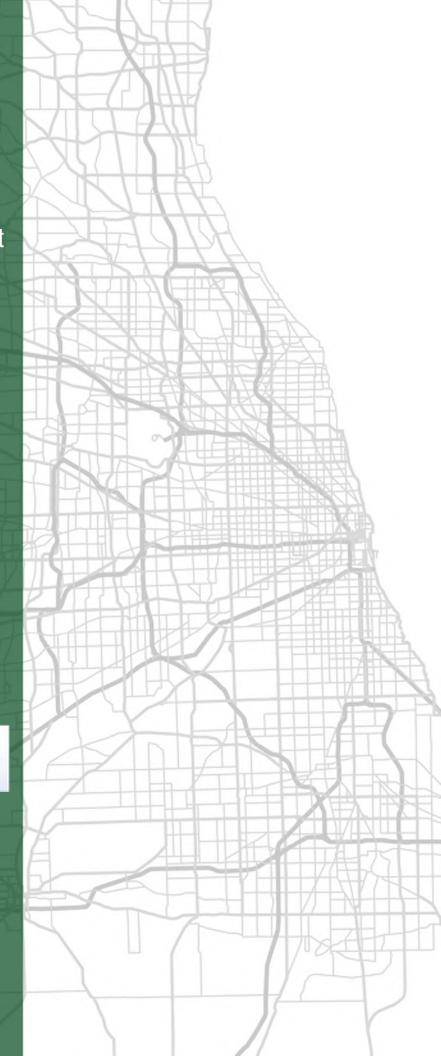
Prepared for:



Interfaith Housing Development Corporation

Prepared by: Gewalt Hamilton Associates, Inc.





# Part I. Introduction and Project Context

Gewalt Hamilton Associates, Inc. (GHA) has conducted a Traffic Impact Study (TIS) on behalf of Interfaith Housing Development Corporation (IHDC) for the affordable housing site to be constructed at 1106 Madison Street in Oak Park, Illinois. The approximately 31,341 square foot site is to be rezoned from an existing church into a 5-story affordable housing development. The site is located on the north side of Madison Street, east of the Harlem Avenue (IL Route 43) intersection and west of the Wisconsin Avenue intersection. On the January 16<sup>th</sup>, 2024, Site Plan, prepared by Weese Langley Weese Architects, LTD proposes to reconstruct an existing church into a 5-story brick building for affordable housing.

The following summarizes our findings and provides various recommendations for your consideration. *Appendices* referenced are in the Technical Addendum at the end of this document.

# Part II. Background Information

#### Site Location Map and Roadway Inventory

**Exhibit 1** provides a site location map. The existing traffic operations in the site area are illustrated on **Exhibit 2**. **Appendix A** provides a photo inventory of operations along the site frontage. Pertinent comments to the adjacent roadways include:

#### **Madison Street**

- Madison Street is an east-west minor arterial under the jurisdiction of the Village of Oak Park.
- Along the site frontage, Madison Street provides one travel lane in each direction separated by a flush painted median.
- Madison Street widens to two travel lanes in each direction west of the site approaching the intersection with Harlem Avenue (IL Route 43).
- Madison Street has a posted speed limit of 25 miles per hour (mph) in the vicinity of the site.
- Separate eastbound and westbound left turn lanes are provided at the signalized intersections with Harlem Avenue (IL Route 43) and Wisconsin Avenue.
- On-street parking is permitted along Madison Street in the vicinity of the site.
- Madison Street intersects with Maple Avenue approximately 430 feet to the west of Wisconsin Avenue and 230 feet east of Harlem Avenue. This is an unsignalized intersection.
- The Annual Average Daily Traffic (AADT), year 2022, on Madison Street was 13,500 vehicles per day east
  of Harlem Avenue (IL Route 43) and 12,200 vehicles per day west of Harlem Avenue (IL Route 43).

### Harlem Avenue (IL Route 43)

- Harlem Avenue (IL Route 43) is a north-south principal arterial under the jurisdiction of the Illinois Department of Transportation (IDOT).
- Harlem Avenue (IL Route 43) provides two travel lanes in each direction separated by a flush painted median.
- Separate northbound and southbound left turn lanes are provided approaching the signalized intersection with Madison Street.
- Harlem Avenue has a posted speed limit of 30 mph.
- The Annual Average Daily Traffic (AADT), year 2022, on Harlem Avenue (IL Route 43) was 32,700 vehicles both north and south of Madison Street.

- Harlem Avenue (IL Route 43) is designated as a Strategic Regional Arterial (SRA) by IDOT and is listed as SRA #301.
- Harlem Avenue (IL Route 43) intersects Madison Street approximately 585 feet west of the site.

#### Wisconsin Avenue

- Wisconsin Avenue is a north-south local roadway that intersects Madison Street approximately 75 feet west
  of the site.
- Wisconsin Avenue provides one travel lane in each direction, including at its signalized intersection with Madison Street.
- On-street parking is permitted north and south of the Madison Street intersection along Wisconsin Avenue.
- To the south of the intersection, Wisconsin Avenue terminates into RUSH Hospital and is utilized as a main access point for the hospital.
- The speed limit along Wisconsin Avenue is posted at 25 mph and the 2022 AADT measured by IDOT was 1,800 vehicles per day both north and south of Madison Street.

#### Alley Access

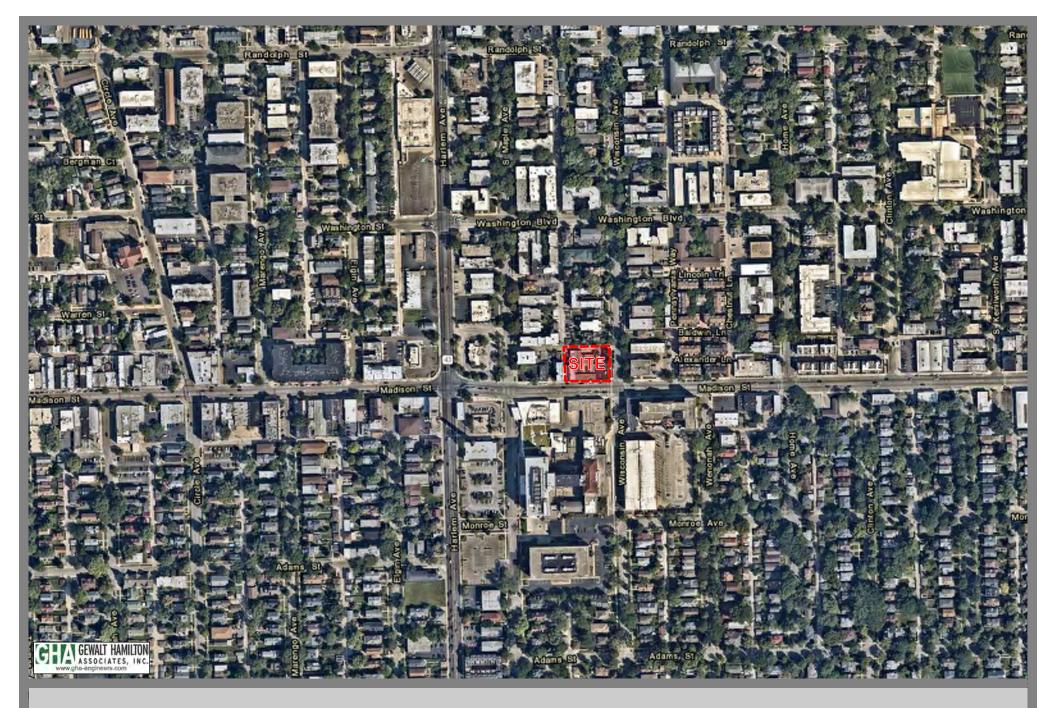
- Access to the site is provided by an alleyway located along Wisconsin Avenue approximately 165 feet to the north of the Madison Street intersection.
- The alley provides enough space for one travel lane in each direction for queueing purposes eastbound near the intersection but narrows to one lane west of the site.
- There is no posted speed limit within the alley.

#### Pedestrian Facilities

- Sidewalk facilities are provided along the north and south sides of Madison Street, along the east and west sides of Harlem Avenue, and along the east and west sides of Wisconsin Avenue.
- At the intersection of Harlem Avenue and Madison Street, standard-style crosswalks are provided on all four legs of the intersection.
- At the intersection of Madison Street and Wisconsin Avenue, continental-style crosswalks are provided on all four legs of the intersection.
- Bicycle lanes are provided along Madison Street in both directions.

#### Transit

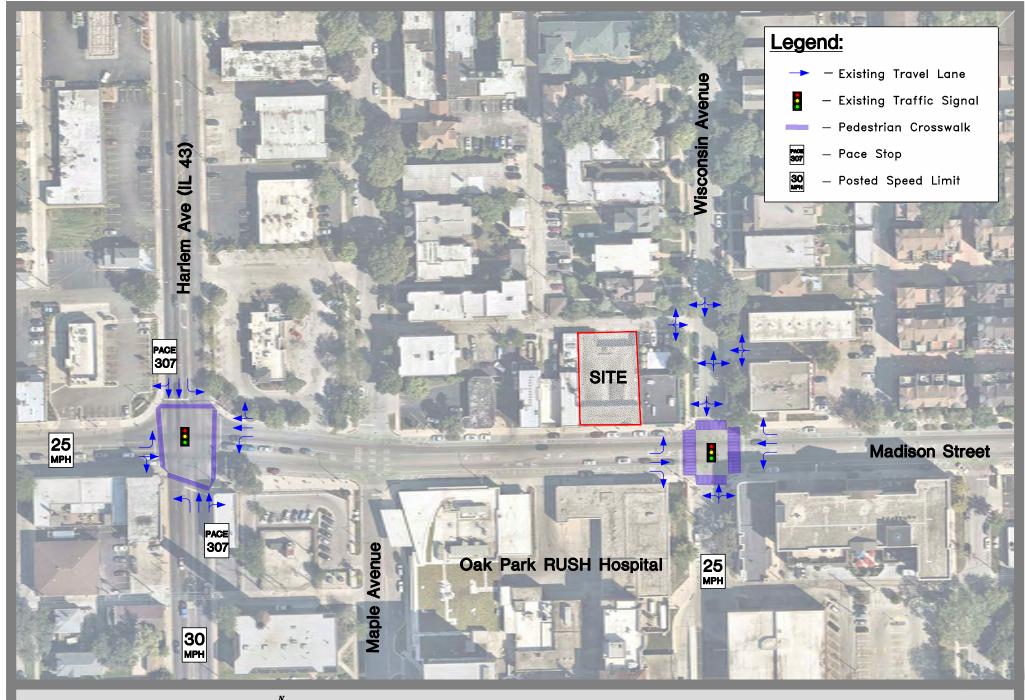
- PACE bus route 307 runs north-south along Harlem Avenue (IL Route 43) in the site vicinity.
- PACE bus route 318 runs east-west along Madison Street but terminates at Harlem Avenue (IL Route 43).





# **Exhibit 1 - Location Map**

Proposed Housing Development 1106 Madison Street, Oak Park, IL, 60302







## Existing Traffic

Exhibit 3 summarizes the existing weekday morning, evening, and Saturday midday peak hour traffic volumes. Peak period traffic turning movement counts were conducted by GHA on Saturday, January 27<sup>th</sup>, 2024, and Tuesday January 30<sup>th</sup>, 2024. The counts were taken from 11:00 AM to 2:00 PM on Saturday, and 6:00 AM to 9:00 AM and from 3:00 PM to 6:00 PM on Tuesday at the intersections of Madison Street and Harlem Avenue, Madison Street and Wisconsin Avenue, and Wisconsin Avenue and the Alley. The observed peak hours for the Madison Street and Harlem Avenue intersection were 7:45 to 8:45 AM for the morning, 5:00 to 6:00 PM for the evening, and 1:00 to 2:00 PM for Saturday midday. The observed peak hours for the Madison Street and Wisconsin Avenue intersection were 7:30 to 8:30 AM for the morning, 4:00 to 5:00 PM for the evening, and 12:30 to 1:30 for the Saturday midday peak hour. The observed peak hours for the Wisconsin Avenue and alley intersection were 7:45 to 8:45 AM for the morning, 3:45 to 4:45 PM for the evening, and 12:00 to 1:00 PM for Saturday midday. Exhibit 3 also provides the AADT (24-hour volume) along Harlem Avenue (IL Route 43), Madison Street, and Wisconsin Avenue as published by IDOT on their website: <a href="https://www.gettingaroundillinois.com">www.gettingaroundillinois.com</a>.

No unusual activities (e.g., roadway construction, or inclement weather) were observed during our counts that would be expected to impact traffic volumes or travel patterns in the vicinity. Summaries of the 2024 existing traffic counts can be found in *Appendix B*.

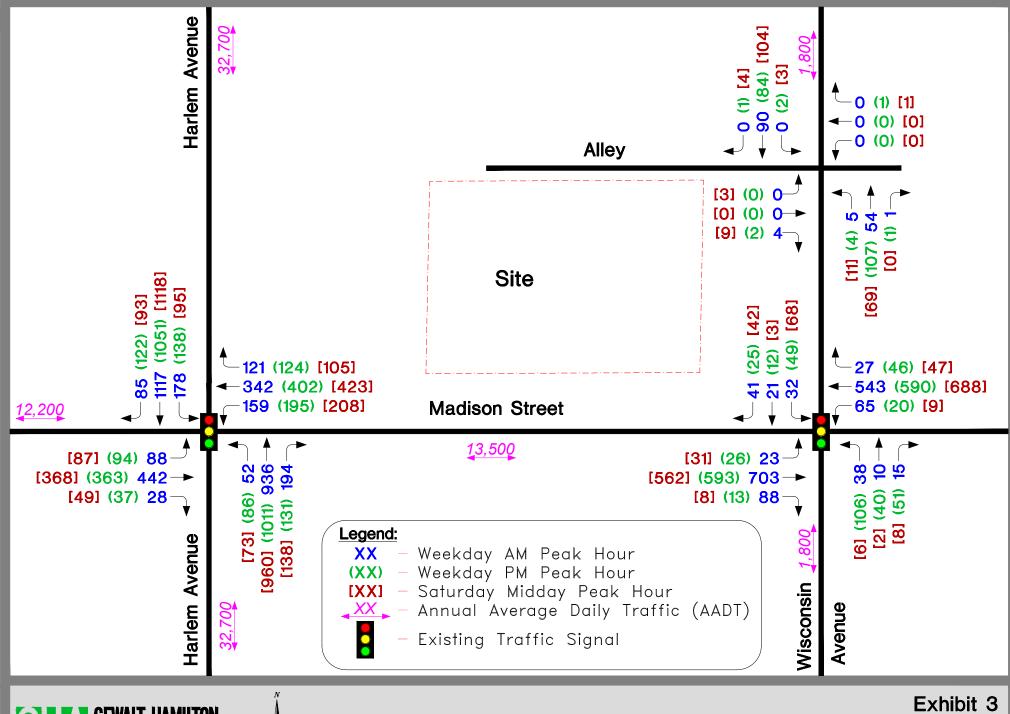






Exhibit 3
Existing Traffic
Sources: 1) GHA January 2024 2) IDOT 2022 AADT

### Crash Analysis

Crash data was obtained from the IDOT Division of Transportation and Safety for the last five available calendar years, 2018 through 2022. A summary of the crash data is provided in *Table 1* with the locations mapped on the exhibit contained in *Appendix C*.

Table 1: Crash Summary (2018-2022) A

Location	No. Of		Seve	erity <sup>B</sup>													Percent During
Location	Crashes	PD	Α	PI <sup>C</sup> B	С	F	Α	FO	FTF	FTR	00	PMV	PD	RTF	SSD	Т	Wet/Icy Conditions
Intersections - Crashes within 300'	of intersec	tion					•						•	•			•
Harlem Ave at Madison St	83	68	-	7	8	-	9	-	1	31	1	1	2	1	20	17	20%
Madison St at Maple Ave	24	21	-	2	1		8	-	-	2	-	3	-	-	4	7	8%
Madison St at Wisconsin Ave	25	18	1	4	2	-	5	1	-	7	-	3	1	-	5	3	16%
Wisconsin Ave at Alley	1	1	-	-		-	1	-	-	-	-	-	-	-	-	-	0%
Total (2018-22)	133	108	1	13	11	0	23	1	1	40	1	7	3	1	29	27	17%

A Source: IDOT Division of Transportation Safety for the 2018-2022 calendar years.

As shown in Table 1, approximately 81 percent (108 of 133) of all the crashes involved property damage only. The highest single crash type across the site vicinity was front-to-rear with 31 percent of crashes (40 of 133). The next highest crash types were sideswipe same-direction and turning crashes with 22 percent (29 of 133) and 20 percent (27 of 133) respectively. There were no fatal crashes in the 5-year period, one Type-A crash, Thirteen Type-B crashes, and 11 Type-C crashes for a total of 19 percent (25 of 133) of all crashes resulting in injury.

As shown in Table 1, the intersection of Harlem Avenue and Madison Street experienced the highest number of crashes within the study area over the five-year analyses period, with an average of 16-17 crashes per year. Approximately 82 percent (68 of 83) of the crashes involved property damage only and approximately 37 percent (31 of 83) were front to rear collisions at this intersection.

Additionally, the intersections of Madison Street with Wisconsin Avenue and Maple Avenue each experienced an average of approximately 5 crashes per year. The intersection of Madison Street with Maple Avenue experienced 24 total crashes, 88 percent (21 of 24) total crashes being property damage only, and a most common crash type at the intersection of angle crashes, with 33 percent (8 of 24) of crashes being angle. The intersection of Madison Street with Wisconsin Avenue experienced 25 total crashes, 72 percent (18 of 25) of total crashes being property damage only, and a most common crash type of front-to-rear with 28 percent (7 of 25) crashes being front-to-rear. There was only one crash (angle) at the Wisconsin Avenue intersection with the alley.

There were three crashes that involved pedestrians in the site vicinity, including the Type-A injury crash and two of the Type-B injury crashes. The Type-A injury pedestrian crash occurred at the Madison Street and Wisconsin Avenue intersection, and the two Type-B injury crashes occurred at the Madison Street and Harlem Avenue intersection.

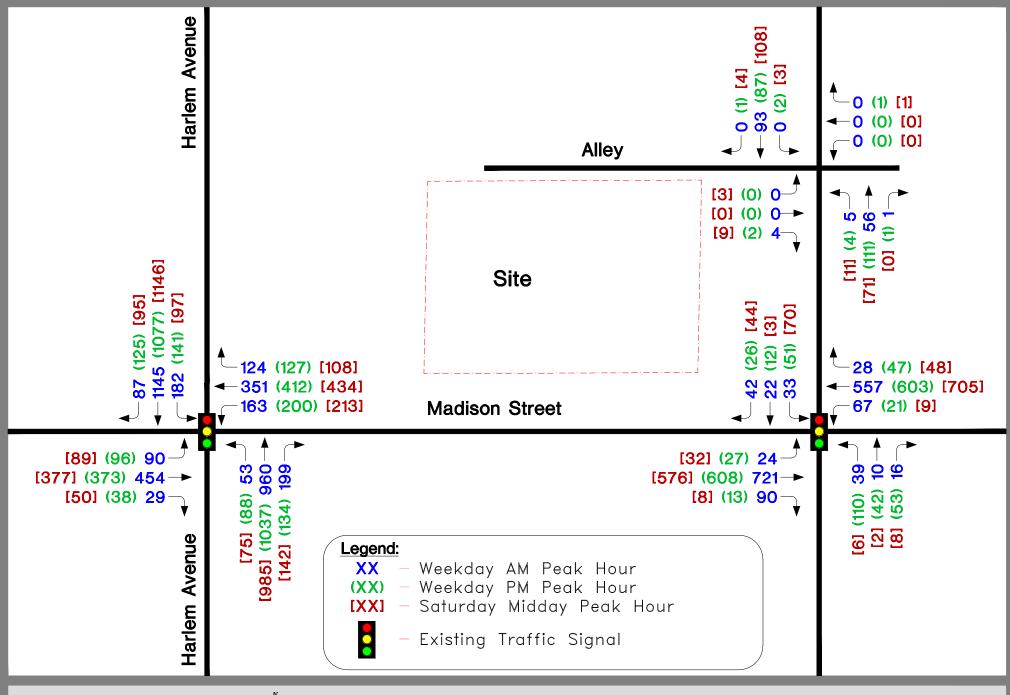
<sup>&</sup>lt;sup>B</sup> PD = property damage only; PI = personal injury; F = fatality.

<sup>&</sup>lt;sup>C</sup> Type A (incapacitating injury); Type B (non-incapacitating injury); Type C (possible injury).

D A = Angle; FO = Fixed Object; FTF = Front to Front; FTR = Front to Rear; OO = Other Object; PMV = Parked Motor Vehicle; PD = Pedestrian; RTF = Rear to Front; SSD = Sideswipe, Same Direction; T = Turning

#### No-Build Traffic

Traffic growth in the area is a function of expected land development in the region. Future traffic volume conditions were developed for the year 2029, build-out year of the development (year 2024) plus five years. Based on a review of historical traffic volumes and the Chicago Metropolitan Agency for Planning (CMAP) 2050 projections (see *Appendix D*), traffic volumes along the roadways surrounding the site are assumed to experience an overall annual compounded growth rate of between 0.49% and 0.72% per year. Accordingly, the 2029 No-Build peak hour traffic volumes (see *Exhibit 4*) were developed by applying the predicted growth rates to the existing traffic.







#### Part III. Traffic Evaluation

#### Future Site Characteristics

#### **Proposed Development Plan**

Interfaith Housing Development Corporation proposes to rezone an existing church located at 1106 Madison Street, west of the Madison Street intersection with Wisconsin Avenue in Oak Park, Illinois, and convert it into a 5-story, 31,451 square foot low-income housing development. This housing unit would consist of 36 units, where at least 20 are reserved specifically for homeless individuals. Access to the site is anticipated to remain as existing off of the alley north of the site. There are six (6) proposed parking spaces, and IHDC anticipates having 2-3 employees on site regularly, including one 24/7 desk worker.

The December 23<sup>rd</sup>, 2023 Overall Site Plan is provided in *Appendix E*.

#### **Trip Generation**

*Table 2* summarizes the traffic generation calculations for the proposed development. Trip generation rates published by the Institute of Transportation Engineers (ITE) in the 11<sup>th</sup> Edition of the Manual *Trip Generation* were used to determine the anticipated traffic generated by an affordable housing development. As can be seen in *Table 2* the proposed development being an affordable housing project anticipates very low proposed trip generation, including employees. The total anticipated trips may still be greater than the actual trips generated, but to provide a conservative estimate, the ITE data will be used to determine the potential impact on the surrounding roadways.

See *Appendix F* for excerpts of the ITE manual.

**Table 2: Trip Generation Calculations** 

					Weel	day Pe	ak H	ours			Satur	day
Land Use			ITE		Morni	ng	E	Eveni	ng		Midd	lay
	Uı	nits	Code	ln	Out	Sum	In	Out	Sum	In	Out	Sum
Affordable Housing Proposed T	rips											
1106 Madison Street	36	Units	233	5	13	18	8	5	13	8	9	17
Total New	Trips:			5	13	18	8	5	13	8	9	17

Source: ITE Trip Generation Manual, 11th Edition

#### **Trip Distribution**

*Table 3* provides the anticipated distribution of site traffic. This was based on existing site travel patterns and the operational characteristics of the adjacent street system.

Table 3: Trip Distribution

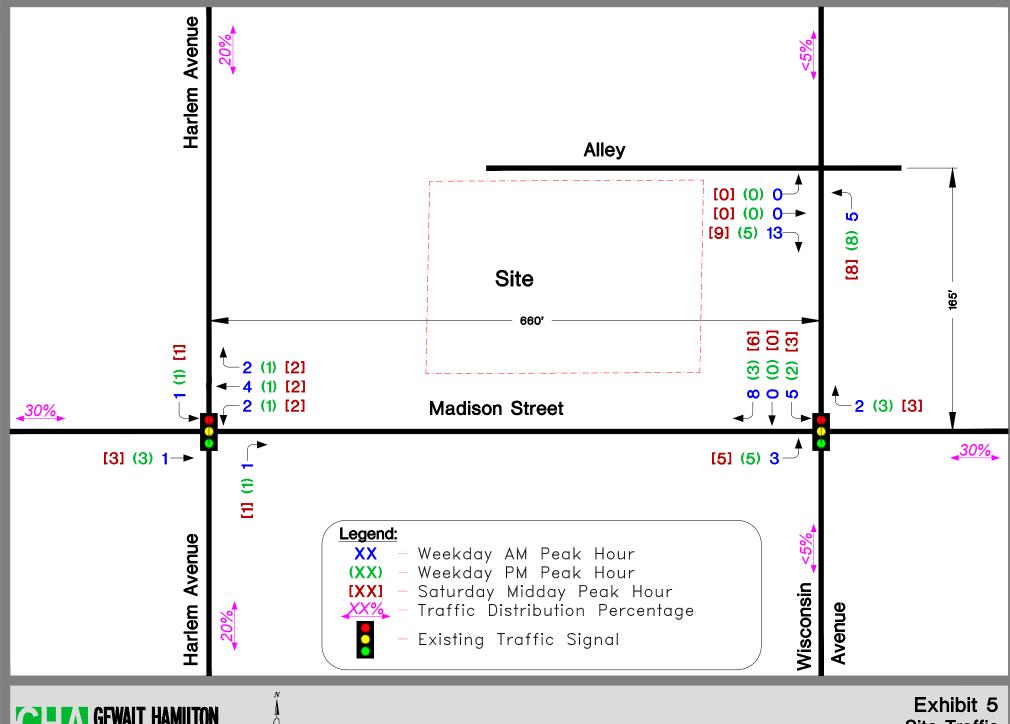
Route & Direction	Approach Site From	Depart Site To
Madison Street		
West of Harlem Avenue	30%	30%
East of Wisconsin Avenue	30%	30%
Harlem Avenue		
North of Madison Street	20%	20%
South of Madison Street	20%	20%
Wisconsin Avenue		
North of Alley Entrance	<5%	<5%
South of Madison Street	<5%	<5%
Totals =	100%	100%

Traffic usage of the area roadway network is also illustrated on *Exhibit 5*.

## Site and Total Traffic Assignments

**Exhibit 5** illustrates the site traffic assignments for the housing development's trips, which is based on the traffic characteristics summarized in *Tables 2 and 3* (traffic generation and trip distribution) and assigned to the area roadways. As previously noted, the proposed development is anticipated to open in late 2024. Therefore, we have considered the total impacts of the complete development for the year 2029, or buildout plus five years.

The site traffic (*Exhibit 5*) and 2029 No-Build traffic (*Exhibit 4*) were combined to produce the 2029 Total traffic, which is illustrated on *Exhibit 6*.







Site Traffic

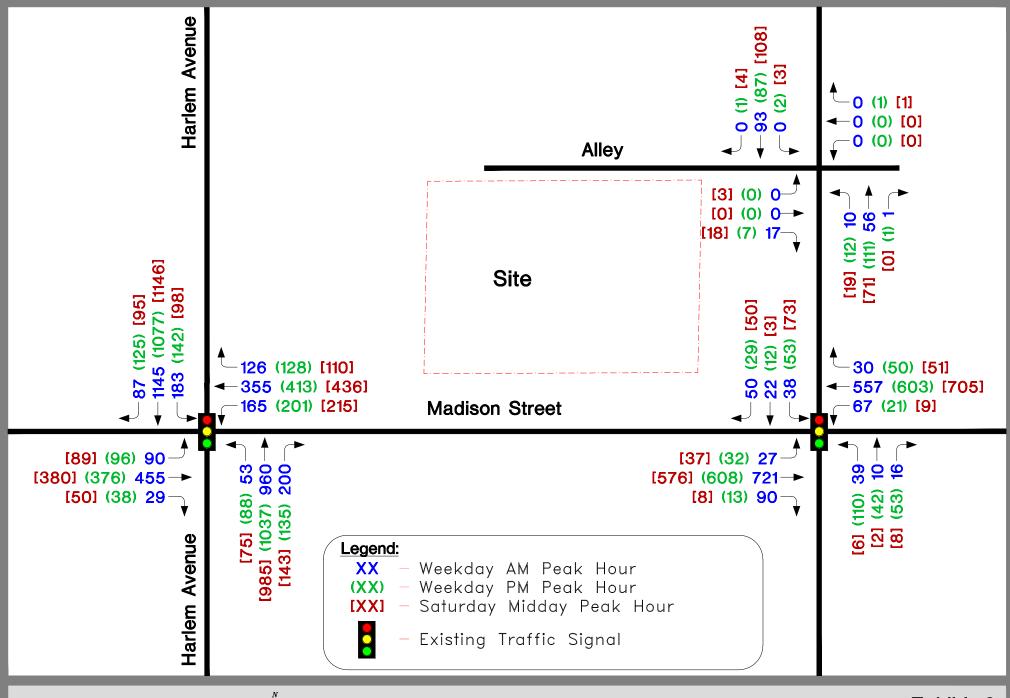






Exhibit 6
Year 2029 Total Traffic

# Capacity Analysis

Capacity analyses are a standard measurement that identifies how an intersection operates. They are measured in terms of Level of Service (LOS). The concept of LOS is defined as a qualitative measure describing operational conditions within a traffic stream and their perception by motorists and/or passengers. A level-of-service definition provides an index to quality of traffic flow in terms of such factors as speed, travel time, freedom to maneuver, traffic interruptions, comfort, convenience, and safety.

Six Levels of Service are defined for each type of facility. They are given letter designations from A to F, with LOS A representing the best operating conditions and LOS F the worst. LOS C is often considered acceptable for design purposes and LOS D is usually considered as providing the lower threshold of acceptable operations. Since the level of service is a function of the traffic flows placed upon it, the facility may operate at a wide range of levels of service, depending on the time of day, day of week or period of year. A description of the operating condition under each level of service, based on the analysis parameters as published in the Transportation Research Board's (TRB) Highway Capacity Manual (HCM), Sixth Edition, is provided in *Table 4*.

Table 4: Level of Service (LOS) Summary

		Delay (secon	ds / vehicle)
LOS	Description	Traffic Signal	Stop Sign
Α	Describes conditions with little to no delay to motorists.	<10	< 10
В	Represents a desirable level with relatively low delay to motorists.	>10 and < 20	>10 and < 15
С	Describes conditions with average delays to motorists.	>20 and < 35	>15 and < 25
D	Describes operations where the influence of congestion becomes more		
U	noticeable. Delays are still within an acceptable range.	>35 and < 55	>25 and < 35
	Represents operating conditions with high delay values. This level is often		
E	considered within urban settings or for minor streets intersecting major		
	arterial roadways to be the limit of acceptable delay.	>55 and < 80	>35 and < 50
_	Is unacceptable to most drivers with high delay values that often occur		
Г	when arrival flow rates exceed the capacity of the intersection.	>80	>50

Capacity analyses were performed using the methodologies outlined in the HCM, for the following scenarios:

- Existing Traffic
- *No-Build Traffic* Future (non-site, year 2029)
- *Total Traffic* Future No-Build traffic volumes (year 2029) plus the addition of the site generated traffic.

*Table 5* summarizes the intersection capacity and queue analysis results. Capacity analysis summary printouts are provided in *Appendix G*.

Table 5: Level-of-Service Summary

		Tubic o. L	<u>                                     </u>		up By Approach		
	Intersection / Timeframe	Roadway Conditions	> - Shared La		tical or not Allow	ed Movement	Overall
	microcolon / micromic	Roddway Conditions	Eastbound	Westbound	Northbound	Southbound	Intersection
1 Harl	em Avenue at Madison Street	Traffic Signal	LT TH RT	LT TH RT	LT TH RT	LT TH RT	
I. Hall	T Avenue at Madison Street	• LOS	C D <				- D
		• LOS • Delay (sec)	34.0 47.9 -	D D < 41.5 41.0 -	B D < 16.4 36.7 -	E C < 73.1 30.6 -	38.7
	A.Existing (See Exhibit 3)	• 95th Queue Length (ft)	90 261 -	153 247 -	40 546 -	234 558 -	30.7
		Approach LOS (Delay)	D (45.5)	D (41.1)	D (35.8)	D (36.9)	-
		• I OS	C D <	D (41.1)	B D <	F C <	- D
AM		• Delay (sec)	34.7 48.3 -	43.6 41.5 -	16.9 38.0 -	93.5 31.6 -	40.7
Peak	B. 2029 No-Build (See Exhibit 4)	• 95th Queue Length (ft)	92 268 -	157 255 -	40 568 -	256 580 -	40.7
reak		Approach LOS (Delay)	D (46.0)	D (42.0)	C (37.1)	B (40.8)	-
		• LOS	C D <	D D <	B D <	F C <	D
		• Delay (sec)	35.0 48.4 -	44.2 41.7 -	16.9 38.2 -	94.2 31.7 -	40.9
	C. 2029 Total (See Exhibit 6)	• 95th Queue Length (ft)	92 270 -	159 258 -	40 570 -	256 580 -	
		Approach LOS (Delay)	D (46.1)	D (42.4)	C (37.3)	B (41.0)	_
		• LOS	C D <	D D <	C C <	C C <	С
		• Delay (sec)	34.4 43.8 -	40.7 47.7 -	20.6 30.5 -	30.0 31.4 -	35.0
	A.Existing (See Exhibit 3)	• 95th Queue Length (ft)	99 202 -	181 285 -	57 511 -	114 557 -	-
		Approach LOS (Delay)	D (41.8)	D (45.9)	C (29.7)	C (31.3)	-
		•LOS	C D <	D D <	C C <	D C <	D
PM	D 0000 N D 111/0 E 1111/1	<ul> <li>Delay (sec)</li> </ul>	34.6 43.8 -	41.5 47.8 -	24.4 31.8 -	36.2 33.0 -	36.2
Peak	B. 2029 No-Build (See Exhibit 4)	• 95th Queue Length (ft)	101 208 -	186 293 -	66 532 -	143 580 -	-
1 out		Approach LOS (Delay)	D (41.8)	D (46.2)	C (31.2)	C (33.3)	-
		•LOS	C D <	D D <	C C <	D C <	D
	0 0000 T 1 1/0 F 1 11 11 ()	<ul> <li>Delay (sec)</li> </ul>	34.7 43.9 -	42.3 48.1 -	24.4 31.9 -	26.6 33.2 -	36.4
	C. 2029 Total (See Exhibit 6)	• 95th Queue Length (ft)	101 210 -	186 294 -	66 534 -	143 581 -	-
		Approach LOS (Delay)	D (42.0)	D (46.6)	C (31.3)	C (33.5)	-
		•LOS	C D <	D D <	C C <	C D <	D
	A F. (-4) (C F. (-1)   14 2)	<ul> <li>Delay (sec)</li> </ul>	28.6 38.2 -	42.0 40.3 -	25.6 33.3 -	25.3 39.4 -	36.8
	A.Existing (See Exhibit 3)	• 95th Queue Length (ft)	81 206 -	186 257 -	53 497 -	65 663 -	-
		Approach LOS (Delay)	D (36.4)	D (40.8)	C (32.7)	D (38.2)	-
		• LOS	C D <	D D <	C C <	C D <	D
SAT	B. 2029 No-Build (See Exhibit 4)	<ul> <li>Delay (sec)</li> </ul>	29.0 38.3 -	44.2 40.6 -	26.5 34.4 -	29.1 41.9 -	38.2
Peak	B. 2029 NO-Build (See Exhibit 4)	<ul> <li>95th Queue Length (ft)</li> </ul>	82 211 -	201 26 -	57 516 -	72 694 -	-
		<ul> <li>Approach LOS (Delay)</li> </ul>	D (36.5)	D (41.6)	C (33.8)	D (40.8)	-
		·LOS	C D <	D D <	C C <	C D <	С
	C. 2029 Total (See Exhibit 6)	<ul> <li>Delay (sec)</li> </ul>	29.0 38.4 -	45.6 40.8 -	26.2 34.6 -	29.4 42.2 -	38.5
	C. 2029 TOTAL (See EXHIBIT 6)	• 95th Queue Length (ft)	82 212 -	209 267 -	56 518 -	73 695 -	-
		Approach LOS (Delay)	D (36.6)	D (42.1)	C (33.9)	D (41.1)	-
				. · · · ·			

Table 5: Level-of-Service Summary (cont.)

					up By Approach		Overall
	Intersection / Timeframe	Roadway Conditions	> = Shared La	ne -= Non Cri	tical or not Allow	ed Movement	
		-	Eastbound	Westbound	Northbound	Southbound	Intersection
2. Mad	ison Street at Wisconsin Avenue	Traffic Signal	LT TH RT	LT TH RT	LT TH RT	LT TH RT	-
		•LOS	A B A	A A A	> D <	> D <	В
	A.Existing (See Exhibit 3)	<ul> <li>Delay (sec)</li> </ul>	3.8 13.7 4.0	4.4 9.3 0.6	- 47.4 -	- 45.0 -	15.0
	A.Existing (See Exhibit 3)	<ul> <li>95th Queue Length (ft)</li> </ul>	11 475 24	25 292 0	- 86 -	- 116 -	-
		<ul> <li>Approach LOS (Delay)</li> </ul>	B (13.0)	A (8.2)	D (47.4)	D (45.0)	-
		• LOS	A B A	A A A	> D <	> D <	В
AM	B. 2029 No-Build (See Exhibit 4)	<ul> <li>Delay (sec)</li> </ul>	3.9 14.3 4.2	4.6 9.5 0.6	- 47.6 -	- 45.5 -	15.5
Peak	B. 2027 NO-Balla (See Exhibit 4)	• 95th Queue Length (ft)	11 502 26	25 304 0	- 88 -	- 120 -	-
		<ul> <li>Approach LOS (Delay)</li> </ul>	B (13.7)	A (8.5)	D (47.6)	D (45.5)	-
		•LOS	A B A	A A A	> D <	> D <	В
	C. 2029 Total (See Exhibit 6)	<ul> <li>Delay (sec)</li> </ul>	4.5 15.7 4.6	5.2 10.5 0.9	- 45.3 -	- 47.3 -	16.8
	0. 2027 Total (See Exhibit 0)	<ul> <li>95th Queue Length (ft)</li> </ul>	13 534 27	28 324 0	- 86 -	- 133 -	-
		<ul> <li>Approach LOS (Delay)</li> </ul>	B (14.9)	A (9.3)	D (45.3)	D (47.4)	-
		•LOS	A B A	A B A	> E <	> D <	С
	A.Existing (See Exhibit 3)	<ul> <li>Delay (sec)</li> </ul>	6.3 14.9 0.1	6.2 15.1 2.8	- 64.3 -	- 37.9 -	22.7
	TEXISTING (See Exhibit s)	<ul> <li>95th Queue Length (ft)</li> </ul>	14 382 0	11 387 7	- 176 -	- 69 -	-
		<ul> <li>Approach LOS (Delay)</li> </ul>	B (14.6)	B (13.5)	E (64.3)	D (37.9)	-
		• LOS	A B A	A B A	> E <	> D <	С
PM	B. 2029 No-Build (See Exhibit 4)	<ul> <li>Delay (sec)</li> </ul>	6.3 15.4 0.0	6.2 15.5 3.0	- 67.2 -	- 38.2 -	23.5
Peak	B. 2027 No Bana (800 Eximple 1)	• 95th Queue Length (ft)	15 397 0	12 400 7	- 183 -	- 71 -	-
		<ul> <li>Approach LOS (Delay)</li> </ul>	B (15.0)	B (13.8)	E (67.2)	D (38.2)	-
		•LOS	A B A	A B A	> E <	> D <	С
	C. 2029 Total (See Exhibit 6)	<ul> <li>Delay (sec)</li> </ul>	6.5 15.6 0.1	6.3 16.9 3.4	- 69.5 -	- 38.5 -	24.4
	C. 2027 Total (See Exhibit o)	• 95th Queue Length (ft)	16 394 0	12 403 -	- 185 -	- 74 -	-
		<ul> <li>Approach LOS (Delay)</li> </ul>	B (15.2)	B (15.0)	E (69.5)	D (38.5)	-
		• LOS	A B A	A B A	> C <	> D <	В
	A.Existing (See Exhibit 3)	<ul> <li>Delay (sec)</li> </ul>	5.1 10.3 0.0	5.0 13.7 2.1	- 23.7 -	- 50.9 -	15.3
	A.Existing (See Exhibit 9)	• 95th Queue Length (ft)	16 339 0	6 495 8	- 3 -	- 47 -	-
		<ul> <li>Approach LOS (Delay)</li> </ul>	A (10.0)	B (12.6)	C (23.7)	D (50.9)	-
		•LOS	A B A	A B A	> C <	> D <	В
SAT	B. 2029 No-Build (See Exhibit 4)	<ul> <li>Delay (sec)</li> </ul>	5.3 10.7 0.0	5.1 14.4 2.3	- 23.3 -	- 51.1 -	16.1
Peak	B. 2027 NO-Balla (See Exhibit 4)	<ul> <li>95th Queue Length (ft)</li> </ul>	17 355 0	6 523 9	- 3 -	- 49 -	-
		<ul> <li>Approach LOS (Delay)</li> </ul>	B (10.7)	B (13.2)	C (23.3)	D (51.1)	-
		• LOS	A B A	A B A	> C <	> D <	В
	C. 2029 Total (See Exhibit 6)	<ul> <li>Delay (sec)</li> </ul>	5.7 11.2 0.0	5.3 16.1 2.6	- 22.9 -	- 53.1 -	17.3
	G. 2027 IOIAI (SEE EXIIIDII U)	<ul> <li>95th Queue Length (ft)</li> </ul>	19 356 0	6 527 11	- 3 -	- 51 -	-
		<ul> <li>Approach LOS (Delay)</li> </ul>	B (11.1)	B (14.7)	C (22.9)	D (53.1)	-

Table 5: Level-of-Service Summary (cont.)

		Table 5. Level-01-3	S. VIC	Jo Juli	miui		ement	Gro	up Bv	Appro	ach			
	Intersection / Timeframe	Roadway Conditions	>	= Shar	ed La							ed M	oveme	nt
			Е	astbour	nd	W	estbou	nd	No	rthbou	nd	So	uthbou	nd
3. Wis	consin Avenue at Alley Entrance	TWSC - EB/WB Stops	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
		•LOS	>	Α	<	>	Α	<	Α	-	-	Α	-	-
	A.Existing (See Exhibit 3)	• Delay (sec)	-	8.9	-	-	0	-	7.6	-	-	0	-	-
	3,444	• 95th Queue Length (ft)	-	0	-	-	0	-	0	- (7.4)	-	0	- 0	-
		Approach LOS (Delay)     LOS	>	A (8.9)	<	_	A (0)	<	Α	A (7.6)		Α	A (0)	
AM		• Delay (sec)	>	8.9	-	>	<b>A</b>	-	7.6	-	-	0	-	-
Peak	B. 2029 No-Build (See Exhibit 4)	• 95th Queue Length (ft)	_	0.7	_	_	0	_	0	_	_	0	_	_
Feak		Approach LOS (Delay)		A (8.9)			A (0)		ľ	A (7.6)		U	A (0)	
		•LOS	>	A	<	>	A	<	Α	-	-	Α	-	-
	0.000 7 + 1/0 - 5 + 1/1 /	<ul> <li>Delay (sec)</li> </ul>	-	9.3	-	-	0	-	7.7	-	-	0	-	-
	C. 2029 Total (See Exhibit 6)	• 95th Queue Length (ft)	-	3	-	-	0	-	0	-	-	0	-	-
		Approach LOS (Delay)		A (9.3)			A (0)			A (7.7)			A (0)	
		•LOS	>	Α	<	>	Α	<	Α	-	-	Α	-	-
	A Eviating (Cas Evhibit 2)	<ul> <li>Delay (sec)</li> </ul>	-	8.9	-	-	8.9	-	7.6	-	-	7.4	-	-
	A.Existing (See Exhibit 3)	• 95th Queue Length (ft)	-	0	-	-	0	-	0	-	-	0	-	-
		<ul> <li>Approach LOS (Delay)</li> </ul>		A (8.9)			A (8.9)			A (7.6)			A (7.4)	
		·LOS	>	Α	<	>	Α	<	Α	-	-	Α	-	
PM	B. 2029 No-Build (See Exhibit 4)	<ul> <li>Delay (sec)</li> </ul>	-	8.9	-	-	8.9	-	7.6	-	-	7.4	-	-
Peak	,	<ul> <li>95th Queue Length (ft)</li> </ul>	-	0	-	-	0	-	0	-	-	0	-	-
		<ul> <li>Approach LOS (Delay)</li> </ul>		A (8.9)			A (8.9)			A (7.6)			A (7.4)	
		• LOS	>	Α	<	>	Α	<	Α	-	-	Α	-	-
	C. 2029 Total (See Exhibit 6)	<ul> <li>Delay (sec)</li> </ul>	-	9.2	-	-	9.2	-	7.7	-	-	7.5	-	-
	0. 2027 Total (See Exhibit b)	• 95th Queue Length (ft)	-	0	-	-	0	-	0	-	-	0	-	-
		<ul> <li>Approach LOS (Delay)</li> </ul>		A (9.2)			A (9.2)			A (7.7)			A (7.5)	
		•LOS	>	Α	<	>	Α	<	Α	-	-	Α	-	-
	A.Existing (See Exhibit 3)	<ul> <li>Delay (sec)</li> </ul>	-	9.4	-	-	8.7	-	7.7	-	-	7.4	-	-
	7 = 2	• 95th Queue Length (ft)	-	0	-	-	0	-	0		-	0		-
SAT		<ul> <li>Approach LOS (Delay)</li> </ul>		A (9.4)			A (8.7)			A (7.7)			A (7.4)	
Peak		·LOS	>	Α	<	>	Α	<	Α	-	-	Α	-	-
	B. 2029 No-Build (See Exhibit 4)	• Delay	-	9.4	-	-	8.8	-	7.7	-	-	7.4	-	-
		• 95th Queue Length (ft)	-	0	-	-	0	-	0	- ^ (7.7)	-	0	- ^ /7 ^\	-
		Approach LOS (Delay)		A (9.4)			A (8.8)			A (7.7)		_	A (7.4)	
		·LOS	>	Α	<	>	Α	<	A	-	-	A	-	-
	C. 2029 Total (See Exhibit 6)	• Delay	-	9.9	-	-	9.1	-	7.8	-	-	7.4	-	-
	, , , , , ,	• 95th Queue Length (ft)	-	3	-	-	0	-	0	- ^ (7.7\	-	0	- ^ (7.4)	-
		<ul> <li>Approach LOS (Delay)</li> </ul>		A (9.9)			A (9.1)			A (7.7)			A (7.4)	

The following summarizes the findings of the Capacity Analyses.

#### Harlem Avenue (IL Route 43) at Madison Street

The intersection of Harlem Avenue and Madison Street operates at LOS "C" or "D" in the existing, 2029 no-build, and 2029 future traffic during the weekday morning, weekday evening, and Saturday midday peak hours respectively. The impact from the site traffic is negligible to the operations of this IDOT intersection.

#### Madison Street at Wisconsin Avenue

The intersection between Madison Street and Wisconsin Avenue operates at LOS "B" in the existing, 2029 no-build, and 2029 total traffic scenarios during the weekday morning, and Saturday midday peak hours. It also operates at LOS "C" during the existing, 2029 no-build, and 2029 total traffic scenarios during the weekday evening peak hour. The overall impact from site traffic is negligible to the overall operation of the intersection

#### Wisconsin Avenue at Alley Entrance

The movements at Wisconsin Avenue at Alley Entrance operate at LOS "A" in the existing, 2029 no-build, and 2029 future traffic during the weekday morning, weekday evening, and Saturday midday peak hours. The impact from the site traffic is negligible to the operations of this local road intersection.

## Parking Analysis

The proposed site plan shown in *Appendix E* shows six (6) proposed parking spaces for the site. IHDC indicated that the primary parking demand is anticipated to be primarily the 2-3 employees that are on-site, and many tenants will not own vehicles. Oak Park municipal code does not specify the number of parking spaces required for an affordable housing development, but standard rates are one parking space per unit. This ratio results in the 36-unit housing development (consisting of 12 SROs and 24 one-bedroom units) to be required to have 36 parking spaces. IHDC is currently seeking zoning relief for parking as a part of this application, and is requesting a reduction in the parking ratio from one space per dwelling unit to one space per six dwelling units, which would meet the proposed six spaces.

Handicap parking has been addressed within the on-site parking, and will not be requiring street parking.

RUSH Oak Park Hospital, located to the south, has detailed a willingness to evaluate and absorb the excess parking need, if necessary, and their letter detailing this has been attached as *Appendix H*.

#### Part IV. Recommendations and Conclusions

Analyses have been conducted under existing and future conditions to determine the impact from the proposed affordable housing development on the study area intersections. The capacity analysis results indicate that the increase in project site-generated traffic has little to no effect upon the Peak Hour operations of the area roadway network. GHA recommends the following:

• IHDC to verify with the Village of Oak Park and the zoning commission that the parking ratio reduction and that RUSH Oak Park Hospital's ability to absorb excess parking if necessary is acceptable.

#### Part V. Technical Addendum

The following Appendices were previously referenced. They provide technical support for our observations, findings and recommendations discussed in the text.

#### **Appendices**

- A. Photo Inventory
- B. 2024 Traffic Count Summaries
- C. Crash Summary Map
- D. CMAP Traffic Projections
- E. December 23rd, 2023, Site Plan
- F. ITE Trip Generation Manual Excerpts
- G. Capacity Analysis Worksheets
- H. RUSH Oak Park Hospital Letter

6063.900 - Oak Park Housing Development TIS.docx

# **TECHNICAL ADDENDUM**



# APPENDIX A *Photo Inventory*





**Looking South along Wisconsin Avenue at Alley** 



Looking west at Alley across Wisconsin Avenue



**Looking North along Wisconsin Avenue at Alley** 

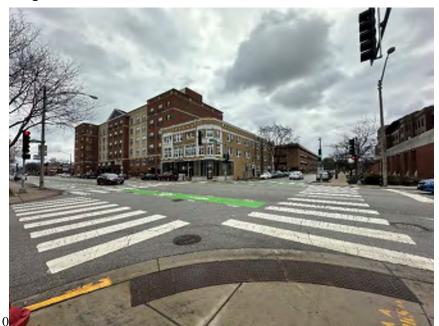


Looking Southwest at the Madison Street/Wisconsin Avenue Intersection





**Looking Northwest at the Madison Street/Wisconsin Avenue Intersection** 



Looking Southeast at the Madison Street/Wisconsin Avenue Intersection



Looking Northeast at the Madison Street/Wisconsin Avenue Intersection



Looking Southwest at the Harlem Avenue/Madison Street Intersection





Looking Southeast at the Harlem Avenue/Madison Street Intersection



Looking Northeast at the Harlem Avenue/Madison Street Intersection





Looking Northwest at the Harlem Avenue/Madison Street Intersection

# APPENDIX B Traffic Count Summary Sheets



Harlem/Madison 6063.900 - Oak Park Housing TIS 11 AM - 2 PM GHA Mio

# Gewalt Hamilton Associates Inc. 625 Forest Edge Drive

Vernon Hills, Illinois, United States 60061 (847) 478-9700 poster@gha-engineers.com

Count Name: Harlem/Madison Site Code: Start Date: 01/27/2024 Page No: 1

## **Turning Movement Data**

										ı aıı	, , , , , , , , , , , , , , , , , , ,	/10 V C1	ilour F	Juliu											
			Hai	rlem					Mad	dison					Ha	rlem					Mad	dison			
			South	bound			İ		West	tbound					North	bound			İ		Eastl	bound			
Start Time	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
11:00 AM	0	36	289	20	4	345	0	47	74	29	2	150	0	14	256	34	3	304	0	22	65	11	4	98	897
11:15 AM	0	32	287	18	2	337	0	52	82	38	3	172	0	16	230	40	3	286	0	18	78	18	7	114	909
11:30 AM	0	15	278	17	5	310	0	55	68	29	4	152	0	17	280	43	7	340	0	12	57	8	3	77	879
11:45 AM	0	32	261	26	5	319	0	53	66	31	1	150	0	24	226	33	3	283	0	20	58	15	2	93	845
Hourly Total	0	115	1115	81	16	1311	0	207	290	127	10	624	0	71	992	150	16	1213	0	72	258	52	16	382	3530
12:00 PM	0	27	294	31	11	352	0	45	78	30	3	153	0	21	252	40	3	313	0	32	60	13	2	105	923
12:15 PM	0	26	284	29	3	339	0	52	94	38	1	184	0	14	222	37	5	273	0	24	80	15	7	119	915
12:30 PM	0	16	312	20	6	348	0	49	86	34	5	169	0	20	205	43	2	268	0	15	72	17	0	104	889
12:45 PM	0	21	244	17	1	282	0	64	101	35	0	200	0	21	217	42	3	280	0	23	78	15	2	116	878
Hourly Total	0	90	1134	97	21	1321	0	210	359	137	9	706	0	76	896	162	13	1134	0	94	290	60	11	444	3605
1:00 PM	0	31	285	33	10	349	0	59	99	22	7	180	0	16	254	35	7	305	0	22	73	6	2	101	935
1:15 PM	0	21	283	16	3	320	0	56	95	31	3	182	0	16	236	39	7	291	0	19	88	16	0	123	916
1:30 PM	0	22	305	22	3	349	0	51	82	23	5	156	0	17	235	35	5	287	0	28	68	12	2	108	900
1:45 PM	0	21	245	22	2	288	0	42	113	29	1	184	0	24	235	29	1	288	0	18	93	15	0	126	886
Hourly Total	0	95	1118	93	18	1306	0	208	389	105	16	702	0	73	960	138	20	1171	0	87	322	49	4	458	3637
Grand Total	0	300	3367	271	55	3938	0	625	1038	369	35	2032	0	220	2848	450	49	3518	0	253	870	161	31	1284	10772
Approach %	0.0	7.6	85.5	6.9	-	-	0.0	30.8	51.1	18.2	-	-	0.0	6.3	81.0	12.8	-	-	0.0	19.7	67.8	12.5	-	-	T -
Total %	0.0	2.8	31.3	2.5	-	36.6	0.0	5.8	9.6	3.4	-	18.9	0.0	2.0	26.4	4.2	-	32.7	0.0	2.3	8.1	1.5	-	11.9	T -
Lights	0	297	3323	253	-	3873	0	618	1034	369	-	2021	0	219	2810	447	-	3476	0	243	866	160	-	1269	10639
% Lights	-	99.0	98.7	93.4	-	98.3	-	98.9	99.6	100.0	-	99.5	-	99.5	98.7	99.3	-	98.8	-	96.0	99.5	99.4	-	98.8	98.8
Mediums	0	3	36	18	-	57	0	5	4	0	-	9	0	1	27	2	-	30	0	10	4	1	-	15	111
% Mediums	-	1.0	1.1	6.6	-	1.4	-	0.8	0.4	0.0	-	0.4	-	0.5	0.9	0.4	-	0.9	-	4.0	0.5	0.6	-	1.2	1.0
Articulated Trucks	0	0	8	0	-	8	0	2	0	0	-	2	0	0	11	1	-	12	0	0	0	0	-	0	22
% Articulated Trucks	-	0.0	0.2	0.0	-	0.2	-	0.3	0.0	0.0	-	0.1	-	0.0	0.4	0.2	-	0.3	-	0.0	0.0	0.0	-	0.0	0.2
Bicycles on Crosswalk	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	-	2	-		-	-	-	1	-	-
% Bicycles on Crosswalk		-	-	-	5.5	-			-	-	0.0			-		-	4.1	-		-	-	-	3.2		
Pedestrians	-	-	-	-	52	-	-	-	-	-	35	-	-	-	-	-	47	-	-	-	-	-	30	-	-
% Pedestrians	-	-	-	-	94.5	-	-	-	-	-	100.0	-	-	-	_	-	95.9	-	-	-	-	-	96.8	-	Τ.

Harlem/Madison 6063.900 - Oak Park Housing TIS 6 AM - 9 AM, 3 PM - 6 PM GHA Mio

# Gewalt Hamilton Associates Inc. 625 Forest Edge Drive

Vernon Hills, Illinois, United States 60061 (847) 478-9700 poster@gha-engineers.com

Count Name: Harlem/Madison Site Code: Start Date: 01/30/2024 Page No: 1

## **Turning Movement Data**

	ı						I				mig i	VIOVCI		Jala					I						ĺ
			Har				1			dison						lem			1			lison			
Start Time			South	bound					West	bound					North	bound					Easth	oound			
Start Time	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
6:00 AM	0	11	221	12	0	244	0	22	24	9	0	55	0	7	144	20	1	171	0	7	35	7	0	49	519
6:15 AM	0	33	207	7	0	247	0	34	22	14	0	70	0	4	109	28	2	141	0	7	29	2	1	38	496
6:30 AM	0	32	280	27	2	339	0	29	40	22	1	91	0	8	180	35	0	223	0	16	47	4	0	67	720
6:45 AM	0	41	262	17	3	320	0	22	43	19	1	84	0	9	151	31	2	191	0	10	80	7	1	97	692
Hourly Total	0	117	970	63	5	1150	0	107	129	64	2	300	0	28	584	114	5	726	0	40	191	20	2	251	2427
7:00 AM	0	32	263	17	1	312	0	40	55	24	0	119	0	14	159	24	0	197	0	14	83	7	1	104	732
7:15 AM	0	47	247	18	1	312	0	30	84	24	1	138	0	7	187	25	2	219	0	13	111	2	0	126	795
7:30 AM	0	64	249	18	2	331	0	36	88	30	1	154	0	12	235	49	5	296	0	16	99	4	1	119	900
7:45 AM	0	56	293	22	1	371	0	32	74	26	1	132	0	13	236	39	3	288	0	23	106	5	0	134	925
Hourly Total	0	199	1052	75	5	1326	0	138	301	104	3	543	0	46	817	137	10	1000	0	66	399	18	2	483	3352
8:00 AM	0	44	283	25	0	352	0	35	86	34	1	155	0	14	249	47	3	310	0	28	79	9	2	116	933
8:15 AM	0	42	283	18	3	343	0	46	94	20	1	160	0	12	226	49	2	287	0	25	92	6	0	123	913
8:30 AM	0	36	258	20	0	314	0	46	88	41	1	175	0	13	225	59	3	297	0	12	98	8	1	118	904
8:45 AM	0	39	248	23	2	310	0	42	86	31	3	159	0	13	241	35	1	289	0	21	89	7	1	117	875
Hourly Total	0	161	1072	86	5	1319	0	169	354	126	6	649	0	52	941	190	9	1183	0	86	358	30	4	474	3625
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	0	27	252	29	3	308	0	47	84	38	3	169	0	22	237	42	4	301	0	16	71	9	3	96	874
3:15 PM	0	32	299	23	5	354	0	54	110	41	6	205	0	16	257	35	7	308	0	20	75	8	3	103	970
3:30 PM	0	34	260	28	6	322	0	55	93	36	0	184	0	15	241	38	2	294	0	14	79	5	4	98	898
3:45 PM	0	29	262	33	8	324	0	46	99	38	1	183	0	23	213	28	2	264	0	23	80	8	3	111	882
Hourly Total	0	122	1073	113	22	1308	0	202	386	153	10	741	0	76	948	143	15	1167	0	73	305	30	13	408	3624
4:00 PM	0	32	243	30	7	305	0	52	105	25	0	182	0	19	233	23	5	275	0	20	76	10	5	106	868
4:15 PM	0	40	240	22	4	302	0	44	104	30	2	178	0	13	225	34	4	272	0	17	79	7	3	103	855
4:30 PM	0	27	297	21	1	345	0	45	103	25	7	173	0	17	205	44	10	266	0	9	80	7	2	96	880
4:45 PM	0	42	273	30	2	345	0	48	94	33	0	175	0	20	213	29	7	262	0	28	75	12	3	115	897
Hourly Total	0	141	1053	103	14	1297	0	189	406	113	9	708	0	69	876	130	26	1075	0	74	310	36	13	420	3500
5:00 PM	0	31	273	23	10	327	0	51	100	33	2	184	0	26	267	35	7	328	0	22	74	9	11	105	944
5:15 PM	0	32	265	23	5	320	0	44	89	31	9	164	0	18	232	24	9	274	0	26	73	9	1	108	866
5:30 PM	0	37	272	30	9	339	0	50	86	25	4	161	0	16	249	33	6	298	0	27	76	8	8	111	909
5:45 PM	0	38	241	46	3	325	0	50	83	35	1	168	0	26	263	39	6	328	0	19	75	11	2	105	926
Hourly Total	0	138	1051	122	27	1311	0	195	358	124	16	677	0	86	1011	131	28	1228	0	94	298	37	22	429	3645
Grand Total	0	878	6271	562	78	7711	0	1000	1934	684	46	3618	0	357	5177	845	93	6379	0	433	1861	171	56	2465	20173
Approach %	0.0	11.4	81.3	7.3	-	-	0.0	27.6	53.5	18.9	-	-	0.0	5.6	81.2	13.2	-	-	0.0	17.6	75.5	6.9	-	-	-
Total %	0.0	4.4	31.1	2.8	-	38.2	0.0	5.0	9.6	3.4	-	17.9	0.0	1.8	25.7	4.2	-	31.6	0.0	2.1	9.2	8.0	-	12.2	-
Lights	0	853	6111	506	-	7470	0	984	1890	675	-	3549	0	351	5022	826	-	6199	0	389	1803	166	-	2358	19576
% Lights	-	97.2	97.4	90.0	-	96.9	-	98.4	97.7	98.7	-	98.1	-	98.3	97.0	97.8	-	97.2	-	89.8	96.9	97.1	-	95.7	97.0
Mediums	0	22	121	55	-	198	0	13	42	8	-	63	0	6	128	15	-	149	0	40	56	3	-	99	509
% Mediums	-	2.5	1.9	9.8	-	2.6	-	1.3	2.2	1.2	-	1.7	-	1.7	2.5	1.8	-	2.3	-	9.2	3.0	1.8	-	4.0	2.5

Appendix B

Articulated Trucks	0	3	39	1	-	43	0	3	2	1	-	6	0	0	27	4	-	31	0	4	2	2	-	8	88
% Articulated Trucks	-	0.3	0.6	0.2	-	0.6	-	0.3	0.1	0.1	-	0.2	-	0.0	0.5	0.5	-	0.5	-	0.9	0.1	1.2	-	0.3	0.4
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	3.6	-	-
Pedestrians	-	-	-	-	78	-	-	-	-	-	46	-	-	-	-	-	93	-	-	-	-	-	54	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	96.4	-	-

# Gewalt Hamilton Associates Inc. 625 Forest Edge Drive

Madison/Wisconsin 6063.900 - Oak Park Housing TIS 11 AM - 2 PM GHA Mio

Vernon Hills, Illinois, United States 60061 (847) 478-9700 poster@gha-engineers.com

Count Name: Madison/Wisconsin Site Code: Start Date: 01/27/2024 Page No: 1

## Turning Movement Data

										i uii	illing i	NIOVEI	ilelit r	Jala											
			Wisc	consin					Ma	dison					Wisc	consin					Mad	dison			
			South	bound					West	tbound					North	bound					East	bound			
Start Time	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
11:00 AM	0	14	2	14	5	30	0	3	148	8	0	159	0	7	0	1	2	8	0	6	139	3	2	148	345
11:15 AM	0	15	0	11	14	26	0	5	140	5	1	150	0	2	3	4	5	9	0	9	147	1	6	157	342
11:30 AM	0	7	0	9	13	16	0	1	152	20	1	173	0	2	2	2	5	6	0	3	119	1	8	123	318
11:45 AM	0	16	1	9	11	26	0	2	133	19	3	154	0	2	0	2	0	4	0	9	122	0	2	131	315
Hourly Total	0	52	3	43	43	98	0	11	573	52	5	636	0	13	5	9	12	27	0	27	527	5	18	559	1320
12:00 PM	0	17	1	16	6	34	0	0	145	15	2	160	0	6	2	2	6	10	0	6	131	2	15	139	343
12:15 PM	0	10	1	9	10	20	0	1	157	14	1	172	0	4	2	1	5	7	0	8	154	1	2	163	362
12:30 PM	0	15	1	14	4	30	0	1	166	16	0	183	0	3	1	1	0	5	0	5	141	4	3	150	368
12:45 PM	0	16	0	11	6	27	0	0	189	7	1	196	0	2	0	0	3	2	0	6	134	0	1	140	365
Hourly Total	0	58	3	50	26	111	0	2	657	52	4	711	0	15	5	4	14	24	0	25	560	7	21	592	1438
1:00 PM	0	14	2	7	4	23	0	3	167	12	2	182	0	1	0	5	7	6	0	10	139	0	9	149	360
1:15 PM	0	23	0	10	8	33	0	5	166	12	7	183	0	0	0	2	5	2	0	10	148	4	3	162	380
1:30 PM	0	9	2	9	5	20	0	3	168	10	4	181	0	4	0	4	6	8	0	8	125	2	5	135	344
1:45 PM	0	8	0	11	4	19	0	0	150	7	5	157	0	2	2	0	1	4	0	7	134	2	0	143	323
Hourly Total	0	54	4	37	21	95	0	11	651	41	18	703	0	7	2	11	19	20	0	35	546	8	17	589	1407
Grand Total	0	164	10	130	90	304	0	24	1881	145	27	2050	0	35	12	24	45	71	0	87	1633	20	56	1740	4165
Approach %	0.0	53.9	3.3	42.8	-	_	0.0	1.2	91.8	7.1	-	-	0.0	49.3	16.9	33.8	-	_	0.0	5.0	93.9	1.1	-	-	-
Total %	0.0	3.9	0.2	3.1	-	7.3	0.0	0.6	45.2	3.5	-	49.2	0.0	0.8	0.3	0.6	-	1.7	0.0	2.1	39.2	0.5	-	41.8	-
Lights	0	161	10	130	-	301	0	22	1865	143	-	2030	0	35	12	24	-	71	0	86	1621	20	-	1727	4129
% Lights	-	98.2	100.0	100.0	-	99.0	-	91.7	99.1	98.6	-	99.0	-	100.0	100.0	100.0	-	100.0	-	98.9	99.3	100.0	-	99.3	99.1
Mediums	0	3	0	0	-	3	0	2	14	2	-	18	0	0	0	0	-	0	0	1	11	0	-	12	33
% Mediums	-	1.8	0.0	0.0	-	1.0	-	8.3	0.7	1.4	-	0.9	-	0.0	0.0	0.0	-	0.0	-	1.1	0.7	0.0	-	0.7	0.8
Articulated Trucks	0	0	0	0	-	0	0	0	2	0	-	2	0	0	0	0	-	0	0	0	1	0	-	. 1	3
% Articulated Trucks	-	0.0	0.0	0.0	-	0.0	-	0.0	0.1	0.0	-	0.1	-	0.0	0.0	0.0	-	0.0	-	0.0	0.1	0.0	-	0.1	0.1
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	2	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	2.2	-	-	-	-	-	3.6	-	
Pedestrians	-			-	90	-			-		27	-		-	-		44	-		-	-	-	54	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	97.8	-	-	-	-	-	96.4	-	T -

# Gewalt Hamilton Associates Inc. 625 Forest Edge Drive

Madison/Wisconsin 6063.900 - Oak Park Housing TIS 6 AM - 9 AM, 3 PM - 6 PM GHA Mio

Vernon Hills, Illinois, United States 60061 (847) 478-9700 poster@gha-engineers.com

Count Name: Madison/Wisconsin Site Code: Start Date: 01/30/2024 Page No: 1

## Turning Movement Data

			Wisc							lison	3					consin						lison			
Start Time				bound		Ann			vvest	bound		Ann			Νοπη	bound		Ann			East	oound		Ann	
	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
6:00 AM	0	1	0	3	0	4	0	3	46	1	0	50	0	0	0	0	0	0	0	0	55	11	1	66	120
6:15 AM	0	0	1	1	0	2	0	10	65	0	0	75	0	1	0	0	0	1	0	1	69	18	0	88	166
6:30 AM	0	2	2	5	1	9	0	8	77	1	1	86	0	3	0	3	0	6	0	2	79	32	0	113	214
6:45 AM	0	1	4	10	0	15	0	8	88	3	0	99	0	1	2	3	2	6	0	1	115	38	2	154	274
Hourly Total	0	4	7	19	1	30	0	29	276	5	1	310	0	5	2	6	2	13	0	4	318	99	3	421	774
7:00 AM	0	6	2	2	6	10	0	2	107	2	4	111	0	4	0	5	0	9	0	2	121	18	0	141	271
7:15 AM	0	9	6	4	0	19	0	9	138	7	0	154	0	7	1	4	2	12	0	2	169	11	1	182	367
7:30 AM	0	12	6	6	2	24	0	13	144	8	0	165	0	8	2	3	2	13	0	5	204	13	3	222	424
7:45 AM	0	8	5	8	3	21	0	19	124	5	2	148	0	13	3	2	0	18	0	7	187	32	1	226	413
Hourly Total	0	35	19	20	11	74	0	43	513	22	6	578	0	32	6	14	4	52	0	16	681	74	5	771	1475
8:00 AM	0	4	5	13	3	22	0	16	142	10	2	168	0	7	3	4	0	14	0	8	147	21	3	176	380
8:15 AM	0	8	5	14	2	27	0	17	138	4	4	159	0	10	2	6	0	18	0	3	165	22	2	190	394
8:30 AM	0	8	3	10	0	21	0	9	153	7	1	169	0	10	5	7	3	22	0	5	175	29	5	209	421
8:45 AM	0	8	5	10	2	23	0	12	143	5	1	160	0	10	4	7	4	21	0	7	159	16	1	182	386
Hourly Total	0	28	18	47	7	93	0	54	576	26	8	656	0	37	14	24	7	75	0	23	646	88	11	757	1581
*** BREAK ***	-				-		-	-	_	_	-		-	-		-	-			-		_	-		-
3:00 PM	0	10	4	11	2	25	0	3	131	10	0	144	0	22	5	6	4	33	0	6	138	2	2	146	348
3:15 PM	0	9	1	9	5	19	0	6	181	10	1	197	0	27	5	8	6	40	0	10	136	2	2	148	404
3:30 PM	0	10	2	5	6	17	0	5	158	13	2	176	0	24	2	14	4	40	0	4	154	6	3	164	397
3:45 PM	0	15	5	6	3	26	0	4	149	5	0	158	0	18	8	3	1	29	0	6	137	0	2	143	356
Hourly Total	0	44	12	31	16	87	0	18	619	38	3	675	0	91	20	31	15	142	0	26	565	10	9	601	1505
4:00 PM	0	15	5	6	2	26	0	5	142	11	2	158	0	29	10	15	5	54	0	7	137	4	4	148	386
4:15 PM	0	16	2	6	3	24	0	8	145	14	5	167	0	20	11	11	7	42	0	6	151	4	7	161	394
4:30 PM	0	7	4	6	0	17	0	4	159	14	1	177	0	34	15	13	3	62	0	4	157	3	3	164	420
4:45 PM	0	11	1	7	0	19	0	3	144	7	6	154	0	23	4	12	7	39	0	9	148	2	3	159	371
Hourly Total	0	49	12	25	5	86	0	20	590	46	14	656	0	106	40	51	22	197	0	26	593	13	17	632	1571
5:00 PM	0	15	1	3	5	19	0	4	136	10	1	150	0	33	11	17	2	61	0	5	143	1	4	149	379
5:15 PM	0	19	1	10	4	30	0	2	129	12	1	143	0	13	7	13	3	33	0	5	140	1	1	146	352
5:30 PM	0	13	3	7	4	23	0	0	142	15	4	157	0	27	6	10	3	43	0	3	158	3	3	164	387
5:45 PM	0	20	0	7	3	27	0	5	148	11	0	164	0	19	4	5	6	28	0	2	161	0	2	163	382
Hourly Total	0	67	5	27	16	99	0	11	555	48	6	614	0	92	28	45	14	165	0	15	602	5	10	622	1500
Grand Total	0	227	73	169	56	469	0	175	3129	185	38	3489	0	363	110	171	64	644	0	110	3405	289	55	3804	8406
Approach %	0.0	48.4	15.6	36.0	_		0.0	5.0	89.7	5.3	-	-	0.0	56.4	17.1	26.6	-		0.0	2.9	89.5	7.6	-	-	-
Total %	0.0	2.7	0.9	2.0	-	5.6	0.0	2.1	37.2	2.2	-	41.5	0.0	4.3	1.3	2.0	-	7.7	0.0	1.3	40.5	3.4	-	45.3	-
Lights	0	225	71	167	-	463	0	174	3064	185	-	3423	0	362	109	169	-	640	0	105	3310	283	-	3698	8224
% Lights	-	99.1	97.3	98.8	-	98.7	-	99.4	97.9	100.0	-	98.1	-	99.7	99.1	98.8	-	99.4	-	95.5	97.2	97.9	-	97.2	97.8
Mediums	0	2	2	2	-	6	0	1	56	0	-	57	0	1	1	2	-	4	0	3	90	6	-	99	166
% Mediums	-	0.9	2.7	1.2	_	1.3	-	0.6	1.8	0.0	-	1.6	-	0.3	0.9	1.2	-	0.6	-	2.7	2.6	2.1	-	2.6	2.0

Appendix B

Articulated Trucks	0	0	0	0	-	0	0	0	9	0	-	9	0	0	0	0	-	0	0	2	5	0	-	7	16
% Articulated Trucks	-	0.0	0.0	0.0	-	0.0	-	0.0	0.3	0.0	-	0.3	-	0.0	0.0	0.0	-	0.0	-	1.8	0.1	0.0	-	0.2	0.2
Bicycles on Crosswalk	-	-	-	-	2	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	3.6	-	-	-	-	-	2.6	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	_	-	54	-	-	-	-	-	37	-	-	-	-	-	64	-	-	-	-	-	55	-	-
% Pedestrians	-	-	-	-	96.4	-	-	-	-	-	97.4	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

# Gewalt Hamilton Associates Inc. 625 Forest Edge Drive Wisconsin Ave at Alley 6063.900 - Oak Park Housing TIS 11 AM - 2 PM GHA Mio

Vernon Hills, Illinois, United States 60061 (847) 478-9700 poster@gha-engineers.com

Count Name: Wisconsin Ave at Alley Site Code: Start Date: 01/27/2024 Page No: 1

## **Turning Movement Data**

										ı anı	mig i		ilour F	Julu													
			Wisc	consin					Α	lley	_				Wisc	onsin			Alley								
			South	bound			Ī		Wes	tbound					North	bound			Eastbound								
Start Time	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		
11:00 AM	0	1	27	1	3	29	0	0	0	0	2	0	1	2	13	0	1	16	0	0	0	2	9	2	47		
11:15 AM	0	0	20	1	3	21	0	0	0	0	6	0	1	0	13	0	0	14	0	2	0	2	5	4	39		
11:30 AM	0	0	12	0	3	12	0	0	0	0	3	0	0	2	23	0	0	25	0	0	0	4	8	4	41		
11:45 AM	0	0	23	1	3	24	0	0	0	0	2	0	2	2	21	0	0	25	0	0	0	3	7	3	52		
Hourly Total	0	1	82	3	12	86	0	0	0	0	13	0	4	6	70	0	1	80	0	2	0	11	29	13	179		
12:00 PM	0	0	27	2	0	29	0	0	0	0	2	0	1	2	22	0	0	25	0	2	0	6	14	8	62		
12:15 PM	0	1	19	0	0	20	0	0	0	0	5	0	0	5	17	0	4	22	0	0	0	0	6	0	42		
12:30 PM	0	1	26	0	2	27	0	0	0	1	0	1	1	3	16	0	0	20	0	1	0	2	6	3	51		
12:45 PM	0	1	25	2	0	28	0	0	0	0	4	0	1	1	14	0	0	16	0	0	0	1	8	1	45		
Hourly Total	0	3	97	4	2	104	0	0	0	1	11	1	3	11	69	0	4	83	0	3	0	9	34	12	200		
1:00 PM	0	0	25	0	0	25	0	0	0	0	6	0	1	3	18	0	0	22	0	1	0	0	8	1	48		
1:15 PM	1	0	27	0	2	28	0	0	0	1	2	1	0	2	19	0	1	21	0	1	0	1	7	2	52		
1:30 PM	0	0	24	0	0	24	0	0	0	1	7	1	1	3	17	0	1	21	0	0	0	0	10	0	46		
1:45 PM	0	0	14	1	2	15	0	0	0	0	2	0	0	1	14	0	0	15	0	1	0	2	4	3	33		
Hourly Total	1	0	90	1	4	92	0	0	0	2	17	2	2	9	68	0	2	79	0	3	0	3	29	6	179		
Grand Total	1	4	269	8	18	282	0	0	0	3	41	3	9	26	207	0	7	242	0	8	0	23	92	31	558		
Approach %	0.4	1.4	95.4	2.8	-	-	0.0	0.0	0.0	100.0	-	-	3.7	10.7	85.5	0.0	-	-	0.0	25.8	0.0	74.2	-	-	T -		
Total %	0.2	0.7	48.2	1.4	-	50.5	0.0	0.0	0.0	0.5	-	0.5	1.6	4.7	37.1	0.0	-	43.4	0.0	1.4	0.0	4.1	-	5.6	T -		
Lights	1	3	266	8	-	278	0	0	0	3	-	3	9	26	204	0	-	239	0	8	0	23	-	31	551		
% Lights	100.0	75.0	98.9	100.0	-	98.6	-	-	-	100.0	-	100.0	100.0	100.0	98.6	-	-	98.8	-	100.0	-	100.0	-	100.0	98.7		
Mediums	0	1	3	0	-	4	0	0	0	0	-	0	0	0	3	0	-	3	0	0	0	0	-	0	7		
% Mediums	0.0	25.0	1.1	0.0	-	1.4	-	-	-	0.0	-	0.0	0.0	0.0	1.4	-	-	1.2	-	0.0	-	0.0	-	0.0	1.3		
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		
Bicycles on Crosswalk		-	-	-	0	-		-	-	-	0	-	-	-	-	-	0	-		-	-	-	0	-	-		
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-			
Pedestrians			-	-	18	-					41	-				-	7	-					92	-	-		
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	_	100.0				

# Gewalt Hamilton Associates Inc. 625 Forest Edge Drive

Wisconsin Ave at Alley 6063.900 - Oak Park Housing TIS 6 AM - 9 AM, 3 PM - 6 PM GHA Mio

Vernon Hills, Illinois, United States 60061 (847) 478-9700 poster@gha-engineers.com

Count Name: Wisconsin Ave at Alley Site Code: Start Date: 01/30/2024 Page No: 1

## Turning Movement Data

	Wisconsin Alley											710 001		Julu	Wisc	onsin			Alley							
				bound						bound						bound			Eastbound							
Start Time	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	
6:00 AM	0	1	6	0	0	7	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	8	
6:15 AM	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	
6:30 AM	0	0	7	0	0	7	0	0	0	0	3	0	0	0	2	1	0	3	0	0	0	3	0	3	13	
6:45 AM	0	0	15	1	0	16	0	0	0	1	1	1	0	1	. 5	1	0	. 7	0	0	0	2	2	2	26	
Hourly Total	0	1	31	1	0	33	0	0	0	1	4	1	0	1	8	2	0	11	0	0	0	5	3	5	50	
7:00 AM	0	0	9	0	0	9	0	0	0	0	1	0	0	2	5	0	1	7	0	0	0	1	0	1	17	
7:15 AM	0	0	15	1	0	16	0	0	0	0	0	0	1	0	6	0	0	7	0	0	0	1	1	1	24	
7:30 AM	0	0	19	1	0	20	0	1	0	0	1	1	0	0	12	0	1	12	0	1	0	3	2	4	37	
7:45 AM	0	0	22	0	0	22	0	0	0	0	4	0	0	4	11	1	0	16	0	0	0	2	3	2	40	
Hourly Total	0	0	65	2	0	67	0	1	0	0	6	. 1	1	6	34	1	2	42	0	1	0	7	6	. 8	118	
8:00 AM	1	0	22	0	2	23	0	0	0	0	3	0	0	1	20	0	0	21	0	0	0	1	1	1	45	
8:15 AM	1	0	22	0	1	23	0	0	0	0	4	0	0	0	9	0	1	9	0	0	0	0	3	0	32	
8:30 AM	0	0	24	. 0	0	24	0	0	0	0	2	0	0	0	16	. 0	0	16	0	0	. 0	1	3	1	41	
8:45 AM	0	0	23	0	0	23	0	0	0	0	1	0	0	0	15	0	0	15	0	0	0	0	3	0	38	
Hourly Total	2	0	91	0	3	93	0	0	0	0	10	0	0	1	60	0	1	61	0	0	0	2	10	2	156	
*** BREAK ***	-	<u>-</u>	-		-	<u>-</u>	-	-	-		-		-	-	<u>-</u>		-			-	<u> </u>	-			-	
3:00 PM	1	1	26	0	0	28	0	0	0	0	0	0	0	0	16	0	0	16	0	1	0	1	1	2	46	
3:15 PM	0	0	15	0	0	15	0	0	0	0	1	0	1	3	24	0	0	28	0	0	1	2	0	3	46	
3:30 PM	0	0	18	. 0	1	18	0	0	0	0	5	0	1	1	18	. 0	0	20	0	1	. 0	0	5	1	39	
3:45 PM	0	0	22	0	1	22	0	0	0	0	1	0	0	1	20	0	0	21	0	0	0	1	1	1	44	
Hourly Total	1	1	81	0	2	83	0	0	0	0	7	0	2	5	78	0	0	85	0	2	1	4	7	7	175	
4:00 PM	1	0	28	. 0	0	29	0	0	0	0	0	0	0	1	25	. 0	0	26	0	0	. 0	0	4	0	55	
4:15 PM	1	0	25	0	0	26	0	0	0	0	2	0	0	2	28	0	0	30	0	0	0	0	5	0	56	
4:30 PM	0	2	17	1	1	20	0	0	0	1	2	1	0	0	32	1	0	33	0	0	0	1	4	1	55	
4:45 PM	0	0	19	1	1	20	0	0	0	0	4	0	0	4	20	0	1	24	0	0	0	0	3	0	44	
Hourly Total	2	2	89	2	2	95	0	0	0	1	8	1	0	7	105	1	1	113	0	0	0	1	16	1	210	
5:00 PM	0	0	16	1	0	17	0	0	0	0	6	0	1	0	20	0	0	21	0	0	0	2	2	2	40	
5:15 PM	1	1	27	0	0	29	0	0	0	0	6	0	0	3	25	0	1	28	0	0	1	0	1	1	58	
5:30 PM	0	1	24	1	1	26	0	1	0	0	3	1	0	1	22	0	0	23	0	0	0	2	4	2	52	
5:45 PM	1	0	29	0	0	30	0	0	0	0	4	0	0	2	12	0	0	14	0	0	0	1	2	1	45	
Hourly Total	2	2	96	2	1	102	0	1	0	0	19	1	1	6	79	0	1	86	0	0	1	5	9	6	195	
Grand Total	7	6	453	7	8	473	0	2	0	2	54	4	4	26	364	4	5	398	0	3	2	24	51	29	904	
Approach %	1.5	1.3	95.8	1.5	-	-	0.0	50.0	0.0	50.0	-		1.0	6.5	91.5	1.0	-		0.0	10.3	6.9	82.8	-		-	
Total %	0.8	0.7	50.1	8.0	-	52.3	0.0	0.2	0.0	0.2	-	0.4	0.4	2.9	40.3	0.4	-	44.0	0.0	0.3	0.2	2.7	-	3.2	-	
Lights	7	6	447	7	-	467	0	2	0	2	-	4	4	25	359	4	-	392	0	3	2	24	-	29	892	
% Lights	100.0	100.0	98.7	100.0	-	98.7	-	100.0	-	100.0	-	100.0	100.0	96.2	98.6	100.0	-	98.5	-	100.0	100.0	100.0	-	100.0	98.7	
Mediums	0	0	6	0	-	6	0	0	0	0	-	0	0	1	3	0	-	4	0	0	0	0	-	0	10	
% Mediums	0.0	0.0	1.3	0.0	-	1.3	-	0.0	-	0.0	-	0.0	0.0	3.8	0.8	0.0	-	1.0	-	0.0	0.0	0.0	-	0.0	1.1	

Appendix B

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	-	0.0	-	0.0	-	0.0	-	0.0	0.0	0.0	0.5	0.0	-	0.5	-	0.0	0.0	0.0	-	0.0	0.2
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0		-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	0.0		-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	8	-	-	-	-	-	54	-	-	-	-	-	5	-	-	-	-	_	51	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

# APPENDIX C Crash Map





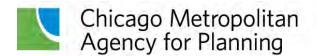


# Appendix C - IDOT Crash Data (2018-2022)

Proposed Housing Complex Oak Park, IL

## APPENDIX D CMAP Correspondence





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

February 12, 2024

David Westergreen, E. I. Traffic Engineer Gewalt Hamilton Associates 625 Forest Edge Drive Vernon Hills, IL 60061

Subject: Madison Street @ Harlem Avenue and @ Wisconsin Street

IDOT

Dear Ms. Westergreen:

In response to a request made on your behalf and dated February 9, 2024, we have developed year 2050 average daily traffic (ADT) projections for the subject location.

ROAD SEGMENT	<b>Current ADT</b>	Year 2050 ADT
Madison St east of Harlem Ave	13,500	15,500
Madison St west of Harlem Ave	12,200	14,000
Harlem Ave north of Madison St	32,700	37,600
Harlem Ave south of Madison St	32,700	37,700
Wisconsin Ave north of Madison St	1,800	2,200
Wisconsin Ave south of Madison St	1,800	2,200

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\OakPark\ck-23-24\ck-23-24.docx

### APPENDIX E Site Plan



# KEYSTONE APARTMENTS

### 1106 MADISON STREET, OAK PAK, IL

### DEVELOPMENT TEAM

PRIMARY SPONSOR CONSTRUCTION GUARANTOR INTERFAITH HOUSING DEVELOMENT CORP. 411 S. WELLS STREET, SUITE 401 CHICAGO, IL 60607 PHONE: 312-274-8200, X25 E-MAIL: pviettioihdc.org CONTACT: PERRY VIĔTTI

#### ARCHITECT

WEESE LANGLEY WEESE ARCHITECTS LTD. 20 W. HUBBARD ST. CHICAGO IL PHONE: 312-642-1820 E-MAIL: rkleinowlwltd.com CONTACT: RICH KLEIN

ELEMENT ENERGY CONSULTING LLC 11 N. NORTHWEST HIGHWAY. SUITE 107 PARK RIDGE, IL 60068 PHONE: 312-620-9984 E-MAIL: roboelement-co.com CONTACT: ROB OLDEN

#### CIVIL

ERIKSSON ENGINEERING 145 COMMERCE DR., SUITE A GRAYSLAKE, IL 60030 PHONE: 847-223-4804 E-MAIL: mrenner@eea-ltd.com CONTACT: MIKE RENNER

### OWNER

INTERFAITH HOUSING DEVELOMENT CORP. 411 S. WELLS STREET, SUITE 401 CHICAGO, IL 60607 PHONE: 312-274-8200, X25 E-MAIL: pviettioihdcorg CONTACT: PERRY VIETTI

#### GENERAL CONTRACTOR

HENRY BROS. CO. 9821 S. 78TH AVE. HICKORY HILLS, IL 60457 PHONE: 708-430-5400 E-MAIL: tobrien@henrybros.com CONTACT: TOM O'BŘIEN

#### STRUCTURAL

FOREFRONT STRUCTURAL ENGINEERS, INC. 25 E. WASHINGTON ST., SUITE 1450 CHICAGO IL, 60602 PHONE: 312-376-1140 E-MAIL: jdortzbachoforefrontstructural.com CONTACT: JOSH DORTZBACH

### BUILDING DATA:

SITE AREA: 8,925 SQ. FT. (0.2 ACRES) BUILDING AREA: FIRST FLOOR: 5.623 SQ. FT. 2ND FLOOR: 6,457 SQ. FT. 6,457 SQ. FT. 3RD FLOOR: 4TH FLOOR: 6,457 SQ. FT. 6,457 SQ. FT. 5TH FLOOR: TOTAL AREA: 31,451 SQ. FT. BUILDING HEIGHT: 56'-4" GOVERNING CODE: IBC 2021 EDITION CONSTRUCTION TYPE: 3-A

FULLY SPRINKLERED PER NFPA 13

UNIT TYPE:

(24) 1-BEDROOM (12) EFFICIENCIES 36 TOTAL

UNIT SUMMARY:

(6) 1-BEDRM UNITS PER TYP. FLR X 4 FLRS = 24 1-BR'S (3) EFFICIENCIES PER TYP. FLR X 4 FLRS = 12 EFFICIENCIES

TOTAL:

36 UNITS

#### UNIT MATRIX

UNITS:	SECTION 504*:	ICC/ANSI A117.1 TYPE A:	IAC ADAPTABLE:	FFHA ADAPTABLE**:	TOTAL:
GROUND FLOOR	0	0	0	0	0
2ND FLOOR	1	1	2	5	9
3RD FLOOR	1	1	1	6	9
4TH FLOOR	0	0	3	6	9
5TH FLOOR	<u>O</u>	<u>O</u>	2	7	9
UNIT TOTAL:	2	2	8	24	36

- SECTION 504 UNITS ARE FULLY ACCESSIBLE & ALSO MEET ICC/ANSI A117.1 TYPE A REQUIREMENTS
- \*\* ONE FFHA ADAPTABLE UNIT TO BE SENSORY IMPAIRED UNIT

WEESE LANGLEY WEESE ARCHITECTS LTD.

drawn RNK checked RNK

job no. date 01-16-24

scale N.A. sheets 1 OF 11

1106 MADISON STREET OAK PARK, ILLINOIS

TITLE SHEET

KEYSTONE APARTMENTS

DRAWING LIST:

Site Plan

Roof Plan

AA

First Floor Plan

South Elevation

West Elevation

East Elevation

North Elevation

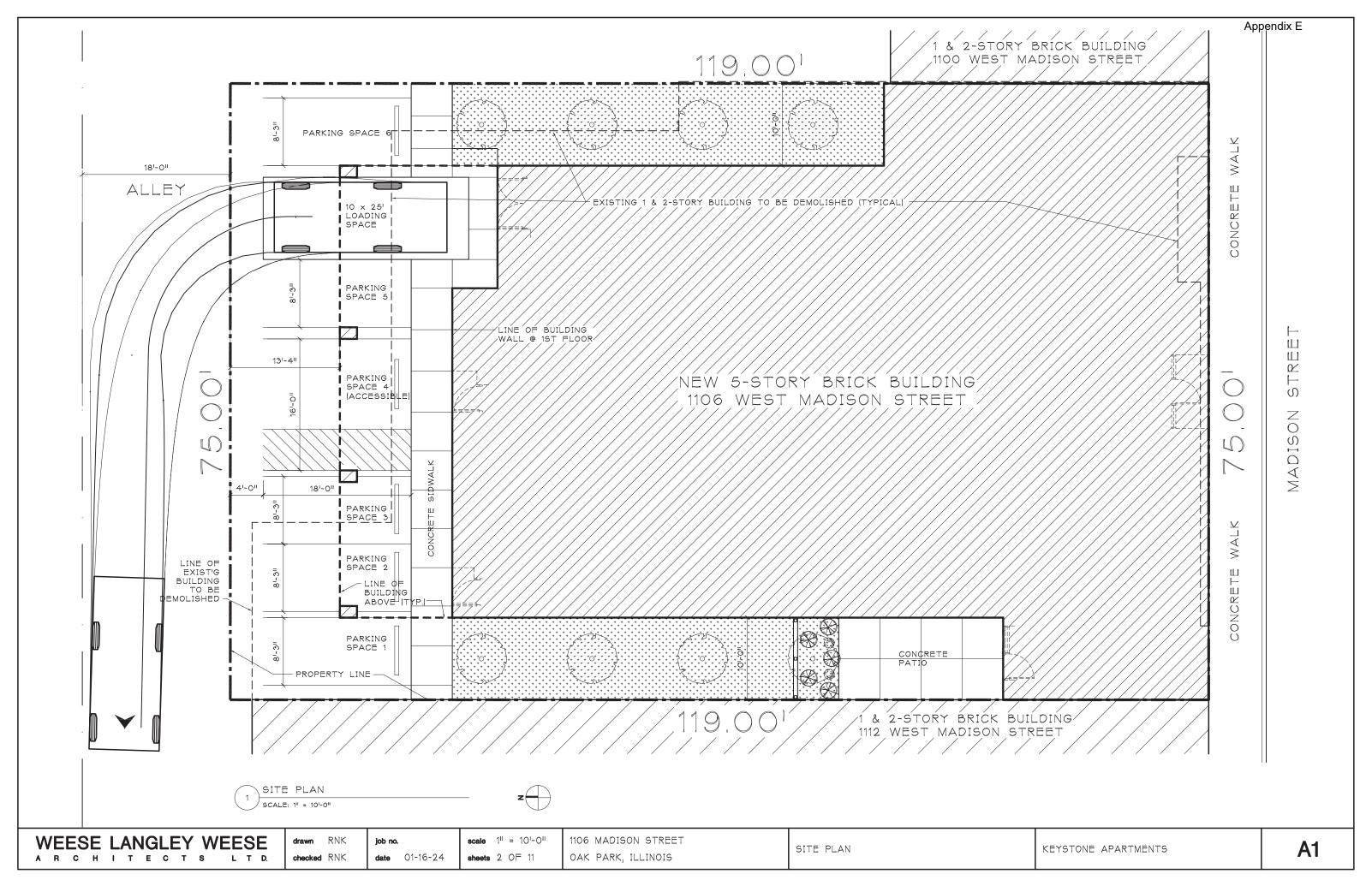
Landscape Plan

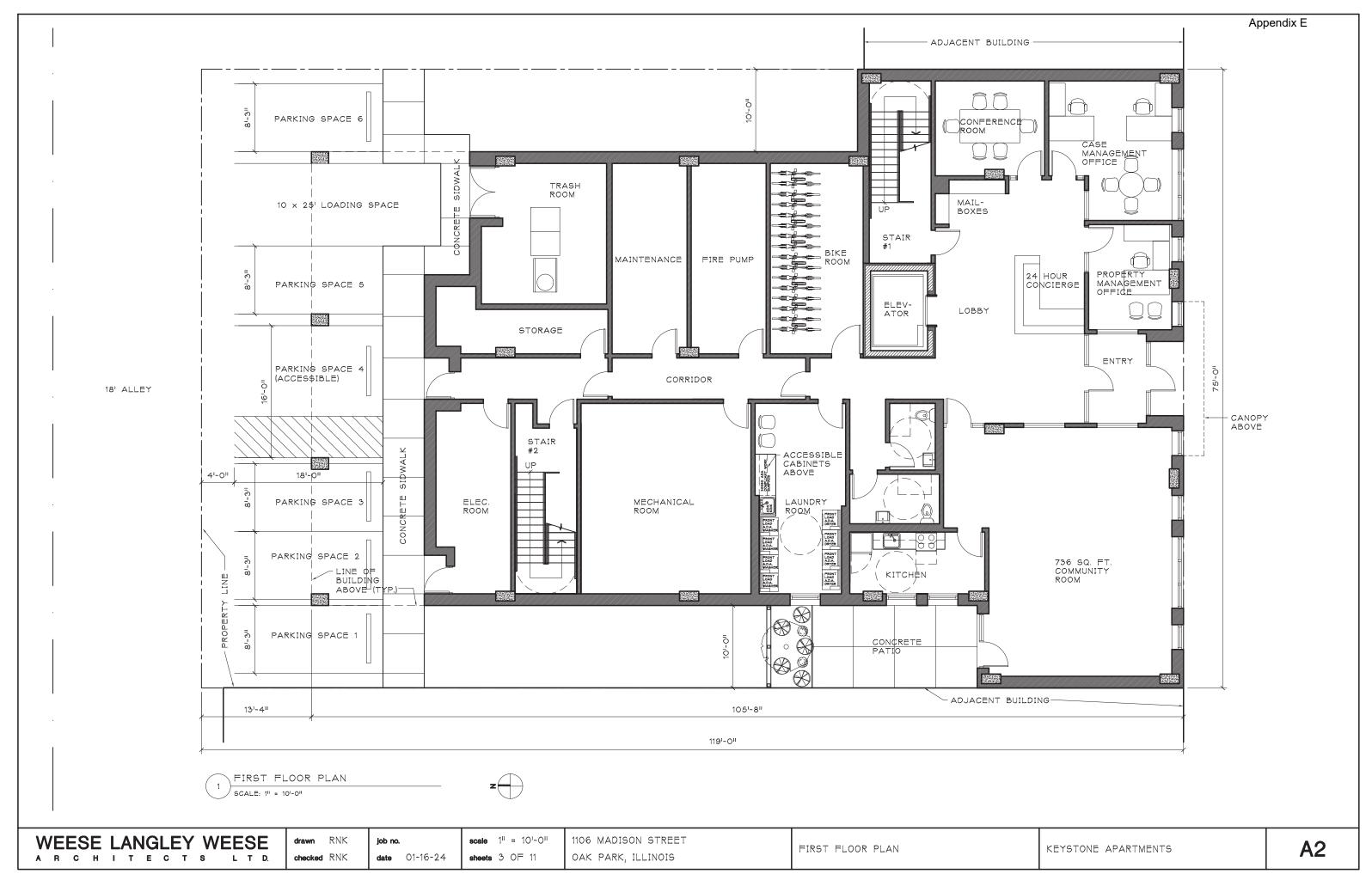
Exterior Wall Section

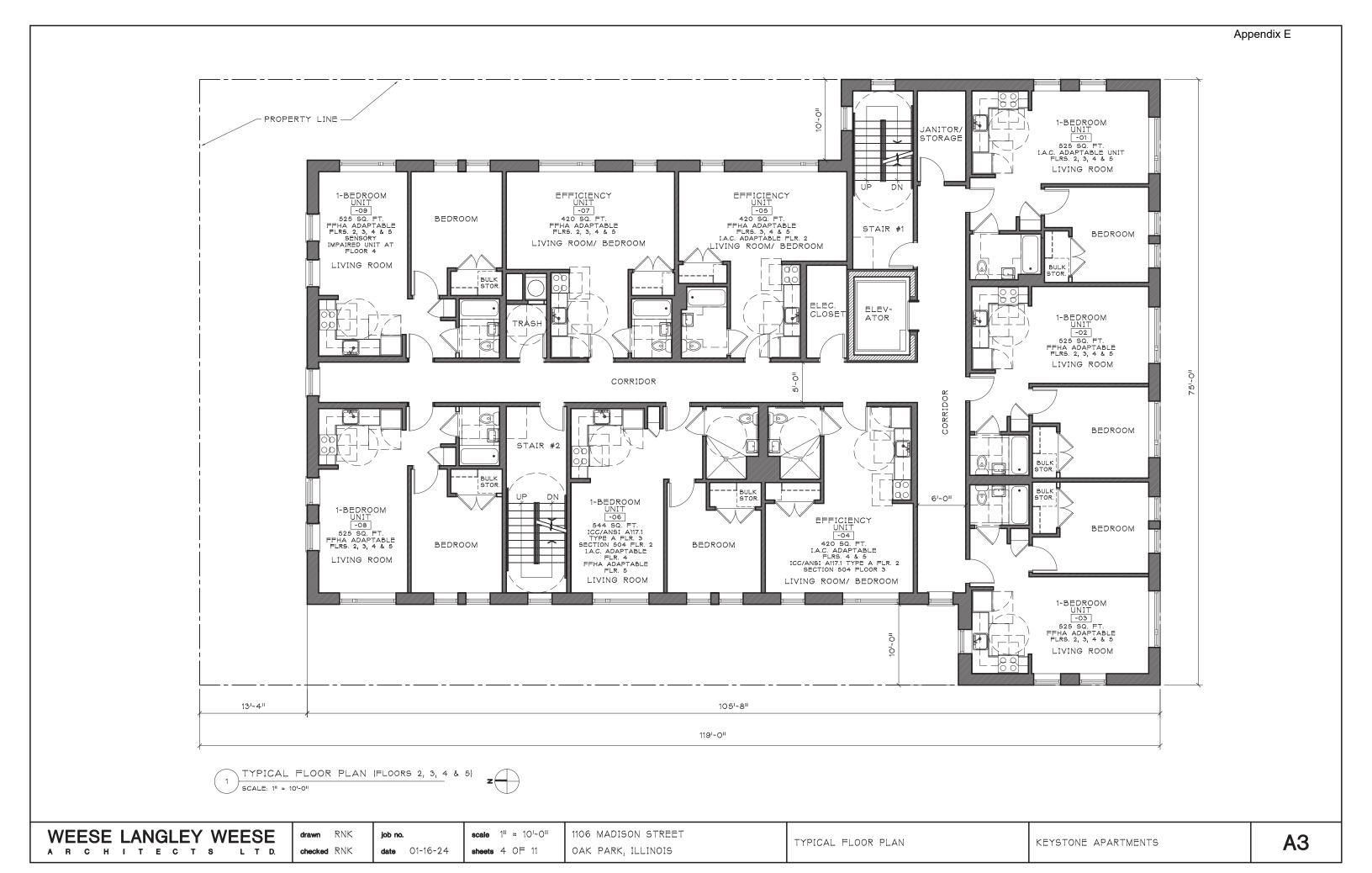
Typical Floor Plan

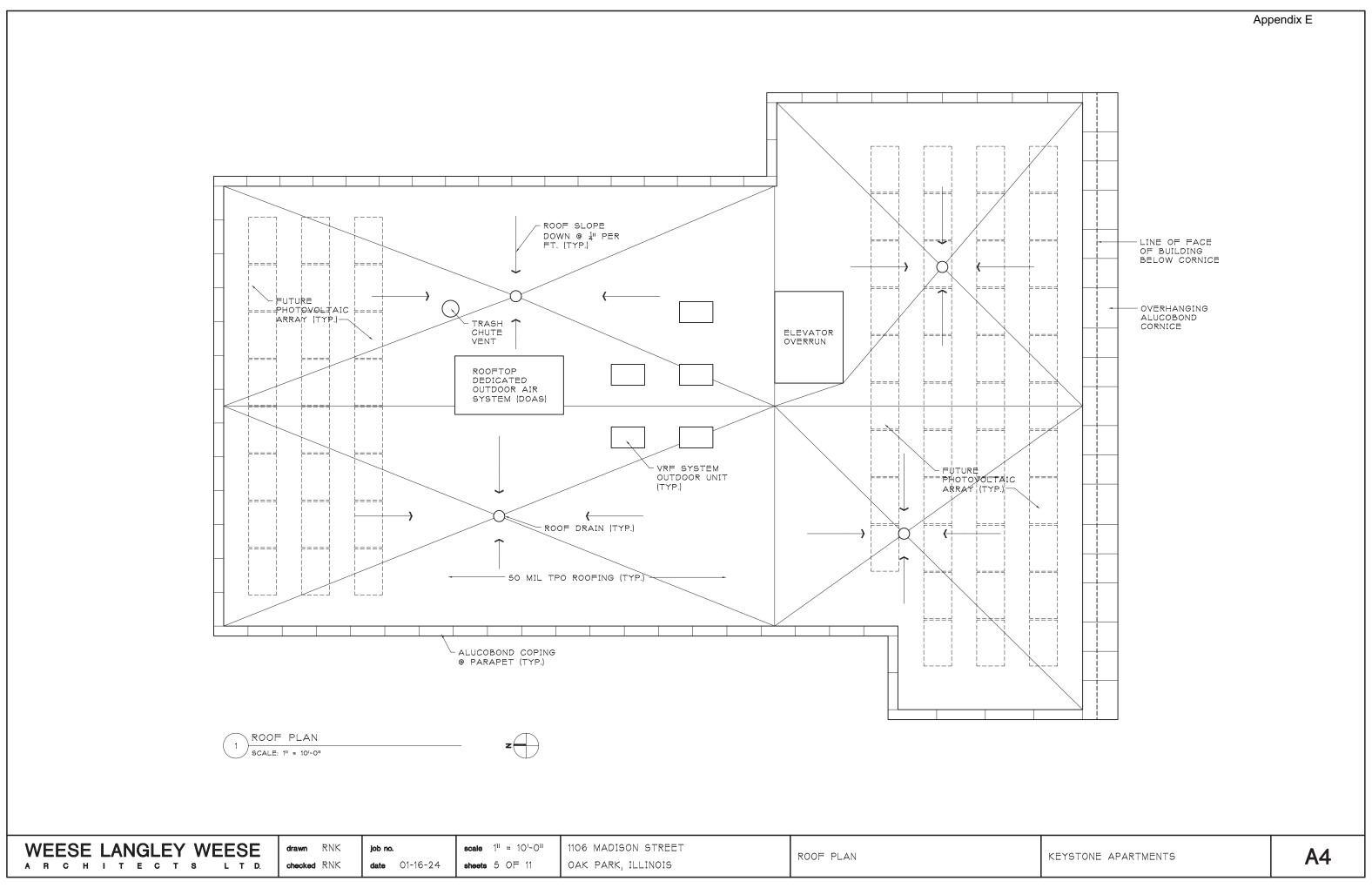
Title Sheet / Site Plan

**T1** 









# APPENDIX F ITE Trip Generation Excerpts



### Land Use: 223 **Affordable Housing**

#### **Description**

Affordable housing includes all multifamily housing that is rented at below market rate to households that include at least one employed member. Eligibility to live in affordable housing can be a function of limited household income and resident age. Multifamily housing (low-rise) (Land Use 220), multifamily housing (mid-rise) (Land Use 221), and multifamily housing (high-rise) (Land Use 222) are related land uses.

#### Land Use Subcategory

Data are presented for three subcategories for this land use: (1) sites with income limitations for its tenants (denoted as income limits in the data plots), (2) sites with both minimum age thresholds and income limitations for its tenants (denoted as senior in the data plots), and (3) sites designed for and occupied by residents with special needs, such as persons with physical and mental impairments, single mothers, recovering addicts and others living in a group setting.

#### **Additional Data**

For most study sites contained in this land use, all dwelling units in the development are classified as affordable units. For residential study sites that provide a mix of market value and affordable units, the study sites with at least 75 percent of the dwelling units designated as affordable are also included in this land use database.

It is expected that the number of bedrooms and number of residents are likely correlated to the trips generated by a residential site. To assist in future analysis, trip generation studies of all multifamily housing should attempt to obtain information on occupancy rate and on the mix of residential unit sizes (i.e., number of units by number of bedrooms at the site complex).

The sites were surveyed in the 1980s and 2010s in California, Ontario (CAN), and New Jersey.

#### **Source Numbers**

237, 918, 1003, 1004, 1046, 1057



## Affordable Housing - Income Limits (223)

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: Dense Multi-Use Urban

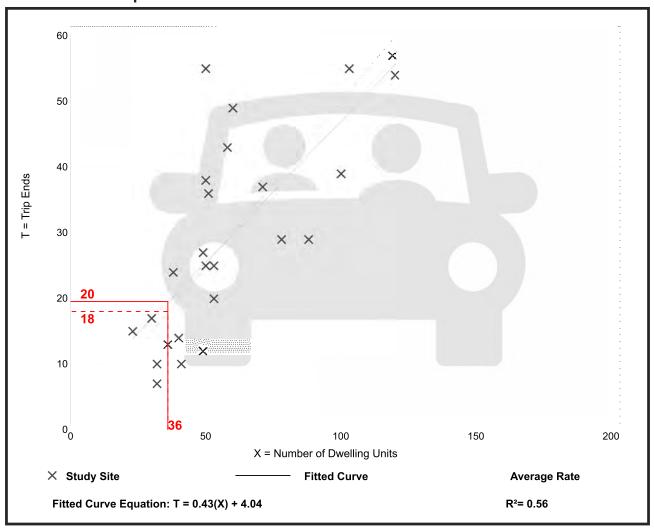
Number of Studies: 25 Avg. Num. of Dwelling Units: 59

Directional Distribution: 29% entering, 71% exiting

#### **Vehicle Trip Generation per Dwelling Unit**

Average Rate Range of Rates Standard Deviation 0.50 0.22 - 1.10 0.19

### **Data Plot and Equation**



Trip Gen Manual, 11th Edition

Institute of Transportation Engineers

## Affordable Housing - Income Limits (223)

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: Dense Multi-Use Urban

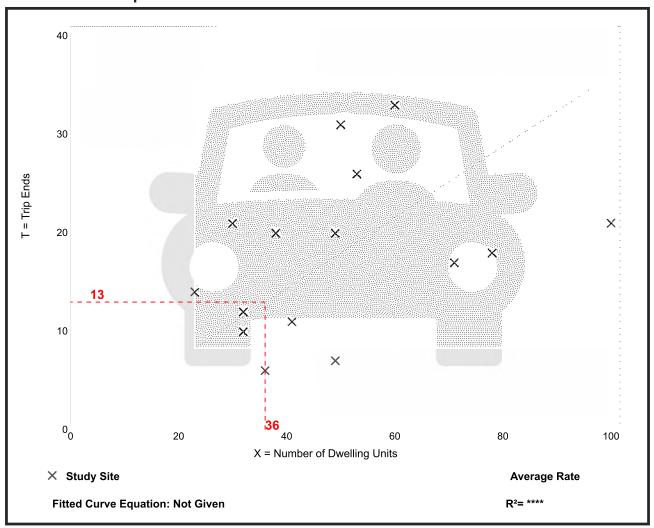
Number of Studies: 15 Avg. Num. of Dwelling Units: 49

Directional Distribution: 61% entering, 39% exiting

#### **Vehicle Trip Generation per Dwelling Unit**

Average Rate Range of Rates Standard Deviation 0.36 0.14 - 0.70 0.17

### **Data Plot and Equation**



Trip Gen Manual, 11th Edition

Institute of Transportation Engineers

## Affordable Housing - Income Limits (223)

Vehicle Trip Ends vs: Dwelling Units

On a: Saturday, Peak Hour of Generator

Setting/Location: Dense Multi-Use Urban

Number of Studies: 3 Avg. Num. of Dwelling Units: 35

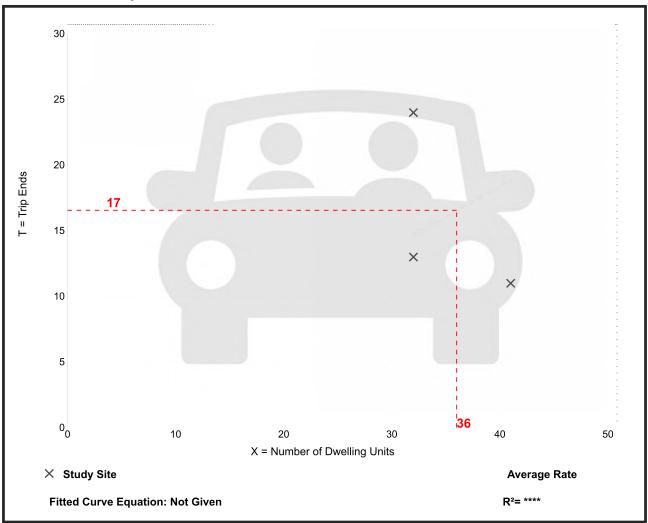
Directional Distribution: Not Available

#### **Vehicle Trip Generation per Dwelling Unit**

Average Rate Range of Rates Standard Deviation 0.46 0.27 - 0.75 0.25

#### **Data Plot and Equation**

#### Caution – Small Sample Size



Trip Gen Manual, 11th Edition

• Institute of Transportation Engineers

# APPENDIX G Capacity Analysis Worksheets



	۶	<b>→</b>	•	•	<b>←</b>	•	1	<b>†</b>	<i>&gt;</i>	<b>/</b>	<b>+</b>	-√
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	*	<b>1</b>		*	<b>1</b>		*	<b>1</b>		*	<b>^</b> 1>	
Traffic Volume (vph)	88	442	28	159	342	121	52	936	194	178	1117	85
Future Volume (vph)	88	442	28	159	342	121	52	936	194	178	1117	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105		40	155		0	155		0	125		0
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	65			75			95			95		
Satd. Flow (prot)	1492	3168	0	1752	3384	0	1770	3350	0	1787	3464	0
Flt Permitted	0.276			0.266			0.108			0.080		
Satd. Flow (perm)	433	3168	0	489	3384	0	201	3350	0	150	3464	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			52			29			9	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		238			315			1097			1406	
Travel Time (s)		6.5			8.6			24.9			32.0	
Confl. Peds. (#/hr)	3		7	7		3	4		11	11		4
Peak Hour Factor	0.79	0.88	0.79	0.86	0.90	0.74	0.93	0.94	0.82	0.80	0.95	0.85
Heavy Vehicles (%)	21%	12%	22%	3%	2%	0%	2%	4%	5%	1%	3%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	111	537	0	185	544	0	56	1233	0	223	1276	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7 4	4		38	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	6.5	35.5		6.5	22.0		6.5	45.5		6.5	22.0	
Total Split (s)	14.0	37.0		14.0	37.0		14.0	60.0		14.0	60.0	
Total Split (%)	11.2%	29.6%		11.2%	29.6%		11.2%	48.0%		11.2%	48.0%	
Maximum Green (s)	10.5	31.5		10.5	31.5		10.5	54.5		10.5	54.5	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.0		0.0	1.0		0.0	1.0		0.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	5.5		3.5	5.5		3.5	5.5		3.5	5.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)		12.0			12.0			12.0			12.0	
Flash Dont Walk (s)		17.0			22.0			28.0			22.0	
Pedestrian Calls (#/hr)		0			0			0			0	

AM Exist Gewalt Hamilton Associates, Inc

	•	<b>→</b>	$\rightarrow$	•	•	•	<b>1</b>	<b>†</b>	~	<b>&gt;</b>	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)	42.2	30.3		43.4	30.9		63.7	54.5		71.1	60.8	
Actuated g/C Ratio	0.34	0.24		0.35	0.25		0.51	0.44		0.57	0.49	
v/c Ratio	0.48	0.70		0.67	0.62		0.29	0.84		0.93	0.76	
Control Delay	34.0	47.9		41.5	41.0		16.4	36.7		73.1	30.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	34.0	47.9		41.5	41.0		16.4	36.7		73.1	30.6	
LOS	С	D		D	D		В	D		Е	С	
Approach Delay		45.5			41.1			35.8			36.9	
Approach LOS		D			D			D			D	
Queue Length 50th (ft)	60	204		103	186		19	447		~122	448	
Queue Length 95th (ft)	90	261		153	247		40	546		#234	558	
Internal Link Dist (ft)		158			235			1017			1326	
Turn Bay Length (ft)	105			155			155			125		
Base Capacity (vph)	241	802		278	892		239	1476		239	1689	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.46	0.67		0.67	0.61		0.23	0.84		0.93	0.76	

Area Type: Other

Cycle Length: 125

Actuated Cycle Length: 125

Offset: 61 (49%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.93 Intersection Signal Delay: 38.7

Intersection LOS: D
ICU Level of Service E

Intersection Capacity Utilization 83.3%

Analysis Period (min) 15

Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 3: IL 43 (Harlem) & Madison St



	۶	<b>→</b>	•	•	+	•	•	<b>†</b>	~	<b>/</b>	ţ	-√
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	*	<b>↑</b>	7	*	<b>↑</b>	7		4			4	
Traffic Volume (vph)	23	703	88	65	548	27	38	10	15	32	21	41
Future Volume (vph)	23	703	88	65	548	27	38	10	15	32	21	41
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50	2000	40	50	2000	40	0	1000	0	0	1000	0
Storage Lanes	1		1	1		1	0		0	0		0
Taper Length (ft)	50			50		•	25		J	25		U
Satd. Flow (prot)	1656	1942	1615	1805	1961	1615	0	1765	0	0	1709	0
Flt Permitted	0.398	1012	1010	0.239	1001	1010	•	0.688	•	•	0.855	J
Satd. Flow (perm)	690	1942	1541	454	1961	1546	0	1238	0	0	1486	0
Right Turn on Red	030	1042	Yes	707	1301	Yes	U	1200	Yes	U	1700	Yes
Satd. Flow (RTOR)			74			74		16	103		33	103
Link Speed (mph)		25	77		25	77		30			30	
Link Opeed (mpn) Link Distance (ft)		349			1200			1117			164	
Travel Time (s)		9.5			32.7			25.4			3.7	
Confl. Peds. (#/hr)	8	3.5	9	9	32.1	8	10	23.4	2	2	5.7	10
Peak Hour Factor	0.72	0.86	0.69	0.86	0.95	0.68	0.73	0.83	0.63	0.67	0.88	0.73
Heavy Vehicles (%)	9%	3%	0.09	0.86	2%	0.00	0.73	0.03	0.03	0.07	0.00	2%
Shared Lane Traffic (%)	9 /0	J /0	0 /0	0 /0	∠ /0	U /0	0 /0	U /0	0 /0	U /0	0 /0	∠ /0
Lane Group Flow (vph)	32	817	128	76	577	40	0	88	0	0	128	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
	Left				Left							
Lane Alignment	Leit	Left 12	Right	Left	12	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		16			16			0 16			16	
Crosswalk Width(ft)		10			10			10			10	
Two way Left Turn Lane	1.00	0.04	1.00	1.00	0.04	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Headway Factor	1.00	0.94	1.00	1.00	0.94	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	N I A		15	N I A	9	15	NI A	9	15	N I A	9
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2	0	1	6	_	_	8		4	4	
Permitted Phases	2	0	2	6	^	6	8	0		4	4	
Detector Phase	5	2	2	1	6	6	8	8		4	4	
Switch Phase	<b>5</b> 0	45.0	45.0	<b>5</b> 0	45.0	45.0	0.0	0.0		0.0	0.0	
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	8.0	8.0		8.0	8.0	
Minimum Split (s)	9.5	25.0	25.0	9.5	25.0	25.0	31.0	31.0		31.0	31.0	
Total Split (s)	13.0	66.0	66.0	13.0	66.0	66.0	31.0	31.0		31.0	31.0	
Total Split (%)	11.8%	60.0%	60.0%	11.8%	60.0%	60.0%	28.2%	28.2%		28.2%	28.2%	
Maximum Green (s)	8.5	60.0	60.0	8.5	60.0	60.0	25.0	25.0		25.0	25.0	
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	4.5	4.5	4.5		4.5	4.5	
All-Red Time (s)	1.0	1.5	1.5	1.0	1.5	1.5	1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0			0.0	
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0	6.0		6.0			6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0	7.0	3.0	7.0	7.0	4.0	4.0		4.0	4.0	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		12.0	12.0		12.0	12.0	18.0	18.0		18.0	18.0	
Pedestrian Calls (#/hr)		0	0		0	0	0	0		0	0	

AM Exist Gewalt Hamilton Associates, Inc

	•	-	•	•	←	•	1	<b>†</b>	1	-	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)	81.8	75.3	75.3	83.8	78.0	78.0		13.5			13.5	
Actuated g/C Ratio	0.74	0.68	0.68	0.76	0.71	0.71		0.12			0.12	
v/c Ratio	0.06	0.61	0.12	0.18	0.42	0.04		0.53			0.61	
Control Delay	3.8	13.7	4.0	4.4	9.3	0.6		47.4			45.0	
Queue Delay	0.0	1.1	0.0	0.0	0.0	0.0		0.0			0.0	
Total Delay	3.8	14.8	4.0	4.4	9.3	0.6		47.4			45.0	
LOS	Α	В	Α	Α	Α	Α		D			D	
Approach Delay		13.0			8.2			47.4			45.0	
Approach LOS		В			Α			D			D	
Queue Length 50th (ft)	4	298	12	10	169	0		48			64	
Queue Length 95th (ft)	11	475	24	25	292	0		86			116	
Internal Link Dist (ft)		269			1120			1037			84	
Turn Bay Length (ft)	50		40	50		40						
Base Capacity (vph)	599	1330	1078	453	1389	1117		293			363	
Starvation Cap Reductn	0	276	0	0	0	0		0			0	
Spillback Cap Reductn	0	0	0	0	0	0		0			0	
Storage Cap Reductn	0	0	0	0	0	0		0			0	
Reduced v/c Ratio	0.05	0.78	0.12	0.17	0.42	0.04		0.30			0.35	

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 17 (15%), Referenced to phase 2:EBTL and 6:WBTL, Start of 1st Green

Natural Cycle: 80

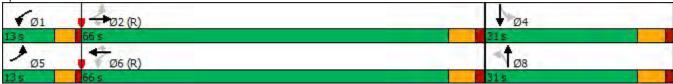
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.61 Intersection Signal Delay: 15.0 Intersection Capacity Utilization 63.7%

Intersection LOS: B
ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 6: Wisconsin Ave & Madison St



Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Traffic Vol, veh/h	0	0	4	0	0	0	5	56	1	0	90	0
Future Vol, veh/h	0	0	4	0	0	0	5	56	1	0	90	0
Conflicting Peds, #/hr	13	0	10	10	0	13	3	0	1	1	0	3
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage,	# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	20	4	0	0	1	0
Mvmt Flow	0	0	4	0	0	0	5	59	1	0	95	0
Major/Minor N	/linor2		1	Minor1		N	Major1		1	Major2		
Conflicting Flow All	181	169	108	178	169	74	98	0	0	61	0	0
Stage 1	98	98	-	71	71	-	-	-	-	-	_	_
Stage 2	83	71	-	107	98	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.3	-	_	4.1	-	_
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	_	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.38	-	-	2.2	-	-
Pot Cap-1 Maneuver	785	728	951	789	728	993	1390	-	-	1555	-	_
Stage 1	913	818	-	944	840	-	-	_	-	-	-	-
Stage 2	930	840	-	903	818	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	771	722	939	775	722	980	1386	-	-	1554	-	-
Mov Cap-2 Maneuver	771	722	-	775	722	-	-	-	-	-	-	-
Stage 1	907	816	-	939	836	-	-	-	-	-	-	-
Stage 2	915	836	-	890	816	-	-	-	-	-	-	-
, in the second												
Approach	EB			WB			NB			SB		
HCM Control Delay, s	8.9			0			0.6			0		
HCM LOS	Α			A								
Minor Lane/Major Mvm	t	NBL	NBT	NBR I	EBLn1V	VBL <sub>n1</sub>	SBL	SBT	SBR			
Capacity (veh/h)		1386	-	-	939	-	1554	-	-			
HCM Lane V/C Ratio		0.004	-	-	0.004	-	-	-	-			
HCM Control Delay (s)		7.6	0	-	8.9	0	0	-	-			
HCM Lane LOS		Α	A	-	Α	A	A	-	_			
HCM 95th %tile Q(veh)		0	-	-	0	-	0	-	-			

Approach		
Approach Direction	NB	
Median Present?	No	
Approach Delay(s)	3.5	
Level of Service	A	
Crosswalk		
Length (ft)	32	
Lanes Crossed	2	
Veh Vol Crossed	146	
Ped Vol Crossed	0	
Yield Rate(%)	0	
Ped Platooning	No	
Critical Headway (s)	12.14	
Prob of Delayed X-ing	0.39	
Prob of Blocked Lane	0.22	
Delay for adq Gap	9.12	
Avg Ped Delay (s)	3.55	
Approach		
Approach Direction	SB	
Median Present?	No	
Approach Delay(s)	3.5	
Level of Service	3.5 A	
Level Of Service	А	
Crosswalk		
Length (ft)	32	
Lanes Crossed	2	
Veh Vol Crossed	146	
Ped Vol Crossed	0	
Yield Rate(%)	0	
Ped Platooning	No	
Critical Headway (s)	12.14	
Prob of Delayed X-ing	0.39	
Prob of Blocked Lane	0.22	
Delay for adq Gap	9.12	
Avg Ped Delay (s)	3.55	
	3.00	

	۶	<b>→</b>	•	•	<b>←</b>	•	4	†	~	<b>\</b>	<del> </del>	-√
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	*	<b>†</b> 1>		*	<b>^</b>		*	<b>†</b> 1>		7	<b>†</b> 1>	
Traffic Volume (vph)	90	454	29	163	351	124	53	960	199	182	1145	87
Future Volume (vph)	90	454	29	163	351	124	53	960	199	182	1145	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105	1000	40	155	1000	0	155	1000	0	125	1000	0
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	65			75		J	95		•	95		·
Satd. Flow (prot)	1492	3168	0	1752	3384	0	1770	3350	0	1787	3464	0
Flt Permitted	0.266	0100	•	0.254	0001	J	0.097	0000	V	0.071	0101	U
Satd. Flow (perm)	417	3168	0	467	3384	0	181	3350	0	133	3464	0
Right Turn on Red	111	0100	Yes	107	0001	Yes	101	0000	Yes	100	0101	Yes
Satd. Flow (RTOR)		6	100		51	100		29	100		9	100
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		238			315			1097			1406	
Travel Time (s)		6.5			8.6			24.9			32.0	
Confl. Peds. (#/hr)	3	0.0	7	7	0.0	3	4	27.5	11	11	02.0	4
Peak Hour Factor	0.79	0.88	0.79	0.86	0.90	0.74	0.93	0.94	0.82	0.80	0.95	0.85
Heavy Vehicles (%)	21%	12%	22%	3%	2%	0%	2%	4%	5%	1%	3%	1%
Shared Lane Traffic (%)	2170	12 /0	ZZ /0	J /0	<b>Z</b> /0	0 70	2 /0	7 /0	J /0	1 /0	J /0	1 /0
Lane Group Flow (vph)	114	553	0	190	558	0	57	1264	0	228	1307	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	Leit	12	Right	Leit	12	Right	LGIL	12	rtigiit	Leit	12	Night
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		10			10			10			10	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	1.00	1.00	9	1.00	1.00	9	1.00	1.00	9	1.00	1.00	9
Turn Type	pm+pt	NA	3	pm+pt	NA	3	pm+pt	NA	3	pm+pt	NA	3
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4	7		8	U		2	L		6	U	
Detector Phase	7 4	4		38	8		5	2		1	6	
Switch Phase	7 7	7		3.0	U		J	L		1	U	
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	6.5	35.5		6.5	22.0		6.5	45.5		6.5	22.0	
Total Split (s)	14.0	37.0		14.0	37.0		14.0	60.0		14.0	60.0	
Total Split (%)	11.2%	29.6%		11.2%	29.6%		11.2%	48.0%		11.2%	48.0%	
Maximum Green (s)	10.5	31.5		10.5	31.5		10.5	54.5		10.5	54.5	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.0		0.0	1.0		0.0	1.0		0.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	5.5		3.5	5.5		3.5	5.5		3.5	5.5	
Lead/Lag	Lead			Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Leau	Lag		Leau	Lay		Leau	Lay		Leau	Lay	
Vehicle Extension (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Recall Mode		None						C-Max			C-Max	
	None			None	None		None			None		
Walk Time (s)		12.0			12.0			12.0			12.0 22.0	
Flash Dont Walk (s)		17.0			22.0			28.0				
Pedestrian Calls (#/hr)		0			0			0			0	

AM No Build Gewalt Hamilton Associates, Inc

	۶	-	•	•	•	•	•	<b>†</b>	~	<b>&gt;</b>	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)	42.4	30.5		43.6	31.1		63.8	54.5		70.9	60.5	
Actuated g/C Ratio	0.34	0.24		0.35	0.25		0.51	0.44		0.57	0.48	
v/c Ratio	0.50	0.71		0.70	0.63		0.31	0.86		1.00	0.78	
Control Delay	34.7	48.3		43.6	41.5		16.9	38.0		93.5	31.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	34.7	48.3		43.6	41.5		16.9	38.0		93.5	31.6	
LOS	С	D		D	D		В	D		F	С	
Approach Delay		46.0			42.0			37.1			40.8	
Approach LOS		D			D			D			D	
Queue Length 50th (ft)	61	211		106	192		20	466		~149	466	
Queue Length 95th (ft)	92	268		157	255		40	568		#256	580	
Internal Link Dist (ft)		158			235			1017			1326	
Turn Bay Length (ft)	105			155			155			125		
Base Capacity (vph)	237	802		272	892		230	1476		227	1682	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.48	0.69		0.70	0.63		0.25	0.86		1.00	0.78	

Area Type: Other

Cycle Length: 125

Actuated Cycle Length: 125

Offset: 61 (49%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.00 Intersection Signal Delay: 40.7 Intersection Capacity Utilization 84.0%

Intersection LOS: D
ICU Level of Service E

Analysis Period (min) 15

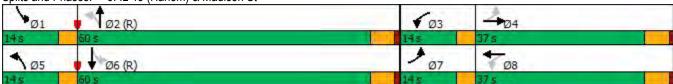
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 3: IL 43 (Harlem) & Madison St



	۶	<b>→</b>	•	•	<b>+</b>	•	•	<b>†</b>	<i>&gt;</i>	<b>/</b>	<b>+</b>	-√
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	*	<b>↑</b>	7	*	<b>†</b>	7		4			4	
Traffic Volume (vph)	24	721	90	67	557	28	39	10	16	33	22	42
Future Volume (vph)	24	721	90	67	557	28	39	10	16	33	22	42
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50		40	50		40	0		0	0		0
Storage Lanes	1		1	1		1	0		0	0		0
Taper Length (ft)	50			50			25			25		
Satd. Flow (prot)	1656	1942	1615	1805	1961	1615	0	1763	0	0	1709	0
Flt Permitted	0.392			0.226				0.682			0.854	
Satd. Flow (perm)	680	1942	1541	429	1961	1546	0	1226	0	0	1484	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			74			74		16			33	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		349			1200			1117			164	
Travel Time (s)		9.5			32.7			25.4			3.7	
Confl. Peds. (#/hr)	8	0.0	9	9	<b>0</b>	8	10		2	2	<b></b>	10
Peak Hour Factor	0.72	0.86	0.69	0.86	0.95	0.68	0.73	0.83	0.63	0.67	0.88	0.73
Heavy Vehicles (%)	9%	3%	0%	0%	2%	0%	0%	0%	0%	0%	0%	2%
Shared Lane Traffic (%)	070	0,0	0 70	0 70	270	0,0	070	0,70	0,0	0,0	070	270
Lane Group Flow (vph)	33	838	130	78	586	41	0	90	0	0	132	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	Loit	12	rugiit	Lon	12	rugiit	Lon	0	ragin	Loit	0	rugiit
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	0.94	1.00	1.00	0.94	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	0.01	9	15	0.01	9	15	1.00	9	15	1.00	9
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	•	Perm	NA	
Protected Phases	5	2		1	6			8		. •	4	
Permitted Phases	2	_	2	6		6	8			4	•	
Detector Phase	5	2	2	1	6	6	8	8		4	4	
Switch Phase		_	_	•						•	•	
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	8.0	8.0		8.0	8.0	
Minimum Split (s)	9.5	25.0	25.0	9.5	25.0	25.0	31.0	31.0		31.0	31.0	
Total Split (s)	13.0	66.0	66.0	13.0	66.0	66.0	31.0	31.0		31.0	31.0	
Total Split (%)	11.8%	60.0%	60.0%	11.8%	60.0%	60.0%	28.2%	28.2%		28.2%	28.2%	
Maximum Green (s)	8.5	60.0	60.0	8.5	60.0	60.0	25.0	25.0		25.0	25.0	
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	4.5	4.5	4.5		4.5	4.5	
All-Red Time (s)	1.0	1.5	1.5	1.0	1.5	1.5	1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0		1.0	0.0	
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0	6.0		6.0			6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag		0.0			0.0	
Lead-Lag Optimize?	Leau	Lag	Lay	Leau	Lay	Lay						
Vehicle Extension (s)	3.0	7.0	7.0	3.0	7.0	7.0	4.0	4.0		4.0	4.0	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Walk Time (s)	NOHE	7.0	7.0	NOHE	7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		12.0	12.0		12.0	12.0	18.0	18.0		18.0	18.0	
Pedestrian Calls (#/hr)		0	0		0	0	0	0		0	0	

AM No Build Gewalt Hamilton Associates, Inc

	•	-	•	•	<b>←</b>	•	•	<b>†</b>	~	-	<b>↓</b>	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)	81.5	75.0	75.0	83.5	77.7	77.7		13.8			13.8	
Actuated g/C Ratio	0.74	0.68	0.68	0.76	0.71	0.71		0.13			0.13	
v/c Ratio	0.06	0.63	0.12	0.19	0.42	0.04		0.54			0.61	
Control Delay	3.9	14.3	4.2	4.6	9.5	0.6		47.6			45.5	
Queue Delay	0.0	1.2	0.0	0.0	0.0	0.0		0.0			0.0	
Total Delay	3.9	15.6	4.2	4.6	9.5	0.6		47.6			45.5	
LOS	Α	В	Α	Α	Α	Α		D			D	
Approach Delay		13.7			8.5			47.6			45.5	
Approach LOS		В			Α			D			D	
Queue Length 50th (ft)	4	315	12	10	175	0		49			67	
Queue Length 95th (ft)	11	502	26	25	304	0		88			120	
Internal Link Dist (ft)		269			1120			1037			84	
Turn Bay Length (ft)	50		40	50		40						
Base Capacity (vph)	590	1324	1074	434	1384	1113		291			362	
Starvation Cap Reductn	0	267	0	0	0	0		0			0	
Spillback Cap Reductn	0	0	0	0	0	0		0			0	
Storage Cap Reductn	0	0	0	0	0	0		0			0	
Reduced v/c Ratio	0.06	0.79	0.12	0.18	0.42	0.04		0.31			0.36	

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 17 (15%), Referenced to phase 2:EBTL and 6:WBTL, Start of 1st Green

Natural Cycle: 90

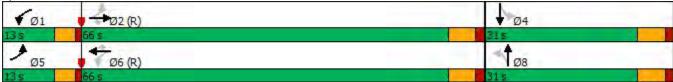
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.63 Intersection Signal Delay: 15.5 Intersection Capacity Utilization 64.6%

Intersection LOS: B
ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 6: Wisconsin Ave & Madison St



Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Traffic Vol, veh/h	0	0	4	0	0	0	5	56	1	0	93	0
Future Vol, veh/h	0	0	4	0	0	0	5	56	1	0	93	0
Conflicting Peds, #/hr	13	0	10	10	0	13	3	0	1	1	0	3
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage,	# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	20	4	0	0	1	0
Mvmt Flow	0	0	4	0	0	0	5	59	1	0	98	0
Major/Minor N	/linor2		ı	Minor1		N	Major1		- 1	Major2		
Conflicting Flow All	184	172	111	181	172	74	101	0	0	61	0	0
Stage 1	101	101	-	71	71	-	-	-	-	-	-	-
Stage 2	83	71	-	110	101	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.3	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.38	-	-	2.2	-	-
Pot Cap-1 Maneuver	781	725	948	785	725	993	1386	-	-	1555	-	-
Stage 1	910	815	-	944	840	-	-	-	-	-	-	-
Stage 2	930	840	-	900	815	-	-	-	-	-	-	_
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	767	719	936	771	719	980	1382	-	-	1554	-	_
Mov Cap-2 Maneuver	767	719	-	771	719	-	-	-	-	-	-	-
Stage 1	904	813	-	939	836	-	-	-	-	-	-	_
Stage 2	915	836	-	887	813	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	8.9			0			0.6			0		
HCM LOS	Α			Α								
Minor Lane/Major Mvmt	t	NBL	NBT	NBR I	EBLn1V	VBLn1	SBL	SBT	SBR			
Capacity (veh/h)		1382	-	-	936	-	1554	-	-			
HCM Lane V/C Ratio		0.004	-	-	0.004	-	-	-	-			
HCM Control Delay (s)		7.6	0	-	8.9	0	0	-	-			
HCM Lane LOS		Α	Α	-	Α	Α	Α	-	-			
HCM 95th %tile Q(veh)		0	-	-	0	-	0	-	-			

Approach		
Approach Direction	NB	
Median Present?	No	
Approach Delay(s)	3.6	
Level of Service	A	
Crosswalk		
Length (ft)	32	
Lanes Crossed	2	
Veh Vol Crossed	149	
Ped Vol Crossed	0	
Yield Rate(%)	0	
Ped Platooning	No	
Critical Headway (s)	12.14	
Prob of Delayed X-ing	0.40	
Prob of Blocked Lane	0.22	
Delay for adq Gap	9.20	
Avg Ped Delay (s)	3.63	
Approach		
Approach Direction	SB	
Median Present?	No No	
Approach Delay(s) Level of Service	3.6	
revel of Service	Α	
Crosswalk		
Length (ft)	32	
Lanes Crossed	2	
Veh Vol Crossed	149	
Ped Vol Crossed	0	
Yield Rate(%)	0	
Ped Platooning	No	
<b>J</b>		
Critical Headway (s)	12.14	
Prob of Delayed X-ing	0.40	
Prob of Blocked Lane	0.22	
Delay for adq Gap	9.20	
Avg Ped Delay (s)	3.63	
	3.00	

	۶	<b>→</b>	•	•	<b>←</b>	•	1	<b>†</b>	<i>&gt;</i>	<b>/</b>	<b>+</b>	-√
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	*	<b>1</b>		*	<b>1</b>		*	<b>1</b>		*	<b>^</b> 1>	
Traffic Volume (vph)	90	455	29	165	355	126	53	960	200	182	1145	87
Future Volume (vph)	90	455	29	165	355	126	53	960	200	182	1145	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105		40	155		0	155		0	125		0
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	65			75			95			95		
Satd. Flow (prot)	1492	3162	0	1752	3362	0	1770	3338	0	1787	3458	0
Flt Permitted	0.261			0.254			0.097			0.071		
Satd. Flow (perm)	406	3162	0	463	3362	0	181	3338	0	133	3458	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			52			30			9	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		238			315			1097			1406	
Travel Time (s)		6.5			8.6			24.9			32.0	
Confl. Peds. (#/hr)	23		27	27		23	24		31	31		24
Peak Hour Factor	0.79	0.88	0.79	0.86	0.90	0.74	0.93	0.94	0.82	0.80	0.95	0.85
Heavy Vehicles (%)	21%	12%	22%	3%	2%	0%	2%	4%	5%	1%	3%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	114	554	0	192	564	0	57	1265	0	228	1307	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7 4	4		38	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	6.5	35.5		6.5	22.0		6.5	45.5		6.5	22.0	
Total Split (s)	14.0	37.0		14.0	37.0		14.0	60.0		14.0	60.0	
Total Split (%)	11.2%	29.6%		11.2%	29.6%		11.2%	48.0%		11.2%	48.0%	
Maximum Green (s)	10.5	31.5		10.5	31.5		10.5	54.5		10.5	54.5	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.0		0.0	1.0		0.0	1.0		0.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	5.5		3.5	5.5		3.5	5.5		3.5	5.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)		12.0			12.0			12.0			12.0	
Flash Dont Walk (s)		17.0			22.0			28.0			22.0	
Pedestrian Calls (#/hr)		0			0			0			0	

AM Total Gewalt Hamilton Associates, Inc

	۶	<b>→</b>	•	•	<b>←</b>	•	4	<b>†</b>	~	<b>&gt;</b>	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)	42.4	30.5		43.6	31.1		63.8	54.5		70.8	60.5	
Actuated g/C Ratio	0.34	0.24		0.35	0.25		0.51	0.44		0.57	0.48	
v/c Ratio	0.51	0.71		0.71	0.64		0.31	0.86		1.01	0.78	
Control Delay	35.0	48.4		44.2	41.7		16.9	38.2		94.2	31.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	35.0	48.4		44.2	41.7		16.9	38.2		94.2	31.7	
LOS	С	D		D	D		В	D		F	С	
Approach Delay		46.1			42.4			37.3			41.0	
Approach LOS		D			D			D			D	
Queue Length 50th (ft)	61	212		107	195		20	467		~149	467	
Queue Length 95th (ft)	92	270		159	258		40	570		#256	580	
Internal Link Dist (ft)		158			235			1017			1326	
Turn Bay Length (ft)	105			155			155			125		
Base Capacity (vph)	234	801		271	888		230	1472		226	1678	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.49	0.69		0.71	0.64		0.25	0.86		1.01	0.78	

Area Type: Other

Cycle Length: 125

Actuated Cycle Length: 125

Offset: 61 (49%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.01 Intersection Signal Delay: 40.9 Intersection Capacity Utilization 88.3%

Intersection LOS: D
ICU Level of Service E

Analysis Period (min) 15

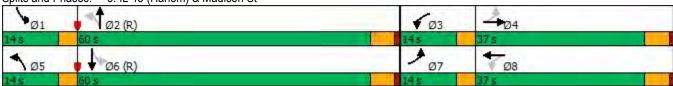
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 3: IL 43 (Harlem) & Madison St



	۶	<b>→</b>	*	•	+	•	1	†	~	<b>/</b>	<b>+</b>	-√
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	*	<b>↑</b>	7	*	<b>^</b>	7		4			4	
Traffic Volume (vph)	27	721	90	67	557	30	39	10	16	38	22	50
Future Volume (vph)	27	721	90	67	557	30	39	10	16	38	22	50
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50		40	50		40	0		0	0		0
Storage Lanes	1		1	1		1	0		0	0		0
Taper Length (ft)	50			50			25			25		
Satd. Flow (prot)	1656	1942	1615	1805	1961	1615	0	1742	0	0	1668	0
Flt Permitted	0.385			0.218				0.663			0.851	
Satd. Flow (perm)	659	1942	1450	414	1961	1454	0	1156	0	0	1424	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			74			74		16			35	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		349			1200			1117			164	
Travel Time (s)		9.5			32.7			25.4			3.7	
Confl. Peds. (#/hr)	28		29	29		28	30		22	22		30
Peak Hour Factor	0.72	0.86	0.69	0.86	0.95	0.68	0.73	0.83	0.63	0.67	0.88	0.73
Heavy Vehicles (%)	9%	3%	0%	0%	2%	0%	0%	0%	0%	0%	0%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	38	838	130	78	586	44	0	90	0	0	150	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	0.94	1.00	1.00	0.94	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8			4		
Detector Phase	5	2	2	1	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	8.0	8.0		8.0	8.0	
Minimum Split (s)	9.5	25.0	25.0	9.5	25.0	25.0	31.0	31.0		31.0	31.0	
Total Split (s)	13.0	66.0	66.0	13.0	66.0	66.0	31.0	31.0		31.0	31.0	
Total Split (%)	11.8%	60.0%	60.0%	11.8%	60.0%	60.0%	28.2%	28.2%		28.2%	28.2%	
Maximum Green (s)	8.5	60.0	60.0	8.5	60.0	60.0	25.0	25.0		25.0	25.0	
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	4.5	4.5	4.5		4.5	4.5	
All-Red Time (s)	1.0	1.5	1.5	1.0	1.5	1.5	1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0			0.0	
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0	6.0		6.0			6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0	7.0	3.0	7.0	7.0	4.0	4.0		4.0	4.0	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		12.0	12.0		12.0	12.0	18.0	18.0		18.0	18.0	
Pedestrian Calls (#/hr)		0	0		0	0	0	0		0	0	

AM Total Gewalt Hamilton Associates, Inc

	•	-	$\rightarrow$	•	<b>←</b>	•	•	<b>†</b>	~	-	ţ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)	80.1	73.5	73.5	82.0	76.1	76.1		15.2			15.2	
Actuated g/C Ratio	0.73	0.67	0.67	0.75	0.69	0.69		0.14			0.14	
v/c Ratio	0.07	0.65	0.13	0.20	0.43	0.04		0.52			0.66	
Control Delay	4.5	15.7	4.6	5.2	10.5	0.9		45.3			47.4	
Queue Delay	0.0	1.3	0.0	0.0	0.0	0.0		0.0			0.0	
Total Delay	4.5	16.9	4.6	5.2	10.5	0.9		45.3			47.4	
LOS	Α	В	Α	Α	В	Α		D			D	
Approach Delay		14.9			9.3			45.3			47.4	
Approach LOS		В			Α			D			D	
Queue Length 50th (ft)	5	331	13	11	185	0		49			78	
Queue Length 95th (ft)	13	534	27	28	324	0		86			133	
Internal Link Dist (ft)		269			1120			1037			84	
Turn Bay Length (ft)	50		40	50		40						
Base Capacity (vph)	567	1298	994	418	1357	1028		275			350	
Starvation Cap Reductn	0	250	0	0	0	0		0			0	
Spillback Cap Reductn	0	0	0	0	0	0		0			0	
Storage Cap Reductn	0	0	0	0	0	0		0			0	
Reduced v/c Ratio	0.07	0.80	0.13	0.19	0.43	0.04		0.33			0.43	

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 17 (15%), Referenced to phase 2:EBTL and 6:WBTL, Start of 1st Green

Natural Cycle: 90

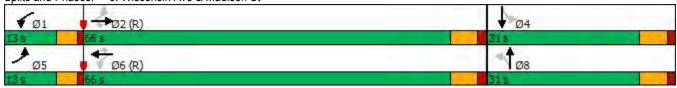
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.66 Intersection Signal Delay: 16.8 Intersection Capacity Utilization 70.0%

Intersection LOS: B
ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 6: Wisconsin Ave & Madison St



Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Traffic Vol, veh/h	0	0	17	0	0	0	10	56	1	0	93	0
Future Vol, veh/h	0	0	17	0	0	0	10	56	1	0	93	0
Conflicting Peds, #/hr	33	0	30	30	0	33	23	0	21	21	0	23
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage,	# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	20	4	0	0	1	0
Mvmt Flow	0	0	18	0	0	0	11	59	1	0	98	0
Major/Minor N	/linor2		1	Minor1		1	Major1		1	Major2		
Conflicting Flow All	236	224	151	240	224	114	121	0	0	81	0	0
Stage 1	121	121	-	103	103	-	-	-	-	-	_	_
Stage 2	115	103	-	137	121	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.3	-	-	4.1	-	_
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.38	-	-	2.2	-	-
Pot Cap-1 Maneuver	723	678	901	718	678	944	1362	-	-	1529	-	-
Stage 1	888	800	-	908	814	-	-	-	-	-	-	-
Stage 2	895	814	-	871	800	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	680	644	856	665	644	896	1332	-	-	1498	-	-
Mov Cap-2 Maneuver	680	644	-	665	644	-	-	-	-	-	-	-
Stage 1	860	782	-	882	790	-	-	-	-	-	-	_
Stage 2	859	790	-	828	782	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	9.3			0			1.2			0		
HCM LOS	Α			A								
Minor Lane/Major Mvm	t	NBL	NBT	NBR I	EBLn1V	VBLn1	SBL	SBT	SBR			
Capacity (veh/h)		1332	-	-	856	-	1498	-	-			
HCM Lane V/C Ratio		0.008	-	-	0.021	-	-	-	-			
HCM Control Delay (s)		7.7	0	-	9.3	0	0	-	-			
HCM Lane LOS		Α	A	-	Α	A	A	-	-			
HCM 95th %tile Q(veh)		0	-	-	0.1	-	0	-	-			

Approach		
Approach Direction	NB	
Median Present?	No	
Approach Delay(s)	3.6	
Level of Service	A	
Crosswalk		
Length (ft)	32	
Lanes Crossed	2	
Veh Vol Crossed	149	
Ped Vol Crossed	0	
Yield Rate(%)	0	
Ped Platooning	No	
1 od i lateorning	110	
Critical Headway (s)	12.14	
Prob of Delayed X-ing	0.40	
Prob of Blocked Lane	0.22	
Delay for adq Gap	9.20	
Avg Ped Delay (s)	3.63	
g . cu = c.u.j (c)	0.00	
Approach		
	SB	
Approach Direction Median Present?	No	
	3.6	
Approach Delay(s) Level of Service		
Level of Service	Α	
Crosswalk		
Length (ft)	32	
Lanes Crossed	2	
Veh Vol Crossed	149	
Ped Vol Crossed	0	
Yield Rate(%)	0	
Ped Platooning	No	
Critical Headway (s)	12.14	
Prob of Delayed X-ing	0.40	
Prob of Blocked Lane	0.22	
Delay for adq Gap	9.20	
Avg Ped Delay (s)	3.63	

	۶	<b>→</b>	•	•	<b>←</b>	•	•	†	~	<b>\</b>	<b>+</b>	-√
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	*	<b>*</b> 1>		7	<b>1</b>		7	<b>1</b>		*	<b>^</b> 1>	
Traffic Volume (vph)	94	363	37	195	402	124	86	1011	131	138	1051	122
Future Volume (vph)	94	363	37	195	402	124	86	1011	131	138	1051	122
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105	1000	40	155	1000	0	155	1000	0	125	1000	0
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	65		•	75		•	95		•	95		v
Satd. Flow (prot)	1736	3506	0	1787	3396	0	1770	3489	0	1736	3412	0
Flt Permitted	0.223	0000	V	0.357	0000	•	0.097	0 100	•	0.106	UTIZ	J
Satd. Flow (perm)	405	3506	0	662	3396	0	181	3489	0	193	3412	0
Right Turn on Red	700	3300	Yes	002	0000	Yes	101	0400	Yes	100	0412	Yes
Satd. Flow (RTOR)		10	103		31	103		17	103		20	103
Link Speed (mph)		25			25			30			30	
Link Opeed (mpn) Link Distance (ft)		238			315			1097			1406	
Travel Time (s)		6.5			8.6			24.9			32.0	
Confl. Peds. (#/hr)	16	0.5	22	22	0.0	16	27	24.9	28	28	32.0	27
Peak Hour Factor	0.87	0.98	0.84	0.96	0.90	0.89	0.83	0.95	0.84	0.91	0.96	0.66
	4%	1%	0.64	1%	2%	1%	2%	1%	1%	4%	2%	8%
Heavy Vehicles (%)	470	170	U%	1 70	Z70	170	Z70	170	170	470	Z70	070
Shared Lane Traffic (%)	400	444	0	000	E0C	0	101	4000	0	450	4000	0
Lane Group Flow (vph)	108	414	0	203	586	0	104	1220	0	152	1280	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2	_		6	_	
Detector Phase	7 4	4		38	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	6.5	20.5		6.5	20.5		6.5	45.5		6.5	39.5	
Total Split (s)	14.0	35.0		14.0	35.0		14.0	62.0		14.0	62.0	
Total Split (%)	11.2%	28.0%		11.2%	28.0%		11.2%	49.6%		11.2%	49.6%	
Maximum Green (s)	10.5	29.5		10.5	29.5		10.5	56.5		10.5	56.5	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.0		0.0	1.0		0.0	1.0		0.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	5.5		3.5	5.5		3.5	5.5		3.5	5.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)		12.0			12.0			12.0			12.0	
Flash Dont Walk (s)		17.0			22.0			28.0			22.0	
Pedestrian Calls (#/hr)		0			0			0			0	

PM Exist Gewalt Hamilton Associates, Inc

	•	<b>→</b>	$\rightarrow$	•	•	•	<b>1</b>	<b>†</b>	<b>/</b>	-	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)	39.8	28.1		41.4	28.9		69.3	58.7		71.4	59.8	
Actuated g/C Ratio	0.32	0.22		0.33	0.23		0.55	0.47		0.57	0.48	
v/c Ratio	0.47	0.52		0.65	0.72		0.50	0.74		0.66	0.78	
Control Delay	34.4	43.8		40.7	47.7		20.6	30.5		30.0	31.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	34.4	43.8		40.7	47.7		20.6	30.5		30.0	31.4	
LOS	С	D		D	D		С	С		С	С	
Approach Delay		41.8			45.9			29.7			31.3	
Approach LOS		D			D			С			С	
Queue Length 50th (ft)	59	149		117	218		36	422		54	446	
Queue Length 95th (ft)	99	202		181	285		57	511		114	557	
Internal Link Dist (ft)		158			235			1017			1326	
Turn Bay Length (ft)	105			155			155			125		
Base Capacity (vph)	247	835		316	825		236	1648		241	1642	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.44	0.50		0.64	0.71		0.44	0.74		0.63	0.78	

Area Type: Other

Cycle Length: 125

Actuated Cycle Length: 125

Offset: 63 (50%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green

Natural Cycle: 80

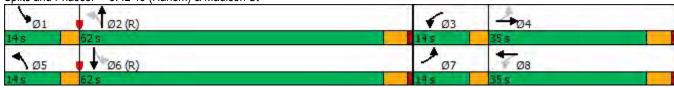
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.78

Intersection Signal Delay: 35.0 Intersection LOS: C
Intersection Capacity Utilization 86.2% ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 3: IL 43 (Harlem) & Madison St



	۶	<b>→</b>	*	•	+	•	1	†	~	<b>/</b>	<b>+</b>	-√
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	*	<b>↑</b>	7	*	<b>^</b>	7		4			4	
Traffic Volume (vph)	26	593	13	20	590	46	106	40	51	49	12	25
Future Volume (vph)	26	593	13	20	590	46	106	40	51	49	12	25
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50		40	50		40	0		0	0		0
Storage Lanes	1		1	1		1	0		0	0		0
Taper Length (ft)	50			50			25			25		
Satd. Flow (prot)	1736	1961	1313	1805	1961	1615	0	1763	0	0	1745	0
Flt Permitted	0.312			0.316				0.782			0.679	
Satd. Flow (perm)	570	1961	1223	600	1961	1519	0	1409	0	0	1201	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			74			74		13			14	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		349			1200			1117			164	
Travel Time (s)		9.5			32.7			25.4			3.7	
Confl. Peds. (#/hr)	14		17	17		14	5		22	22		5
Peak Hour Factor	0.72	0.94	0.81	0.63	0.93	0.62	0.78	0.67	0.85	0.77	0.60	0.89
Heavy Vehicles (%)	4%	2%	23%	0%	2%	0%	0%	0%	0%	0%	8%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	36	631	16	32	634	74	0	256	0	0	112	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12	_		0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	0.94	1.00	1.00	0.94	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8			4		
Detector Phase	5	2	2	1	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	8.0	8.0		8.0	8.0	
Minimum Split (s)	9.5	25.0	25.0	9.5	25.0	25.0	31.0	31.0		31.0	31.0	
Total Split (s)	13.0	66.0	66.0	13.0	66.0	66.0	31.0	31.0		31.0	31.0	
Total Split (%)	11.8%	60.0%	60.0%	11.8%	60.0%	60.0%	28.2%	28.2%		28.2%	28.2%	
Maximum Green (s)	8.5	60.0	60.0	8.5	60.0	60.0	25.0	25.0		25.0	25.0	
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	4.5	4.5	4.5		4.5	4.5	
All-Red Time (s)	1.0	1.5	1.5	1.0	1.5	1.5	1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0			0.0	
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0	6.0		6.0			6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0	7.0	3.0	7.0	7.0	4.0	4.0		4.0	4.0	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		12.0	12.0		12.0	12.0	18.0	18.0		18.0	18.0	
Pedestrian Calls (#/hr)		0	0		0	0	0	0		0	0	

PM Exist Gewalt Hamilton Associates, Inc

	•	-	•	•	•	•	•	t	/	-	Ţ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL NE	3T I	NBR	SBL	SBT	SBR
Act Effct Green (s)	74.1	68.6	68.6	73.9	68.5	68.5	22	.8			22.8	
Actuated g/C Ratio	0.67	0.62	0.62	0.67	0.62	0.62	0.2	21			0.21	
v/c Ratio	0.08	0.52	0.02	0.07	0.52	0.08	0.8	35			0.43	
Control Delay	6.3	14.9	0.1	6.2	15.1	2.8	64	.3			37.9	
Queue Delay	0.0	0.5	0.0	0.0	0.0	0.0	0	.0			0.0	
Total Delay	6.3	15.4	0.1	6.2	15.1	2.8	64	.3			37.9	
LOS	Α	В	Α	Α	В	Α		Е			D	
Approach Delay		14.6			13.5		64	.3			37.9	
Approach LOS		В			В			Е			D	
Queue Length 50th (ft)	8	269	0	7	271	0	10	62			59	
Queue Length 95th (ft)	14	382	0	11	387	7	17	76			69	
Internal Link Dist (ft)		269			1120		103	37			84	
Turn Bay Length (ft)	50		40	50		40						
Base Capacity (vph)	479	1223	790	502	1220	973	33	30			283	
Starvation Cap Reductn	0	230	0	0	0	0		0			0	
Spillback Cap Reductn	0	0	0	0	0	0		0			0	
Storage Cap Reductn	0	0	0	0	0	0		0			0	
Reduced v/c Ratio	0.08	0.64	0.02	0.06	0.52	0.08	0.7	78			0.40	

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 83 (75%), Referenced to phase 2:EBTL and 6:WBTL, Start of 1st Green

Natural Cycle: 70

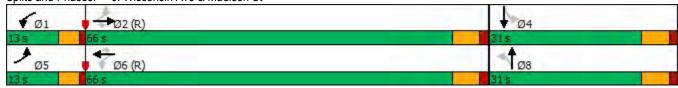
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 22.7 Intersection LOS: C
Intersection Capacity Utilization 57.1% ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 6: Wisconsin Ave & Madison St



Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Traffic Vol, veh/h	0	0	2	0	0	1	4	111	1	2	87	1
Future Vol, veh/h	0	0	2	0	0	1	4	111	1	2	87	1
Conflicting Peds, #/hr	5	0	14	14	0	5	2	0	0	0	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	_	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage,	# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	20	4	0	0	1	0
Mvmt Flow	0	0	2	0	0	1	4	117	1	2	92	1
Major/Minor N	linor2		ı	Minor1			Major1		N	Major2		
Conflicting Flow All	230	225	109	238	225	123	95	0	0	118	0	0
Stage 1	99	99	-	126	126	-	-	-	-	-	-	-
Stage 2	131	126	-	112	99	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.3	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	_
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.38	-	-	2.2	-	-
Pot Cap-1 Maneuver	729	678	950	721	678	933	1393	-	-	1483	-	-
Stage 1	912	817	-	883	796	-	-	-	-	-	-	-
Stage 2	877	796	-	898	817	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	721	674	936	707	674	929	1390	-	-	1483	-	-
Mov Cap-2 Maneuver	721	674	-	707	674	-	-	-	-	-	-	-
Stage 1	907	815	-	880	794	-	-	-	-	-	-	-
Stage 2	869	794	-	883	815	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	8.9			8.9			0.3			0.2		
HCM LOS	Α			Α								
Minor Lane/Major Mvmt		NBL	NBT	NBR I	EBLn1V	VBLn1	SBL	SBT	SBR			
Capacity (veh/h)		1390	-	-	936	929	1483	-				
HCM Lane V/C Ratio		0.003	_			0.001		<u>-</u>	_			
HCM Control Delay (s)		7.6	0	_	8.9	8.9	7.4	0	-			
HCM Lane LOS		A	A	_	A	A	A	A	_			
HCM 95th %tile Q(veh)		0	-	_	0	0	0	-	-			
					-							

Approach		
Approach Direction	NB	
Median Present?	No	
Approach Delay(s)	5.1	
Level of Service	В	
Crosswalk		
	32	
Length (ft) Lanes Crossed	2	
Veh Vol Crossed	198	
Ped Vol Crossed		
	0	
Yield Rate(%)	0	
Ped Platooning	No	
	10.11	
Critical Headway (s)	12.14	
Prob of Delayed X-ing	0.49	
Prob of Blocked Lane	0.28	
Delay for adq Gap	10.53	
Avg Ped Delay (s)	5.13	
Approach		
Approach Direction	SB	
Median Present?	No	
Approach Delay(s)	5.1	
Level of Service	В	
Crosswalk		
Length (ft)	32	
Lanes Crossed	2	
Veh Vol Crossed	198	
Ped Vol Crossed	0	
Yield Rate(%)	0	
Ped Platooning	No	
Critical Headway (s)	12.14	
Prob of Delayed X-ing	0.49	
Prob of Blocked Lane	0.28	
Delay for adq Gap	10.53	
Avg Ped Delay (s)	5.13	
J ( )		

Lane Group	o. IL 40 (Harletti) a	Widalo	011 01										
Lane Configurations		•	-	$\rightarrow$	•	<b>←</b>	*	1	<b>†</b>	<b>/</b>	-	ţ	4
Traffic Volume (vph)	Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	Lane Configurations	*	<b>*</b> 1>		*	<b>1</b>		ň	<b>1</b>		ň	<b>1</b>	
Future Volume (uph)		96		38	200		127			134	141		125
Idea   Flow (vphpi)		96	373	38	200	412	127	88	1037	134	141	1077	125
Storage Length (ft)		1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Taper Length (ft)		105		40	155		0	155		0	125		0
Satt   Flow (prort)   1736   3506   0   1787   3396   0   1770   3489   0   1736   3412   0	Storage Lanes	1		1	1		0	1		0	1		0
Satis   Flow (prori)   1736   3506   0   1787   3396   0   1770   3489   0   1736   3412   0	Taper Length (ft)	65			75			95			95		
Fit Permitted		1736	3506	0	1787	3396	0	1770	3489	0	1736	3412	0
Right Turn on Red   Satd. Flow (RTOR)		0.216			0.349			0.085			0.094		
Right Turn on Red   Yes   Ye	Satd. Flow (perm)	392	3506	0	648	3396	0	158	3489	0	171	3412	0
Satid Flow (RTOR)				Yes			Yes			Yes			Yes
Link Opsder (mph)         25         25         30         30           Link Distance (th)         238         315         1097         1406           Travel Time (s)         6.5         8.6         24.9         32.0           Confl. Peds. (#/hr)         16         22         22         16         27         28         28         27           Peak Hour Factor         0.87         0.98         0.94         0.96         0.90         0.89         0.83         0.95         0.84         0.91         0.96         0.60			9			31			17			20	
Link Distance (ft)			25			25			30			30	
Travel Time (s)									1097			1406	
Confi. Peds. (#hr)													
Peak Hour Factor   0.87   0.98   0.84   0.96   0.90   0.89   0.83   0.95   0.84   0.91   0.96   0.66     Heavy Vehicles (%)   4%   1%   0%   1%   2%   1%   2%   1%   1%   4%   2%   8%     Shared Lane Traffic (%)     Lane Group Flow (vph)   110   426   0   208   601   0   106   1252   0   155   1311   0     Enter Blocked Intersection   No   No   No   No   No   No   No		16		22	22		16	27		28	28		27
Heavy Vehicles (%)			0.98	0.84	0.96	0.90		0.83	0.95	0.84		0.96	
Shared Lane Traffic (%)   Lane Group Flow (vph)   110   426   0   208   601   0   106   1252   0   155   1311   0     Enter Blocked Intersection   No   No   No   No   No   No   No	Heavy Vehicles (%)												
Lane Group Flow (vph)													
Enter Blocked Intersection   No   No   No   No   No   No   No		110	426	0	208	601	0	106	1252	0	155	1311	0
Left   Left   Right   Right   Left   Right   Left   Right   Right   Left   Right   Right   Left   Right   R				No						No			
Median Width(fft)													
Link Offset(ft)         0         0         0         0         0           Crosswalk Width(ft)         16         16         16         16           Two way Left Turn Lane         1.00 </td <td></td> <td></td> <td></td> <td><b>J</b></td> <td></td> <td></td> <td><b>J</b></td> <td></td> <td></td> <td><b>J</b></td> <td></td> <td></td> <td><b>J</b> -</td>				<b>J</b>			<b>J</b>			<b>J</b>			<b>J</b> -
Crosswalk Width(ft)													
Two way Left Turn Lane   Headway Factor   1.00			16			16						16	
Headway Factor	. ,												
Turning Speed (mph)         15         9         16         2         1         6         Portocted Phases         7         4         3         8         5         2         1         6         Detector Phase         4         4         38         8         5         2         1         6         8         2         6         5         2         1         6         5         2         1         6         5         2         1         6         5         2         1         6         5         2         1         6         5         2         1         6         5         2         1         1         6         6         5         2         5		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turn Type													
Protected Phases         7         4         3         8         5         2         1         6           Permitted Phases         4         8         2         6           Detector Phase         74         4         38         8         5         2         1         6           Switch Phase           Minimum Initial (s)         3.0         15.0         3.0         15.0         3.0         15.0           Minimum Initial (s)         3.0         15.0         3.0         15.0         3.0         15.0           Minimum Initial (s)         3.0         15.0         3.0         15.0         3.0         15.0           Minimum Initial (s)         3.0         15.0         3.0         15.0         3.0         15.0           Minimum Initial (s)         3.0         15.0         3.0         15.0         3.0         15.0         3.0         15.0           Minimum Initial (s)         3.0         15.0         3.0         16.5         20.5         6.5         45.5         5.5         6.5         39.5           Total Split (s)         11.2%         28.0%         11.2%         28.0%         11.2%         49.6%         1			NA			NA			NA			NA	
Permitted Phases         4         8         2         6           Detector Phase         7 4         4         3 8         8         5         2         1         6           Switch Phase           Minimum Initial (s)         3.0         15.0         3.0         15.0         3.0         15.0           Minimum Split (s)         6.5         20.5         6.5         20.5         6.5         45.5         6.5         39.5           Total Split (s)         14.0         35.0         14.0         35.0         14.0         62.0         14.0         62.0           Total Split (%)         11.2%         28.0%         11.2%         28.0%         11.2%         49.6%           Maximum Green (s)         10.5         29.5         10.5         29.5         10.5         56.5         10.5         56.5           Yellow Time (s)         3.5         4.5         3.5         4.5         3.5         4.5         3.5         4.5         3.5         4.5         3.5         4.5         3.5         4.5         3.5         4.5         3.5         4.5         3.5         4.5         3.5         4.5         3.5         4.5         3.5         4.5													
Detector Phase   7 4		4									6		
Switch Phase         Minimum Initial (s)         3.0         15.0         3.0         15.0         3.0         15.0         3.0         15.0           Minimum Split (s)         6.5         20.5         6.5         20.5         6.5         45.5         6.5         39.5           Total Split (s)         14.0         35.0         14.0         62.0         14.0         62.0           Total Split (%)         11.2%         28.0%         11.2%         28.0%         11.2%         49.6%         11.2%         49.6%           Maximum Green (s)         10.5         29.5         10.5         29.5         10.5         56.5         10.5         56.5           Yellow Time (s)         3.5         4.5         3.5         4.5         3.5         4.5         3.5         4.5         3.5         4.5         3.5         4.5         3.5         4.5         3.5         4.5         3.5         4.5         3.5         4.5         3.5         4.5         3.5         4.5         3.5         4.5         3.5         4.5         3.5         4.5         3.5         4.5         3.5         4.5         3.5         5.5         3.5         5.5         3.5         5.5         3.5			4		38	8		5	2			6	
Minimum Initial (s)         3.0         15.0         3.0         15.0         3.0         15.0           Minimum Split (s)         6.5         20.5         6.5         20.5         6.5         45.5         6.5         39.5           Total Split (s)         14.0         35.0         14.0         35.0         14.0         62.0         14.0         62.0           Total Split (%)         11.2%         28.0%         11.2%         28.0%         11.2%         49.6%         11.2%         49.6%           Maximum Green (s)         10.5         29.5         10.5         29.5         10.5         56.5         10.5         56.5           Yellow Time (s)         3.5         4.5         3.5													
Minimum Split (s)         6.5         20.5         6.5         20.5         6.5         45.5         6.5         39.5           Total Split (s)         14.0         35.0         14.0         35.0         14.0         62.0         14.0         62.0           Total Split (%)         11.2%         28.0%         11.2%         28.0%         11.2%         49.6%         11.2%         49.6%           Maximum Green (s)         10.5         29.5         10.5         29.5         10.5         56.5         10.5         56.5           Yellow Time (s)         3.5         4.5         3.5         4.5         3.5         4.5         3.5         4.5           All-Red Time (s)         0.0         1.0         0.0         1.0         0.0         1.0         0.0         1.0         0.0         1.0         0.0         1.0         0.0         1.0         0.0         1.0         0.0         1.0         0.0		3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	
Total Split (s)         14.0         35.0         14.0         35.0         14.0         62.0         14.0         62.0           Total Split (%)         11.2%         28.0%         11.2%         28.0%         11.2%         49.6%         11.2%         49.6%           Maximum Green (s)         10.5         29.5         10.5         56.5         10.5         56.5           Yellow Time (s)         3.5         4.5         3.5         4.5         3.5         4.5           All-Red Time (s)         0.0         1.0         0.0         1.0         0.0         1.0         0.0         1.0           Lost Time Adjust (s)         0.0													
Total Split (%)         11.2%         28.0%         11.2%         28.0%         11.2%         49.6%           Maximum Green (s)         10.5         29.5         10.5         29.5         10.5         56.5           Yellow Time (s)         3.5         4.5         3.5         4.5         3.5         4.5           All-Red Time (s)         0.0         1.0         0.0         1.0         0.0         1.0           Lost Time Adjust (s)         0.0         0.0         0.0         0.0         0.0         0.0         0.0           Total Lost Time (s)         3.5         5.5         3.5         5.5         3.5         5.5           Lead/Lag         Lead         Lag         Lead         Lag         Lead         Lag           Lead-Lag Optimize?         Vehicle Extension (s)         3.0         7.0         3.0         7.0         3.0         7.0           Recall Mode         None         None         None         None         None         C-Max         None         C-Max           Walk Time (s)         12.0         12.0         12.0         12.0         12.0         12.0         12.0           Flash Dont Walk (s)         17.0         22.0 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>													
Maximum Green (s)         10.5         29.5         10.5         29.5         10.5         56.5         10.5         56.5           Yellow Time (s)         3.5         4.5         3.5         4.5         3.5         4.5           All-Red Time (s)         0.0         1.0         0.0         1.0         0.0         1.0         0.0         1.0           Lost Time Adjust (s)         0.0													
Yellow Time (s)       3.5       4.5       3.5       4.5       3.5       4.5         All-Red Time (s)       0.0       1.0       0.0       1.0       0.0       1.0         Lost Time Adjust (s)       0.0       0.0       0.0       0.0       0.0       0.0       0.0         Total Lost Time (s)       3.5       5.5       3.5       5.5       3.5       5.5         Lead/Lag       Lead       Lag       Lead       Lag       Lead       Lag         Lead-Lag Optimize?       Vehicle Extension (s)       3.0       7.0       3.0       7.0       3.0       7.0         Recall Mode       None       None       None       None       None       C-Max         Walk Time (s)       12.0       12.0       12.0       12.0         Flash Dont Walk (s)       17.0       22.0       28.0       22.0													
All-Red Time (s)       0.0       1.0       0.0       1.0       0.0       1.0       0.0       1.0       0.0       1.0       0.0       1.0       0.0       1.0       0.0       1.0       0.0       1.0       0.0       1.0       0.0 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>													
Lost Time Adjust (s)         0.0	. ,												
Total Lost Time (s)         3.5         5.5         3.5         5.5         3.5         5.5           Lead/Lag         Lead         Lag         Lead         Lag         Lead         Lag           Lead-Lag Optimize?         Vehicle Extension (s)         3.0         7.0         3.0         7.0         3.0         7.0           Recall Mode         None         None         None         None         None         C-Max           Walk Time (s)         12.0         12.0         12.0         12.0           Flash Dont Walk (s)         17.0         22.0         28.0         22.0	( )												
Lead/Lag         Lead         Lag         Lead         Lag         Lead         Lag           Lead-Lag Optimize?         Vehicle Extension (s)         3.0         7.0         3.0         7.0         3.0         7.0           Recall Mode         None         None         None         None         None         C-Max           Walk Time (s)         12.0         12.0         12.0         12.0           Flash Dont Walk (s)         17.0         22.0         28.0         22.0													
Lead-Lag Optimize?         Vehicle Extension (s)       3.0       7.0       3.0       7.0       3.0       7.0         Recall Mode       None       None       None       None       None       C-Max       None       C-Max         Walk Time (s)       12.0       12.0       12.0       12.0       12.0         Flash Dont Walk (s)       17.0       22.0       28.0       22.0	,												
Vehicle Extension (s)         3.0         7.0         3.0         7.0         3.0         7.0           Recall Mode         None         None         None         None         C-Max         None         C-Max           Walk Time (s)         12.0         12.0         12.0         12.0         12.0           Flash Dont Walk (s)         17.0         22.0         28.0         22.0			9			3			3			3	
Recall Mode         None         None         None         None         C-Max         None         C-Max           Walk Time (s)         12.0         12.0         12.0         12.0           Flash Dont Walk (s)         17.0         22.0         28.0         22.0	• .	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Walk Time (s)       12.0       12.0       12.0       12.0         Flash Dont Walk (s)       17.0       22.0       28.0       22.0													
Flash Dont Walk (s) 17.0 22.0 28.0 22.0		0110									0110		
	. ,												
	Pedestrian Calls (#/hr)		0			0			0			0	

PM No Build Gewalt Hamilton Associates, Inc

	۶	<b>→</b>	$\rightarrow$	•	<b>←</b>	•	<b>1</b>	<b>†</b>	<b>/</b>	-	ţ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)	40.3	28.6		41.9	29.4		68.8	58.1		71.0	59.1	
Actuated g/C Ratio	0.32	0.23		0.34	0.24		0.55	0.46		0.57	0.47	
v/c Ratio	0.48	0.53		0.67	0.73		0.53	0.77		0.70	0.81	
Control Delay	34.6	43.8		41.5	47.8		24.4	31.8		36.2	33.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	34.6	43.8		41.5	47.8		24.4	31.8		36.2	33.0	
LOS	С	D		D	D		С	С		D	С	
Approach Delay		41.9			46.2			31.2			33.3	
Approach LOS		D			D			С			С	
Queue Length 50th (ft)	60	155		120	225		36	440		55	465	
Queue Length 95th (ft)	101	208		186	293		66	532		#143	580	
Internal Link Dist (ft)		158			235			1017			1326	
Turn Bay Length (ft)	105			155			155			125		
Base Capacity (vph)	244	834		314	830		224	1630		229	1624	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.45	0.51		0.66	0.72		0.47	0.77		0.68	0.81	

Area Type: Other

Cycle Length: 125

Actuated Cycle Length: 125

Offset: 63 (50%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.81 Intersection Signal Delay: 36.2 Intersection Capacity Utilization 86.6%

Intersection LOS: D
ICU Level of Service E

Analysis Period (min) 15

Queue shown is maximum after two cycles.



<sup># 95</sup>th percentile volume exceeds capacity, queue may be longer.

Lane Group		۶	<b>→</b>	•	•	<b>+</b>	•	•	†	~	<b>/</b>	<b>+</b>	-√
Traffic Volume (vph)	Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	Lane Configurations	*	<b>*</b>	7	*	<b>*</b>	7		4			4	
Future Volume (volph (volph (volph )   1900   2000   1900   1000   170								110		53	51		26
Ideal Flow (yphpi)													
Storage Length (ft)   50	· · /		2000		1900		1900				1900		1900
Storage Lanes													
Taper Length (ft)	<b>3 3 1 7</b>						1			0	0		0
Satis   Flow (pront)   1736   1961   1313   1805   1961   1615   0   1765   0   0   1746   0   0   0   0   0   0   0   0   0		50			50								
Fit Permitted			1961	1313	1805	1961	1615		1765	0		1746	0
Satd, Flow (perm)   S50													
Right Turn on Red   Yes   Ye	Satd. Flow (perm)		1961	1223		1961	1519	0	1407	0	0	1193	0
Satid Flow (RTOR)													
Link Speed (mph)									13			14	
Link Distance (ft)   349			25			25						30	
Travel Time (s)													
Confile Peds. (#/hr)	\ <i>\</i>												
Peak Hour Factor   0.72   0.94   0.81   0.63   0.93   0.62   0.78   0.67   0.85   0.77   0.60   0.89     Heavy Vehicles (%)		14		17	17		14	5		22	22		5
Heavy Vehicles (%)	` ,		0.94			0.93			0.67			0.60	
Shared Lane Traffic (%)   Lane Group Flow (γph)   38   647   16   33   648   76   0   266   0   0   0   115   0													
Lane Group Flow (vph)   38		.,,	_,,			_,,				- 70			
Enter Blocked Intersection   No   No   No   No   No   No   No		38	647	16	33	648	76	0	266	0	0	115	0
Lane Alignment   Left   Left   Right   Median Width(fft)   12   12   12   0   0   0   0   0   0   0   0   0													
Median Width(fft)													
Link Offset(ft)													
Crosswalk Width(fft)													
Two way Left Turn Lane													
Headway Factor	. ,												
Turning Speed (mph)         15         9         15         4         4         4         4         4         4         4         4         4         9         15         9         15         6         6         8         8         4         4         4         4         9         15         9         15         10         15         15         15         15         15         15		1.00	0.94	1.00	1.00	0.94	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turn Type         pm+pt         NA         Perm         pm+pt         NA         Perm         Perm         NA         Perm         NA           Protected Phases         5         2         1         6         8         4           Permitted Phases         5         2         2         1         6         8         8         4           Detector Phase         5         2         2         1         6         8         8         4         4           Switch Phase         8         5         2         2         1         6         6         8         8         4         4           Switch Phase         8         5         2         2         1         6         6         8         8         4         4           Switch Phase         8         5         2         2         1         5         0         8         0         8         0         8         0         8         0         8         0         8         0         8         0         8         0         8         0         8         0         0         0         0         0         0         0													
Protected Phases 5 2 1 6 6 8 4  Permitted Phases 2 2 2 6 6 6 8 4  Detector Phase 5 2 2 1 6 6 8 8 8 4  Detector Phase 5 2 2 1 6 6 8 8 8 4 4  Switch Phase  Minimum Initial (s) 5.0 15.0 15.0 5.0 15.0 15.0 8.0 8.0 8.0 8.0 8.0  Minimum Split (s) 9.5 25.0 25.0 9.5 25.0 25.0 31.0 31.0 31.0 31.0  Total Split (s) 13.0 66.0 66.0 13.0 66.0 66.0 31.0 31.0 31.0 31.0  Total Split (%) 11.8% 60.0% 60.0% 11.8% 60.0% 60.0% 28.2% 28.2% 28.2% 28.2%  Maximum Green (s) 8.5 60.0 60.0 8.5 60.0 60.0 25.0 25.0 25.0 25.0 25.0  Yellow Time (s) 3.5 4.5 4.5 3.5 4.5 4.5 4.5 4.5 4.5 4.5 4.5 4.5  All-Red Time (s) 1.0 1.5 1.5 1.0 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5  Lost Time Adjust (s) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0  Total Lost Time (s) 4.5 6.0 6.0 4.5 6.0 6.0 6.0 6.0 6.0  Lead/Lag Lead Lag Lag Lead Lag Lag Lag Lag Lag Lag Lag Lag Lag Lag			NA			NA			NA	-		NA	-
Permitted Phases         2         2         6         6         8         4           Detector Phase         5         2         2         1         6         6         8         8         4         4           Switch Phase         Minimum Initial (s)         5.0         15.0         15.0         5.0         15.0         8.0         8.0         8.0         8.0           Minimum Split (s)         9.5         25.0         25.0         9.5         25.0         25.0         31.0													
Detector Phase   5   2   2   1   6   6   8   8   8   4   4			_	2	6		6	8			4		
Switch Phase         Minimum Initial (s)         5.0         15.0         15.0         5.0         15.0         15.0         8.0         8.0         8.0         8.0           Minimum Split (s)         9.5         25.0         25.0         9.5         25.0         25.0         31.0			2			6			8			4	
Minimum Initial (s)         5.0         15.0         15.0         5.0         15.0         15.0         8.0         8.0         8.0         8.0           Minimum Split (s)         9.5         25.0         25.0         9.5         25.0         25.0         31.0													
Minimum Split (s)         9.5         25.0         25.0         25.0         25.0         25.0         25.0         31.0		5.0	15.0	15.0	5.0	15.0	15.0	8.0	8.0		8.0	8.0	
Total Split (s)         13.0         66.0         66.0         13.0         66.0         66.0         31.0         31.0         31.0         31.0           Total Split (%)         11.8%         60.0%         60.0%         60.0%         60.0%         28.2%         28.2%         28.2%         28.2%           Maximum Green (s)         8.5         60.0         60.0         8.5         60.0         60.0         25.0         25.0         25.0         25.0           Yellow Time (s)         3.5         4.5         4.5         3.5         4.0         4.0	` ,												
Total Split (%)         11.8%         60.0%         60.0%         11.8%         60.0%         60.0%         28.2%         28.2%         28.2%         28.2%           Maximum Green (s)         8.5         60.0         60.0         8.5         60.0         60.0         25.0         25.0         25.0         25.0           Yellow Time (s)         3.5         4.0         4.0         4.0         4.0         4.0         4.0         4.0         4.0         4.0         4.0         4.0         4.0         4.0													
Maximum Green (s)         8.5         60.0         60.0         8.5         60.0         60.0         25.0         25.0         25.0         25.0           Yellow Time (s)         3.5         4.5         4.5         4.5         4.5         4.5         4.5         4.5           All-Red Time (s)         1.0         1.5 <td>. ,</td> <td></td>	. ,												
Yellow Time (s)       3.5       4.5       4.5       3.5       4.5       4.5       4.5       4.5       4.5       4.5         All-Red Time (s)       1.0       1.5													
All-Red Time (s)       1.0       1.5       1.5       1.0       1.5       1.0       0.0       0.0       0.0       0.0       0.0       0.0 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>													
Lost Time Adjust (s)         0.0													
Total Lost Time (s)         4.5         6.0         6.0         6.0         6.0           Lead/Lag         Lead         Lag         Lead         Lag         Lag           Lead-Lag Optimize?         Vehicle Extension (s)         3.0         7.0         7.0         3.0         7.0         4.0         4.0         4.0           Recall Mode         None         C-Max         None         C-Max         None         None         None	. ,												
Lead/Lag         Lead         Lag         Lead         Lag         Lag           Lead-Lag Optimize?         Vehicle Extension (s)         3.0         7.0         7.0         3.0         7.0         4.0         4.0         4.0         4.0           Recall Mode         None         C-Max         None         C-Max         None         None         None         None													
Lead-Lag Optimize?           Vehicle Extension (s)         3.0         7.0         7.0         3.0         7.0         4.0         4.0         4.0         4.0           Recall Mode         None         C-Max         None         C-Max         None         None         None         None	· ,												
Vehicle Extension (s)         3.0         7.0         7.0         3.0         7.0         4.0         4.0         4.0         4.0           Recall Mode         None         C-Max         None         C-Max         None         None         None         None	•		9	5		9	9						
Recall Mode None C-Max C-Max None C-Max None None None None		3.0	7.0	7.0	3.0	7.0	7.0	4.0	4.0		4.0	4.0	
	. ,												
VVAIN THUE (5) 1,U 1,U 1.U 1.U 1.U 1.U 1.U 1.U 1.U 1.U 1.U 1.	Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s) 12.0 12.0 12.0 18.0 18.0 18.0	. ,												
Pedestrian Calls (#/hr) 0 0 0 0 0 0 0 0													

PM No Build Gewalt Hamilton Associates, Inc

	•	-	•	•	←	•	1	<b>†</b>	1	-	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)	73.7	68.2	68.2	73.5	68.1	68.1		23.2			23.2	
Actuated g/C Ratio	0.67	0.62	0.62	0.67	0.62	0.62		0.21			0.21	
v/c Ratio	0.09	0.53	0.02	0.07	0.53	0.08		0.87			0.44	
Control Delay	6.3	15.4	0.1	6.2	15.5	3.0		67.2			38.2	
Queue Delay	0.0	0.5	0.0	0.0	0.0	0.0		0.0			0.0	
Total Delay	6.3	15.9	0.1	6.2	15.5	3.0		67.2			38.2	
LOS	Α	В	Α	Α	В	Α		Е			D	
Approach Delay		15.0			13.8			67.2			38.2	
Approach LOS		В			В			Е			D	
Queue Length 50th (ft)	8	279	0	7	281	1		171			61	
Queue Length 95th (ft)	15	397	0	12	400	7		183			71	
Internal Link Dist (ft)		269			1120			1037			84	
Turn Bay Length (ft)	50		40	50		40						
Base Capacity (vph)	465	1216	786	486	1214	968		329			281	
Starvation Cap Reductn	0	227	0	0	0	0		0			0	
Spillback Cap Reductn	0	0	0	0	0	0		0			0	
Storage Cap Reductn	0	0	0	0	0	0		0			0	
Reduced v/c Ratio	0.08	0.65	0.02	0.07	0.53	0.08		0.81			0.41	

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 83 (75%), Referenced to phase 2:EBTL and 6:WBTL, Start of 1st Green

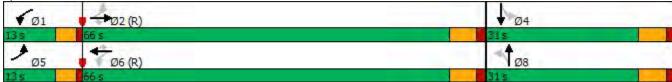
Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.87
Intersection Signal Delay: 23.5

Intersection Signal Delay: 23.5 Intersection LOS: C
Intersection Capacity Utilization 58.1% ICU Level of Service B

Analysis Period (min) 15



Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Traffic Vol, veh/h	0	0	2	0	0	1	4	111	1	2	87	1
Future Vol, veh/h	0	0	2	0	0	1	4	111	1	2	87	1
Conflicting Peds, #/hr	5	0	14	14	0	5	2	0	0	0	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage,	,# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	20	4	0	0	1	0
Mvmt Flow	0	0	2	0	0	1	4	117	1	2	92	1
Major/Minor N	/linor2		ı	Minor1			Major1		1	Major2		
Conflicting Flow All	230	225	109	238	225	123	95	0	0	118	0	0
Stage 1	99	99	-	126	126	-	-	-	-	-	_	_
Stage 2	131	126	-	112	99	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.3	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.38	-	-	2.2	-	-
Pot Cap-1 Maneuver	729	678	950	721	678	933	1393	-	-	1483	-	-
Stage 1	912	817	-	883	796	-	-	-	-	-	-	-
Stage 2	877	796	-	898	817	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	721	674	936	707	674	929	1390	-	-	1483	-	-
Mov Cap-2 Maneuver	721	674	-	707	674	-	-	-	-	-	-	-
Stage 1	907	815	-	880	794	-	-	-	-	-	-	-
Stage 2	869	794	-	883	815	-	-	-	-	-	-	-
Ĭ												
Approach	EB			WB			NB			SB		
HCM Control Delay, s	8.9			8.9			0.3			0.2		
HCM LOS	Α			Α								
Minor Lane/Major Mvm	t	NBL	NBT	NBR I	EBLn1V	VBLn1	SBL	SBT	SBR			
Capacity (veh/h)		1390	-	-	936	929	1483	-	-			
HCM Lane V/C Ratio		0.003	-	-		0.001		_	_			
HCM Control Delay (s)		7.6	0	_	8.9	8.9	7.4	0	_			
HCM Lane LOS		A	A	-	A	A	Α	A	-			
HCM 95th %tile Q(veh)		0	-	-	0	0	0	-	-			

Approach		
Approach Direction	NB	
Median Present?	No	
Approach Delay(s)	5.1	
Level of Service	В	
Crosswalk		
Length (ft)	32	
Lanes Crossed	2	
Veh Vol Crossed	198	
Ped Vol Crossed	0	
Yield Rate(%)	0	
Ped Platooning	No	
	110	
Critical Headway (s)	12.14	
Prob of Delayed X-ing	0.49	
Prob of Blocked Lane	0.28	
Delay for adq Gap	10.53	
Avg Ped Delay (s)	5.13	
<b>5 7</b> (-7)		
Annanah		
Approach	20	
Approach Direction	SB	
Median Present?	No	
Approach Delay(s)	5.1	
Level of Service	В	
Crosswalk		
Length (ft)	32	
Lanes Crossed	2	
Veh Vol Crossed	198	
Ped Vol Crossed	0	
Yield Rate(%)	0	
Ped Platooning	No	
Critical Headway (s)	12.14	
Prob of Delayed X-ing	0.49	
Prob of Blocked Lane	0.28	
Delay for adq Gap	10.53	
Avg Ped Delay (s)	5.13	

	۶	<b>→</b>	•	•	<b>←</b>	•	1	<b>†</b>	<i>&gt;</i>	<b>&gt;</b>	<b>+</b>	-√
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	*	<b>1</b>		*	<b>1</b>		*	<b>1</b>		*	<b>^</b> 1>	
Traffic Volume (vph)	96	376	38	201	413	128	88	1037	135	142	1077	125
Future Volume (vph)	96	376	38	201	413	128	88	1037	135	142	1077	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105		40	155		0	155		0	125		0
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	65			75			95			95		
Satd. Flow (prot)	1736	3497	0	1787	3378	0	1770	3481	0	1736	3401	0
Flt Permitted	0.214			0.346			0.085			0.094		
Satd. Flow (perm)	386	3497	0	634	3378	0	158	3481	0	171	3401	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			31			17			20	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		238			315			1097			1406	
Travel Time (s)		6.5			8.6			24.9			32.0	
Confl. Peds. (#/hr)	36		42	42		36	47		48	48		47
Peak Hour Factor	0.87	0.98	0.84	0.96	0.90	0.89	0.83	0.95	0.84	0.91	0.96	0.66
Heavy Vehicles (%)	4%	1%	0%	1%	2%	1%	2%	1%	1%	4%	2%	8%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	110	429	0	209	603	0	106	1253	0	156	1311	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7 4	4		38	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	6.5	20.5		6.5	20.5		6.5	45.5		6.5	39.5	
Total Split (s)	14.0	35.0		14.0	35.0		14.0	62.0		14.0	62.0	
Total Split (%)	11.2%	28.0%		11.2%	28.0%		11.2%	49.6%		11.2%	49.6%	
Maximum Green (s)	10.5	29.5		10.5	29.5		10.5	56.5		10.5	56.5	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.0		0.0	1.0		0.0	1.0		0.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	5.5		3.5	5.5		3.5	5.5		3.5	5.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)		12.0			12.0			12.0			12.0	
Flash Dont Walk (s)		17.0			22.0			28.0			22.0	
Pedestrian Calls (#/hr)		0			0			0			0	

PM Total Gewalt Hamilton Associates, Inc

	•	-	•	•	<b>←</b>	•	•	<b>†</b>	~	-	<b>↓</b>	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)	40.3	28.6		41.9	29.4		68.8	58.0		71.0	59.1	
Actuated g/C Ratio	0.32	0.23		0.34	0.24		0.55	0.46		0.57	0.47	
v/c Ratio	0.48	0.53		0.68	0.74		0.53	0.77		0.71	0.81	
Control Delay	34.7	43.9		42.3	48.1		24.4	31.9		36.6	33.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	34.7	43.9		42.3	48.1		24.4	31.9		36.6	33.2	
LOS	С	D		D	D		С	С		D	С	
Approach Delay		42.0			46.6			31.3			33.5	
Approach LOS		D			D			С			С	
Queue Length 50th (ft)	60	156		121	226		36	441		55	466	
Queue Length 95th (ft)	101	210		186	294		66	534		#143	581	
Internal Link Dist (ft)		158			235			1017			1326	
Turn Bay Length (ft)	105			155			155			125		
Base Capacity (vph)	243	832		310	825		224	1625		229	1619	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.45	0.52		0.67	0.73		0.47	0.77		0.68	0.81	

Area Type: Other

Cycle Length: 125

Actuated Cycle Length: 125

Offset: 63 (50%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.81 Intersection Signal Delay: 36.4 Intersection Capacity Utilization 89.5%

Intersection LOS: D
ICU Level of Service E

Analysis Period (min) 15

Queue shown is maximum after two cycles.



<sup># 95</sup>th percentile volume exceeds capacity, queue may be longer.

Lane Configurations   T.   A.   T.   T.   A.   T.   T		۶	<b>→</b>	•	•	-	•	1	†	<i>&gt;</i>	<b>/</b>	<b>↓</b>	✓
Traffic Volume (γph)   32   608   13   21   603   50   110   42   53   53   12   29	Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	Lane Configurations	*	<b>^</b>	7	*	<b>^</b>	7		4			44	
Future Volume (vph)   32   608   13   21   603   50   110   42   53   53   12   29		32		13	21		50	110		53	53		29
Ideal Flow (yphp)	· · · /												
Storage Length (ft)   50	` ' '				1900		1900	1900		1900			1900
Storage Lanes	<b>\ \ \ \</b> , ,												
Taper Length (rft)													
Sation   Flow (pront)   1736   1961   1313   1805   1961   1615   0   1747   0   0   0   1720   0   0   1720   0   0   1720   0   0   1720   0   0   0   1720   0   0   0   1720   0   0   0   1720   0   0   0   1720   0   0   0   1720   0   0   0   1720   0   0   1720   0   0   0   1720   0   0   0   1720   0   0   0   1720   0   0   0   1720   0   0   0   1720   0   0   0   1720   0   0   0   1720   0   0   0   0   0   0   0   0   0		50			50								
Fith Permitted   0.286			1961	1313		1961	1615		1747	0		1720	0
Satd. Flow (perm)   Sat	,,												
Right Turn on Red   Yes   Ye			1961	1149		1961	1413	0		0	0		0
Satid   Flow (RTOR)	" /												
Link Speed (mph)									13			16	
Link Distance (ft)   349	,		25			25							
Travel Time (s)	,												
Confil Peds (#hr)	· ,												
Peak Hour Factor   0.72   0.94   0.81   0.63   0.93   0.62   0.78   0.67   0.85   0.77   0.60   0.89     Heavy Vehicles (%)   4%   2%   23%   0%   0%   0%   0%   0%   0%   0%	. ,	34	0.0	37	37	V	37	25		42	42	<b></b>	25
Heavy Vehicles (%)	` ,		0.94			0.93			0.67			0.60	
Shared Lane Traffic (%)   Lane Group Flow (vph)   44   647   16   33   648   81   0   266   0   0   122   0													
Lane Group Flow (vph)	,	.,,	_,,	_0,0	• 70	_,~	• 70	• • • • • • • • • • • • • • • • • • • •	• 70	0,0	0,0	• • • • • • • • • • • • • • • • • • • •	0,0
Enter Blocked Intersection   No   No   No   No   No   No   No		44	647	16	33	648	81	0	266	0	0	122	0
Left   Left   Right   Right   Median Width(ft)   12	,												
Median Width(fft)													
Crosswalk Width(fft)	•												
Crosswalk Width(fft)													
Two way Left Turn Lane	` ,												
Headway Factor   1.00   0.94   1.00   1.00   0.94   1.00	. ,												
Turning Speed (mph)         15         9         15         9         15         9         15         9         15         9         15         9         15         9         15         9         15         9         15         9         15         9         15         9         15         9         15         9         15         9         15         9         15         9         15         9         16         10         NA         Perm         A         A		1.00	0.94	1.00	1.00	0.94	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turn Type         pm+pt         NA         Perm         pm+pt         NA         Perm         Perm         NA         Perm         NA           Protected Phases         5         2         1         6         6         8         4           Permitted Phases         2         2         2         6         6         8         4           Detector Phase         5         2         2         1         6         6         8         4           Switch Phase         5         2         2         1         6         6         8         8         4           Minimum Initial (s)         5.0         15.0         15.0         15.0         15.0         8.0         8.0         8.0         8.0           Minimum Split (s)         9.5         25.0         25.0         9.5         25.0         25.0         31.0													
Protected Phases   5	• ,		NA			NA			NA	-		NA	-
Permitted Phases   2   2   6   6   8   8   4   4   4   5													
Detector Phase   5   2   2   1   6   6   8   8   8   4   4				2	6		6	8			4		
Switch Phase         Minimum Initial (s)         5.0         15.0         15.0         5.0         15.0         15.0         15.0         15.0         15.0         8.0         8.0         8.0         8.0           Minimum Split (s)         9.5         25.0         25.0         9.5         25.0         25.0         31.0			2			6			8			4	
Minimum Initial (s)         5.0         15.0         15.0         5.0         15.0         15.0         15.0         15.0         15.0         8.0         8.0         8.0         8.0           Minimum Split (s)         9.5         25.0         25.0         9.5         25.0         25.0         31.0													
Minimum Split (s)         9.5         25.0         25.0         9.5         25.0         25.0         31.0		5.0	15.0	15.0	5.0	15.0	15.0	8.0	8.0		8.0	8.0	
Total Split (s)         13.0         66.0         66.0         13.0         66.0         66.0         31.0         31.0         31.0         31.0           Total Split (%)         11.8%         60.0%         60.0%         11.8%         60.0%         60.0%         28.2%         28.2%         28.2%         28.2%           Maximum Green (s)         8.5         60.0         60.0         8.5         60.0         60.0         25.0         25.0         25.0         25.0           Yellow Time (s)         3.5         4.5         4.5         3.5         4.0         4.0         4.0         4.0         4.0         4.0         4.0         4.0         4.0         4.0         4.0         4.0	( )												
Total Split (%)         11.8%         60.0%         60.0%         11.8%         60.0%         60.0%         28.2%         28.2%         28.2%         28.2%           Maximum Green (s)         8.5         60.0         60.0         8.5         60.0         60.0         25.0         25.0         25.0         25.0           Yellow Time (s)         3.5         4.5         4.5         3.5         4.0         4.0         4.0         4.0         4.0         4.0         4.0         4.0         4.0         4.0         4.0         4.0         4.0         4.0         4.0													
Maximum Green (s)         8.5         60.0         60.0         8.5         60.0         60.0         25.0         25.0         25.0         25.0           Yellow Time (s)         3.5         4.5         4.5         3.5         4.5         4.5         4.5         4.5         4.5         4.5           All-Red Time (s)         1.0         1.5 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>													
Yellow Time (s)         3.5         4.5         4.5         3.5         4.5													
All-Red Time (s) 1.0 1.5 1.5 1.0 1.5 1.5 1.5 1.5 1.5 1.5 1.5 Lost Time Adjust (s) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.													
Lost Time Adjust (s)         0.0         6.0         4.0         4.0         4.0         4.0         4.0													
Total Lost Time (s)         4.5         6.0         6.0         6.0         6.0           Lead/Lag         Lead         Lag         Lead         Lag         Lag           Lead-Lag Optimize?         Vehicle Extension (s)         3.0         7.0         7.0         3.0         7.0         4.0         4.0         4.0         4.0           Recall Mode         None         C-Max         C-Max         C-Max         None         None         None         None           Walk Time (s)         7.0         7.0         7.0         7.0         7.0         7.0         7.0           Flash Dont Walk (s)         12.0         12.0         12.0         12.0         18.0         18.0         18.0	( )												
Lead/Lag         Lead         Lag         Lead         Lag         Lag         Lag           Lead-Lag Optimize?         Vehicle Extension (s)         3.0         7.0         7.0         7.0         4.0         4.0         4.0         4.0           Recall Mode         None         C-Max         C-Max         C-Max         C-Max         None         None         None         None           Walk Time (s)         7.0         7.0         7.0         7.0         7.0         7.0         7.0         7.0           Flash Dont Walk (s)         12.0         12.0         12.0         18.0         18.0         18.0         18.0													
Lead-Lag Optimize?         Vehicle Extension (s)       3.0       7.0       7.0       3.0       7.0       4.0       4.0       4.0       4.0         Recall Mode       None       C-Max       None       C-Max       None       None </td <td>` ,</td> <td></td>	` ,												
Vehicle Extension (s)         3.0         7.0         7.0         3.0         7.0         4.0         4.0         4.0         4.0           Recall Mode         None         C-Max         None         C-Max         C-Max         None         None </td <td></td> <td></td> <td>9</td> <td></td> <td></td> <td></td> <td>9</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>			9				9						
Recall Mode         None         C-Max         C-Max         None         C-Max         C-Max         None         None         None         None           Walk Time (s)         7.0 <t< td=""><td>•</td><td>3.0</td><td>7.0</td><td>7.0</td><td>3.0</td><td>7.0</td><td>7.0</td><td>4.0</td><td>4.0</td><td></td><td>4.0</td><td>4.0</td><td></td></t<>	•	3.0	7.0	7.0	3.0	7.0	7.0	4.0	4.0		4.0	4.0	
Walk Time (s)       7.0													
Flash Dont Walk (s) 12.0 12.0 12.0 18.0 18.0 18.0 18.0													
	Pedestrian Calls (#/hr)		0	0		0	0	0	0		0	0	

PM Total Gewalt Hamilton Associates, Inc

	•	-	•	•	<b>←</b>	•	•	<b>†</b>	~	-	<b>↓</b>	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)	73.4	67.8	67.8	72.0	65.5	65.5		23.6			23.6	
Actuated g/C Ratio	0.67	0.62	0.62	0.65	0.60	0.60		0.21			0.21	
v/c Ratio	0.11	0.54	0.02	0.07	0.56	0.09		0.88			0.47	
Control Delay	6.5	15.6	0.1	6.3	16.9	3.4		69.5			38.5	
Queue Delay	0.0	0.5	0.0	0.0	0.0	0.0		0.0			0.0	
Total Delay	6.5	16.1	0.1	6.3	16.9	3.4		69.5			38.5	
LOS	Α	В	Α	Α	В	Α		Е			D	
Approach Delay		15.2			15.0			69.5			38.5	
Approach LOS		В			В			Е			D	
Queue Length 50th (ft)	9	279	0	7	282	2		172			64	
Queue Length 95th (ft)	16	397	0	12	403	9		185			74	
Internal Link Dist (ft)		269			1120			1037			84	
Turn Bay Length (ft)	50		40	50		40						
Base Capacity (vph)	446	1207	736	485	1166	870		318			276	
Starvation Cap Reductn	0	227	0	0	0	0		0			0	
Spillback Cap Reductn	0	0	0	0	0	0		0			0	
Storage Cap Reductn	0	0	0	0	0	0		0			0	
Reduced v/c Ratio	0.10	0.66	0.02	0.07	0.56	0.09		0.84			0.44	

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 83 (75%), Referenced to phase 2:EBTL and 6:WBTL, Start of 1st Green

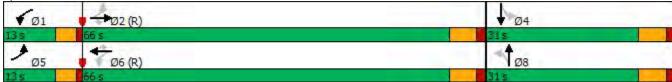
Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.88 Intersection Signal Delay: 24.4 Intersection Capacity Utilization 59.7%

Intersection LOS: C
ICU Level of Service B

Analysis Period (min) 15



Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Traffic Vol, veh/h	0	0	7	0	0	1	12	111	1	2	87	1
Future Vol, veh/h	0	0	7	0	0	1	12	111	1	2	87	1
Conflicting Peds, #/hr	25	0	34	34	0	25	22	0	20	20	0	22
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage,	# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	20	4	0	0	1	0
Mvmt Flow	0	0	7	0	0	1	13	117	1	2	92	1
Major/Minor N	linor2		ı	Minor1		ı	Major1		ı	Major2		
Conflicting Flow All	288	283	149	298	283	163	115	0	0	138	0	0
Stage 1	119	119	-	164	164	-	-	-	-	-	-	-
Stage 2	169	164	-	134	119	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.3	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.38	-	-	2.2	-	-
Pot Cap-1 Maneuver	668	629	903	658	629	887	1369	-	-	1458	-	-
Stage 1	890	801	-	843	766	-	-	-	-	-	-	-
Stage 2	838	766	-	874	801	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	633	598	855	614	598	849	1340	-	-	1430	-	-
Mov Cap-2 Maneuver	633	598	-	614	598	-	-	-	-	-	-	-
Stage 1	862	783	-	819	744	-	-	-	-	-	-	-
Stage 2	809	744	-	838	783	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	9.2			9.2			0.7			0.2		
HCM LOS	Α			Α								
Minor Lane/Major Mvmt		NBL	NBT	NBR I	EBLn1V	VBLn1	SBL	SBT	SBR			
Capacity (veh/h)		1340	-	-		849	1430	-	-			
HCM Lane V/C Ratio		0.009	_	_		0.001		_	_			
HCM Control Delay (s)		7.7	0	-	9.2	9.2	7.5	0	-			
HCM Lane LOS		Α	A	-	A	A	A	A	-			
HCM 95th %tile Q(veh)		0	-	-	0	0	0	-	-			
.( - )												

Approach		
Approach Direction	NB	
Median Present?	No	
Approach Delay(s)	5.1	
Level of Service	В	
Crosswalk		
	32	
Length (ft) Lanes Crossed	2	
Veh Vol Crossed	198	
Ped Vol Crossed		
	0	
Yield Rate(%)	0	
Ped Platooning	No	
	10.11	
Critical Headway (s)	12.14	
Prob of Delayed X-ing	0.49	
Prob of Blocked Lane	0.28	
Delay for adq Gap	10.53	
Avg Ped Delay (s)	5.13	
Approach		
Approach Direction	SB	
Median Present?	No	
Approach Delay(s)	5.1	
Level of Service	В	
Crosswalk		
Length (ft)	32	
Lanes Crossed	2	
Veh Vol Crossed	198	
Ped Vol Crossed	0	
Yield Rate(%)	0	
Ped Platooning	No	
Critical Headway (s)	12.14	
Prob of Delayed X-ing	0.49	
Prob of Blocked Lane	0.28	
Delay for adq Gap	10.53	
Avg Ped Delay (s)	5.13	
J ( )		

	۶	<b>→</b>	•	•	<b>+</b>	•	•	†	<i>&gt;</i>	<b>/</b>	<b>+</b>	✓
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	<b>1</b>		*	<b>1</b>		7	<b>1</b>		*	<b>1</b>	
Traffic Volume (vph)	87	368	49	208	423	105	73	960	138	95	1118	93
Future Volume (vph)	87	368	49	208	423	105	73	960	138	95	1118	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	40	155		0	155	,,,,,	0	125	,,,,,	0
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	65		•	75			95			95		· ·
Satd. Flow (prot)	1770	3521	0	1787	3482	0	1805	3494	0	1805	3493	0
Flt Permitted	0.245	0021	· ·	0.334	0.102		0.077	0101	Ū	0.103	0.00	
Satd. Flow (perm)	454	3521	0	627	3482	0	146	3494	0	195	3493	0
Right Turn on Red	101	0021	Yes	UZ1	0102	Yes	110	0101	Yes	100	0100	Yes
Satd. Flow (RTOR)		14	100		26	100		17	100		12	100
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		238			315			1097			1406	
Travel Time (s)		6.5			8.6			24.9			32.0	
Confl. Peds. (#/hr)	16	0.5	4	4	0.0	16	18	24.3	20	20	32.0	18
Peak Hour Factor	0.78	0.87	0.77	0.88	0.86	0.85	0.76	0.95	0.89	0.77	0.92	0.71
Heavy Vehicles (%)	2%	0.07	2%	1%	0.00	0.03	0.76	1%	0.09	0.77	1%	6%
	Z 70	U 70	Z 70	I 70	U 70	U 70	070	1 70	U 70	0 70	1 70	070
Shared Lane Traffic (%)	112	487	0	236	616	0	96	1166	0	123	1346	٥
Lane Group Flow (vph)												0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15	) I A	9	15		9
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8	•		2	•		6	•	
Detector Phase	7 4	4		38	8		5	2		1	6	
Switch Phase	0.0	45.0		0.0	45.0		0.0	45.0		0.0	45.0	
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	6.5	20.5		6.5	20.5		6.5	45.5		6.5	39.5	
Total Split (s)	13.0	39.0		13.0	39.0		13.0	55.0		13.0	55.0	
Total Split (%)	10.8%	32.5%		10.8%	32.5%		10.8%	45.8%		10.8%	45.8%	
Maximum Green (s)	9.5	33.5		9.5	33.5		9.5	49.5		9.5	49.5	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.0		0.0	1.0		0.0	1.0		0.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	5.5		3.5	5.5		3.5	5.5		3.5	5.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)		12.0			12.0			12.0			12.0	
Flash Dont Walk (s)		17.0			22.0			28.0			22.0	
Pedestrian Calls (#/hr)		0			0			0			0	

SAT Exist Gewalt Hamilton Associates, Inc

	۶	<b>→</b>	$\rightarrow$	•	<b>←</b>	•	4	<b>†</b>	/	-	ţ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)	42.9	31.9		43.9	32.4		62.2	51.9		63.1	52.3	
Actuated g/C Ratio	0.36	0.27		0.37	0.27		0.52	0.43		0.53	0.44	
v/c Ratio	0.43	0.51		0.74	0.64		0.51	0.77		0.56	0.88	
Control Delay	28.6	38.2		42.0	40.3		25.6	33.3		25.3	39.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	28.6	38.2		42.0	40.3		25.6	33.3		25.3	39.4	
LOS	С	D		D	D		С	С		С	D	
Approach Delay		36.4			40.8			32.7			38.2	
Approach LOS		D			D			С			D	
Queue Length 50th (ft)	54	161		124	210		35	405		45	504	
Queue Length 95th (ft)	81	206		#186	257		53	497		65	#663	
Internal Link Dist (ft)		158			235			1017			1326	
Turn Bay Length (ft)	105			155			155			125		
Base Capacity (vph)	274	993		326	991		208	1521		231	1530	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.41	0.49		0.72	0.62		0.46	0.77		0.53	0.88	

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 60 (50%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.88 Intersection Signal Delay: 36.8 Intersection Capacity Utilization 80.0%

Intersection LOS: D
ICU Level of Service D

Analysis Period (min) 15

Queue shown is maximum after two cycles.



<sup># 95</sup>th percentile volume exceeds capacity, queue may be longer.

	•	<b>→</b>	•	•	+	•	•	<b>†</b>	~	<b>/</b>	ţ	-√
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	*	<b>↑</b>	7	7	<b>↑</b>	7		4			4	
Traffic Volume (vph)	31	562	18	9	688	47	6	2	8	68	3	42
Future Volume (vph)	31	562	18	9	688	47	6	2	8	68	3	42
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50		40	50		40	0		0	0	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	0
Storage Lanes	1		1	1		1	0		0	0		0
Taper Length (ft)	50		-	50		•	25		-	25		-
Satd. Flow (prot)	1805	1980	1615	1626	1980	1615	0	1699	0	0	1684	0
Flt Permitted	0.263			0.379				0.903			0.796	
Satd. Flow (perm)	500	1980	1509	642	1980	1537	0	1541	0	0	1355	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			74			74		20			24	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		349			1200			1117			164	
Travel Time (s)		9.5			32.7			25.4			3.7	
Confl. Peds. (#/hr)	10		16	16		10	22		15	15		22
Peak Hour Factor	0.78	0.95	0.50	0.45	0.91	0.73	0.50	0.25	0.40	0.74	0.38	0.75
Heavy Vehicles (%)	0%	1%	0%	11%	1%	0%	0%	0%	0%	3%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	40	592	36	20	756	64	0	40	0	0	156	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	0.94	1.00	1.00	0.94	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8			4		
Detector Phase	5	2	2	1	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	8.0	8.0		8.0	8.0	
Minimum Split (s)	9.5	25.0	25.0	9.5	25.0	25.0	31.0	31.0		31.0	31.0	
Total Split (s)	13.0	66.0	66.0	13.0	66.0	66.0	31.0	31.0		31.0	31.0	
Total Split (%)	11.8%	60.0%	60.0%	11.8%	60.0%	60.0%	28.2%	28.2%		28.2%	28.2%	
Maximum Green (s)	8.5	60.0	60.0	8.5	60.0	60.0	25.0	25.0		25.0	25.0	
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	4.5	4.5	4.5		4.5	4.5	
All-Red Time (s)	1.0	1.5	1.5	1.0	1.5	1.5	1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0			0.0	
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0	6.0		6.0			6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?		- 5	- 3		- 5							
Vehicle Extension (s)	3.0	7.0	7.0	3.0	7.0	7.0	4.0	4.0		4.0	4.0	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		12.0	12.0		12.0	12.0	18.0	18.0		18.0	18.0	
Pedestrian Calls (#/hr)		0	0		0	0	0	0		0	0	

SAT Exist Gewalt Hamilton Associates, Inc

	•	-	•	•	<b>←</b>	•	•	<b>†</b>	~	-	<b>↓</b>	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)	80.9	76.6	76.6	79.5	74.3	74.3		17.0			17.0	
Actuated g/C Ratio	0.74	0.70	0.70	0.72	0.68	0.68		0.15			0.15	
v/c Ratio	0.09	0.43	0.03	0.04	0.57	0.06		0.16			0.68	
Control Delay	5.1	10.3	0.4	5.0	13.7	2.1		23.7			50.9	
Queue Delay	0.0	0.6	0.0	0.0	0.0	0.0		0.0			0.0	
Total Delay	5.1	10.9	0.4	5.0	13.7	2.1		23.7			50.9	
LOS	Α	В	Α	Α	В	Α		С			D	
Approach Delay		10.0			12.6			23.7			50.9	
Approach LOS		Α			В			С			D	
Queue Length 50th (ft)	6	136	0	3	286	0		12			89	
Queue Length 95th (ft)	16	339	0	6	495	8		3			47	
Internal Link Dist (ft)		269			1120			1037			84	
Turn Bay Length (ft)	50		40	50		40						
Base Capacity (vph)	471	1379	1073	548	1337	1062		365			326	
Starvation Cap Reductn	0	405	0	0	0	0		0			0	
Spillback Cap Reductn	0	0	0	0	0	0		0			0	
Storage Cap Reductn	0	0	0	0	0	0		0			0	
Reduced v/c Ratio	0.08	0.61	0.03	0.04	0.57	0.06		0.11			0.48	

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 83 (75%), Referenced to phase 2:EBTL and 6:WBTL, Start of 1st Green

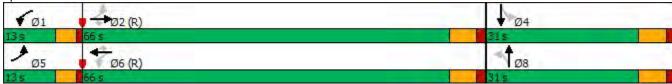
Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.68 Intersection Signal Delay: 15.3 Intersection Capacity Utilization 60.7%

Intersection LOS: B
ICU Level of Service B

Analysis Period (min) 15



Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Traffic Vol, veh/h	3	0	9	0	0	1	11	69	0	3	104	4
Future Vol, veh/h	3	0	9	0	0	1	11	69	0	3	104	4
Conflicting Peds, #/hr	11	0	34	34	0	11	2	0	4	4	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage,	# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	20	4	0	0	1	0
Mvmt Flow	3	0	9	0	0	1	12	73	0	3	109	4
Major/Minor N	linor2		1	Minor1			Major1		1	Major2		
Conflicting Flow All	228	220	147	257	222	88	115	0	0	77	0	0
Stage 1	119	119	-	101	101	-	-	-	-	-	-	-
Stage 2	109	101	-	156	121	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.3	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.38	-	-	2.2	-	-
Pot Cap-1 Maneuver	731	682	905	700	680	976	1369	-	-	1535	-	-
Stage 1	890	801	-	910	815	-	-	-	-	-	-	-
Stage 2	901	815	-	851	800	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	715	670	874	662	668	962	1366	-	-	1529	-	-
Mov Cap-2 Maneuver	715	670	-	662	668	-	-	-	-	-	-	-
Stage 1	880	798	-	898	804	-	-	-	-	-	-	-
Stage 2	883	804	-	813	797	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	9.4			8.7			1.1			0.2		
HCM LOS	Α			Α								
Minor Lane/Major Mvmt		NBL	NBT	NBR I	EBLn1V	VBLn1	SBL	SBT	SBR			
Capacity (veh/h)		1366	-	-		962	1529	-	-			
HCM Lane V/C Ratio		0.008	_	-		0.001		_	-			
HCM Control Delay (s)		7.7	0	-	9.4	8.7	7.4	0	-			
HCM Lane LOS		Α	A	-	Α	Α	Α	A	-			
HCM 95th %tile Q(veh)		0	-	-	0	0	0	-	-			

_		
Approach		
Approach Direction	NB	
Median Present?	No	
Approach Delay(s)	4.3	
Level of Service	A	
Crosswalk		
	20	
Length (ft)	32	
Lanes Crossed	2	
Veh Vol Crossed	173	
Ped Vol Crossed	0	
Yield Rate(%)	0	
Ped Platooning	No	
Critical Headway (s)	12.14	
Prob of Delayed X-ing	0.44	
Prob of Blocked Lane	0.25	
Delay for adq Gap	9.83	
Avg Ped Delay (s)	4.35	
Approach		
Approach Direction	SB	
Median Present?	No	
Approach Delay(s)	4.3	
Level of Service	A	
Crosswalk		
Length (ft)	32	
Lanes Crossed	2	
Veh Vol Crossed	173	
Ped Vol Crossed	0	
Yield Rate(%)	0	
Ped Platooning	No	
Critical Headway (s)	12.14	
Prob of Delayed X-ing	0.44	
Prob of Blocked Lane	0.25	
Delay for adq Gap	9.83	
Avg Ped Delay (s)	4.35	
- , ,		

	۶	<b>→</b>	•	•	<b>←</b>	•	4	†	<i>&gt;</i>	<b>/</b>	ţ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	*	<b>1</b>		7	<b>1</b>		7	<b>1</b>		*	<b>1</b>	
Traffic Volume (vph)	89	377	50	213	434	108	75	985	142	97	1146	95
Future Volume (vph)	89	377	50	213	434	108	75	985	142	97	1146	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105	1000	40	155	1000	0	155	1000	0	125	1000	0
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	65		•	75		J	95		V	95		J
Satd. Flow (prot)	1770	3521	0	1787	3482	0	1805	3494	0	1805	3493	0
Flt Permitted	0.235	0021	U	0.326	0402	U	0.077	0-10-1	U	0.092	0430	U
Satd. Flow (perm)	435	3521	0	612	3482	0	146	3494	0	174	3493	0
Right Turn on Red	700	0021	Yes	012	0402	Yes	170	0707	Yes	1/7	0400	Yes
Satd. Flow (RTOR)		14	163		26	163		17	163		12	163
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		238			315			1097			1406	
Travel Time (s)		6.5			8.6			24.9			32.0	
. ,	16	0.5	4	1	0.0	16	18	24.9	20	20	32.0	18
Confl. Peds. (#/hr) Peak Hour Factor	0.78	0.87	0.77	0.88	0.86	0.85	0.76	0.95	0.89	0.77	0.92	0.71
Heavy Vehicles (%)	2%	0%	2%	1%	0%	0%	0%	1%	0%	0%	1%	6%
Shared Lane Traffic (%)	444	400	0	0.40	000	0	00	4407	0	400	4000	0
Lane Group Flow (vph)	114	498	0	242	632	0	99	1197	0	126	1380	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7 4	4		38	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	6.5	20.5		6.5	20.5		6.5	45.5		6.5	39.5	
Total Split (s)	13.0	39.0		13.0	39.0		13.0	55.0		13.0	55.0	
Total Split (%)	10.8%	32.5%		10.8%	32.5%		10.8%	45.8%		10.8%	45.8%	
Maximum Green (s)	9.5	33.5		9.5	33.5		9.5	49.5		9.5	49.5	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.0		0.0	1.0		0.0	1.0		0.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	5.5		3.5	5.5		3.5	5.5		3.5	5.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?		ŭ.						ŭ.				
Vehicle Extension (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)		12.0			12.0			12.0			12.0	
Flash Dont Walk (s)		17.0			22.0			28.0			22.0	
Pedestrian Calls (#/hr)		0			0			0			0	

SAT No Build Gewalt Hamilton Associates, Inc

	۶	<b>→</b>	•	•	<b>←</b>	•	1	<b>†</b>	/	-	ţ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)	43.2	32.1		44.1	32.6		62.0	51.6		62.8	52.1	
Actuated g/C Ratio	0.36	0.27		0.37	0.27		0.52	0.43		0.52	0.43	
v/c Ratio	0.45	0.52		0.76	0.66		0.52	0.79		0.60	0.91	
Control Delay	29.0	38.3		44.2	40.6		26.5	34.4		29.1	41.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	29.0	38.3		44.2	40.6		26.5	34.4		29.1	41.9	
LOS	С	D		D	D		С	С		С	D	
Approach Delay		36.5			41.6			33.8			40.8	
Approach LOS		D			D			С			D	
Queue Length 50th (ft)	55	165		127	217		36	422		47	526	
Queue Length 95th (ft)	82	211		#201	265		57	516		72	#694	
Internal Link Dist (ft)		158			235			1017			1326	
Turn Bay Length (ft)	105			155			155			125		
Base Capacity (vph)	268	993		322	991		208	1513		221	1522	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.43	0.50		0.75	0.64		0.48	0.79		0.57	0.91	

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 60 (50%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.91 Intersection Signal Delay: 38.2 Intersection Capacity Utilization 80.7%

Intersection LOS: D
ICU Level of Service D

Analysis Period (min) 15

Queue shown is maximum after two cycles.



<sup># 95</sup>th percentile volume exceeds capacity, queue may be longer.

	۶	<b>→</b>	•	•	+	•	•	†	~	<b>/</b>	<b></b>	-√
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	*	<b>↑</b>	7	7	<b>↑</b>	7		4			4	
Traffic Volume (vph)	32	576	8	9	705	48	6	2	8	70	3	44
Future Volume (vph)	32	576	8	9	705	48	6	2	8	70	3	44
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50		40	50		40	0		0	0	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	0
Storage Lanes	1		1	1		1	0		0	0		0
Taper Length (ft)	50		-	50		•	25		-	25		-
Satd. Flow (prot)	1805	1980	1615	1626	1980	1615	0	1699	0	0	1684	0
Flt Permitted	0.249			0.369				0.903			0.797	
Satd. Flow (perm)	473	1980	1509	632	1980	1537	0	1542	0	0	1355	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			74			74		20			24	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		349			1200			1117			164	
Travel Time (s)		9.5			32.7			25.4			3.7	
Confl. Peds. (#/hr)	10		16	16		10	22		15	15		22
Peak Hour Factor	0.78	0.95	0.50	0.45	0.91	0.73	0.50	0.25	0.40	0.74	0.38	0.75
Heavy Vehicles (%)	0%	1%	0%	11%	1%	0%	0%	0%	0%	3%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	41	606	16	20	775	66	0	40	0	0	162	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	0.94	1.00	1.00	0.94	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8			4		
Detector Phase	5	2	2	1	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	8.0	8.0		8.0	8.0	
Minimum Split (s)	9.5	25.0	25.0	9.5	25.0	25.0	31.0	31.0		31.0	31.0	
Total Split (s)	13.0	66.0	66.0	13.0	66.0	66.0	31.0	31.0		31.0	31.0	
Total Split (%)	11.8%	60.0%	60.0%	11.8%	60.0%	60.0%	28.2%	28.2%		28.2%	28.2%	
Maximum Green (s)	8.5	60.0	60.0	8.5	60.0	60.0	25.0	25.0		25.0	25.0	
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	4.5	4.5	4.5		4.5	4.5	
All-Red Time (s)	1.0	1.5	1.5	1.0	1.5	1.5	1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0			0.0	
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0	6.0		6.0			6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?		- 5	- 3		- 5							
Vehicle Extension (s)	3.0	7.0	7.0	3.0	7.0	7.0	4.0	4.0		4.0	4.0	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		12.0	12.0		12.0	12.0	18.0	18.0		18.0	18.0	
Pedestrian Calls (#/hr)		0	0		0	0	0	0		0	0	

SAT No Build Gewalt Hamilton Associates, Inc

	•	-	•	•	<b>←</b>	•	•	<b>†</b>	~	-	<b>↓</b>	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)	80.4	76.1	76.1	79.0	73.8	73.8		17.5			17.5	
Actuated g/C Ratio	0.73	0.69	0.69	0.72	0.67	0.67		0.16			0.16	
v/c Ratio	0.10	0.44	0.01	0.04	0.58	0.06		0.15			0.69	
Control Delay	5.3	10.7	0.0	5.1	14.4	2.3		23.3			51.1	
Queue Delay	0.0	0.6	0.0	0.0	0.0	0.0		0.0			0.0	
Total Delay	5.3	11.3	0.0	5.1	14.4	2.3		23.3			51.1	
LOS	Α	В	Α	Α	В	Α		С			D	
Approach Delay		10.7			13.2			23.3			51.1	
Approach LOS		В			В			С			D	
Queue Length 50th (ft)	6	143	0	3	302	0		12			93	
Queue Length 95th (ft)	17	355	0	6	523	9		3			49	
Internal Link Dist (ft)		269			1120			1037			84	
Turn Bay Length (ft)	50		40	50		40						
Base Capacity (vph)	451	1370	1067	538	1328	1055		365			326	
Starvation Cap Reductn	0	395	0	0	0	0		0			0	
Spillback Cap Reductn	0	0	0	0	0	0		0			0	
Storage Cap Reductn	0	0	0	0	0	0		0			0	
Reduced v/c Ratio	0.09	0.62	0.01	0.04	0.58	0.06		0.11			0.50	

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 83 (75%), Referenced to phase 2:EBTL and 6:WBTL, Start of 1st Green

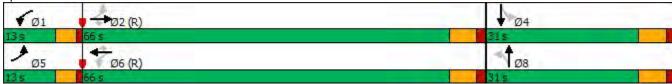
Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.69 Intersection Signal Delay: 16.1 Intersection Capacity Utilization 61.7%

Intersection LOS: B
ICU Level of Service B

Analysis Period (min) 15



Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Traffic Vol, veh/h	3	0	9	0	0	1	11	71	0	3	108	4
Future Vol, veh/h	3	0	9	0	0	1	11	71	0	3	108	4
Conflicting Peds, #/hr	11	0	34	34	0	11	2	0	4	4	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage,	# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	20	4	0	0	1	0
Mvmt Flow	3	0	9	0	0	1	12	75	0	3	114	4
Major/Minor N	/linor2		ı	Minor1			Major1		N	Major2		
Conflicting Flow All	235	227	152	264	229	90	120	0	0	79	0	0
Stage 1	124	124	-	103	103	-	-	-	-	-	-	-
Stage 2	111	103	-	161	126	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.3	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.38	-	-	2.2	-	-
Pot Cap-1 Maneuver	724	676	900	693	674	973	1363	-	-	1532	-	-
Stage 1	885	797	-	908	814	-	-	-	-	-	-	-
Stage 2	899	814	-	846	796	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	708	665	869	655	663	959	1360	-	-	1526	-	-
Mov Cap-2 Maneuver	708	665	-	655	663	-	-	-	-	-	-	-
Stage 1	875	794	-	896	803	-	-	-	-	-	-	-
Stage 2	881	803	-	808	793	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	9.4			8.8			1			0.2		
HCM LOS	Α			Α								
Minor Lane/Major Mvmt	t	NBL	NBT	NBR I	EBLn1V	VBLn1	SBL	SBT	SBR			
Capacity (veh/h)		1360	-	-	822	959	1526	-	-			
HCM Lane V/C Ratio		0.009	-	-		0.001		-	-			
HCM Control Delay (s)		7.7	0	-	9.4	8.8	7.4	0	-			
HCM Lane LOS		Α	A	-	Α	Α	Α	A	-			
HCM 95th %tile Q(veh)		0	-	-	0	0	0	-	-			

-	
Approach	
Approach Direction	NB
Median Present?	No
Approach Delay(s)	4.5
Level of Service	A
Crosswalk	
Length (ft)	32
Lanes Crossed	2
Veh Vol Crossed	179
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
3	
Critical Headway (s)	12.14
Prob of Delayed X-ing	0.45
Prob of Blocked Lane	0.26
Delay for adq Gap	9.99
Avg Ped Delay (s)	4.53
Approach	
Approach Direction	SB
Median Present?	No
Approach Delay(s)	4.5
Level of Service	A
0 "	•
Crosswalk	
Length (ft)	32
Lanes Crossed	2
Veh Vol Crossed	179
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	12.14
Prob of Delayed X-ing	0.45
Prob of Blocked Lane	0.45
Delay for adq Gap	9.99
Avg Ped Delay (s)	4.53
ring I ca bolay (3)	7.00

	۶	<b>→</b>	•	•	<b>←</b>	•	•	†	~	<b>/</b>	<b>↓</b>	✓
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	*	<b>1</b>		*	<b>†</b> 1>		*	<b>1</b>		*	<b>1</b>	
Traffic Volume (vph)	89	380	50	215	436	110	75	985	143	97	1146	95
Future Volume (vph)	89	380	50	215	436	110	75	985	143	97	1146	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105	,,,,,	40	155		0	155		0	125		0
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	65		-	75		-	95		•	95		
Satd. Flow (prot)	1770	3513	0	1787	3467	0	1805	3485	0	1805	3486	0
Flt Permitted	0.233			0.323			0.078			0.091		
Satd. Flow (perm)	429	3513	0	600	3467	0	148	3485	0	172	3486	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			26			17			12	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		238			315			1097			1406	
Travel Time (s)		6.5			8.6			24.9			32.0	
Confl. Peds. (#/hr)	36		24	24		36	38		40	40		38
Peak Hour Factor	0.78	0.87	0.77	0.88	0.86	0.85	0.76	0.95	0.89	0.77	0.92	0.71
Heavy Vehicles (%)	2%	0%	2%	1%	0%	0%	0%	1%	0%	0%	1%	6%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	114	502	0	244	636	0	99	1198	0	126	1380	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12	<b>J</b>		12	<b>J</b>		12	<b>J</b> -		12	<b>J</b>
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7 4	4		38	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	6.5	20.5		6.5	20.5		6.5	45.5		6.5	39.5	
Total Split (s)	13.0	39.0		13.0	39.0		13.0	55.0		13.0	55.0	
Total Split (%)	10.8%	32.5%		10.8%	32.5%		10.8%	45.8%		10.8%	45.8%	
Maximum Green (s)	9.5	33.5		9.5	33.5		9.5	49.5		9.5	49.5	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.0		0.0	1.0		0.0	1.0		0.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	5.5		3.5	5.5		3.5	5.5		3.5	5.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)		12.0			12.0			12.0			12.0	
Flash Dont Walk (s)		17.0			22.0			28.0			22.0	
Pedestrian Calls (#/hr)		0			0			0			0	

SAT Total Gewalt Hamilton Associates, Inc

	•	<b>→</b>	$\rightarrow$	•	•	•	4	<b>†</b>	<b>/</b>	-	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)	43.2	32.2		44.1	32.6		61.9	51.6		62.8	52.0	
Actuated g/C Ratio	0.36	0.27		0.37	0.27		0.52	0.43		0.52	0.43	
v/c Ratio	0.45	0.53		0.78	0.66		0.52	0.79		0.60	0.91	
Control Delay	29.0	38.4		45.6	40.8		26.2	34.6		29.4	42.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	29.0	38.4		45.6	40.8		26.2	34.6		29.4	42.2	
LOS	С	D		D	D		С	С		С	D	
Approach Delay		36.6			42.1			33.9			41.1	
Approach LOS		D			D			С			D	
Queue Length 50th (ft)	55	167		129	219		36	424		47	526	
Queue Length 95th (ft)	82	212		#209	267		56	518		73	#695	
Internal Link Dist (ft)		158			235			1017			1326	
Turn Bay Length (ft)	105			155			155			125		
Base Capacity (vph)	267	990		318	987		209	1507		220	1518	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.43	0.51		0.77	0.64		0.47	0.79		0.57	0.91	

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 60 (50%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.91 Intersection Signal Delay: 38.5 Intersection Capacity Utilization 85.8%

Intersection LOS: D
ICU Level of Service E

Analysis Period (min) 15

Queue shown is maximum after two cycles.



<sup># 95</sup>th percentile volume exceeds capacity, queue may be longer.

	ၨ	<b>→</b>	•	•	+	•	•	<b>†</b>	~	<b>/</b>	ţ	-√
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	*	<b>↑</b>	7	7	<b>↑</b>	7		4			4	
Traffic Volume (vph)	37	576	8	9	705	51	6	2	8	73	3	50
Future Volume (vph)	37	576	8	9	705	51	6	2	8	73	3	50
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50		40	50		40	0		0	0	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	0
Storage Lanes	1		1	1		1	0		0	0		0
Taper Length (ft)	50			50			25			25		
Satd. Flow (prot)	1805	1980	1615	1626	1980	1615	0	1661	0	0	1648	0
Flt Permitted	0.234			0.371				0.902			0.801	
Satd. Flow (perm)	445	1980	1418	635	1980	1445	0	1493	0	0	1302	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			74			74		20			27	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		349			1200			1117			164	
Travel Time (s)		9.5			32.7			25.4			3.7	
Confl. Peds. (#/hr)	30		36	36		30	42		35	35		42
Peak Hour Factor	0.78	0.95	0.50	0.45	0.91	0.73	0.50	0.25	0.40	0.74	0.38	0.75
Heavy Vehicles (%)	0%	1%	0%	11%	1%	0%	0%	0%	0%	3%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	47	606	16	20	775	70	0	40	0	0	174	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	0.94	1.00	1.00	0.94	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8			4		
Detector Phase	5	2	2	1	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	8.0	8.0		8.0	8.0	
Minimum Split (s)	9.5	25.0	25.0	9.5	25.0	25.0	31.0	31.0		31.0	31.0	
Total Split (s)	13.0	66.0	66.0	13.0	66.0	66.0	31.0	31.0		31.0	31.0	
Total Split (%)	11.8%	60.0%	60.0%	11.8%	60.0%	60.0%	28.2%	28.2%		28.2%	28.2%	
Maximum Green (s)	8.5	60.0	60.0	8.5	60.0	60.0	25.0	25.0		25.0	25.0	
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	4.5	4.5	4.5		4.5	4.5	
All-Red Time (s)	1.0	1.5	1.5	1.0	1.5	1.5	1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0			0.0	
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0	6.0		6.0			6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?		3	3		3							
Vehicle Extension (s)	3.0	7.0	7.0	3.0	7.0	7.0	4.0	4.0		4.0	4.0	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		12.0	12.0		12.0	12.0	18.0	18.0		18.0	18.0	
Pedestrian Calls (#/hr)		0	0		0	0	0	0		0	0	

SAT Total Gewalt Hamilton Associates, Inc

	•	-	•	•	<b>←</b>	•	•	<b>†</b>	~	-	<b>↓</b>	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)	79.6	75.3	75.3	77.1	70.8	70.8		18.4			18.4	
Actuated g/C Ratio	0.72	0.68	0.68	0.70	0.64	0.64		0.17			0.17	
v/c Ratio	0.12	0.45	0.02	0.04	0.61	0.07		0.15			0.73	
Control Delay	5.7	11.2	0.0	5.3	16.1	2.6		22.9			53.1	
Queue Delay	0.0	0.6	0.0	0.0	0.0	0.0		0.0			0.0	
Total Delay	5.7	11.8	0.0	5.3	16.1	2.6		22.9			53.1	
LOS	Α	В	Α	Α	В	Α		С			D	
Approach Delay		11.1			14.7			22.9			53.1	
Approach LOS		В			В			С			D	
Queue Length 50th (ft)	8	150	0	3	314	0		12			99	
Queue Length 95th (ft)	19	356	0	6	527	11		3			51	
Internal Link Dist (ft)		269			1120			1037			84	
Turn Bay Length (ft)	50		40	50		40						
Base Capacity (vph)	429	1355	993	532	1274	956		354			316	
Starvation Cap Reductn	0	384	0	0	0	0		0			0	
Spillback Cap Reductn	0	0	0	0	0	0		0			0	
Storage Cap Reductn	0	0	0	0	0	0		0			0	
Reduced v/c Ratio	0.11	0.62	0.02	0.04	0.61	0.07		0.11			0.55	

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 83 (75%), Referenced to phase 2:EBTL and 6:WBTL, Start of 1st Green

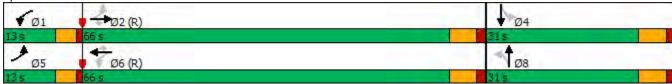
Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.73 Intersection Signal Delay: 17.3 Intersection Capacity Utilization 64.1%

Intersection LOS: B
ICU Level of Service C

Analysis Period (min) 15



Intersection												
Int Delay, s/veh	1.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Traffic Vol, veh/h	3	0	18	0	0	1	19	71	0	3	108	4
Future Vol, veh/h	3	0	18	0	0	1	19	71	0	3	108	4
Conflicting Peds, #/hr	31	0	54	54	0	31	22	0	24	24	0	22
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	_	-	None	_	_	None	_	_	None	-	_	None
Storage Length	-	_	_	_	-	-	_	_	-	-	_	-
Veh in Median Storage,	# -	0	_	_	0	_	_	0	-	-	0	-
Grade, %	_	0	-	-	0	_	_	0	_	_	0	_
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	20	4	0	0	1	0
Mvmt Flow	3	0	19	0	0	1	20	75	0	3	114	4
Major/Minor N	/linor2		1	Minor1			Major1		N	Major2		
Conflicting Flow All	291	283	192	325	285	130	140	0	0	99	0	0
Stage 1	144	144	-	139	139	-	-	_	-	-	_	_
Stage 2	147	139	-	186	146	-	_	_	_	_	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.3	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	_	_	-	_	-
Critical Hdwy Stg 2	6.1	5.5	_	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.38	_	_	2.2	-	_
Pot Cap-1 Maneuver	665	629	855	632	628	925	1340	-	-	1507	-	-
Stage 1	864	782	-	869	785	-	-	_	_	-	_	_
Stage 2	860	785	-	820	780	-	-	-	-	-	-	-
Platoon blocked, %								_	_		-	_
Mov Cap-1 Maneuver	622	591	794	564	590	877	1312	-	-	1473	_	_
Mov Cap-2 Maneuver	622	591	-	564	590	_	-	_	_	-	_	_
Stage 1	832	764	-	836	754	_	-	-	-	-	-	-
Stage 2	820	754	-	758	762	_	_	_	_	_	_	-
		. • 1		. 55								
Approach	EB			WB			NB			SB		
HCM Control Delay, s	9.9			9.1			1.6			0.2		
HCM LOS	Α			Α								
Minor Lane/Major Mvmt	t e	NBL	NBT	NBR I	EBLn1V	VBLn1	SBL	SBT	SBR			
Capacity (veh/h)		1312	-	-	764	877	1473	-	-			
HCM Lane V/C Ratio		0.015	-	-	0.029	0.001	0.002	-	-			
HCM Control Delay (s)		7.8	0	-	9.9	9.1	7.4	0	-			
HCM Lane LOS		Α	Α	-	Α	Α	Α	Α	-			
HCM 95th %tile Q(veh)		0	-	-	0.1	0	0	-	-			

Approach		
Approach Direction	NB	
Median Present?	No	
Approach Delay(s)	4.5	
Level of Service	A	
Crosswalk		
	32	
Length (ft)		
Lanes Crossed	2	
Veh Vol Crossed	179	
Ped Vol Crossed	0	
Yield Rate(%)	0	
Ped Platooning	No	
Critical Headway (s)	12.14	
Prob of Delayed X-ing	0.45	
Prob of Blocked Lane	0.26	
Delay for adq Gap	9.99	
Avg Ped Delay (s)	4.53	
Approach		
Approach Direction	SB	
Median Present?	No	
Approach Delay(s)	4.5	
Level of Service	4.5 A	
LEVEL OF SELVICE	A	
Crosswalk		
Length (ft)	32	
Lanes Crossed	2	
Veh Vol Crossed	179	
Ped Vol Crossed	0	
Yield Rate(%)	0	
Ped Platooning	No	
Critical Headway (s)	12.14	
Prob of Delayed X-ing	0.45	
Prob of Blocked Lane	0.26	
Delay for adq Gap	9.99	
Avg Ped Delay (s)	4.53	

# APPENDIX H RUSH Oak Park Hospital Letter



Tel: 708.660.6660 Fax: 708.660.6658 dino\_rumoro@rush.edu www.roph.org



**Dino P.Rumoro, DO, MPH, FACEP**President and Chief Executive Officer

April 30, 2024

Oak Park Project Review Team Development Services Department Village of Oak Park 123 Madison Street Oak Park, IL 603032

## SUBJECT: Conversation between RUSH Oak Park Hospital and Keystone Apartments Development Team regarding the possible leasing of parking spaces

Dear Planned Development Project Review Team,

I am reaching out in reference to the status of a recent conversation between RUSH Oak Park Hospital and Keystone Apartments regarding overnight and weekend parking for tenants at the proposed development at 1106 Madison Street.

On Monday, March 4, 2024, both parties discussed Keystone Apartment's need for leasing nearby parking spaces. It's our understanding that the need to lease these parking spaces would not be required until the Fall of 2026, at the earliest. The proposed timeline of this project provides the hospital with ample time to assess if extra parking may be available for lease on its campus.

We feel it's possible that the hospital will be able to provide a limited number of spaces for Keystone Apartments to lease for overnight and weekend parking should the need arise come the Fall of 2026.

This arrangement aligns with our commitment to supporting initiatives that enhance the well-being and quality of life of our community members.

Should you have any questions or require further information, please do not hesitate to contact me directly.

Thank you for your continued partnership and support.

Sincerely,

Dino P. Rumoro, DO, MPH, FACEP

President and CEO | RUSH Oak Park Hospital

ino P. aumoro, D., MPH, FACEP

Professor of Emergency Medicine

Rush is a not-for-profit health care, education and research enterprise comprising Rush University Medical Center, Rush University, Rush Oak Park Hospital and Rush Health.

8. Development Drawings*

#### WEESELANGLEYKLEIN

Response to architectural comments in 3/22/24 Planned Development Application Review 1106 Madison St.

Oak Park

- 1.c. The request for Relief from the proposed Illumination Plans footcandle along the front property line has been provided by Maureen Mahr Lighting Design.
- 3. The completed Enterprise Green Communities Criteria Checklist for this project has been provided.
- 5. We are integrating public art into the design of the façade in a way that is consistent with historic Chicago architecture. The art is incorporated in a way that is intended to recall how art was incorporated in buildings by Louis Sullivan and other architects. This site does not allow for placing a sculpture on the sidewalk in front of the building, and the east and west walls of the building can't be used for public art as these walls may be covered up at some point in the future. These artist-designed spandrel panels will be clearly visible by pedestrians across the street.
- 8. Response to the review memorandum from Wight & Co.: Please see the attached updated renderings and the revised wall section on sheet A9. Depth and shadow has been added per the comments from Wight & Co. by:
  - projecting the bottom of the metal cornice at the top of the building out 2" from the face of the brick
  - projecting the stone belt course at the top of the fifth floor windows out 2" from the face of the brick
  - projecting all of the stone headers at the top of the windows out 2" from the face of the brick
  - projecting all of the stone window sills out 2" from the face of the brick
  - projecting the stone belt course at the second floor window sill level out 2" from the face of the brick, and projecting the stone band above the belt course out 1-1/2" from the face of the belt course
- 9. The plan has been revised at the rear of the building so that the columns do not conflict with the required width of the parking spaces.
- 12.f. A foundation easement and a canopy and cornice easement will be required. These have been identified on the site plan.
- 12.g. Please see the revised Utility Plan Exhibit from Eriksson Engineering Associates
- 12.h. Please see the revised Utility Plan Exhibit from Eriksson Engineering Associates. The building load will not be placed on the water pipe. The foundation wall will extend below the water pipe, with the footing below the water pipe, and there will be an isolation sleeve where the water pipe passes through the foundation wall. This is noted on the revised Utility Plan Exhibit.
- 12.1. Notes have been added on the Site Plan, sheet A1, indicating that the alley will be patched after completion of construction, and the sidewalk and curb are to be replaced along the building frontage.
- 12.j. A drawing sheet has been added in the drawings showing the Delivery Truck vehicle used for the turning template into the Loading Zone on the Site Plan

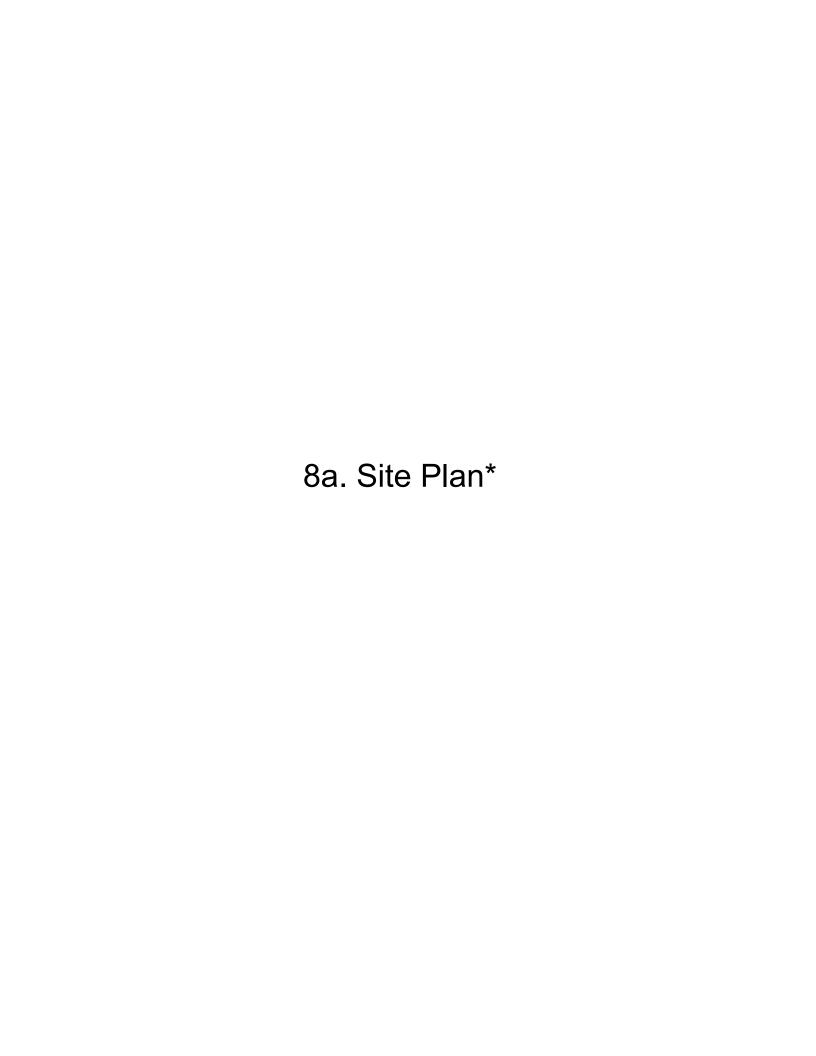
ph 312 642 1820

# WEESELANGLEYKLEIN

- 12.k. A note has been added on the Site Plan indicating that Madison St. is to be resurfaced and restriped for the area impacted by the construction staging. Any areas with temporary striping to be restriped.
- 12.l. It is anticipated that the electric service will be an overhead electric service from a pole and transformer in the alley, similar to the existing overhead electric services for the other buildings on Madison Street. The location for the electric service weatherhead on the building and conduit from the weatherhead to the Electric Room inside the building have been added on the Site Plan and the building elevation drawings. An emergency generator will be provided and it is shown on the Roof Plan.
- 15. All of the specified plants on the Landscape Plan are shade resistant. This has been verified with the Landscape Architect.
- 16. Updated Shadow Study will be provided as requested.
- 17.a. The fire pump room will be enclosed in fire barriers and horizontal assemblies per IBC Section 913.2.1.
- 17.b. The fire pump room will have only fire sprinkler related equipment
- 17.c. Emergency responder communication coverage will be provided per Section 510 of the International Fire Code.
- 17.d. An emergency generator for standby power for the elevator will be provided and it is shown on the Roof Plan.
- 17.e. The generator will also power the fire pump
- 17.f. Fire Department access key boxes (Knoxboxes) will be provided at the front entrance and in the rear where the sprinkler room access will be provided.
- 17.g. The elevator as shown is a 4000 lbs. capacity elevator with interior cab dimensions that accommodate a stretcher. Please see the dimensions added on the plans. Backup power will be provided for the elevator.
- Per: Rich Klein

Weese Langley Klein Architects Ltd.

ph 312 642 1820



# KEYSTONE APARTMENTS

# 1106 MADISON STREET, OAK PAK, IL

SITE AREA:

# DEVELOPMENT TEAM

PRIMARY SPONSOR CONSTRUCTION GUARANTOR INTERFAITH HOUSING DEVELOMENT CORP. 411 S. WELLS STREET, SUITE 401 CHICAGO, IL 60607 PHONE: 312-274-8200, X25 E-MAIL: pviettioihdc.org CONTACT: PERRY VIĔTTI

WEESE LANGLEY WEESE ARCHITECTS LTD. 20 W. HUBBARD ST. CHICAGO IL PHONE: 312-642-1820 E-MAIL: rklein@wlwltd.com CONTACT: RICH KLEIN

# MEP/FP

ELEMENT ENERGY CONSULTING LLC 11 N. NORTHWEST HIGHWAY, SUITE 107 PARK RIDGE, IL 60068 PHONE: 312-620-9984 E-MAIL: robcelement-co.com CONTACT: ROB OLDEN

# CIVIL

ERIKSSON ENGINEERING 145 COMMERCE DR, SUITE A GRAYSLAKE, IL 60030 PHONE: 847-223-4804 E-MAIL: mrenner@eea-ltd.com CONTACT: MIKE RENNER

INTERFAITH HOUSING DEVELOMENT CORP. 411 S. WELLS STREET, SUITE 401 CHICAGO, IL 60607 PHONE: 312-274-8200, X25 E-MAIL: pviettioihdc.org CONTACT: PERRY VIĔTTI

# GENERAL CONTRACTOR

HENRY BROS. CO. 9821 S. 78TH AVE. HICKORY HILLS, IL 60457 PHONE: 708-430-5400 E-MAIL: tobrien@henrybros.com CONTACT: TOM O'BRIEN

# STRUCTURAL

FOREFRONT STRUCTURAL ENGINEERS. INC. 25 E. WASHINGTON ST., SUITE 1450 CHICAGO IL, 60602 PHONE: 312-376-1140 E-MAIL: jdortzbachoforefrontstructural.com CONTACT: JOSH DORTZBACH

# BUILDING DATA:

8,925 SQ. FT. (0.2 ACRES) BUILDING AREA: FIRST FLOOR: 5,623 SQ. FT. 6,457 SQ. FT. 2ND FLOOR: 3RD FLOOR: 6,457 SQ. FT. 4TH FLOOR: 6,457 SQ. FT. 6,457 SQ. FT. 5TH FLOOR: TOTAL AREA: 31,451 SQ. FT. BUILDING HEIGHT: 56'-4"

GOVERNING CODE: IBC 2021 EDITION

CONSTRUCTION TYPE: 3-A

FULLY SPRINKLERED PER NFPA 13

UNIT SUMMARY:

(6) 1-BEDRM UNITS PER TYP. FLR X 4 FLRS = 24 1-BR'S (3) EFFICIENCIES PER TYP. FLR X 4 FLRS = 12 EFFICIENCIES

# UNIT AREAS:

(20) 525 SQ. FT. 1-BEDRM. UNITS (4) 545 SQ. FT. 1-BEDRM. UNITS (12) 420 SQ. FT. EFFICIENCY UNITS

#### UNIT ACCESSIBILITY MATRIX

UNITS:	SECTION 504*:	ICC/ANSI A117.1 TYPE A:	IAC ADAPTABLE:	FFHA ADAPTABLE**:	TOTAL
GROUND FLOOR	0	0	0	0	0
2ND FLOOR	1	1	2	5	9
3RD FLOOR	1	1	1	6	9
4TH FLOOR	0	0	3	6	9
5TH FLOOR	<u>O</u>	<u>O</u>	2	7	9
UNIT TOTAL:	2	2	8	24	36

36 UNITS

A6

\*\* ONE FFHA ADAPTABLE UNIT TO BE SENSORY IMPAIRED UNIT

#### (36) UNITS TOTAL

WEESE LANGLEY WEESE ARCHITECTS LTD.

drawn RNK checked RNK job no.

date 06-19-24

scale N.A. sheets 1 OF 14

1106 MADISON STREET OAK PARK, ILLINOIS

TITLE SHEET

KEYSTONE APARTMENTS

DRAWING LIST:

Title Sheet

First Floor Plan

South Elevation

A5-c Streetscape Elevation

West Elevation

East Elevation

North Elevation

Typical Floor Plan

A5-a Precedents- Spandrel Art

A5-b Spandrel Basis of Design

Exterior Wall Section

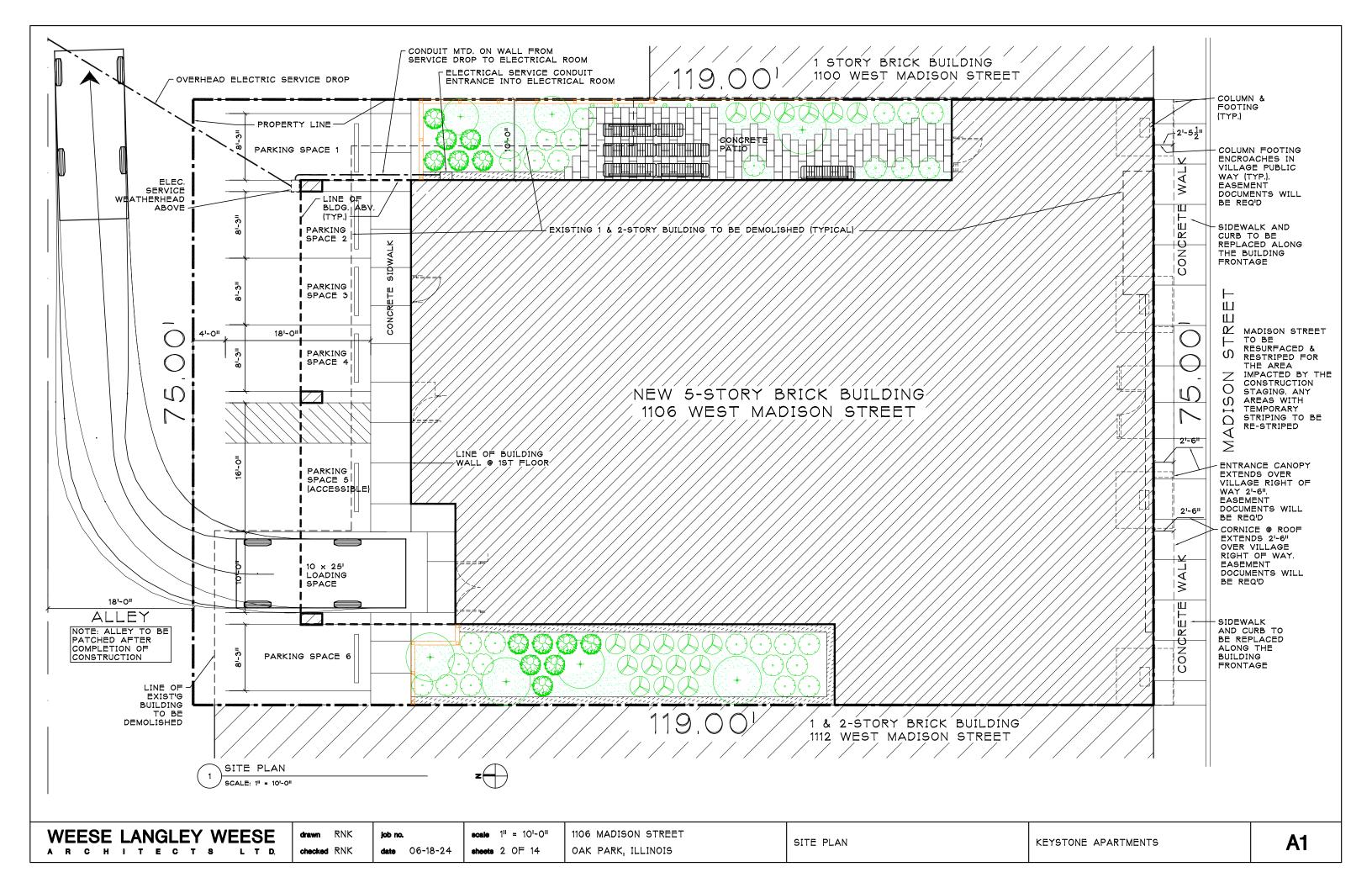
Truck used for Template

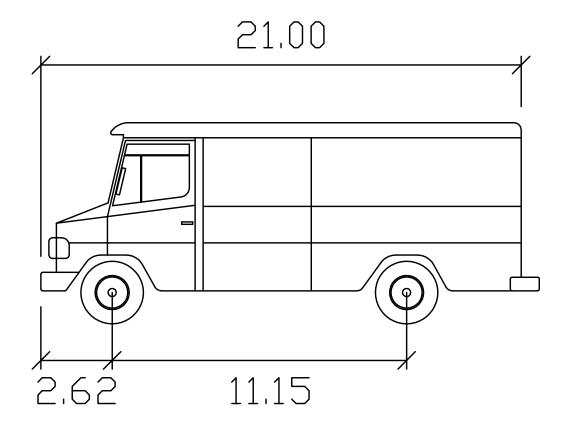
Site Plan

Roof Plan

T1

SECTION 504 UNITS ARE FULLY ACCESSIBLE & ALSO MEET ICC/ANSI A117.1 TYPE A REQUIREMENTS





Delivery Truck feet

Width : 8.53

Track : 8.53

Lock to Lock Time : 6.00

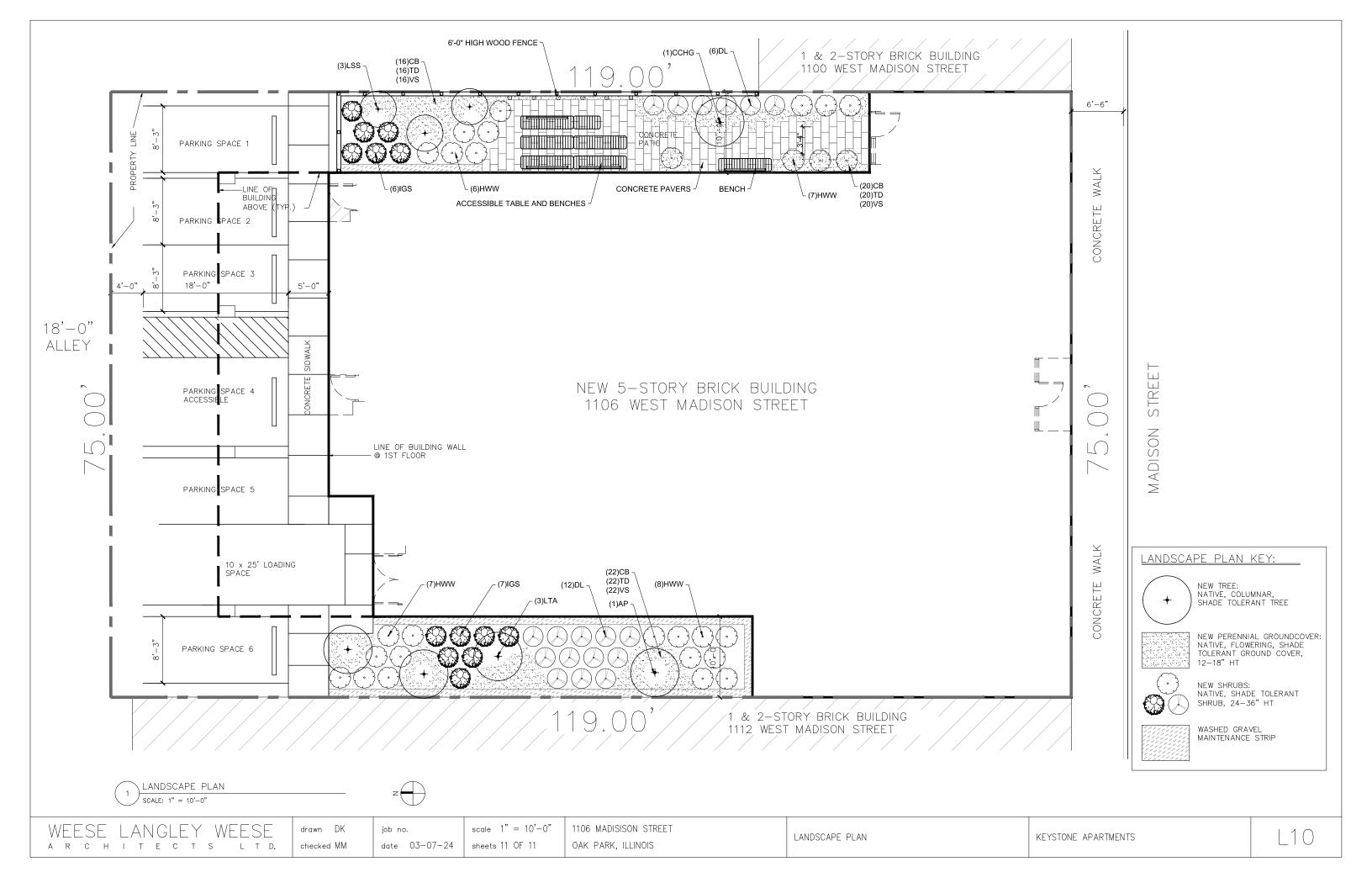
Steering Angle : 40.8

TRUCK USED FOR SITE PLAN TURNING TEMPLATE KEYSTONE APARTMENTS

W	/E	ES	βE	L	A۱	١G	LE	ΞΥ	W	/EESE
A	R	С	н	1	Т	E	C	Т	S	L T D.

drawn	RNK
checked	RNK

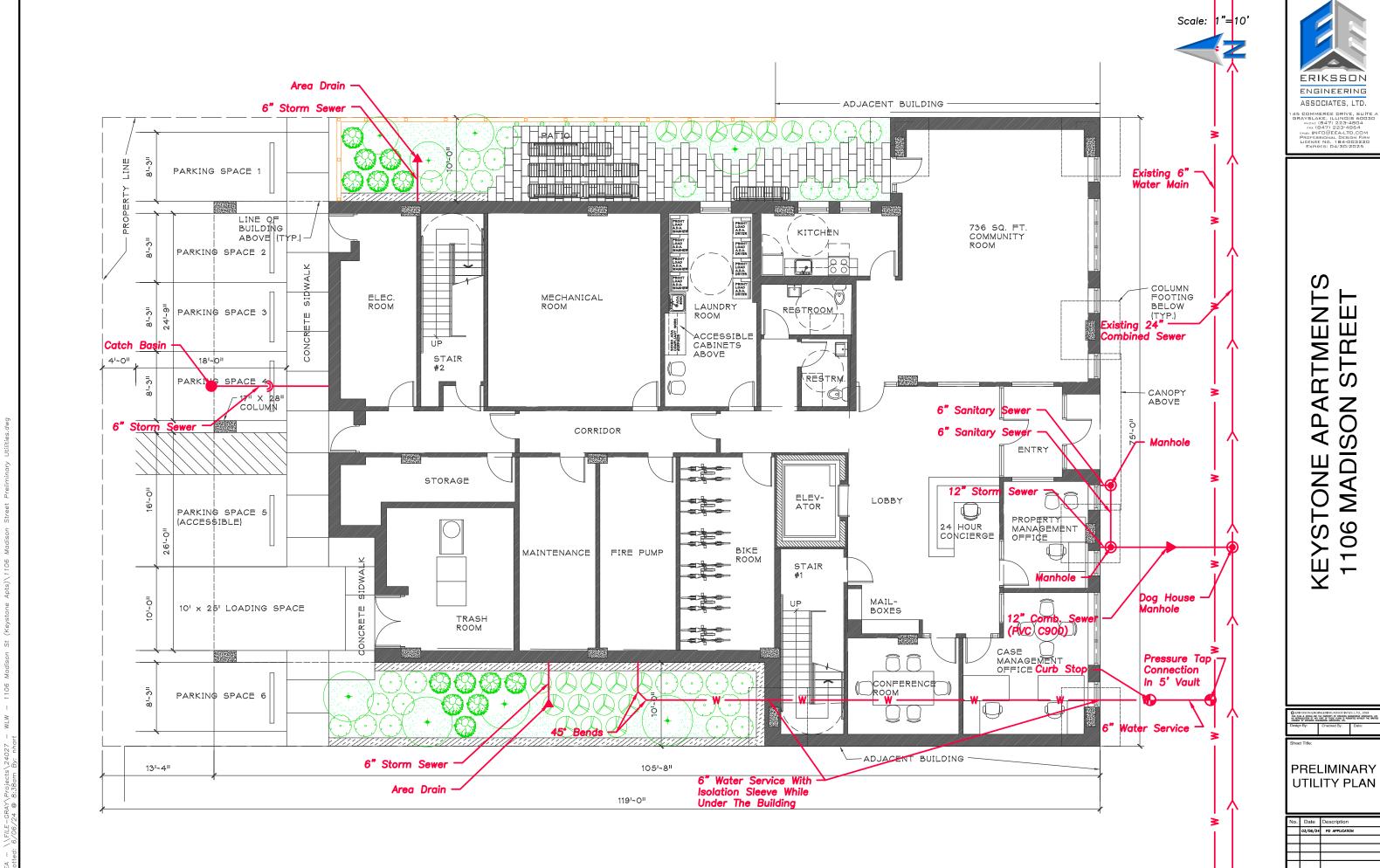
8b. Landscape Plan\*



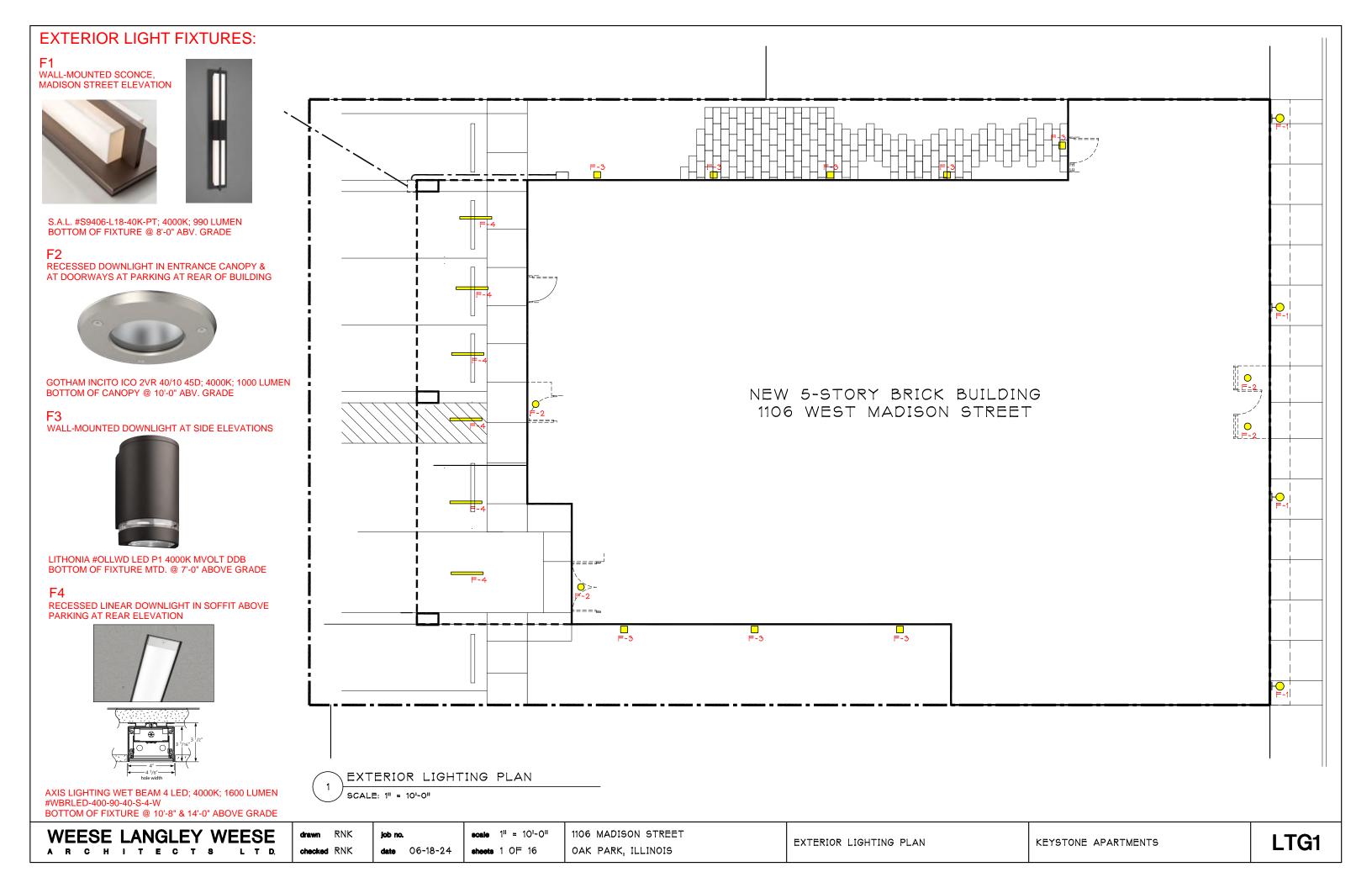
# **PLANTING LIST**

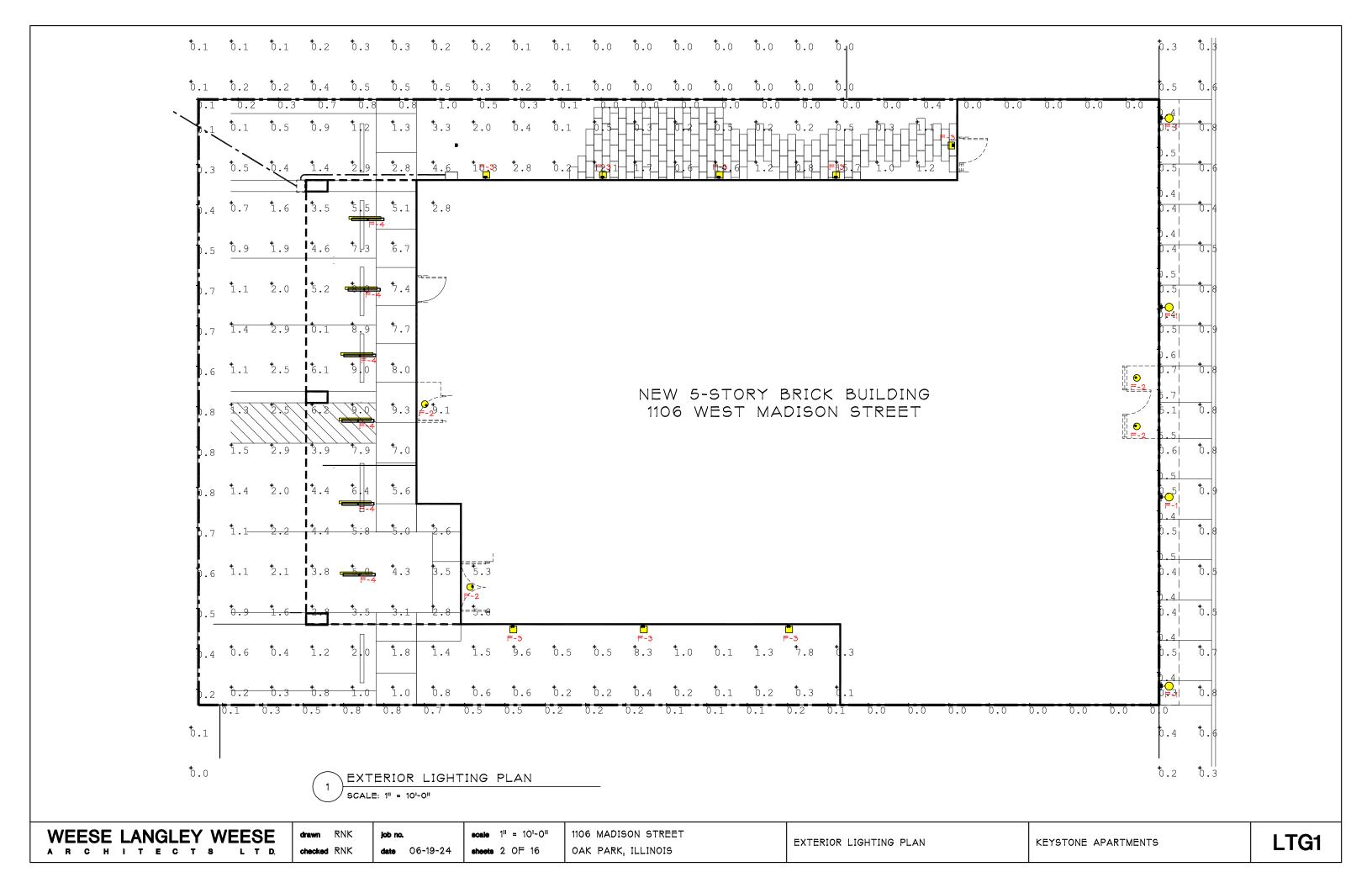
BOTANICAL NAME	COMMON NAME	QTY	SIZE	COMMENTS
TREES				
AP AECULUS PAVIA	RED BUCKEYE	1	6'	MULTI-STEM
CCHG CERCIS CANADENSIS 'HEARTS OF GOLD'	HEARTS OF GOLD REDBUD	1	4"	6' CLEAR
LSS LIQUIDAMBAR STYRACIFLUA 'SLENDER SILHOUETTE'	SLENDER SILHOUETTE SWEET GUM	3	2.5"	3' CLEAR
LTA LIRIODENDRON TULIPIFERA 'ARNOLD'	ARNOLD TULIP TREE	3	2.5"	3' CLEAR
SHRUBS				
DL DIERVILLA LONICERA	DWARF BUSH HONEYSUCKLE	18	#5	
HWW HYDRANGEA ARBORESCENS 'WEE WHITE'	WEE WHITE HYDRANGEA	28	#5	
IGS ILEX GLABRA 'SHAMROCK'	SHAMROCK INKBERR	13	#5	
PERENNIAL GROUNDCOVER				
CB CAREX BLANDA	COMMON WOOD SEDGE	58	#1	15" OC
TD THALICTRUM DIOICUM	EARLY MEADOW RUE	58	#1	15" OC
VS VIOLA SORORIA	COMMON BLUE VIOLET	58	#1	15" OC











# \$9405 Series Ser

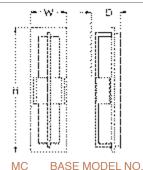








# **DIMENSIONS**



W	Н	D	MC BASE MODEL N
6"	21"	5"	10 1/2" <b>S9405-L14</b>
6"	27"	5"	13 1/2" <b>S9406-L18</b>
6"	38"	5"	19" <b>S9407-L24</b>

# **SPECIFICATIONS**

Driver: 0-10V dimming to 1%, 120/277

Mounting: Mounts to all Standard Electrical Junction Boxes (by others) With Hardware Provided. Silicone Seal Required (by others).

# **FEATURES**

- Smooth Opal Acrylic Lens
- Solid Aluminum Material
- UL Listed for Wet Location
- LED 0-10V Dimming Driver

# ORDER AS A COMPLETE UNIT:

Model No. + Lamp Code + CCT + Finish + Option Code

S9405-L14 S9406-L18 S9407-L24	+	27K 30K 35K	+	PT BA	+	Option
39407-LZ4		40K				

# **FINISHES**

BA Brushed Aluminum PT Powder Coated Finishes\*

\*(Specify Color Code from the list of Powder Coating Finishes [except interior only metallics])

## **OPTIONS**

BAC Buy America; Buy American Act; and Build America, Buy America Act Compliant.

EML Remote 10W Emergency LED Battery Backup

# LIGHT OUTPUT

LXX = ~ 55 LPW Delivered Lumens (Example: L14= 14 x 55 = 770 Lumens)

\*\* Try our new **Shimmer Metalic Paints**, Formulated for Exterior Conditions.







# gotham® INCITO™



Luminaire Type: Catalog Number:









# Multiple Layers of Light

# Keystone Apartments F-2 Fixture

High Center Beam Round Vandal/Tamper Resistant Downlight

2"

# **Feature Set**

- Eleven optimized distribution patterns allow designers to achieve tailored objectives
- · Field interchangeable optic
- Driver and LED light engine fully serviceable from below ceiling
- 70% lumen maintenance at 60,000 hours
- 2.5 SDCM; 85 CRI typical, 90+ CRI optional
- IP66 rated room-side, fixtures are wet location, covered ceiling
- ENERGY STAR® Certified product
- IK10 impact resistant construction with 1/4" polycarbonate lens
- · Tamper resistant design
- Ultra-shallow profile
- Can be paired with complimentary recessed adjustable vandal & tamper resistant luminaires Available with painted or plated finishes



KEYSTONE APARTMENTS
TYPE F-2

# Distribution

15° beam angle	20° beam angle	25° beam angle	30° beam angle	35° beam angle	40° beam angle	45° beam angle				
A							w			
Superior	Performanc	е					35°x15°	50°x20°	50°x60°	60°x70°

#### Nominal 2000 250 500 750 1000 1500 Delivered 192 408 626 857 1285 1623 19.7 28.4 Wattage 3 1 56 86 12 0 Efficacy 62 72 72 65 73 57

# **Coordinated Apertures I Multiple Layers of Light**







**High Center Beam Layer I Incito** 



EVO + Incito — Multiple Layers of Light



<sup>\*</sup>Based on 3500K 80CRI 15D

2"



Luminaire Type:
Catalog Number:

## EXAMPLE: ICO2VR 35/10 SOL 20D MVOLT UGZ DWHG

Series		Color	Temperature	Lume	ens	Lensing		Beam		Voltage	
ICO2VR	Incito 2in Round Van- dal/Tamper Resistant Downlight	27/ 30/ 35/ 40/ 50/1	2700 K 3000 K 3500 K 4000 K 5000 K	02 05 07 10 15 20	250 lumens 500 lumens 750 lumens 1000 lumens 1500 lumens 2000 lumens	SOL LTF SMO	Solite pattern lens Light frost lens Clear	15D 20D 25D 30D 35D 40D 45D 3515D 5020D 5060D 6070D	15° beam angle 20° beam angle 25° beam angle 30° beam angle 35° beam angle 40° beam angle 45° beam angle Elliptical 35° x 15° beam angle Elliptical 50° x 20° beam angle Elliptical 50° x 60° beam angle Elliptical 60° x 70° beam angle	MVOLT 120 277	120V - 277V 120V 277V

Driver	Control Interface <sup>3</sup>	Options	Architectural Colors
UGZ <sup>2</sup> Universal dimming to 1% (0-10V, 120V TRIAC or ELV)	(blank)  NLT  NLTER4  NLTAIR2  NLTAIRE74  NLTAIRER24  NLTAIRER25  NLTAIRER26  NLTAIRER26  NLTAIRER27  NLTAIRER27  NLTAIRER28  NLTAIRER28  NLTAIRER29  NLTAIRER29  NLTAIRER29  NLTAIRER29  NLTAIRER29  NLTAIRER29  NLTAIRER39   90CRI¹ High CRI (90+) NCH⁵ Structural reinforcement pan ICAT⁶ IC/Airtight housing construction CP⁶ Chicago Plenum HAO² High ambient (40°C) N80® nLight Lumen Compensation	Powder Paint  DDB Gloss Dark bronze  DBL Gloss Black  DWH Gloss White  DMB Gloss Medium Bronze  DNA Gloss Natural Aluminum  DWHG Textured White  Plating  GMG Gun Metal Gray  ORB Oil-rubbed Bronze  SNKL Satin Nickel	

#### ACCESSORIES — order as separate catalog numbers (shipped separately)

ICO20PTC XXD Additional optics for field installation. Replace "XX" with beam angle.

ICO20PTC KIT Kit including a field interchangeable optic for each of the 13 preset beam distribution patterns

**SDT 347/120 75VA** 347V/120V, 75VA step down transformer. Must be remote mounted.

#### ORDERING NOTES

- 1. 5000K CCT not available with 90CRI.
- 2. Refer to <u>Tech 240</u> for compatible dimmers.
- 3. Field installed. Access required to location of remote mounted device.
- ER for use with generator supply power. Will require an emergency hot feed and normal hot feed.
- 5. NCH is required for T-grid ceilings or where code requires.
- 6. Not available with 1500lm or 2000lm.
- 7. Not available with 2000lm.
- 8. Requires NLT or NLTER.



2"

## **Optical and Trim Assembly**

Fully serviceable and upgradeable lensed LED light engine suitable for field maintenance or service from above or below the ceiling.

Superior 100% Virgin-silicone refractive optic, enables maximum dimensional stability and optical transmission with no discoloration over life. Field inter-changeable optics.

#### Electrical

The luminaire shall operate from a 50 or 60 Hz  $\pm 3$  Hz AC line over a voltage ranging from 120 VAC to 277 VAC. Support 347V via remote-mounted stepdown transformer. The fluctuations of line voltage shall have no visible effect on the luminous output.

The luminaire shall have a power factor of 90% or greater at all standard operating voltages and full luminaire output.

Sound Rated A+. Driver shall be >80% efficient at full load across all input voltages.

#### Controls

Luminaire shall be equipped with interface for nLight wired or nLight AIR networks with integral power supply as per specification.

# **Dimming**

The luminaire shall be capable of continuous dimming without perceivable stroboscopic flicker as measured by flicker index (ANSI/IES RP-16-10) over a range of 100 - 1.0% of rated lumen output with a smooth shut off function to step to 0%.

Driver is inaudible in 24dB environment, and stable when input voltage conditions fluctuate over what is typically experienced in a commercial environment.

#### Construction

Light engine and driver are accessible from below ceiling.

Several additional mounting options available including a structural reinforcement pan, Chicago plenum, and Type IC.

Anodized extruded aluminum wiring compartment with hinged access. With two 1/2" trade-sized knockouts rated for 90°C.

Accommodates between 3/8" to 2-3/4"-thick ceilings.

## Listings

Fixtures are UL Certified to meet US and Canadian Standards: All fixtures manufactured in strict accordance with the appropriate and current requirements of the "Standards for Safety" to UL, wet location covered ceiling. ENERGY STAR® Certified product.

IC rated with ICAT option. Fixtures with ICAT option are compatible with spray foam insulation with an R-value of 4.3 per inch or less.

Luminaire configurations are Energy Star certified through testing in EPA-recognized laboratories, with the results reviewed by an independent, accredited certification organization. Visit <a href="www.energystar.gov">www.energystar.gov</a> for specific configurations listed

# **Buy American Act**

This product is assembled in the USA and meets the Buy America(n) government procurement requirements under FAR, DFARS and DOT regulations. Please refer to <a href="https://www.acuitybrands.com/buy-american">www.acuitybrands.com/buy-american</a> for additional information.

#### **Photometrics**

LEDs tested to LM-80 standards. Measured by IESNA Standard LM-79-08 in an accredited lab. Lumen output shall not decrease by more than 30% over the minimum operational life of 60,000 hours.

Color appearance from luminaire to luminaire of the same type and in all configurations, shall be consistent both initially and at 6,000 hours and operate within a tolerance of <2.5 MacAdam ellipse as defined by the center of the quadrangles defined in ANSI C78.377-2015.

## Warranty

5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: <a href="https://www.acuitybrands.com/support/warranty/terms-and-conditions">www.acuitybrands.com/support/warranty/terms-and-conditions</a>

#### Note:

Actual performance may differ as a result of end user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C.

# **4** Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is part of an A+ Certified solution for nLight\* control networks when ordered with drivers marked by a shaded background\*
- This luminaire is part of an A+ Certified solution for nLight\* control networks, providing advanced control functionality at the luminaire level, when selection includes driver and control options marked by a shaded background\*

To learn more about A+, visit www.acuitybrands.com/aplus.

\*See ordering tree for details



Lumen Output Multiplier					
CRI	CCT	Multplier			
	2700K	0.910			
	3000K	0.946			
80	3500K	1.000			
	4000K	1.027			
	5000K	1.054			
	2700K	0.784			
90	3000K	0.847			
90	3500K	0.874			
Ī	4000K	0.946			

	Driver			Control Pr	ovided	
Nomenclature	Description	NLT	NLTER	NLTAIR2	NLTAIREM2	NLTAIRER2
UGZ	0-10V driver dims to 1%	nPP16 D EFP	nPP16 D ER EFP	RPP20 D 24V G2	RPP20 D 24V EM G2	RPP20 D 24V ER G2

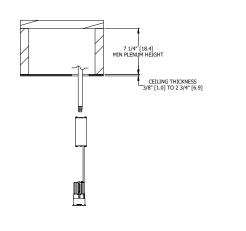
Marked Spacing in Inches 25°C Ambient							
Lumen Package	Space Above Fixture						
2000	18	9	3				
1500 (HAO)	18	9	3				

\*Dimensions in inches [centimeters]

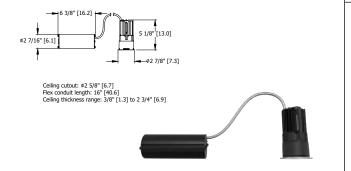
Aperture: 2-1/4" [5.7] Ceiling Opening: 2-5/8" [6.7] self-flanged

Overlap Trim: 3" [7.6] 2-3/4" [7] flangeless

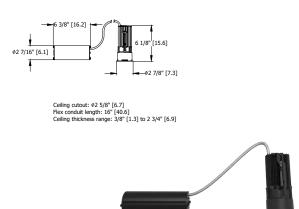
# **Recessed Application - Minimum Clearance Requirements**



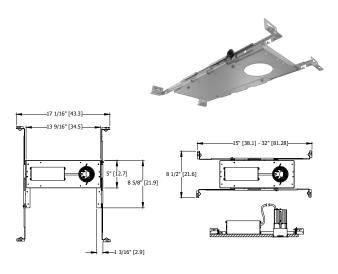
# 1000 Lumen and Below Install-from-Below Construction



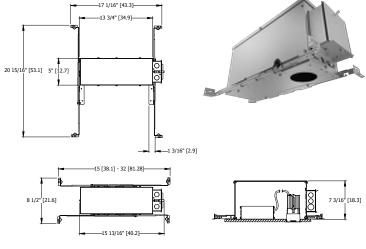
# 1500 and 2000 Lumen or High Ambient Option **Install-from-Below Construction**



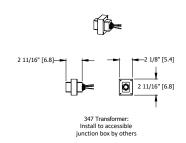
# **Structural Reinforcement Pan**



# IC / Airtight Housing / Chicago Plenum Construction



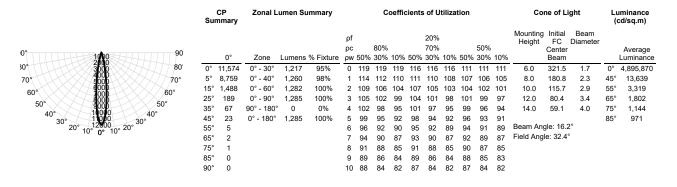
# **347V Transformer**





# CONSULT WWW.GOTHAMLIGHTING.COM FOR ADDITIONAL PHOTOMETRY

ICO2VR 35/15 SMO 15D Input Watts: 19.7, Delivered Lumens: 1285, LPW: 65.2, S/MH: 0.27, Test No: 19-452-01P101

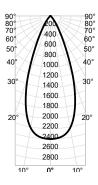


ICO2VR 35/15 SMO 30D Input Watts: 19.7, Delivered Lumens: 1260, LPW: 64.0, S/MH: 0.48, Test No: 19-452-04P101

90° 80° 70° 60° 50°	800	90° 80° 70° 60° 50° 40°
		1.
30°	1600	30°
H	2000	H
20°	2400	20°
-	2800	-
	3200	
H	3600	A-1
1	4000	H
-	1400	-
10°	4800	10°
	5200	
	0°	

CP Zonal Lumen Summary Summary					Coefficients of Utilization								Cone of Light				uminance cd/sq.m)		
	0°	Zone	Lumens	% Fixture	ρf ρc ρw	50%	80% 30%		50%	20% 70% 30%	10%	50%	50% 30%	10%	Mounting Height	Initial FC Center Beam	Beam Diameter		Average Luminance
0°	4,372	0° - 30°	1,137	90%	0	119	119	119	116	116	116	111	111	111	6.0	121.4	3.1	0°	1,849,419
5°	4,044	0° - 40°	1,221	97%	1	112	110	109	110	108	107	106	105	104	8.0	68.3	4.1	45°	22,552
15°	2,034	0° - 60°	1,257	100%	2	107	103	101	105	102	100	102	99	97	10.0	43.7	5.1	55°	4,056
25°	449	0° - 90°	1,260	100%	3	102	98	95	100	97	94	98	95	92	12.0	30.4	6.1	65°	2,002
35°	130	90° - 180°	0	0%	4	97	93	89	96	92	89	94	91	88	14.0	22.3	7.2	75°	1,144
45°	38	0° - 180°	1,260	100%	5	93	88	85	92	88	85	90	87	84				85°	971
55°	6				6	89	85	81	89	84	81	87	83	81	Beam An	gle: 28.7	*0		
65°	2				7	86	81	78	85	81	78	84	80	78	Field Ang	le: 50.4°	•		
75°	1				8	83	78	75	82	78	75	81	77	75					
85°	0				9	80	75	72	80	75	72	79	75	72					
90°	0				10	77	73	70	77	73	70	76	72	70					

ICO2VR 35/15 SMO 45D Input Watts: 19.7, Delivered Lumens: 1243, LPW: 63.1, S/MH: 0.68, Test No: 19-452-07P101



	CP Zonal Lumen Summary Summary				Coefficients of Utilization								Cone of Light			Luminance (cd/sq.m)			
	0°	Zone	Lumens	% Fixture	ρf ρc ρw	50%	80% 30%	10%	50%	20% 70% 30%	10%	50%	50% 30%	10%	Mounting Height	Initial FC Center Beam	Beam Diameter		Average Luminance
0°	2,403	0° - 30°	1,066	86%	0	119	119	119	116	116	116	111	111	111	6.0	66.8	4.6	0°	1,016,499
5°	2,371	0° - 40°	1,197	96%	1	112	110	108	110	108	106	106	104	103	8.0	37.5	6.1	45°	25,244
15°	1,848	0° - 60°	1,239	100%	2	105	102	99	104	100	98	100	98	96	10.0	24.0	7.6	55°	4,499
25°	728	0° - 90°	1,243	100%	3	99	95	92	98	94	91	95	92	89	12.0	16.7	9.1	65°	2,102
35°	202	90° - 180°	0	0%	4	94	89	86	93	89	85	91	87	84	14.0	12.3	10.7	75°	1,307
45°	42	0° - 180°	1,243	100%	5	89	84	81	88	84	80	87	83	80				85°	971
55°	6				6	85	80	76	84	79	76	83	79	75	Beam An	gle: 41.7	7°		
65°	2				7	81	76	72	80	76	72	79	75	72	Field Ang	le: 67.4°	•		
75°	1				8	77	72	69	77	72	69	76	71	68					
85°	0				9	74	69	66	74	69	65	73	68	65					
90°	0				10	71	66	63	71	66	63	70	65	62					



nLight® AIR is the ideal solution for retrofit or new construction spaces where adding communication wiring is cost prohibitive. The integrated nLight AIR rPP20 Power Pack is part of each EVO Luminaire ordered with the NLTAIR option. These individually addressable controls offer the ultimate in flexibility during initial setup and for space repurposing.

#### nLight® AIR Control Accessories

Order as separate catalog number. Visit nLight AIR.

**Wall Switches Model Number** On/Off single pole rPODB (color) G2 On/Off two pole rPODB 2P (color) G2 rPODB DX (color) G2 On/Off & raise/lower single pole On/Off & raise/lower two pole rPODB 2P DX (color) G2

# nLight® AIR Control Accessories (cont.)

manual lighting control schemes.

**Wall Switches** 

On/Off single pole

On/Off & raise/lower single pole

On/Off & raise/lower two pole

Graphic touchscreen

**Photocell Controls** Dimming

On/Off two pole

nLight® Wired Control Accessories

Occupancy Sensors (PIR/dual tech) **Model Number** rCMS 9 / rCMS PDT 9 Small motion 360°, ceiling Large motion 360°, ceiling rCMS 10 / rCMS PDT 10

nLight® Wired The nLight® solution is a digital networked lighting control

system that provides both energy savings and increased user configurability by cost effectively integrating time-based, daylight-based, sensor-based and

Order as separate catalog number. Visit nLight.

**Model Number** 

nPODM (XX)

nPODM 2P (XX)

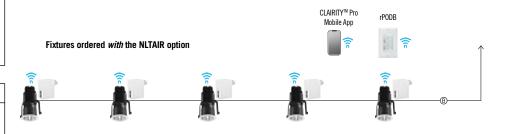
nPOD DX (XX) nPODM 2P DX (XX)

nPOD GFX (XX)

nCM ADCX

# Possibilites for nLight® AIR







# Possibilites for nLight® wired



nPS 80 EZ or nPP16 D (ordered as an accessory)

# nPODM Fixtures ordered with the NLT option

# nLight® Wired Control Accessories (cont.)

Occupancy Sensors (PIR/dual tech) Model Number Small motion 360°, ceiling nCM 9 / nCM PDT 9 Large motion 360°, ceiling nCM 10 / nCM PDT 10 nWV 16 / nWV PDT 16 Wide View Wall switch with raise/lower nWSX LV DX / nWSX PDT LV DX

Cat-5 Cables (plenum rated)

CAT5 10FT J1 10', CAT5 15', CAT5 CAT5 15FT J1







# KEYSTONE APARTMENTS TYPE F-3

# **FEATURES & SPECIFICATIONS**

#### **INTENDED USE**

Provides years of maintenance-free illumination for outdoor use in residential & commercial applications. Ideal for applications such as lighting walkways and stairways for safety and security.

#### CONSTRUCTION

Cast-aluminum housing with corrosion-resistant paint in either dark bronze or white finish.

ADA compliant.

## **OPTICS**

#### 4000K CCT LEDs.

Polycarbonate lens protects the LED from moisture, dirt and other contaminants.

LUMEN MAINTENANCE: The LED will deliver 70% of its initial lumens at 50,000 hour average LED life. See Lighting Facts label on page 2 for performance details.

#### **ELECTRICAL**

MVOLT driver operates on any line voltage from 120-277V

Operating temperature -30°C to 40°C.

1KV surge protection standard.

#### INSTALLATION

Surface mounts to universal junction box (provided by others).

## LISTINGS

UL Listed to U.S. and Canadian safety standards for wet locations.

Tested in accordance with IESNA LM-79 and LM-80 standards.

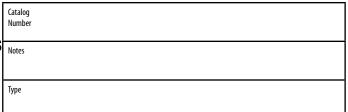
**WARRANTY** — 5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at:

www.acuitybrands.com/support/customer-support/terms-and-conditions

**Note**: Actual performance may differ as a result of end-user environment and application.

All values are design or typical values, measured under laboratory conditions at 25  $^{\circ}\text{C}.$ 

Specifications subject to change without notice.



**Outdoor General Purpose** 

# **OLLWD & OLLWU**

**LED WALL CYLINDER LIGHT** 

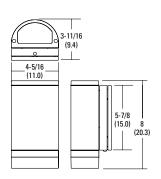


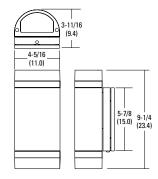




# Specifications

All dimensions are inches (centimeters)





# ORDERING INFORMATION

For shortest lead times, configure products using bolded options.

Series	Performance Package	Color temperature (CCT)	Voltage	Finish
OLLWO LED Downlight OLLWU LED Up & downlight	P1	<b>40K</b> 4000K	MVOLT 120V-277V 120 120V <sup>1</sup>	DDB Dark bronze WH White <sup>2</sup>

#### Notes

 $1. \ \, {\rm Only \, available \, with \, OLLWU \, and \, in \, DDB.}$ 

**Example:** OLLWD LED P1 40K MVOLT DDB

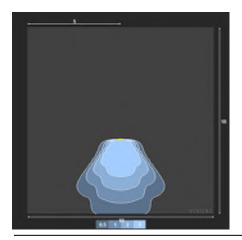
2. Only available with OLLWU.

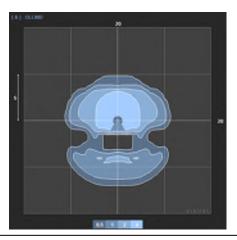
DECORATIVE INDOOR & OUTDOOR OLLWD-OLLWU

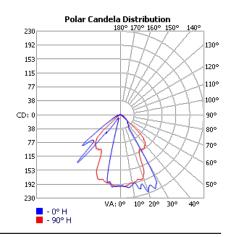
# **PHOTOMETRICS**

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's Outdoor LED homepage Tested in accordance with IESNA LM-79 and LM-80 standards.

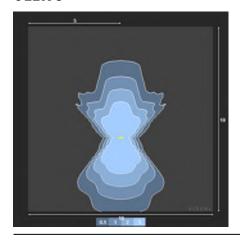
# **OLLWD**

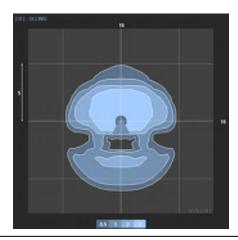


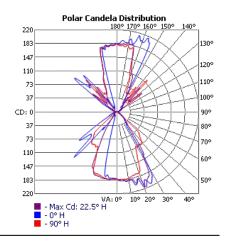




# **OLLWU**







# **OLLWD**

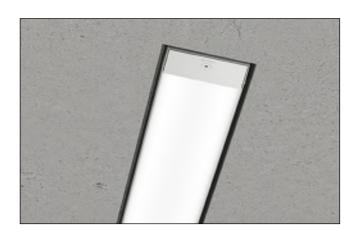


# **OLLWU**





# **KEYSTONE APARTMENTS** TYPE F-4



3 1/16"
/
/
hole width

<b>Project</b>	
-	
Type	
Notes	

# PERFORMANCE PER LINEAR FOOT AT 3500K

NOMINAL LUMEN OUTPUT	INPUT WATTS*	EFFICACY
1000 lm/ft	11.5 W/ft	87 lm/W

Please consult factory for custom lumen output and wattage.











# **Ordering Guide**

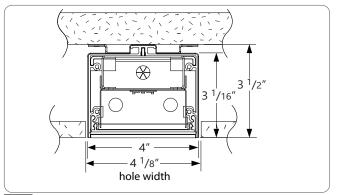
V	/BRLED								S			
PRO	PRODUCT ID		NOM.LUMENS/FT		CRI		COLOR TEMP.		SHIELDING		LENGTH (FT)	
WBRLED	Recessed LED		400 lm/ft - Min. 1000 lm/ft - Max.		80 CRI 90 CR	30 35	2700 K 3000 K 3500 K 4000 K	S	satin lens	3 4	2' 3' 4' 5'	
		are availab	etween listed min and max le. Consult factory for tside of the listed range.							S#	8' system run length not including end caps	

FINISH		VOLTAGE		DRIVER		CIRCUITS	MOUNTINGS		
AP	aluminum paint	<b>120</b> 120 V		<b>DP</b> dimming (0-10V) 1%	1	1 circuit	D	drywall flangeless	
W	white <b>277</b> 277 V		277 V	LT(#) Lutron *	2	2 circuits	DF	drywall flange	
BLK	black	347	347 V	BI bi-level dimming	+E(#)	emergency circuit *	DS	drywall spackle flange	
С	custom	UNV	universal	O(#) other **	+NL(#)	night light circuit *			
	DC low voltage*		POE(#) POE drivers*	+GTD(#)	generator transfer device *				
* Only available with Podrivers.		able with POE	* Operating up to -20°C; Specify system ** Please consult factory; see page 2	* Specify quantity					

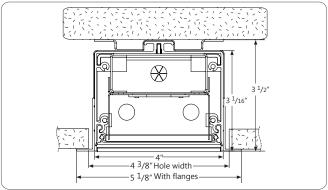
BATTERY (OPTIONAL)		(	OTHER (OPTIONAL)	IC CONT	ROLS (OPTIONAL)	CU	CUSTOM (OPTIONAL)		
В#	battery pack (integral)	+EF +N	end feed* natatorium finish	OS(#) EN(#) WC(#)	' '	С	custom		
	Not available with 347V Please consult factory		age 3 for more details.	See integrated controls guide for further details Please consult factory			specify		



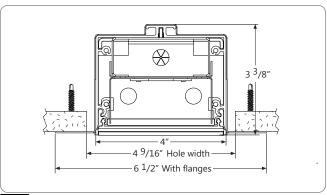
# HORIZONTAL RECESSED MOUNTING OPTIONS



# D DRYWALL FLANGELESS



# **DRYWALL FLANGE**



# DS DRYWALL SPACKLE FLANGE

# LED SYSTEM

CRI Minimum 80 or 90 color rendering index.

CCT Choice of 2700K, 3000K, 3500K and 4000K color

temperature with a great color consistency (within 3-step MacAdam ellipse). Both within

fixture and fixture to fixture.

Minimum 50,000h with 85% of lumen **LED life** 

maintenance in 25°C ambient temperature, in compliance with IES LM-80 testing

measurements.

**Thermal** Aluminum housing acting as the heat sink to

Management maximize life.

# OTHER MOUNTING OPTIONS

WET BEAM 4 LED is available with, pendant, surface, wall mounted options and recessed vertical.

# CONSTRUCTION

Extruded aluminum (0.062" nominal) Housing

Up to 70% recycled content **End Cap** Die cast zinc (0.070" nominal) **Interior Brackets** Die formed sheet steel (16 gauge) Gaskets Moulded elastomer (0.100" nominal) **Lens Gaskets** Extruded elastomer (0.045" nominal)

**Satin Lens Extruded Polycarbonate** 

## ELECTRICAL

**Lutron driver** LDE1 - Hi-lume 1% EcoSystem with Soft-on, Fade-to-

Other drivers\*\* DALI - Digital Addressable Lighting Interface

**DMX** - Digital Multiplex Xitanium SR - For wireless sensor

Power over Ethernet MOLEX POE drivers\* **IGOR** UL2108 certified for

**SMARTENGINE** integral or remote driver

O - Other (Consult factory)
\*Consult factory

**Emergency** Integral emergency battery pack

or emergency circuit optional.

120V, 277V, 347V, UNV. Input Voltage

Flex Whip Shipped in a separate box for contractors to install

f Incorporating these components may have limitations or affect the length of the luminaire. Please contact factory for more details.

# **OPTICS**



**SATIN LENS** 

**Extruded Polycarbonate** 

# WEIGHT

Recessed Horizontal 4 ft 12.8 lbs / 5.8 kg Recessed Horizontal 8 ft 24.5 lbs / 11.1 kg

# GASKETTED FIXTURE

With its gasketted end cap and lens the Wet BEAM 4 LED is made for wet locations, and is ideal for exterior soffits and canopies of malls, hospitals and other institutions.

© 2016 Axis Lighting Inc.

1.800.263.2947

[T] 514.948.6272







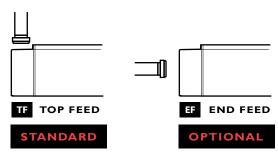
# WARRANTY

Axis Lighting will warrant defective LEDs, boards, and drivers for 5 years from date of purchase. Warranty is valid if luminaire is installed and used according to specifications. If defective, Axis will send replacement boards or drivers at no cost along with detailed replacement instructions and instructions on how to return defective components to Axis.

# FINISH

Aluminum paint, powder coated and custom finishes are also

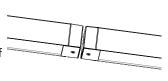
# POWER FEED



<sup>\*</sup> Not available with 347 V.

# JOINER SYSTEM

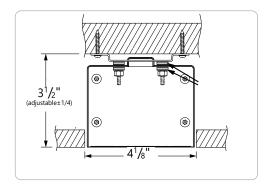
WET BEAM4 LED modular system consists of smaller modules joined and gasketted together allowing for system runs in lengths of 4' and 8' as well as custom lengths up to 12'.



\* For continuous rows allow 2" for connectors between each fixture.

# END VIEW

For D and DF mounting.



# APPROVALS

Certified wet locations to UL and CSA standards

© 2016 Axis Lighting Inc.

1.800.263.2947

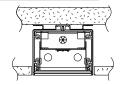
[T] 514.948.6272



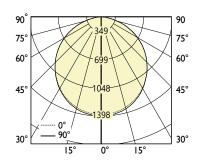


# PHOTOMETRIC DATA

## 1000 lm/ft



# PHOTOMETRIC CURVE



Luminaire Lumens: 1000 lm/ft Total Lumens: 4000 lm (for 4ft) Input Watts: 45.8 W/ft Efficacy: 87 lm/W

IES FILE: WBRLED-1000-80-35-S-4.IES

TESTED ACCORDING TO IES LM-79-2008

## **CANDELA DISTRIBUTION**

	Horizontal Angles										
Vertical Angle	0	22.5	45	67.5	90						
0	1397	1397	1397	1397	1397						
5	1393	1391	1391	1389	1390						
15	1347	1344	1341	1339	1338						
25	1256	1250	1246	1243	1242						
35	1123	1115	1109	1104	1104						
45	952	943	935	929	928						
55	748	738	729	720	718						
65	514	503	492	482	479						
75	272	262	249	236	233						
85	57	49	39	30	27						
90	4	3	3	3	3						

# ZONAL LUMENS

	Lumens
Zone	
0	
0-10	132
10-20	380
20-30	577
30-40	699
40-50	728
50-60	659
60-70	496
70-80	271
80-90	58
90	

#### LUMINANCE DATA (cd/m²)

	Horizontal Angles				
Vertical Angle	0	45	90		
45	10617	10430	10350		
55	10276	10017	9870		
65	9587	9183	8941		
75	8298	7599	7091		
85	5172	3533	2411		

axislighting.com

1 All IES files are available for download at: www.axislighting.com

# **Keystone Apartments**

1106 Madison Street, Oak Park, IL

June 12, 2024

- Memo Exterior Lighting Variance Request
- Lighting Fixture Information Sheets with photometric information:

PH: 773-459-1977

- TYPES F1, F2, F3, F4
- Exterior Lighting Photometric Plan

# **MEMORANDUM**

From: Maureen Mahr Lighting Design

**Date:** June 12, 2024

Re: Keystone Apartments, 1106 Madison Street, Oak Park, IL

Request for Zoning Ordinance Variance: exterior light levels

The design team is seeking an exemption from the following regulation:

# ARTICLE 9. SITE DEVELOPMENT STANDARDS 9.2 Exterior Lighting

B. Maximum Lighting Regulations

1. The maximum allowable footcandle at any lot line is one footcandle.

It is understood that the purpose of this requirement is to: protect the public health and general welfare by controlling the adverse impacts of glare and light trespass associated with poorly shielded or inappropriately directed lighting fixtures.

The lot line in question occurs along Madison Steet. The building façade is located on the property line which occurs at the public sidewalk.

The submitted photometric plan shows light levels in excess of one foot-candle (fc) at the location of the main entrance to the building.

We seek this exemption because lighting of a building's main entrance is important to the safety of the building occupants. The designed light levels are in line with the Illuminating Engineering Society's (IES) recommendations and are not out of range of light levels measured at the existing streetscape. The lighting fixtures that produce this light are recessed into the main entrance canopy, the light output is directed down to the sidewalk, and the fixture has a 45-degree cut-off meaning that the fixture does not produce unshielded glare to surrounding areas.

# **Madison Street Property Line:**

There are two recessed downlights proposed to be located within the canopy for the building's main entrance. The purpose of these fixtures is to provide a bright and welcoming presence to the main entrance to the building and to allow for clear identification of visitors/residents at the entrance at night. The quantity of two lighting fixtures provides best-practice redundancy should one of the lighting fixtures go out.

PH: 773-459-1977



The Illuminating Engineering Society recommends light levels within the range of 2-4 foot-candles at the main entrance of a building. These recommendations take into account that a light loss factor (LLF) is typically used when calculating light levels. Light loss factors address the fact that over time light output is decreased from all lighting fixtures.

Submitted calculations are provided <u>without</u> an applied Light Loss Factors (LLF), meaning these are Day One values and will reduce over time due to lamp lumen depreciation and lens dirt depreciation, among other factors, which occurs with all lighting fixtures over time. Typically when evaluating appropriate lighting levels for a project, a light loss factor is applied to the calculation to account for this light reduction. MMLD typically uses a 0.7 LLF for exterior calculations.

With a 0 light loss factor (LLF) a max: 5.7 fc is calculated on the property line under the canopy at the main entrance to the building. When the 0.7 LLF is applied that point reduces to 4.1 fc. This light level is limited to occurring within the footprint under the main entrance canopy area. Outside of the canopy perimeter, light levels are reduced to less than 1.0 foot-candle.

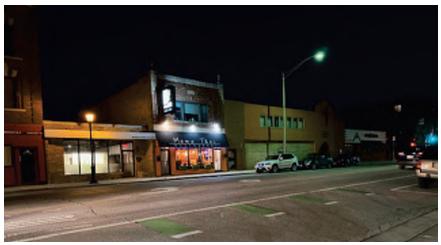
All light sources are low-lumen, low glare, and mounted along the street level of the building to light pedestrian areas at the sidewalk. The contribution of this project's electric light to the nightscape is not out of character for this district.

PH: 773-459-1977

Please see attached lighting fixture information sheets and photometric information.

# **Surrounding neighborhood:**

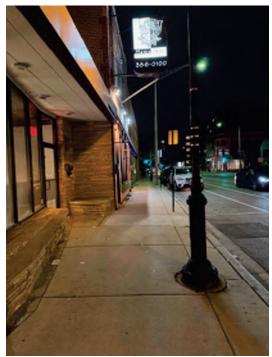
Madison street is a successful commercial district, and many types of businesses and services line the street. An evening visit to the district measured light levels in excess of 1.0 foot-candle in many areas at the public sidewalk.



View of 1106, 1112, 1114 Madison Street

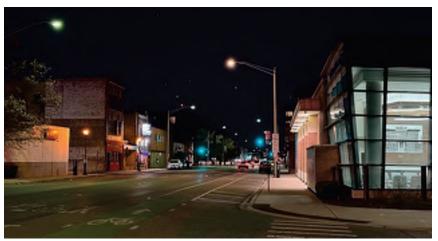
**Project Site**: Currently 1.0 foot-candle on the sidewalk is being exceeded by the streetlight that is adjacent to the property.

**Mama Thai Restaurant**: There is substantial illumination, 4.0 fc measured, at the middle of the sidewalk in front of Mama Thai Restaurant at 1112 Madison Street. This light is from the signage, façade lighting, and brightly illuminated interior of the restaurant.



View along sidewalk at 1114 Madison Street – looking east towards project site

**Madison Street Gallery**: 2 foot-candles were measured at the middle of the sidewalk in front of the Madison Street Gallery. This light is from the pedestrian-scale light pole and light glowing from the windows from the illuminated interior.



View of Madison Street, looking east towards project site

**Rush Oak Park Hospital and Emergency Department**: across the street from the project site is the Rush Oak Park Hospital and Emergency Department. 14.0 fc was measured at the middle of the sidewalk by the building's façade/canopy.

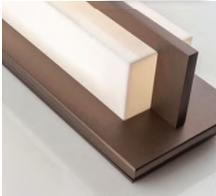
# **Conclusion:**

- The maximum allowable footcandle at any lot line is one footcandle and that 1.0 fc is being exceeded at the property line adjacent to the main entranace for the building.
- The proposed light levels at the entrance are in keeping with IES recommendations.
- Low output downlights light only the sidewalk and have a 45-degree cuthoff to minimize instances of glare.
- Outside of the canopy area light levels, at the property line, from building lighting are below the 1.0 fc threshold.
- 1.0 foot-candle of light is exceeded in numerous places on Madison Street, including the property next to the project site and the emergency room across from the project site.
- We do not believe that increased light levels at the main entrance to the building will have a negative impact on the Madison Street streetscape.

PH: 773-459-1977

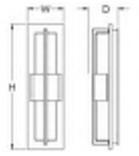








# **DIMENSIONS**



W	Н	D	MC BASE MODEL NO.
6"	21"	5"	10 1/2" <b>S9405-L14</b>
6"	27"	5"	13 1/2" <b>S9406-L18</b>
6"	38"	5"	19" <b>S9407-L24</b>

# **SPECIFICATIONS**

Driver: 0-10V dimming to 1%, 120/277

Mounting: Mounts to all Standard Electrical Junction Boxes (by others) With Hardware Provided. Silicone Seal Required (by others).

# **FEATURES**

- Smooth Opal Acrylic Lens
- Solid Aluminum Material
- UL Listed for Wet Location
- LED 0-10V Dimming Driver

# ORDER AS A COMPLETE UNIT:

Model No. + Lamp Code + CCT + Finish + Option Code

S9405-L14 S9406-L18 S9407-L24	+	27K 30K 35K	+	PT BA	+	Option
		40K				

# **FINISHES**

**BA** Brushed Aluminum PT Powder Coated Finishes\*

\*(Specify Color Code from the list of Powder Coating Finishes [except interior only metallics])

## **OPTIONS**

BAC Buy America; Buy American Act; and Build America, Buy America Act Compliant.

EML Remote 10W Emergency LED Battery Backup

# LIGHT OUTPUT

LXX =  $\sim$  55 LPW Delivered Lumens (Example: L14= 14 x 55 = 770 Lumens)

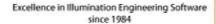
\*\* Try our new **Shimmer Metalic Paints**, Formulated for Exterior Conditions.













sample banner copyright 2013 Lighting Analysis, Inc.

# Photometric Report (Type C)

Filename: 12262516-12262516.03.ies

[TEST] 12262516.03

[TESTLAB] UL Verification Services Inc.

[ISSUEDATE] 5/9/2018

[MANUFAC] Scott Lamp Co Inc [LUMCAT] S9300-L14-35K-BA

[LUMINAIRE] Rectangular silver metal housing with

white plastic lens [LAMP] 48 White LEDs

[BALLAST] One (1) OSRAM OPTOTRONIC

OT25W/PRG1250C/UNV/DIM-1

Maximum Candela = 123.2 at 0 H 89.5 V

# Classification:

Road Classification: Type IV, Very Short, N.A. (deprecated)

Upward Wast Light Ratio: 0.50

Luminaire Efficacy Rating (LER): 55

Maximum UGR: 27

Indoor Classification: General Diffuse

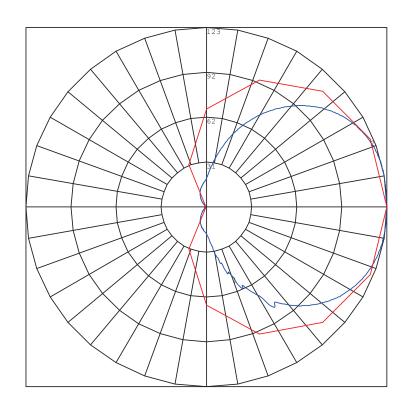
BUG Rating: B0-U3-G1

## Polar Candela Curves:

Vertical Plane Through: 1) 0 - 180 Horizontal

Horizontal Cone Through:

2) 89.5 Vertical





## Excellence in Illumination Engineering Software since 1984



sample banner copyright 2013 Lighting Analysts, Inc.

# Photometric Report (Type C)

Filename: 12262516-12262516.03.ies

[TEST] 12262516.03

[TESTLAB] UL Verification Services Inc.

[ISSUEDATE] 5/9/2018

[MANUFAC] Scott Lamp Co Inc [LUMCAT] S9300-L14-35K-BA

[LUMINAIRE] Rectangular silver metal housing with

white plastic lens [LAMP] 48 White LEDs

[BALLAST] One (1) OSRAM OPTOTRONIC

OT25W/PRG1250C/UNV/DIM-1

Maximum Candela = 123.2 at 0 H 89.5 V

# Classification:

Road Classification: Type IV, Very Short, N.A. (deprecated)

Upward Waste Light Ratio: 0.50 Luminaire Efficacy Rating (LER): 55

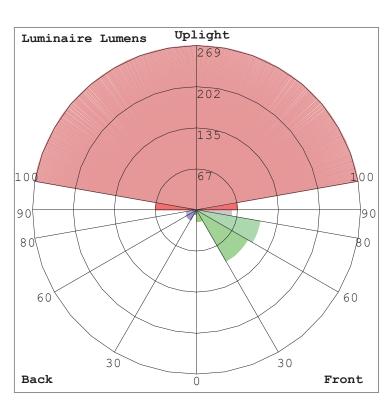
Maximum UGR: 27

Indoor Classification: General Diffuse

BUG Rating : B0-U3-G1

# LCS Summary:

LCS Zone	Lumens	%Lamp	%Lum
FL (0-30)	19.2	N.A.	2.9
FM (30-60)	97.0	N.A.	14.5
FH (60-80)	105.7	N.A.	15.8
FVH (80-90)	57.6	N.A.	8.6
BL (0-30)	7.3	N.A.	1.1
BM $(30-60)$	18.7	N.A.	2.8
BH (60-80)	16.8	N.A.	2.5
BVH (80-90)	9.1	N.A.	1.4
UL (90-100)	67.1	N.A.	10.1
UH (100-180)	269.1	N.A.	40.3
Total	667.6	N.A.	100.0
BUG Rating	B0-U3-G1		



# gotham°|ı N C I T O™

# Multiple Layers of Light















# High Center Beam Round Vandal/Tamper Resistant Downlight

# **Feature Set**

- Eleven optimized distribution patterns allow designers to achieve tailored objectives
- · Field interchangeable optic
- · Driver and LED light engine fully serviceable from below ceiling
- 70% lumen maintenance at 60,000 hours
- 2.5 SDCM; 85 CRI typical, 90+ CRI optional
- IP66 rated room-side, fixtures are wet location, covered ceiling
- · ENERGY STAR® Certified product
- IK10 impact resistant construction with 1/4" polycarbonate lens
- Tamper resistant design
- Ultra-shallow profile
- Can be paired with complimentary recessed adjustable vandal & tamper resistant luminaires Available with painted or plated finishes



**KEYSTONE APARTMENTS** TYPE F-2

#### Distribution

Naminal

**COMPLIMENTARY PRODUCTS** 

15° beam 20° beam 25° beam 30° beam 35° beam 40° beam 45° beam angle angle angle angle angle angle 35°x15° 60°x70 50°x60°

# **Superior Performance**

lumens	250	500	750	1000	1500	2000
Delivered	192	408	626	857	1285	1623
Wattage	3.1	5.6	8.6	12.0	19.7	28.4
Efficacy	62	73	72	72	65	57

<sup>\*</sup>Based on 3500K 80CRI 15D

# **Coordinated Apertures I Multiple Layers of Light**



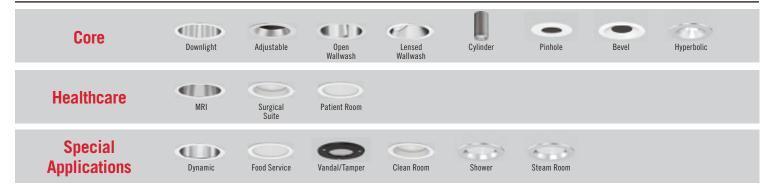




High Center Beam Layer I Incito



EVO + Incito — Multiple Layers of Light



2"



Luminaire Type:
Catalog Number:

# EXAMPLE: ICO2VR 35/10 SOL 20D MVOLT UGZ DWHG

Series		Color	Temperature	Lume	ens	Lensing		Beam		Voltage	
ICO2VR	Incito 2in Round Van- dal/Tamper Resistant Downlight	27/ 30/ 35/ 40/ 50/ <sup>1</sup>	2700 K 3000 K 3500 K 4000 K 5000 K	02 05 07 10 15 20	250 lumens 500 lumens 750 lumens 1000 lumens 1500 lumens 2000 lumens	SOL LTF SMO	Solite pattern lens Light frost lens Clear	15D 20D 25D 30D 35D 40D 45D 3515D 5020D 5060D 6070D	15° beam angle 20° beam angle 25° beam angle 30° beam angle 35° beam angle 40° beam angle 45° beam angle Elliptical 35° x 15° beam angle Elliptical 50° x 20° beam angle Elliptical 50° x 60° beam angle Elliptical 60° x 70° beam angle	MVOLT 120 277	120V - 277V 120V 277V

Driver	Control Interface <sup>3</sup>	Options	Architectural Colors
UGZ <sup>2</sup> Universal dimming to 1% (0-10V, 120V TRIAC or ELV)	(blank)  NLT	90CRI¹ High CRI (90+) NCH⁵ Structural reinforcement pan ICAT⁶ IC/Airtight housing construction CP⁶ Chicago Plenum HAO¹ High ambient (40°C) N80® nLight Lumen Compensation	Powder Paint DDB Gloss Dark bronze DBL Gloss Black DWH Gloss White DMB Gloss Medium Bronze DNA Gloss Natural Aluminum DWHG Textured White Plating GMG Gun Metal Gray ORB Oil-rubbed Bronze SNKL Satin Nickel

### ACCESSORIES — order as separate catalog numbers (shipped separately)

ICO20PTC XXD Additional optics for field installation. Replace "XX" with beam angle.

ICO20PTC KIT Kit including a field interchangeable optic for each of the 13 preset beam distribution patterns

**SDT 347/120 75VA** 347V/120V, 75VA step down transformer. Must be remote mounted.

# ORDERING NOTES

- 1. 5000K CCT not available with 90CRI.
- 2. Refer to <u>Tech 240</u> for compatible dimmers.
- 3. Field installed. Access required to location of remote mounted device.
- ER for use with generator supply power. Will require an emergency hot feed and normal hot feed.
- 5. NCH is required for T-grid ceilings or where code requires.
- 6. Not available with 1500lm or 2000lm.
- 7. Not available with 2000lm.
- 8. Requires NLT or NLTER.



# **Optical and Trim Assembly**

Fully serviceable and upgradeable lensed LED light engine suitable for field maintenance or service from above or below the ceiling.

Superior 100% Virgin-silicone refractive optic, enables maximum dimensional stability and optical transmission with no discoloration over life. Field inter-changeable optics.

### Electrical

The luminaire shall operate from a 50 or 60 Hz ±3 Hz AC line over a voltage ranging from 120 VAC to 277 VAC. Support 347V via remote-mounted stepdown transformer. The fluctuations of line voltage shall have no visible effect on the luminous output.

The luminaire shall have a power factor of 90% or greater at all standard operating voltages and full luminaire output.

Sound Rated A+. Driver shall be >80% efficient at full load across all input voltages.

### Controls

Luminaire shall be equipped with interface for nLight wired or nLight AIR networks with integral power supply as per specification.

# Dimming

The luminaire shall be capable of continuous dimming without perceivable stroboscopic flicker as measured by flicker index (ANSI/IES RP-16-10) over a range of 100 - 1.0% of rated lumen output with a smooth shut off function to step to 0%.

Driver is inaudible in 24dB environment, and stable when input voltage conditions fluctuate over what is typically experienced in a commercial environment.

### Construction

Light engine and driver are accessible from below ceiling.

Several additional mounting options available including a structural reinforcement pan, Chicago plenum, and Type IC.

Anodized extruded aluminum wiring compartment with hinged access. With two 1/2" trade-sized knockouts rated for 90°C.

Accommodates between 3/8" to 2-3/4"-thick ceilings.

### Listings

Fixtures are UL Certified to meet US and Canadian Standards: All fixtures manufactured in strict accordance with the appropriate and current requirements of the "Standards for Safety" to UL, wet location covered ceiling. ENERGY STAR® Certified product.

IC rated with ICAT option. Fixtures with ICAT option are compatible with spray foam insulation with an R-value of 4.3 per inch or less.

Luminaire configurations are Energy Star certified through testing in EPA-recognized laboratories, with the results reviewed by an independent, accredited certification organization. Visit www.energystar.gov for specific configurations listed

# **Buy American Act**

This product is assembled in the USA and meets the Buy America(n) government procurement requirements under FAR, DFARS and DOT regulations. Please refer to www.acuitybrands.com/buy-american for additional information.

## **Photometrics**

LEDs tested to LM-80 standards. Measured by IESNA Standard LM-79-08 in an accredited lab. Lumen output shall not decrease by more than 30% over the minimum operational life of 60,000 hours.

Color appearance from luminaire to luminaire of the same type and in all configurations, shall be consistent both initially and at 6,000 hours and operate within a tolerance of <2.5 MacAdam ellipse as defined by the center of the quadrangles defined in ANSI C78.377-2015.

# Warranty

5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Actual performance may differ as a result of end user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C.

# \*\* Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is part of an A+ Certified solution for nLight<sup>®</sup> control networks when ordered with drivers marked by a shaded background\*
- This luminaire is part of an A+ Certified solution for nLight\* control networks, providing advanced control functionality at the luminaire level, when selection includes driver and control options marked by a shaded background\*

To learn more about A+, visit www.acuitybrands.com/aplus.

\*See ordering tree for details



Lu	Lumen Output Multiplier										
CRI	CCT	Multplier									
	2700K	0.910									
	3000K	0.946									
80	3500K	1.000									
	4000K	1.027									
	5000K	1.054									
	2700K	0.784									
90	3000K	0.847									
90	3500K	0.874									
	4000K	0.946									

	Driver		Control Provided						
Nomenclature	Description	NLT	NLTER	NLTAIR2	NLTAIREM2	NLTAIRER2			
UGZ	0-10V driver dims to 1%	nPP16 D EFP	nPP16 D ER EFP	RPP20 D 24V G2	RPP20 D 24V EM G2	RPP20 D 24V ER G2			

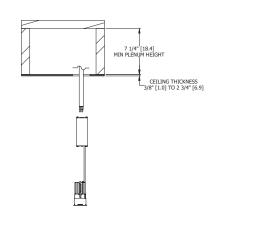
	Marked Spacing in Inches 25°C Ambient											
Lumen Package	Fixed Center to Center MIN	Fixture Center to Building Member MIN	Space Above Fixture									
2000	18	9	3									
1500 (HAO)	18	9	3									

\*Dimensions in inches [centimeters]

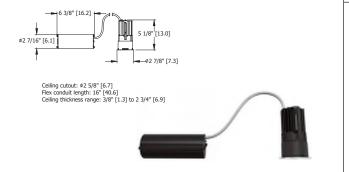
Aperture: 2-1/4" [5.7] Ceiling Opening: 2-5/8" [6.7] self-flanged

2-3/4" [7] flangeless Overlap Trim: 3" [7.6]

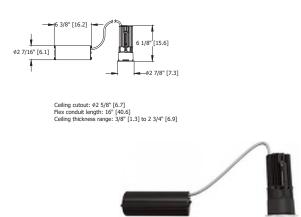
# **Recessed Application - Minimum Clearance Requirements**



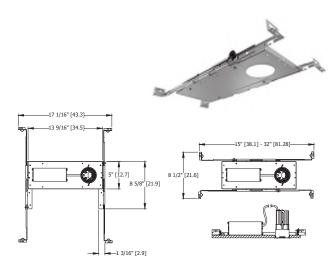
# 1000 Lumen and Below Install-from-Below Construction



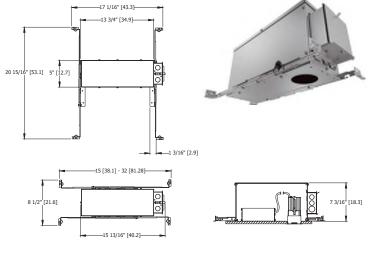
# 1500 and 2000 Lumen or High Ambient Option **Install-from-Below Construction**



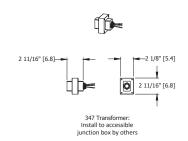
# **Structural Reinforcement Pan**



# IC / Airtight Housing / Chicago Plenum Construction



# **347V Transformer**

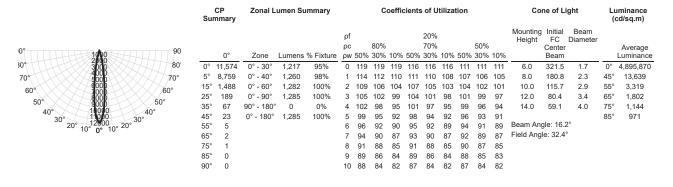




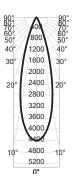


# CONSULT WWW.GOTHAMLIGHTING.COM FOR ADDITIONAL PHOTOMETRY

ICO2VR 35/15 SMO 15D Input Watts: 19.7, Delivered Lumens: 1285, LPW: 65.2, S/MH: 0.27, Test No: 19-452-01P101

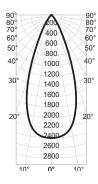


ICO2VR 35/15 SMO 30D Input Watts: 19.7, Delivered Lumens: 1260, LPW: 64.0, S/MH: 0.48, Test No: 19-452-04P101



	CP nmary	Zonal L	umen Sı	ımmary			С	oeffic	cients	of U	tiliza	tion			Co	ne of Li	ght		uminance cd/sq.m)
	0°	Zone	Lumens	% Fixture	ρf ρc ρw	50%	80% 30%		50%	20% 70% 30%	10%	50%	50% 30%	10%	Mounting Height		Beam Diameter		Average Luminance
0°	4.372	0° - 30°	1.137	90%	0	119	119	119	116	116	116	111	111	111	6.0	121.4	3.1	0°	1.849.419
5°	4,044	0° - 40°	1,221	97%	1	112	110	109	110	108	107	106	105	104	8.0	68.3	4.1	45°	22,552
15°	2,034	0° - 60°	1,257	100%	2	107	103	101	105	102	100	102	99	97	10.0	43.7	5.1	55°	4,056
25°	449	0° - 90°	1,260	100%	3	102	98	95	100	97	94	98	95	92	12.0	30.4	6.1	65°	2,002
35°	130	90° - 180°	0	0%	4	97	93	89	96	92	89	94	91	88	14.0	22.3	7.2	75°	1,144
45°	38	0° - 180°	1,260	100%	5	93	88	85	92	88	85	90	87	84				85°	971
55°	6				6	89	85	81	89	84	81	87	83	81	Beam An	gle: 28.7	,0		
65°	2				7	86	81	78	85	81	78	84	80	78	Field Ang	le: 50.4°	•		
75°	1				8	83	78	75	82	78	75	81	77	75					
85°	0				9	80	75	72	80	75	72	79	75	72					
90°	0				10	77	73	70	77	73	70	76	72	70					

ICO2VR 35/15 SMO 45D Input Watts: 19.7, Delivered Lumens: 1243, LPW: 63.1, S/MH: 0.68, Test No: 19-452-07P101



Su	CP mmary	Zonal L	umen Sı	ımmary			C	oeffic	ients	of U	tiliza	tion			Co	ne of Li	ght		ıminance cd/sq.m)
	0°	Zone	Lumens	% Fixture	ρf ρc ρw	50%	80% 30%	10%	50%	20% 70% 30%	10%	50%	50% 30%	10%	Mounting Height	Initial FC Center Beam	Beam Diameter		Average Luminance
0°	2,403	0° - 30°	1,066	86%	0	119	119	119	116	116	116	111	111	111	6.0	66.8	4.6	0°	1,016,499
5°	2,371	0° - 40°	1,197	96%	1	112	110	108	110	108	106	106	104	103	8.0	37.5	6.1	45°	25,244
15°	1,848	0° - 60°	1,239	100%	2	105	102	99	104	100	98	100	98	96	10.0	24.0	7.6	55°	4,499
25°	728	0° - 90°	1,243	100%	3	99	95	92	98	94	91	95	92	89	12.0	16.7	9.1	65°	2,102
35°	202	90° - 180°	0	0%	4	94	89	86	93	89	85	91	87	84	14.0	12.3	10.7	75°	1,307
45°	42	0° - 180°	1,243	100%	5	89	84	81	88	84	80	87	83	80				85°	971
55°	6				6	85	80	76	84	79	76	83	79	75	Beam An	gle: 41.7	7°		
65°	2				7	81	76	72	80	76	72	79	75	72	Field Ang	le: 67.4°	•		
75°	1				8	77	72	69	77	72	69	76	71	68					
85°	0				9	74	69	66	74	69	65	73	68	65					
90°	0				10	71	66	63	71	66	63	70	65	62					

# nLight® AIR is the ideal solution for retrofit or new construction spaces where adding communication wiring is cost prohibitive. The integrated nLight AIR rPP20 Power Pack is part of each EVO Luminaire ordered with the NLTAIR option. These individually addressable controls offer the ultimate in flexibility during initial setup and for space repurposing.

# nLight® AIR Control Accessories

Order as separate catalog number. Visit nLight AIR.

 Wall Switches
 Model Number

 On/Off single pole
 rPODB (color) G2

 On/Off two pole
 rPODB 2P (color) G2

 On/Off & raise/lower single pole
 rPODB DX (color) G2

 On/Off & raise/lower two pole
 rPODB 2P DX (color) G2

### nLight® AIR Control Accessories (cont.)

 Occupancy Sensors (PIR/dual tech)
 Model Number

 Small motion 360°, ceiling
 rCMS 9 / rCMS PDT 9

 Large motion 360°, ceiling
 rCMS 10 / rCMS PDT 10

nLight® Wired The nLight® solution is a digital networked lighting control

system that provides both energy savings and increased user configurability by cost effectively integrating time-based, daylight-based, sensor-based and

Order as separate catalog number. Visit nLight.

**Model Number** 

nPODM (XX)

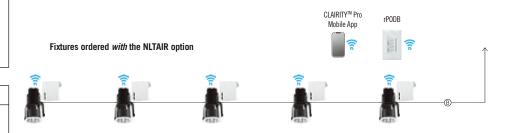
nPODM 2P (XX)

nPOD DX (XX) nPODM 2P DX (XX)

nPOD GFX (XX)

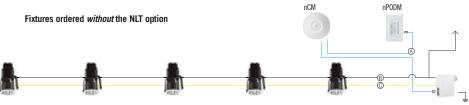
# Possibilites for nLight® AIR







# Possibilites for nLight® wired



nPS 80 EZ or nPP16 D (ordered as an accessory)

nPODM

# Fixtures ordered with the NLT option

# Graphic touchscreen Photocell Controls

On/Off & raise/lower single pole

On/Off & raise/lower two pole

**Wall Switches** 

On/Off single pole

On/Off two pole

manual lighting control schemes.

nLight® Wired Control Accessories

Dimming nCM ADCX

# nLight® Wired Control Accessories (cont.)

 Occupancy Sensors (PIR/dual tech)
 Model Number

 Small motion 360°, ceiling
 nCM 9 / nCM PDT 9

 Large motion 360°, ceiling
 nCM 10 / nCM PDT 10

 Wide View
 nWV 16 / nWV PDT 16

 Wall switch with raise/lower
 nWSX LV DX / nWSX PDT LV DX

Cat-5 Cables (plenum rated)





# INDOOR PHOTOMETRIC REPORT

CATALOG: ICO2VR 35/05 SOL 45D Test #: 19-452-07P79

Test Lab: SCALED PHOTOMETRY ICO2VR 35/05 SOL 45D Catalog:

Description: INCITO 2 INCH VANDAL RESISTANT TRIM, RECESSED

DOWNLIGHT, ROUND, 3500K, 500 LUMENS, SOLITE PATTERN

LENS, 45 DEGREE BEAM, 80 CRI

Series: Incito™ 2" Round Vandal Resistant

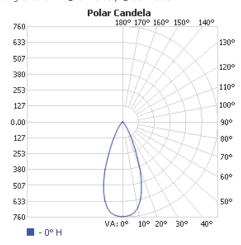
Total luminaire Lumens: 390.4, absolute photometry \* Lamp Output:

Input Wattage: 5.6

Luminous Opening: Circular (Dia: 2.16")

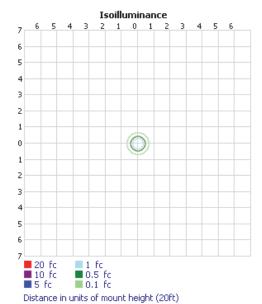
Cie Class: Direct

Max Cd: 755.0 at Horizontal: 0°, Vertical: 0° Spacing Criterion: @ 0 = 0.69 / @ 90 = 0.69









Visual Photometric Tool 1.2.46 copyright 2024, Acuity Brands Lighting.

This Photometric report has been generated using methods recommended by the IESNA. Calculations are based on Photometric data provided by the manufacturer, and the accuracy of this Photometric report is dependent on the accuracy of the data provided. End-user environment and application (including, but not limited to, voltage variation and dirt accumulation) can cause actual Photometric performance to differ from the performance calculated using the data provided by the manufacturer. This report is provided without warranty as to accuracy, completeness, reliability or otherwise. In no event will Acuity Brands Lighting be responsible for any loss resulting from any use of this report.



PAGE 1 OF 3

<sup>\*</sup>Test based on absolute photometry where lamp lumens=lumens total.

<sup>\*</sup>Cutoff Classification and efficiency cannot be properly calculated for absolute photometry.





# **Zonal Lumen Summary**

Zone L	umens %	6 Luminaire
0-30	334.8	85.7%
0-40	376.2	96.4%
0-60	389.4	99.7%
60-90	1.0	0.3%
0-90	390.4	100%

# **Lumens Per Zone**

Zone	Lumens	% Total
0-10	69.5	17.8%
10-20	157.0	40.2%
20-30	108.2	27.7%
30-40	41.4	10.6%
40-50	11.2	2.9%
50-60	2.0	0.5%
60-70	0.7	0.2%
70-80	0.3	0.1%
80-90	0.1	0.0%

# Average Luminance (Cd/m2)

	0
0	319371
45	7931
55	1413
65	660
75	411
85	305

# **Coefficients Of Utilization - Zonal Cavity Method**

											Effe	ctive	Floor	Cavi	ty Re	flecta	nce:	20%
RCC %:		8	0			7	0			<i>50</i>			<i>30</i>			<b>10</b>		0
RW %:	<u>70</u>	50	30	0	<u>70</u>	50	30	0	<u>50</u>	30	20	<u>50</u>	30	20	<u>50</u>	30	20	0
RCR: 0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1	1.14	1.12	1.10	1.08	1.12	1.10	1.08	.95	1.06	1.04	1.03	1.02	1.01	1.00	.98	.98	.97	.95
2	1.09	1.05	1.02	.99	1.07	1.04	1.00	.91	1.00	.98	.95	.97	.95	.93	.95	.93	.92	.90
3	1.05	.99	.95	.92	1.03	.98	.94	.86	.95	.92	.89	.93	.90	.88	.91	.89	.87	.85
4	1.01	.94	.89	.86	.99	.93	.89	.82	.91	.87	.84	.89	.86	.83	.87	.85	.82	.81
5	.96	.89	.84	.81	.95	.88	.84	.78	.87	.83	.80	.85	.82	.79	.84	.81	.78	.77
6	.93	.85	.80	.76	.91	.84	.79	.74	.83	.79	.75	.81	.78	.75	.80	.77	.74	.73
7	.89	.81	.76	.72	.88	.80	.75	.71	.79	.75	.72	.78	.74	.71	.77	.74	.71	.70
8	.85	.77	.72	.69	.84	.77	.72	.68	.76	.71	.68	.75	.71	.68	.74	.70	.68	.67
9	.82	.74	.69	.65	.81	.74	.69	.65	.73	.68	.65	.72	.68	.65	.71	.67	.65	.64
10	.79	.71	.66	.63	.78	.70	.66	.62	.70	.65	.62	.69	.65	.62	.68	.65	.62	.61





Candela 1	able - Type C
	0
0	755
5	745
10	697
15	581
20	410
25	229
30	120
35	64
40	31
45	13
50	4
55	2
60	1
65	1
70	0
75	0
80	0
85	0
90	0



# KEYSTONE APARTMENTS TYPE F-3

# **FEATURES & SPECIFICATIONS**

### **INTENDED USE**

Provides years of maintenance-free illumination for outdoor use in residential & commercial applications. Ideal for applications such as lighting walkways and stairways for safety and security.

### CONSTRUCTION

Cast-aluminum housing with corrosion-resistant paint in either dark bronze or white finish.

ADA compliant.

# **OPTICS**

### 4000K CCT LEDs.

Polycarbonate lens protects the LED from moisture, dirt and other contaminants.

LUMEN MAINTENANCE: The LED will deliver 70% of its initial lumens at 50,000 hour average LED life. See Lighting Facts label on page 2 for performance details.

### **ELECTRICAL**

MVOLT driver operates on any line voltage from 120-277V

Operating temperature -30°C to 40°C.

1KV surge protection standard.

### INSTALLATION

Surface mounts to universal junction box (provided by others).

# LISTINGS

UL Listed to U.S. and Canadian safety standards for wet locations.

Tested in accordance with IESNA LM-79 and LM-80 standards.

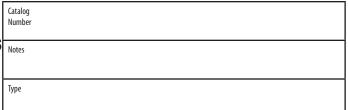
**WARRANTY** — 5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at:

www.acuitybrands.com/support/customer-support/terms-and-conditions

**Note**: Actual performance may differ as a result of end-user environment and application.

All values are design or typical values, measured under laboratory conditions at 25  $^{\circ}\text{C}.$ 

Specifications subject to change without notice.



**Outdoor General Purpose** 

# **OLLWD & OLLWU**

**LED WALL CYLINDER LIGHT** 

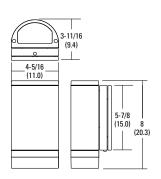


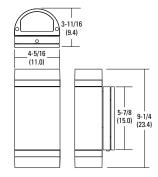




# Specifications

All dimensions are inches (centimeters)





# ORDERING INFORMATION

For shortest lead times, configure products using bolded options.

Series	Performance Package	Color temperature (CCT)	Voltage	Finish
OLLWO LED Downlight OLLWU LED Up & downlight	P1	<b>40K</b> 4000K	MVOLT 120V-277V 120 120V <sup>1</sup>	DDB Dark bronze WH White <sup>2</sup>

### otes

1. Only available with OLLWU and in DDB.

**Example:** OLLWD LED P1 40K MVOLT DDB

2. Only available with OLLWU.

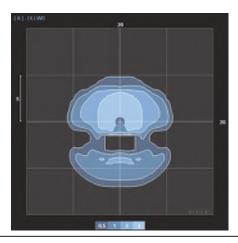
DECORATIVE INDOOR & OUTDOOR OLLWD-OLLWU

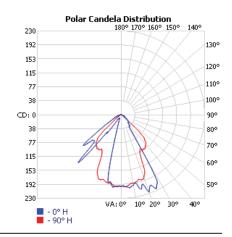
# **PHOTOMETRICS**

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's Outdoor LED homepage Tested in accordance with IESNA LM-79 and LM-80 standards.

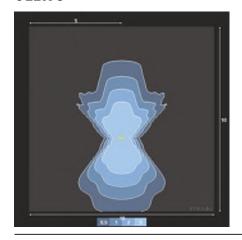
# **OLLWD**

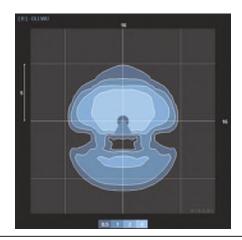


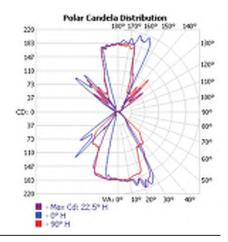




# **OLLWU**



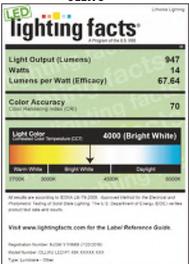




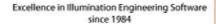
# **OLLWD**



# **OLLWU**









sample banner copyright 2013 Lighting Analysis, Inc.

# Photometric Report (Type C)

Filename: OLLWD LED P1 40K MVOLT.ies

[TEST] ISF 31607

[TESTLAB] ACUITY BRANDS LIGHTING, DECATUR LAB

[ISSUEDATE] 6/3/2021

[MANUFAC] Lithonia Lighting
[LUMCAT] OLLWD LED P1 40K MVOLT
[LUMINAIRE] OUTDOOR LED WALL CYLINDER DOWN LIGHT &
4000K NICHIA 219C
[LAMPCAT] NICHIA 219CT

[LAMP] LED

Maximum Candela = 2104 at 175 H 2.5 V

# Classification:

Road Classification: N.A., N.A., N.A. (deprecated)

Upward Wast Light Ratio: 0.01

Luminaire Efficacy Rating (LER): 64

Maximum UGR: 18.5

Indoor Classification: Direct

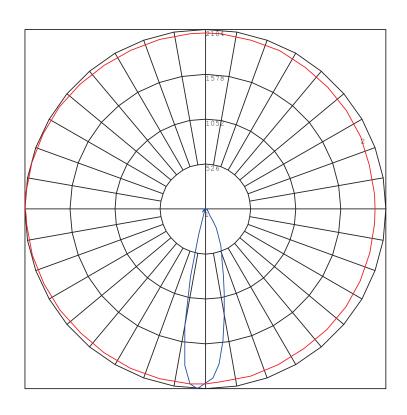
BUG Rating: B1-U1-G0

# Polar Candela Curves:

Vertical Plane Through:
1) 175 - 355 Horizontal

Horizontal Cone Through:

2) 2.5 Vertical





# Photometric Report (Type C)

Filename: OLLWD LED P1 40K MVOLT.ies

[TEST] ISF 31607

[TESTLAB] ACUITY BRANDS LIGHTING, DECATUR LAB

[ISSUEDATE] 6/3/2021

[MANUFAC] Lithonia Lighting
[LUMCAT] OLLWD LED P1 40K MVOLT
[LUMINAIRE] OUTDOOR LED WALL CYLINDER DOWN LIGHT &
4000K NICHIA 219C

[LAMPCAT] NICHIA 219CT

[LAMP] LED

Maximum Candela = 2104 at 175 H 2.5 V

# Classification:

Road Classification: N.A., N.A., N.A. (deprecated)

Upward Waste Light Ratio: 0.01 Luminaire Efficacy Rating (LER): 64

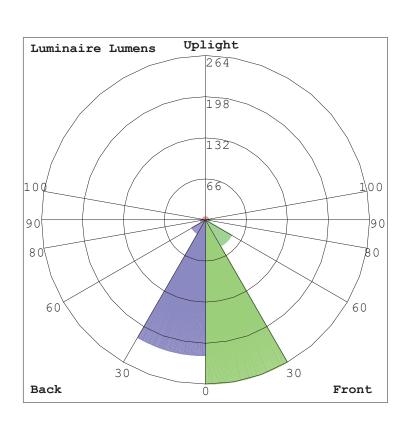
Maximum UGR: 18.5

Indoor Classification: Direct

BUG Rating : B1-U1-G0

# LCS Summary:

LCS Zone	Lumens	%Lamp	%Lum
FL (0-30)	263.9	N.A.	45.6
FM (30-60)	48.7	N.A.	8.4
FH (60-80)	7.7	N.A.	1.3
FVH (80-90)	0.9	N.A.	0.2
BL (0-30)	218.3	N.A.	37.7
BM (30-60)	25.2	N.A.	4.4
BH (60-80)	8.0	N.A.	1.4
BVH (80-90)	1.0	N.A.	0.2
UL (90-100)	0.1	N.A.	0.0
UH (100-180)	4.8	N.A.	0.8
Total	578.6	N.A.	100.0
BUG Rating	B1-U1-G0		







annan kananan dari dari dari dari dari dari dari dari	
3 1/16"	2"
3 <sup>1</sup> /16"	
Δ"	
/      -    -	
4 <sup>1</sup> /8"——	
hole width	

<b>Project</b>	
Type	
Notes	

# PERFORMANCE PER LINEAR FOOT AT 3500K

NOMINAL LUMEN OUTPUT	INPUT WATTS*	EFFICACY
1000 lm/ft	11.5 W/ft	87 lm/W

Please consult factory for custom lumen output and wattage.







© 2016 Axis Lighting Inc.

1.800.263.2947

[T] 514.948.6272





# **Ordering Guide**

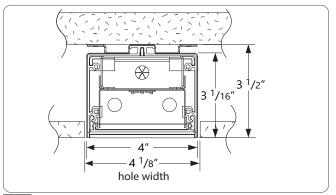
V	VBRLED							S		
PRO	DDUCT ID	NO	M.LUMENS/FT	CRI	COI	LOR TEMP.	SH	IELDING		LENGTH (FT)
WBRLED	Recessed LED		400 lm/ft - Min. 1000 lm/ft - Max.	80 CRI 90 CR	30 35	2700 K 3000 K 3500 K 4000 K	S	satin lens	3 4 5	2' 3' 4' 5' 8'
		are availab	etween listed min and max le. Consult factory for rtside of the listed range.						S#	system run length not including end caps

FINISH		VOLTAGE		DRIVER		CIRCUITS		MOUNTINGS	
AP	aluminum paint	120	120 V	DP	dimming (0-10V) 1%	1	1 circuit	D	drywall flangeless
W	white	277	277 V	LT(#)	Lutron *	2	2 circuits	DF	drywall flange
BLK	black	347	347 V	BI	bi-level dimming	+E(#)	emergency circuit *	DS	drywall spackle flange
С	custom	UNV	universal	O(#)	other **	+NL(#)	night light circuit *		
		DC	low voltage*	POE(#)	POE drivers*	+GTD(#)	generator transfer device *		
	* Only available with POE drivers.			up to -20°C; Specify system onsult factory; see page 2	* Specify quantity				

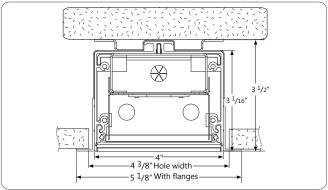
BATTERY (OPTIONAL)		OTHER (OPTIONAL)		IC CONTROLS (OPTIONAL)			CUSTOM (OPTIONAL)	
В#	battery pack (integral)	+EF +N	end feed* natatorium finish	OS(#) EN(#) WC(#)		С	custom	
Not available with 347V Please consult factory		* See page 3 for more details.		See integrated controls guide for further details Please consult factory		Please	specify	



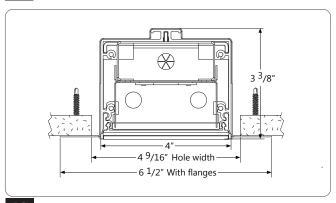
# HORIZONTAL RECESSED MOUNTING OPTIONS



# **DRYWALL FLANGELESS**



# **DRYWALL FLANGE**



# DS DRYWALL SPACKLE FLANGE

# LED SYSTEM

CRI Minimum 80 or 90 color rendering index.

CCT Choice of 2700K, 3000K, 3500K and 4000K color

temperature with a great color consistency (within 3-step MacAdam ellipse). Both within

fixture and fixture to fixture.

Minimum 50,000h with 85% of lumen **LED life** 

maintenance in 25°C ambient temperature, in compliance with IES LM-80 testing

measurements.

**Thermal** Aluminum housing acting as the heat sink to

Management maximize life.

# OTHER MOUNTING OPTIONS

WET BEAM 4 LED is available with, pendant, surface, wall mounted options and recessed vertical.

# CONSTRUCTION

Extruded aluminum (0.062" nominal) Housing

Up to 70% recycled content **End Cap** Die cast zinc (0.070" nominal) **Interior Brackets** Die formed sheet steel (16 gauge) Gaskets Moulded elastomer (0.100" nominal) **Lens Gaskets** Extruded elastomer (0.045" nominal)

**Satin Lens Extruded Polycarbonate** 

# ELECTRICAL

**Lutron driver** LDE1 - Hi-lume 1% EcoSystem with Soft-on, Fade-to-

Other drivers\*\* DALI - Digital Addressable Lighting Interface

DMX - Digital Multiplex Xitanium SR - For wireless sensor

Power over Ethernet MOLEX POE drivers\* IGOR UL2108 certified for

**SMARTENGINE** integral or remote driver

O - Other (Consult factory)
\*Consult factory

**Emergency** Integral emergency battery pack

or emergency circuit optional.

120V, 277V, 347V, UNV. **Input Voltage** 

Flex Whip Shipped in a separate box for contractors to install

functions or affect the length of the luminaire. Please contact factory for more details.

# **OPTICS**



# **SATIN LENS**

**Extruded Polycarbonate** 

# WEIGHT

Recessed Horizontal 4 ft 12.8 lbs / 5.8 kg Recessed Horizontal 8 ft 24.5 lbs / 11.1 kg

# GASKETTED FIXTURE

With its gasketted end cap and lens the Wet BEAM 4 LED is made for wet locations, and is ideal for exterior soffits and canopies of malls, hospitals and other institutions.

© 2016 Axis Lighting Inc.

1.800.263.2947

[T] 514.948.6272







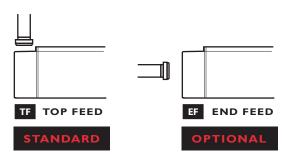
# WARRANTY

Axis Lighting will warrant defective LEDs, boards, and drivers for 5 years from date of purchase. Warranty is valid if luminaire is installed and used according to specifications. If defective, Axis will send replacement boards or drivers at no cost along with detailed replacement instructions and instructions on how to return defective components to Axis.

# FINISH

Aluminum paint, powder coated and custom finishes are also

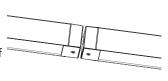
# POWER FEED



<sup>\*</sup> Not available with 347 V.

# JOINER SYSTEM

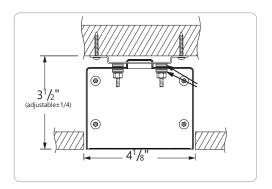
WET BEAM4 LED modular system consists of smaller modules joined and gasketted together allowing for system runs in lengths of 4' and 8' as well as custom lengths up to 12'.



\* For continuous rows allow 2" for connectors between each fixture.

# END VIEW

For D and DF mounting.



# APPROVALS

Certified wet locations to UL and CSA standards

© 2016 Axis Lighting Inc.

1.800.263.2947

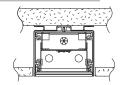
[T] 514.948.6272



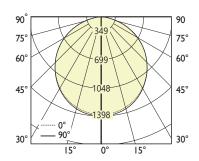


# PHOTOMETRIC DATA

# 1000 lm/ft



# PHOTOMETRIC CURVE



Luminaire Lumens: 1000 lm/ft Total Lumens: 4000 lm (for 4ft) Input Watts: 45.8 W/ft Efficacy: 87 lm/W

IES FILE: WBRLED-1000-80-35-S-4.IES

TESTED ACCORDING TO IES LM-79-2008

# **CANDELA DISTRIBUTION**

	Horizontal Angles						
Vertical Angle	0	22.5	45	67.5	90		
0	1397	1397	1397	1397	1397		
5	1393	1391	1391	1389	1390		
15	1347	1344	1341	1339	1338		
25	1256	1250	1246	1243	1242		
35	1123	1115	1109	1104	1104		
45	952	943	935	929	928		
55	748	738	729	720	718		
65	514	503	492	482	479		
75	272	262	249	236	233		
85	57	49	39	30	27		
90	4	3	3	3	3		

# ZONAL LUMENS

	Lumens
Zone	
0	
0-10	132
10-20	380
20-30	577
30-40	699
40-50	728
50-60	659
60-70	496
70-80	271
80-90	58
90	

### LUMINANCE DATA (cd/m²)

	Horizontal Angles					
Vertical Angle	0	45	90			
45	10617	10430	10350			
55	10276	10017	9870			
65	9587	9183	8941			
75	8298	7599	7091			
85	5172	3533	2411			

axislighting.com

1 All IES files are available for download at: www.axislighting.com







sample banner copyright 2013 Lighting Analysis, Inc.

# Photometric Report (Type C)

Filename: WBRLED-500-80-35-S-4.ies
[TEST] MODIFIED FROM H069C
[TESTLAB] AXIS LIGHTING INC.
[ISSUEDATE] 01-16-2014
[MANUFAC] AXIS LIGHTING INC.
[LUMCAT] WBRLED-500-80-35-S0-4
[LUMINAIRE] AXIS LIGHTING WET BEAM DIRECT LED LUMINAIRE
[LAMP] LED

Maximum Candela = 712.702 at 90 H 2.5 V

# Classification:

Road Classification: Type VS, Very Short, N.A. (deprecated)

Upward Wast Light Ratio: 0.00

Luminaire Efficacy Rating (LER): 90

Maximum UGR: 24.4

Indoor Classification: Direct

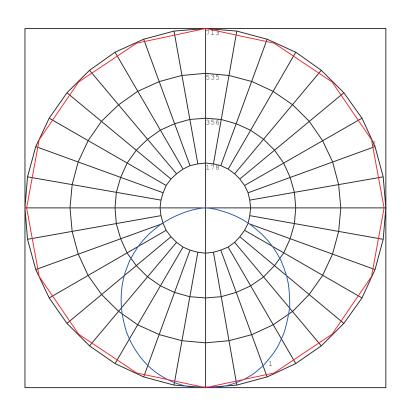
BUG Rating : B1-U0-G1

# Polar Candela Curves:

Vertical Plane Through: 1) 90 - 270 Horizontal

Horizontal Cone Through:

2) 2.5 Vertical





# Photometric Report (Type C)

Filename: WBRLED-500-80-35-S-4.ies

[TEST] MODIFIED FROM H069C [TESTLAB] AXIS LIGHTING INC.

[ISSUEDATE] 01-16-2014

[MANUFAC] AXIS LIGHTING INC. [LUMCAT] WBRLED-500-80-35-S0-4

[LUMINAIRE] AXIS LIGHTING WET BEAM DIRECT LED

LUMINAIRE [LAMP] LED

Maximum Candela = 712.702 at 90 H 2.5 V

# Classification:

Road Classification: Type VS, Very Short, N.A. (deprecated)

Upward Waste Light Ratio: 0.00

Luminaire Efficacy Rating (LER): 90

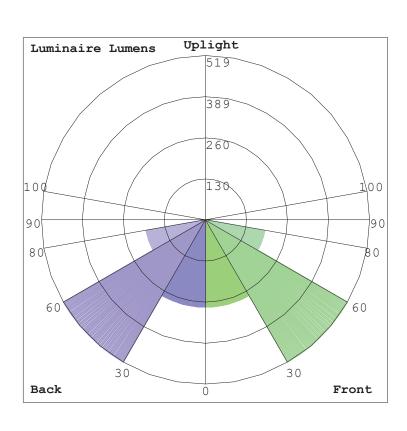
Maximum UGR: 24.4

Indoor Classification: Direct

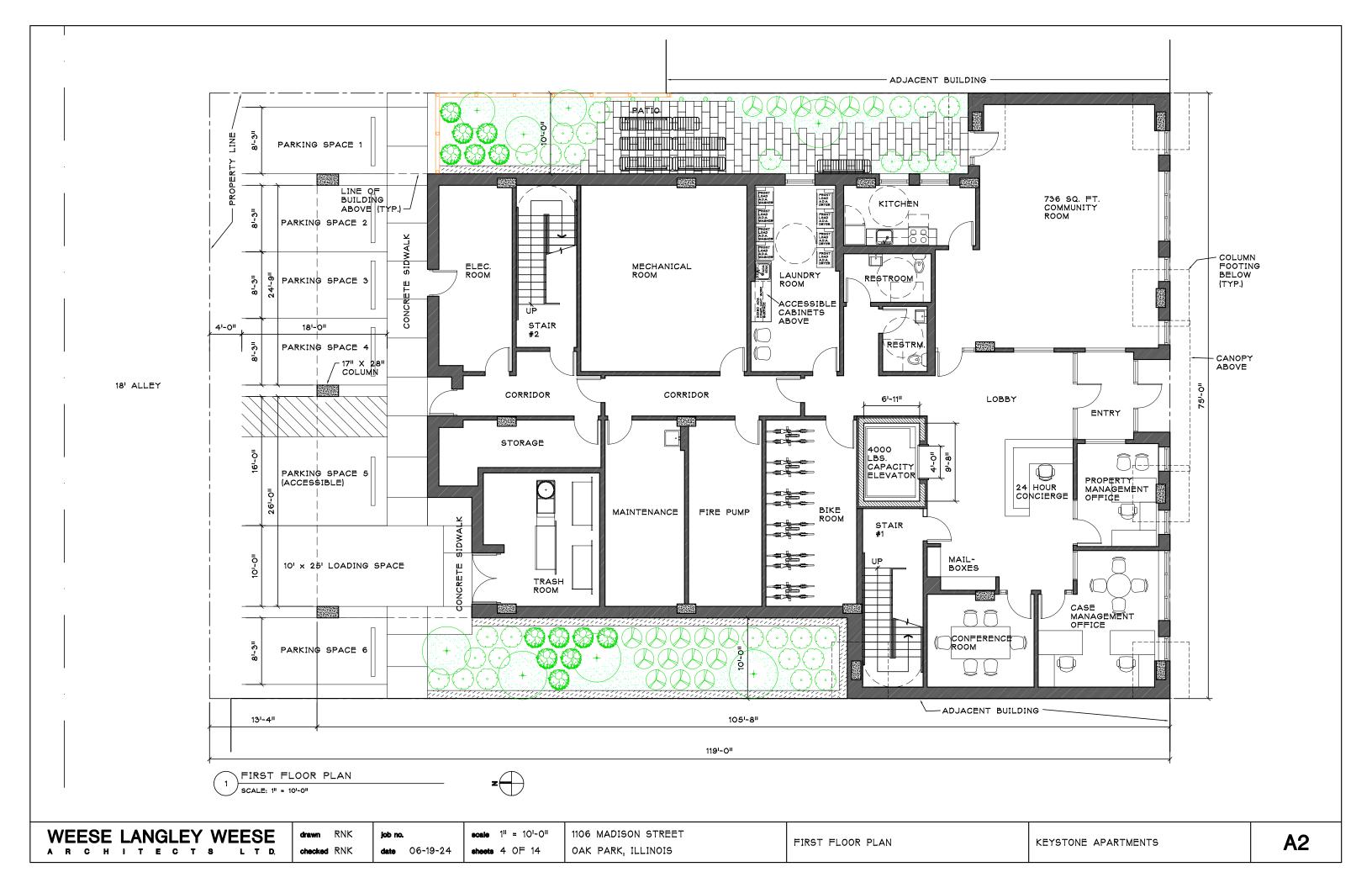
BUG Rating : B1-U0-G1

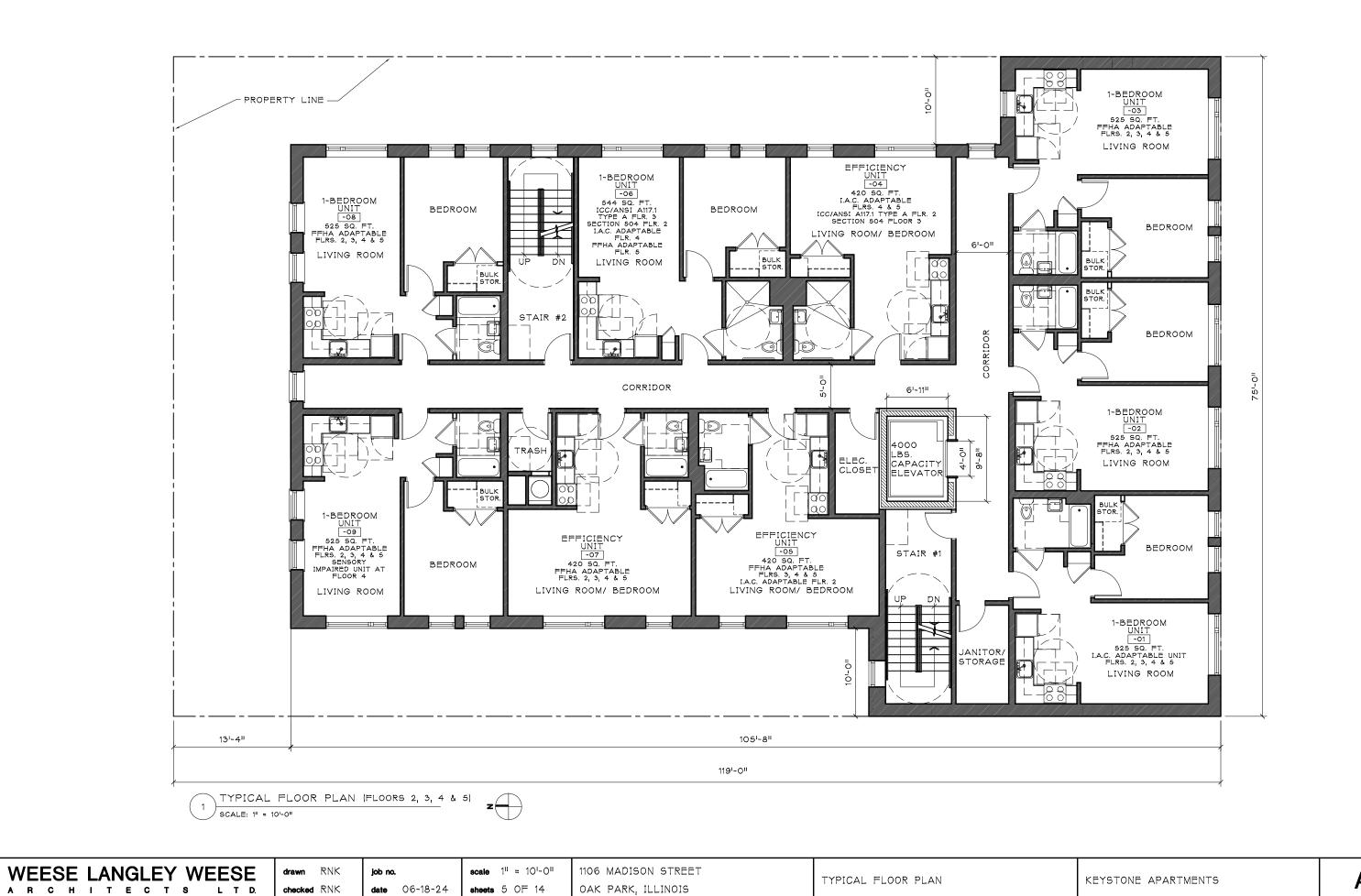
# LCS Summary:

LCS Zone FL (0-30)	Lumens 275.5	%Lamp N.A.	%Lum 13.8
FM (30-60)	519.2	N.A.	26.0
FH (60-80)	190.8	N.A.	9.5
FVH (80-90)	14.3	N.A.	0.7
BL (0-30)	275.5	N.A.	13.8
BM $(30-60)$	519.2	N.A.	26.0
BH (60-80)	190.8	N.A.	9.5
BVH (80-90)	14.3	N.A.	0.7
UL (90-100)	0.0	N.A.	0.0
UH (100-180)	0.0	N.A.	0.0
Total	1999.6	N.A.	100.0
BUG Rating	B1-U0-G1		

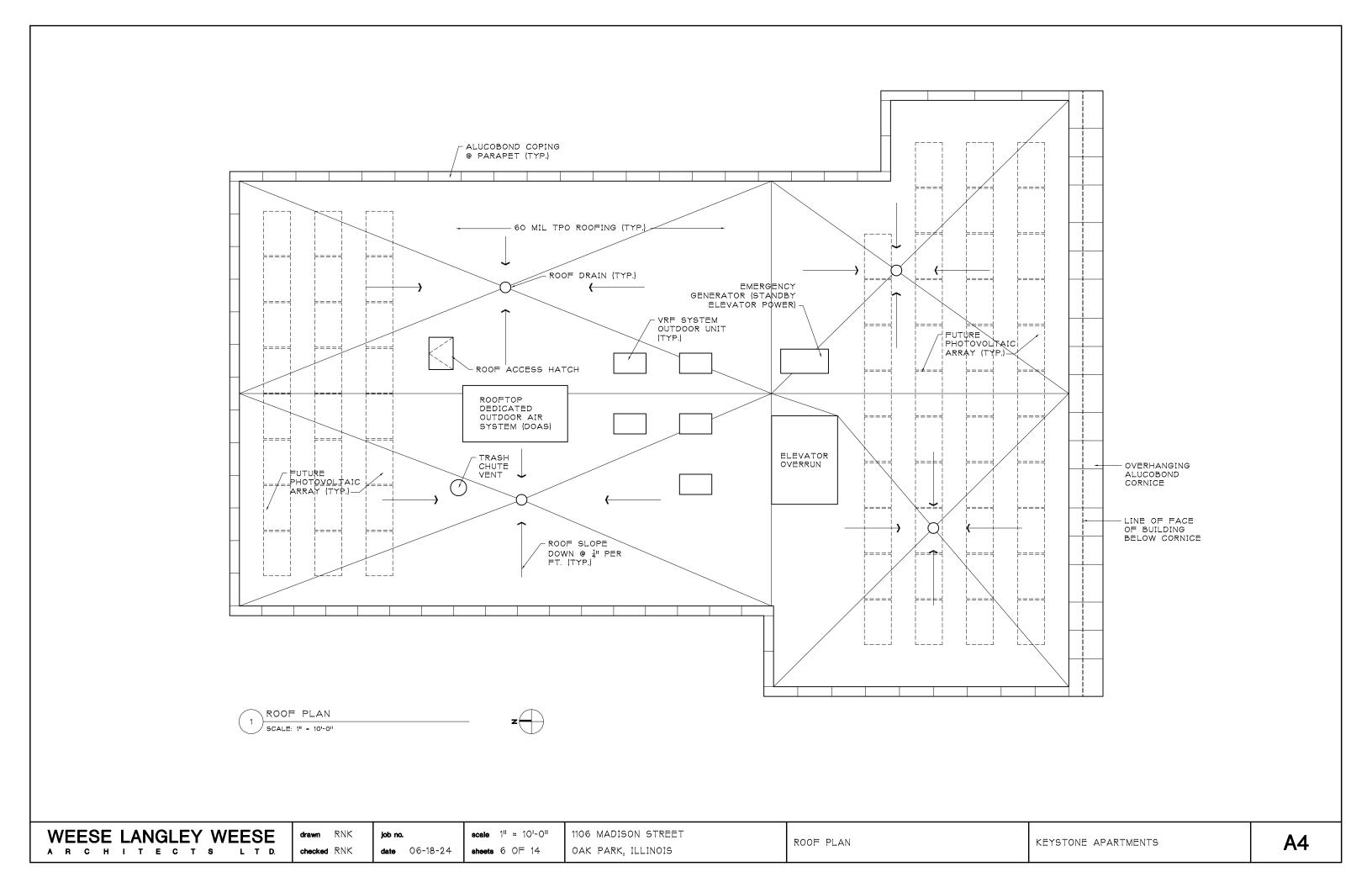


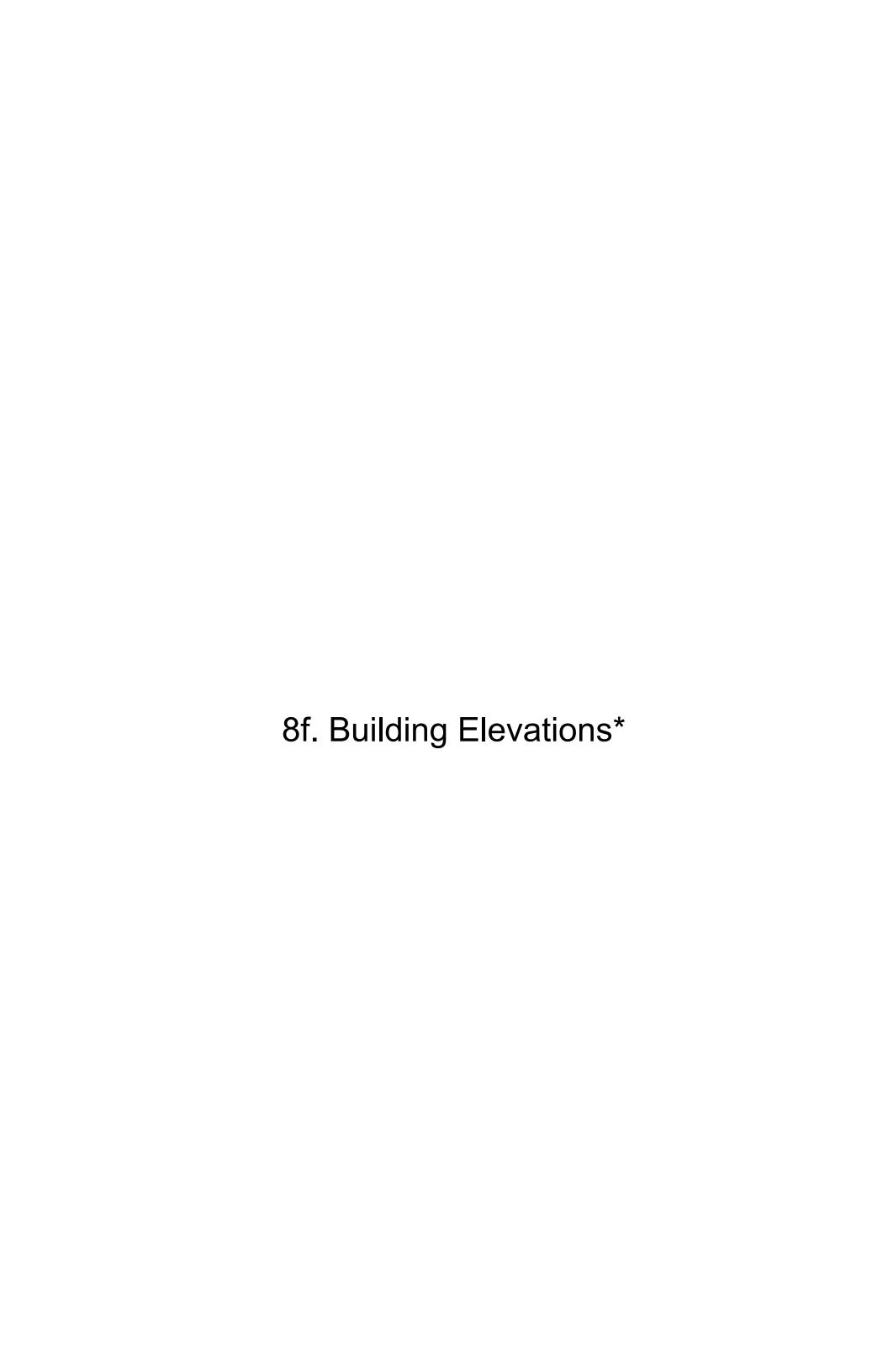






**A3** 





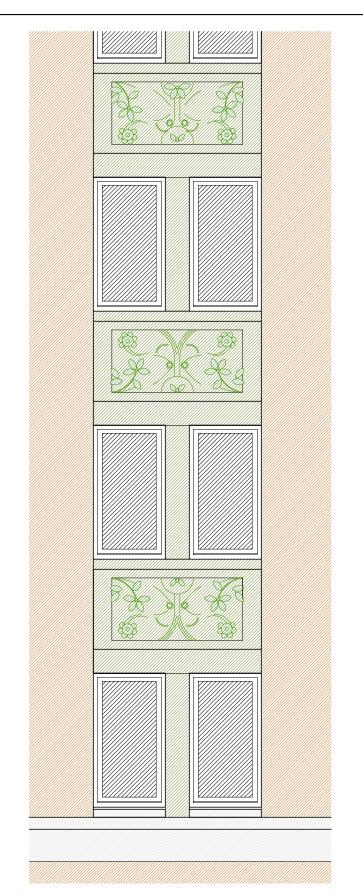














SPANDREL PANEL BASIS OF DESIGN

ELEVATION DETAIL @ SPANDREL PANELS

SCALE: 1/4" = 1'-0"

WEESE LANGLEY WEESE

drawn RNK checked RNK

NK job no NK date

job no. date 06-19-24

scale 1/4" = 1'-0" sheets 9 OF 14

1106 MADISON OAK PARK, ILLINOIS

SPANDREL ART BASIS OF DESIGN

KEYSTONE APARTMENTS

A5-b



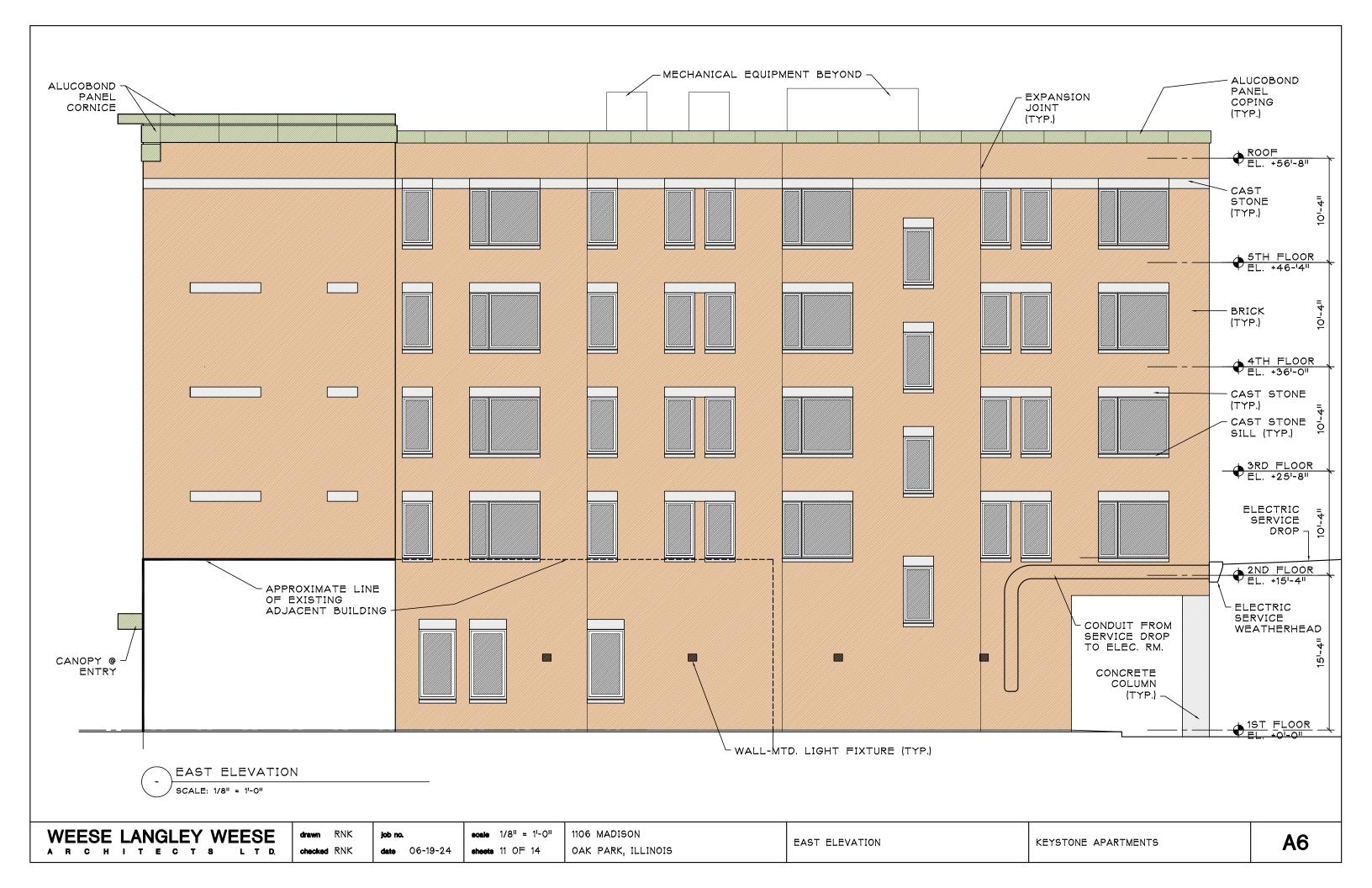
WEESE LANGLEY WEESE

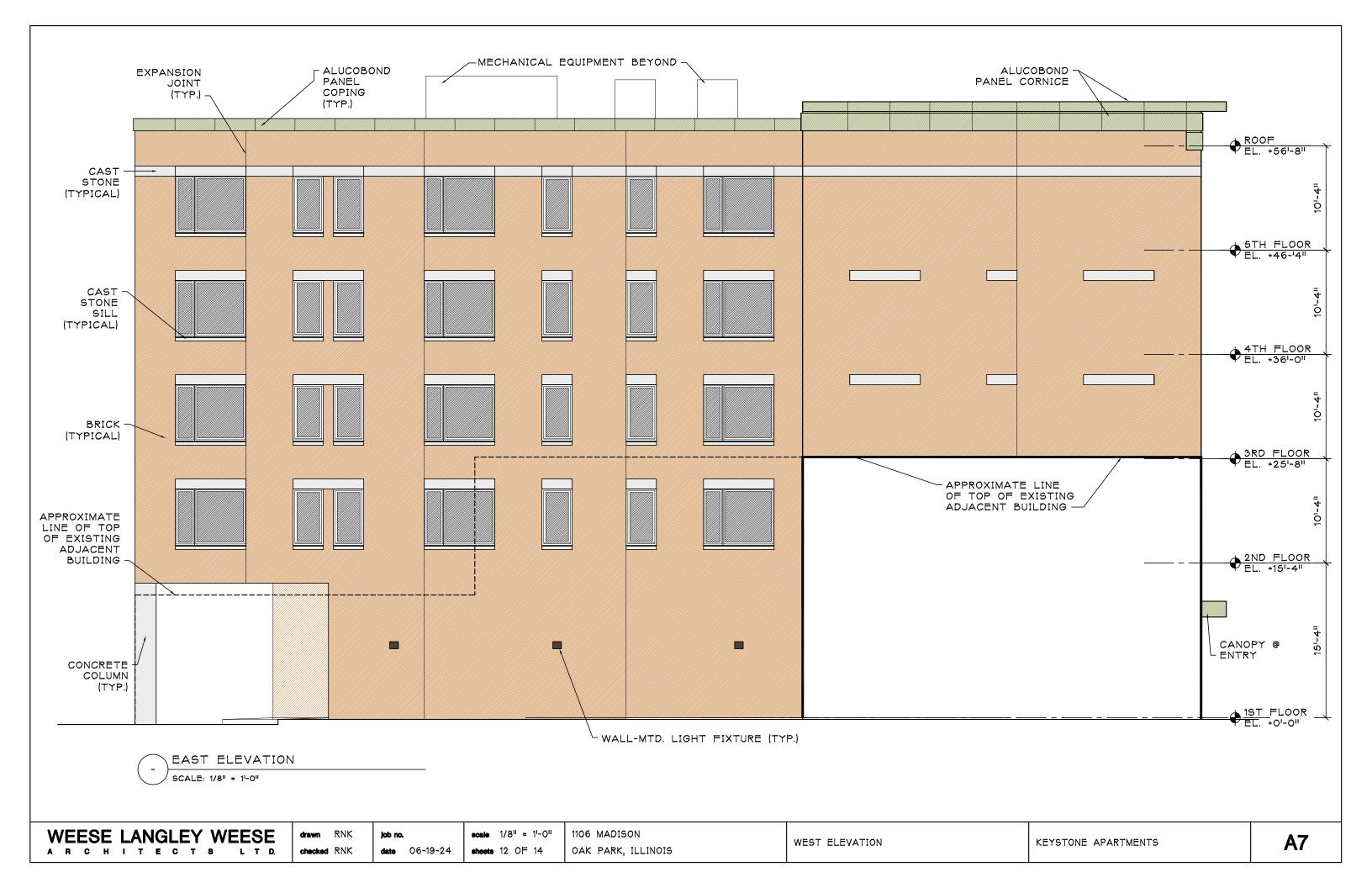
checked RNK

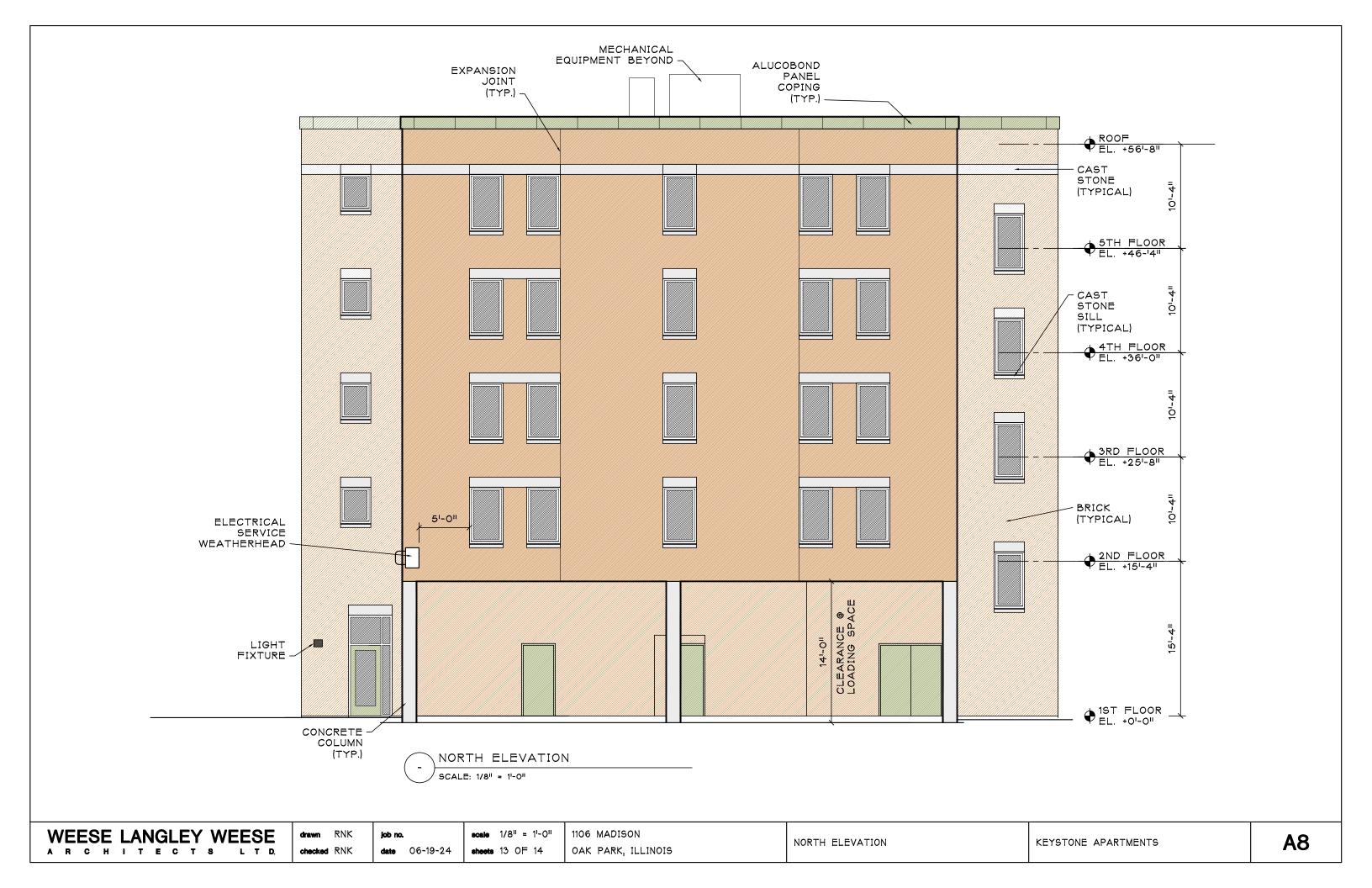
date 06-19-24

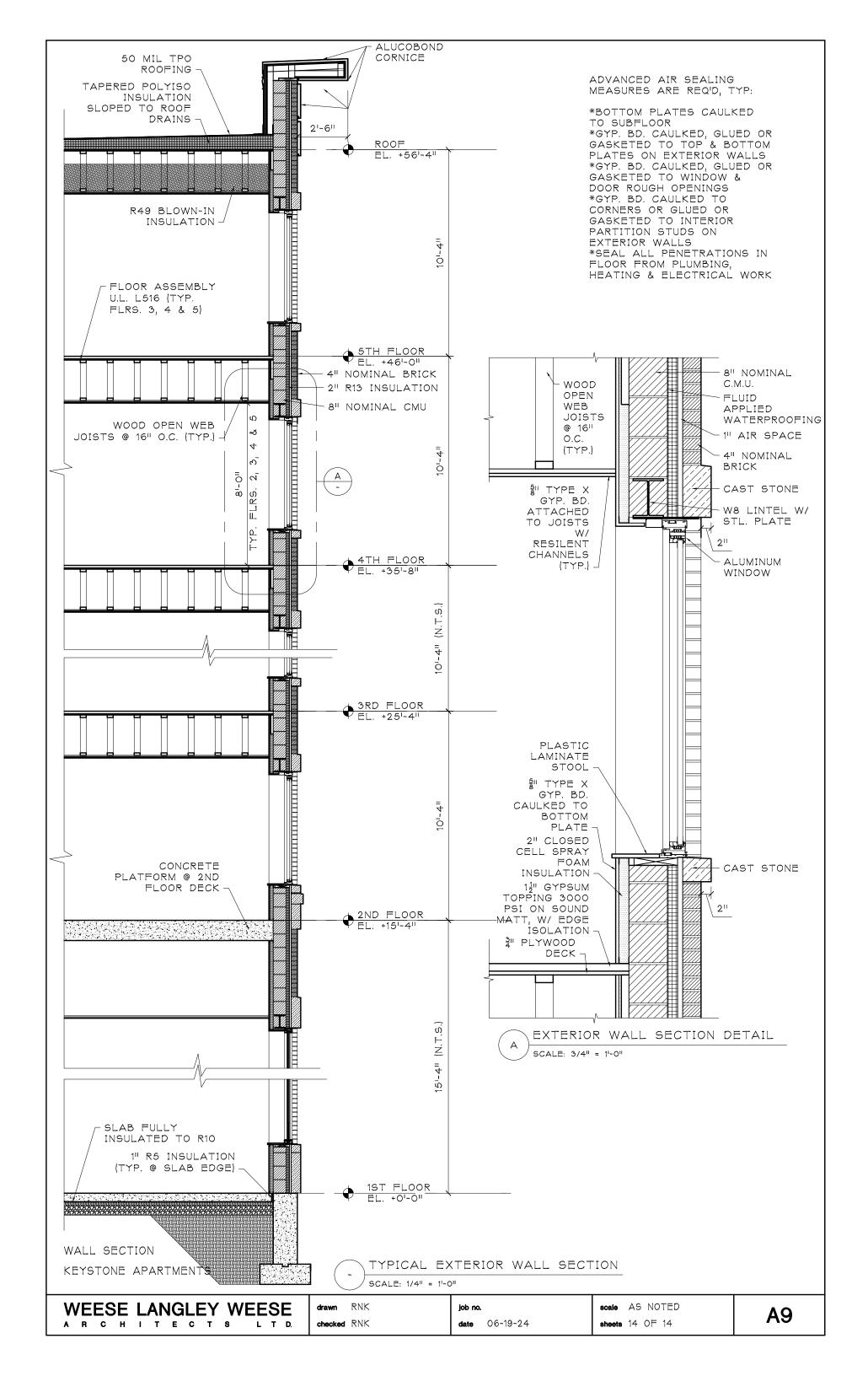
sheets 10 OF 14

OAK PARK, ILLINOIS





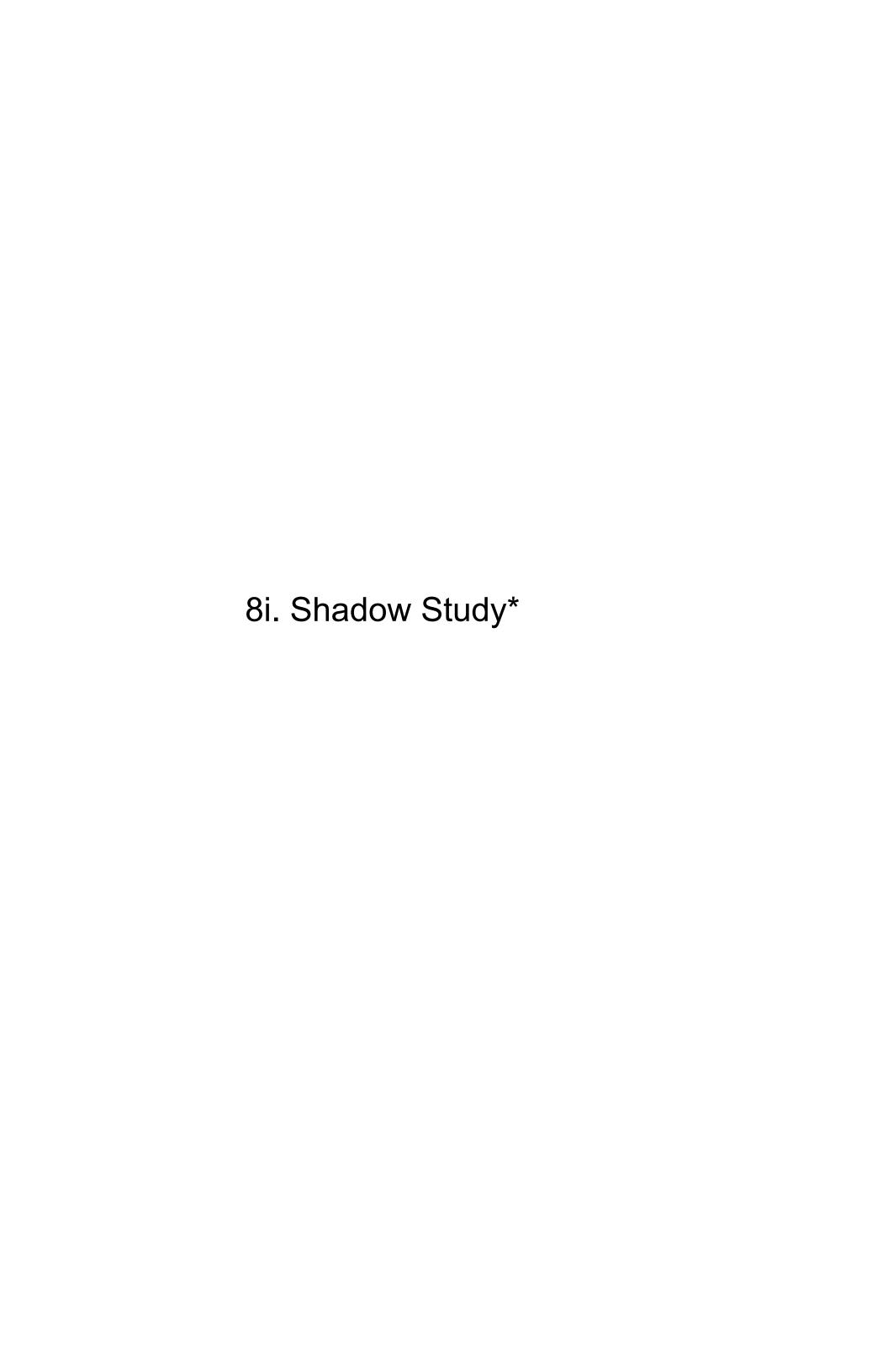


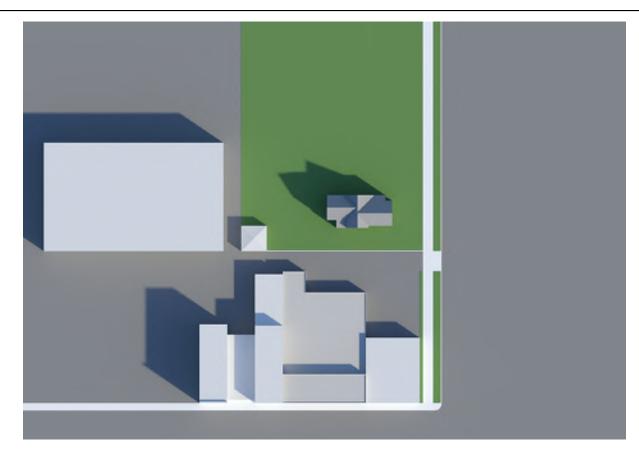




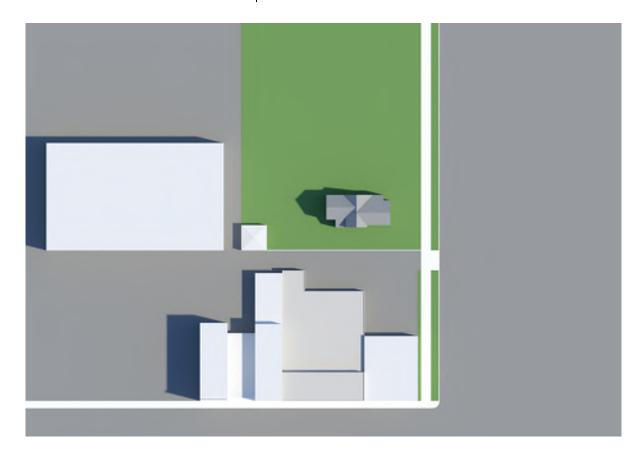




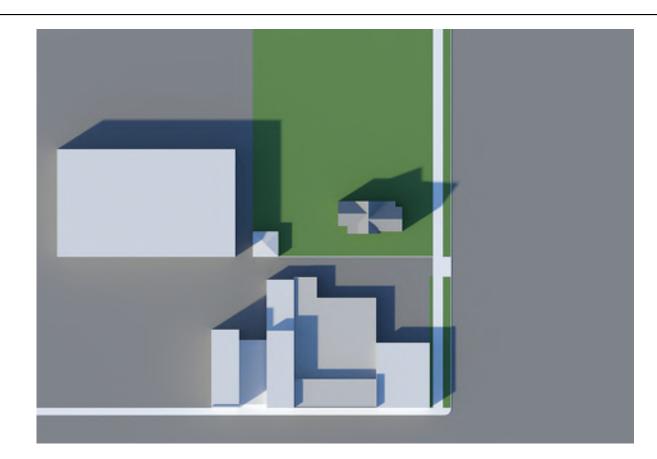




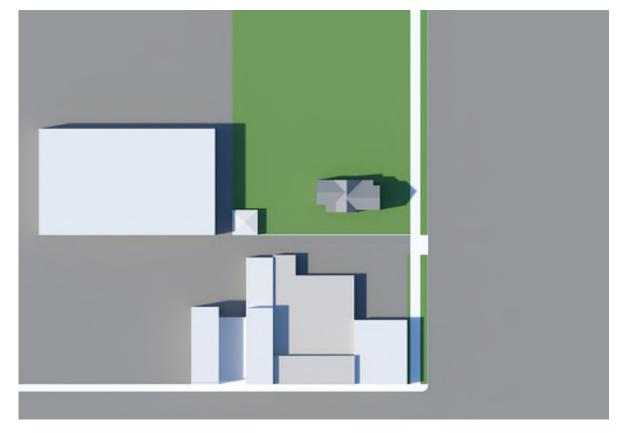
EXISTING BUILDING: MARCH 21ST, 9:00 A.M.



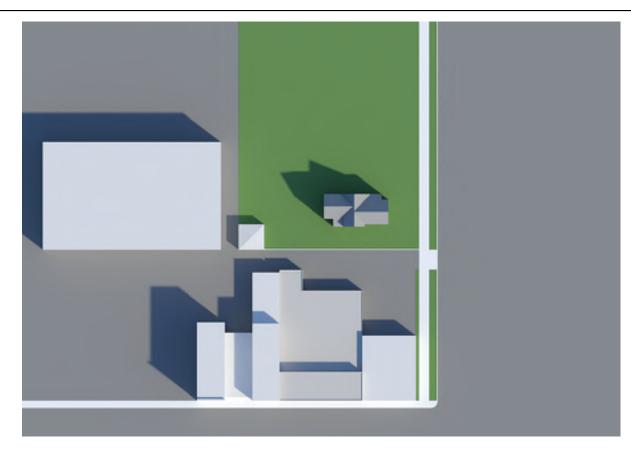
EXISTING BUILDING: JUNE 21ST, 9:00 A.M.



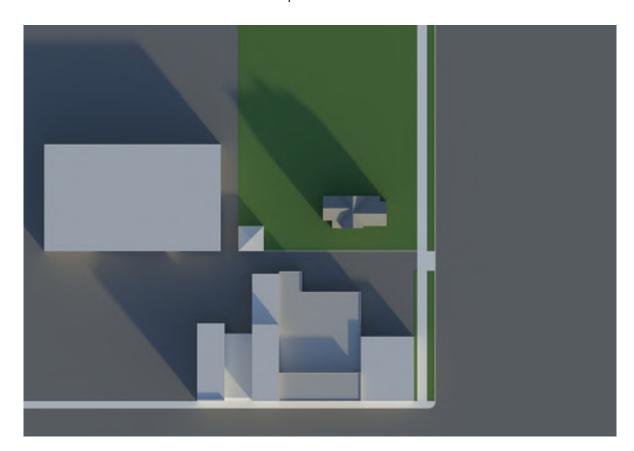
EXISTING BUILDING: MARCH 21ST, 3:00 P.M.



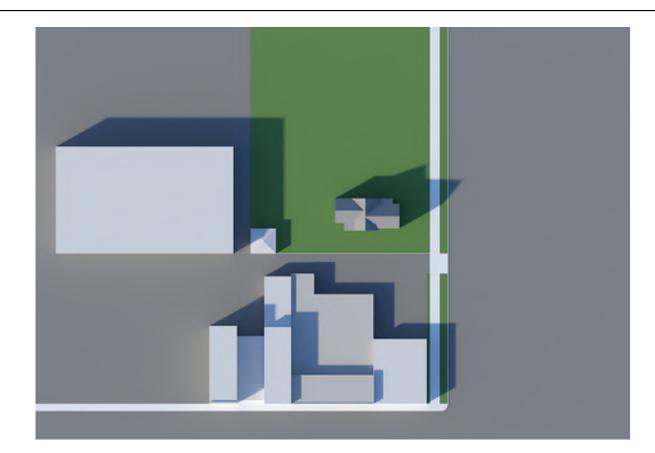
EXISTING BUILDING: JUNE 21ST, 3:00 P.M.



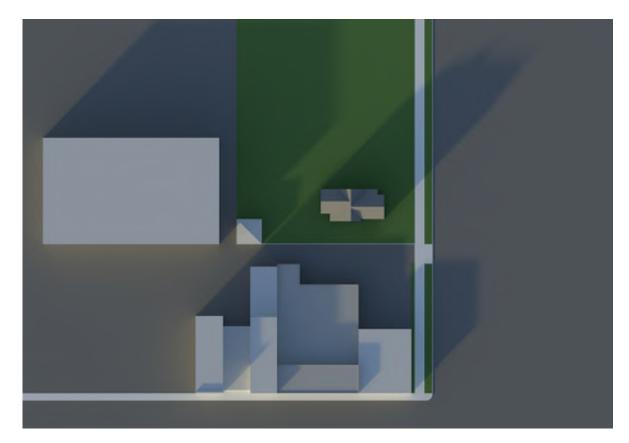
EXISTING BUILDING: SEPTEMBER 21ST, 9:00 A.M.



EXISTING BUILDING: DECEMBER 21ST, 9:00 A.M.



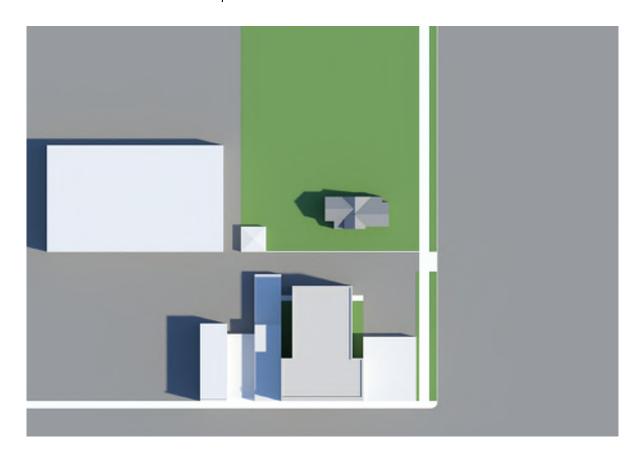
EXISTING BUILDING: SEPTEMBER 21ST, 3:00 P.M.



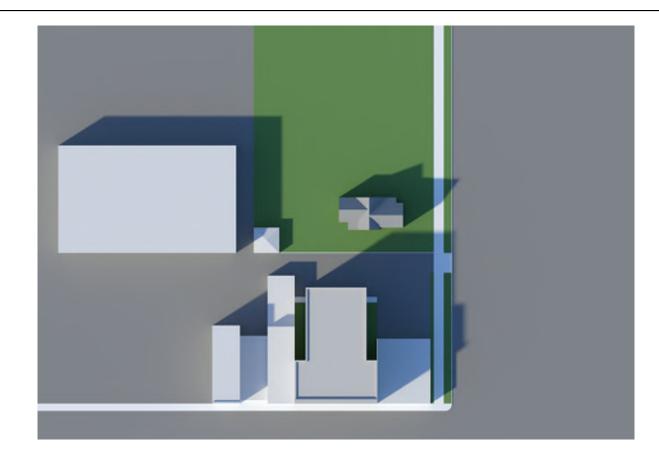
EXISTING BUILDING: DECEMBER 21ST, 3:00 P.M.



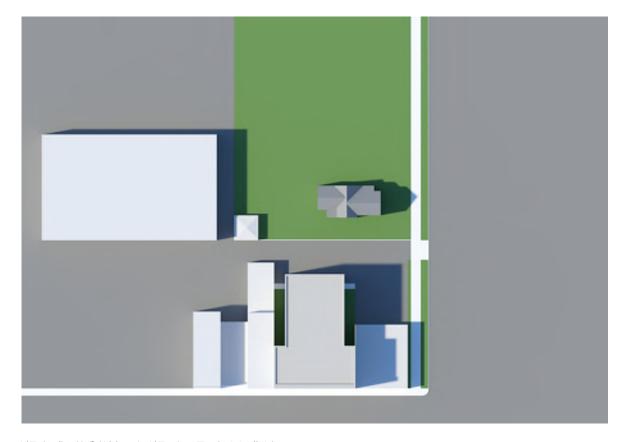
NEW BUILDING: MARCH 21ST, 9:00 A.M.



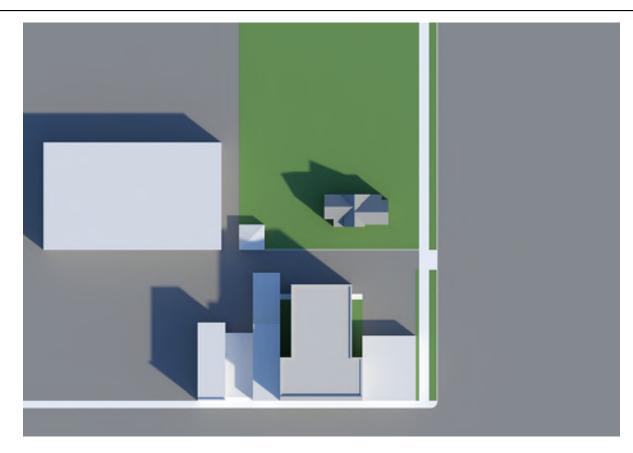
NEW BUILDING: JUNE 21ST, 9:00 A.M.



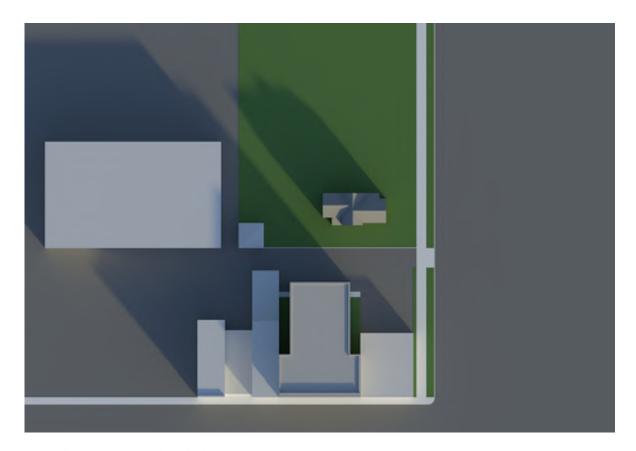
NEW BUILDING: MARCH 21ST, 3:00 P.M.



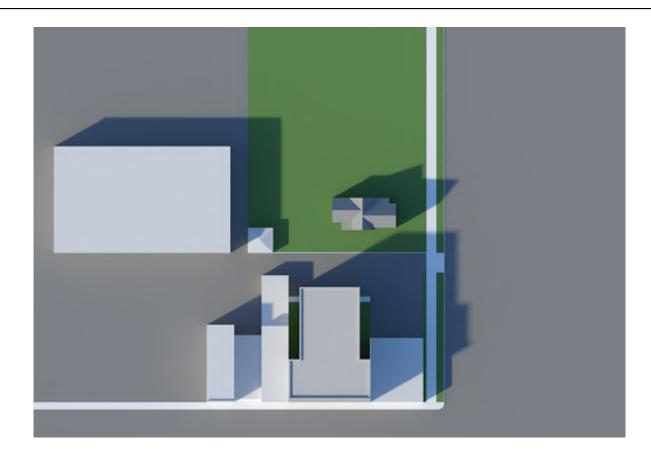
NEW BUILDING: JUNE 21ST, 3:00 P.M.



NEW BUILDING: SEPTEMBER 21ST, 9:00 A.M.



NEW BUILDING: DECEMBER 21ST, 9:00 A.M.



NEW BUILDING: SEPTEMBER 21ST, 3:00 P.M.



NEW BUILDING: DECEMBER 21ST, 3:00 P.M.







June 12, 2024

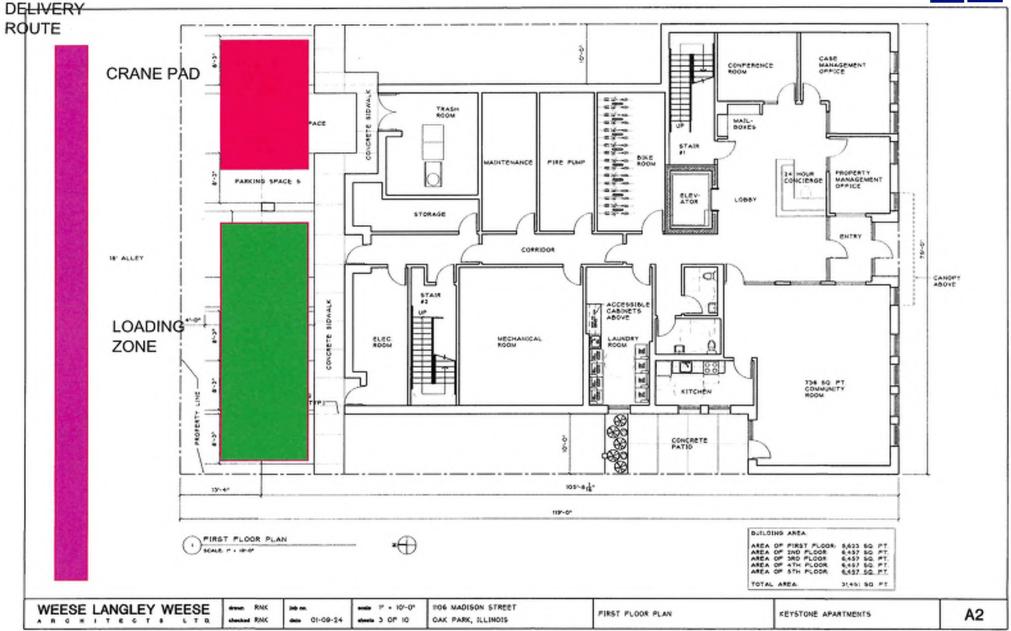
### KEYSTONE APARTMENTS—PREMINARY LOGISTICTS PLAN

### LOGISTIC PLAN KEY POINTS

- A professional/engineered traffic and pedestrian management plan will be completed and submitted to the Village of Oak Park prior to construction by the traffic consultant. This plan will include, but is not limited to, lane shifts, signage, striping, pedestrian walkway, barricades, and all other requirement of the Village of Oak Park for this application. We hope to keep parking spaces open directly in front of the adjacent businesses, but that will be finalized with the traffic and pedestrian management plan.
- 2. The adjacent businesses will be protected by safety barriers during demolition of the existing building and new construction. A complete safety plan will be assembled after meetings with the adjacent businesses. We want to review their concerns and discuss those concerns in order to properly prepare the plan.
- 3. The delivery route is anticipated to be on the east side of the project and through the alley on the north and then head west through the alley. We are trying to minimize construction access off of Madison Street.
- 4. We propose all crane lifts to be on the north side of the project site as outlined. All crane lifts will be planned, reviewed and executed according to the lift plans for all major materials.
- 5. We propose the loading zone for all major materials to be on the north side as outlined.
- 6. The second story portion of the existing building will be demolished to the inside of the existing building in an effort to minimize hazards to the adjacent businesses. A complete demolition action plan will be assembled and reviewed with the adjacent business owners prior to demolition occurring. This plan will include all safety provisions, schedule, etc.
- 7. Relocation of meters, light pole and any power poles will be coordinated with construction.

## **Keystone Apartments—Preliminary Logistics Plan**







# **Keystone Apartments—Preliminary Logistics Plan**







8I. Project Schedule\*

## **Proposed Timeline**

IHDC and Housing Forward propose the following timeline for the development of 1106 Madison Street into 36 affordable dwelling units:

Development Activity	Month Completed
Preliminary Zoning Application to Oak Park	March 2024
Application for Homeless Rental Assistance	June 2024
Application to Village of Oak Park for HTF	Fall 2024
Application to IHDA PSH	January 2025
Construction Drawings Complete/Submit for Building Permits	Summer 2025
All Capital Funding Committed	November 2025
Close and begin construction	Spring 2026
Construction Finished	Fall 2027
Full Occupancy	December 2027

9. Inclusionary Housing Plan*

### **Inclusionary Housing Plan**

The proposed rental mix of Keystone Apartments is as follows:

# of Units	Area Medium Income (AMI)	Unity Type (Subsidy)	Square Footage	Rent
12	50%	Studios	420	\$966
4	50%	One- Bedroom	544	\$1,035
20	30%	One-Bedroom (BCBSIL)	525	\$1,250

As indicated in the attached floor plans, each floor will contain 6 one-bedroom units and 3 large studio units. To maximize tenant selection, studios and one-bedrooms are spread throughout the floor plan, and accessible units are available on each floor. All floors will be easily accessed via a ground-floor elevator.

20 rental subsidies from Blue Cross Blue Shield of Illinois have been identified for a portion of the one-bedroom units to serve exclusively 30% AMI and below. The remaining 16 units will still serve a low-income population of individuals meeting the 50% AMI threshold or below. All units in this development will be affordable; no market-rate units are included in the development plan.

As all of these units are targeting low to very low-income individuals, tenants for subsidized units will be referred and selected from a pre-approved list of individuals meeting the requirements of the subsidy provider, Blue Cross Blue Shield of Illinois. For non-subsidized units, referrals will be accepted from any source as long as the previously outlined income requirements are met.