PLAN COMMISSION COMMUNITY DEVELOPMENT STAFF REPORT

30W063 AND 30W081 ESTES STREET – DREAM CLEAN / STARBUCKS ZONING RELIEF

May 8, 2025

Project No.

SUP-2025-0011

Applicant

Dream Clean Holdings LLC
625 Greenleaf Ave
Wilmette, IL 60091

Joseph Development LLC
1406 W. Fulton Street
Chicago, Illinois 60607

Property Owner

30W063 Estes Street
Leland M. Stahelin Irrevocable Trust / Michael A. Stahelin Irrevocable Trust
800 Roosevelt Road Build A Ste 120
Glen Ellyn, IL 60137

30W081 Estes Street
City of Warrenville

Subject Property Location & Info

30W063 Estes Street

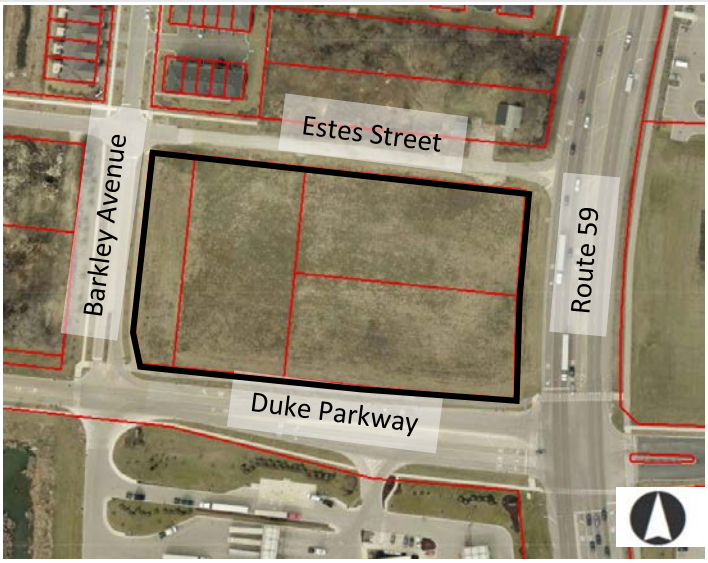
Located on the west side of Route 59 and between Duke Parkway and Estes Street

PINs: 04-33-403-003, 04-33-403-006, 04-33-403-007
Approximate Size: 3.59 acres

30W081 Estes Street (City Parcel)

Located on the east side of Barkley Ave and between Duke Parkway and Estes Street

PIN: 04-33-403-008
Approximate Size: 0.46 acres



LOCATION MAP

PROJECT DESCRIPTION

Mitch Zaveduk on behalf of Dream Clean Holdings LLC and Daniel Abdo on behalf of Joseph Development LLC collectively "the Applicants," are seeking zoning relief to allow the property bounded by Route 59, Estes Street, Barkley Avenue, and Duke Parkway and commonly known as 30W063 and 30W081 (the "Subject Properties") with a Dream Clean car wash, Starbucks drive-through, a development-ready commercial parcel for future development, and related improvements. Project documents are available on the *City Private Development Projects* webpage at:

https://www.warrenville.il.us/969/Dream-Clean-Starbucks-Development

The public hearing for this request began at the March 20, 2025 Plan Commission and Zoning Board of Appeals meeting. The public hearing was continued to the May 8, 2025, Plan Commission and Zoning Board of Appeals meeting. It is important to note that this staff report does not reflect any public input that may be received during the May 8, 2025, public hearing, and therefore should be reviewed with this in mind. Any additional information

Existing Zoning

R-2 Medium-Low Density Single Family Residential

Subarea Plan Designation

Commercial

Approvals Sought

- Rezoning from R-2 Medium-Low Density Single Family Residential to B-2 Community Retail and B-4 Motorist Service;
- Preliminary Plat of Resubdivision;
- Special Use Permit for a drive-through;
- Special Use Permit for outdoor eating & drinking patio;
- Special Use Permit for an automobile laundry;
- Special Use Permit for a Planned Unit Development with code deviations; and
- Preliminary Planned Unit Development plan approval

Attachments

- Attachment A – Zoning Applications
- Attachment B – Revised Subdivision Plat
- Attachment C – Revised Site Plan
- Attachment D – Revised Landscape Plan
- Attachment E – Dream Clean Elevations and Renderings
- Attachment F – Starbucks Renderings
- Attachment G – Dream Clean Sign Package
- Attachment H – Revised Preliminary Civil Engineering Plans
- Attachment I – Auto Turn Exhibit
- Attachment J – Photometric Study
- Attachment K – Revised Traffic Study
- Attachment L – Engineering/SWM/Public Works Review #2
- Attachment M – Sound Impact Study
- Attachment N – Architectural Site Plan

concerning the application that may be provided up to and at the public hearing will need to be reviewed and taken into consideration.

The Plan Commission is responsible for making recommendations to the City Council for the rezoning, plat of subdivision, special use permits, and planned unit development plan with code deviation requests.

BACKGROUND

In November of 2024, the Applicants completed a Courtesy Review for a Dream Clean and Starbucks development. The Plan Commission raised some points of concern including, but not limited to, landscaping, number of vacuums on-site, traffic generated by the use, limiting future uses on the site, signage, hours of operation, native plantings, solar installations, tire air station, and site lighting. Six residents from the Lexington Trace residential development provided testimony in opposition to the project citing the intensity of land use, the number of proposed vacuums, cut-through traffic, future additional uses and their compatibility with the neighborhood, and potential impacts to bike path users and pedestrians.

Based on feedback received at the November 7, 2024, Courtesy Review, the Applicants updated the proposed plans and submitted a formal application for public hearing at the March 20, 2025 Plan Commission meeting. Plan Commissioners provided feedback on the proposed development including, but not limited to, noise concerns, number of vacuum stalls, synergy with adjacent commercial and residential uses, traffic, circulation, and landscaping. Thirteen residents spoke in objection to the project, citing concerns including, but not limited to, safety, compatibility with adjacent residential uses, noise, light pollution, and traffic.

Subsequent to the March 20, 2025, public hearing, the Applicants worked with Community Development Department staff and submitted updated plans based on both staff comments and comments received during the public hearing.

PLAN REVISIONS SUBSEQUENT TO MARCH 20, 2025, PUBLIC HEARING

Below is a list highlighting some of the changes made subsequent to feedback received at the March 20, 2025, public hearing:

- Reduction in the number of vacuum stalls from 20 to 19;
- Additional ornamental trees just north of the westernmost vacuum stalls on the Dream Clean property;

- Relocation of the vacuum utility station from the east side of the car wash building to the south side of the building;
- Narrowed the drive aisle adjacent to the vacuum stalls on the Dream Clean property from 28' to 26';
- Narrowed the car wash stacking lane from 24' to 22';
- Reconfigured Starbucks property access and parking lot layout;
- Additional interior parking lot landscaping for both the Starbucks and Dream Clean properties;
- Added sidewalk connection from Estes Street to Starbucks;
- Reduction in the shared access drive width on Lot 1 from 24' to 22';
- Added prairie grass landscaping on the west side of Lot 3 (Dream Clean property);
- Added Perimeter landscaping on the west side of Lot 3 (Dream Clean property) and the west and north sides of Lot 1 (vacant property).

While not noted in the plans, subsequent conversations with staff resulted in the Applicant agreeing to the following modifications to the site:

- Installation of an 8' tall and 18' long sound wall along the northern side of the exit tunnel of the car wash;
- Reducing signage on the west façade of the building to only and "Exit" sign above the tunnel;
- Installation of a "local traffic only" sign on the Barkley Avenue exit to dissuade cut-through traffic and right turns onto Barkley Avenue;

The Applicant also proposes an updated traffic study in a six-to-twelve-month window following occupancy to determine if there is an impact on traffic in the area and if site adjustments need to be made to reduce its negative externalities.

ANALYSIS

The Applicant is seeking approval of the following zoning relief requests:

- Rezoning of proposed Lot 1 and Lot 2 from R-2 Medium-Low Density Single Family Residential to B-2 Community Retail (**NOTE:** this is a change from the previous staff report);
- Rezoning of proposed Lot 3 from R-2 Medium-Low Density Single Family Residential to B-4 Motorist Service;
- Preliminary Plat of Resubdivision;
- Special Use Permit for a drive-through;
- Special Use Permit for outdoor eating & drinking patio;
- Special Use Permit for an automobile laundry;
- Special Use Permit for a Planned Unit Development; and
- Preliminary Planned Unit Development Plan approval for the proposed development with the following code deviations:

Starbucks Development

1. Front yard setback reduction from 40' to approximately 32.14';
2. Reduce the minimum front yard setback for all other pavement across from residential zoning from 15' to approximately 10.57' on the north side;
3. Reduce the minimum required foundational landscaping from a cumulative of approximately 2,000 square feet to 396 square feet along the north half of the building;

Dream Clean Development

1. Reduce the minimum lot width from 150' to approximately 146.98';

2. Reduce the minimum interior side yard from 10' to approximately 7'2";
3. Reduce the minimum corner side yard setback of pavement across from non-residential zoning from 15' to approximately 7.5'.
4. Reduce the minimum required foundational landscaping from a cumulative of approximately 3,910 square feet to approximately 1,513 square feet located on the north and east sides of the building;

Granting the above zoning relief requests will permit the three-lot development as proposed. Below is a summary of the proposed plans:

Lot 1 (Undeveloped – Future Use To Be Determined)
Aside from a full access point on Barkley Avenue, 22' wide access drive, perimeter landscaping, and connection points to Lot 2 and Lot 3, Lot 1 is proposed to remain undeveloped (see Attachment C and Attachment D). The full access point on Barkley Avenue will be the only route for those customers leaving the site who want to travel northbound on Route 59. The City currently owns a parcel with frontage along Barkley between Estes and Duke that lies between the westernmost limits of Lots 1 and 2 and the Barkley right of way. The City Council has directed City Staff to prepare a Purchase and Sale Agreement for that property pursuant to which the City will only sell the City Parcel to Dream Clean if Dream Clean obtains final approval of the necessary zoning relief for the proposed development. That process is underway. Review and approval of the purchase and sale contract will occur concurrent with any recommendations received by the Plan Commission.

Lot 1 Proposed Land Use Data
Zoning: B-2 Community Retail
Site Area: 1.2 acres

NOTE: Any future development on Lot 1 will require amending the Planned Unit Development plan, which includes a public hearing before the Plan Commission and final action by the City Council.

Since the March 20, 2025, public hearing for this project, the Applicant has included additional perimeter shade tree landscaping along the north property line adjacent to existing residential uses. Installation of landscaping prior to development is not common practice. This will provide additional time for landscaping to mature.

Lot 2 (Starbucks)
Joseph Development proposes a 2,050 square foot Starbucks with drive-through on Lot 3 (see Attachment C). 22 parking spaces, including two ADA spaces, are proposed to serve the site. 15 stacking spaces are proposed to serve the drive-through. Customers will access the site from Estes Street or via Barkley Avenue via a connection with Lot 1. The updated site plan shows a reconfigured parking lot with access moved westward on Estes Street to line up with the proposed one-way drive aisles.

The Starbucks building itself measures approximately 39' by 56' with a 5' extension for a pick-up window on the north side. Building materials include brick, stucco, panels, windows, and canopies (see Attachment F). The building uses a brown and beige color scheme. Fencing is proposed around the rear of the building (east side) to screen utilities. An approximately 650 square foot patio is located on the south side of the building. A nine-foot-wide sidewalk is proposed to serve the perimeter of the building. One menu board and one monument sign are proposed. Other sign details are not yet provided, but will be provided with building and engineering plan/permit submittals.

Joseph Development LLC proposes four street trees, shrubs, and perennial plantings along Route 59 (see Attachment D). Six trees are proposed to be planted in parking lot landscaping islands. Four shade trees and seventeen ornamental trees are proposed around the remainder of the site including near the patio, landscape peninsula at the southwest corner of the property, around the proposed dumpster enclosure, and at the northwest corner of the property. Since the March 20, 2025, public hearing, the Applicant updated the landscape plan to meet planting size requirements, added more landscaping south of the proposed patio, and updated landscaping to accommodate the adjusted parking lot and access configuration. A mix of shrubs and perennials will fill out the remainder of the site.

Lot 2 (Starbucks) Proposed Land Use Data

Zoning: B-2 Motorist Service District with a drive-through special use permit
Site Area: 0.85 acres
Building Area: ~2,050 square feet
Parking Provided: 22 spaces (including 2 ADA spaces)
Car Stacking Provided: 15 cars

Lot 3 (Dream Clean Car Wash)

Dream Clean proposes a 6,500 square foot car wash and related improvements on Lot 3 (see Attachment C). 19 vacuum stalls and eight employee parking spaces, including an ADA stall and an accessible vacuum stall, serve the site. Two parking stalls are proposed next to a tire inflation station located at the northwest corner of the developed portion of the lot. Cars will queue in the double-wide, approximately 360-foot-long queueing lane designed to accommodate 37 cars. Customers may access the site from Duke Parkway or Barkley Avenue via a connection with Lot 1.

The car wash building measures approximately 152’ by 42’ with a maximum height of 34’ 10.5” at the entrance of the wash near Route 59 (see Attachment E). The building design incorporates a mix of materials including stone masonry veneer, brick, aluminum siding, and windows. The color scheme includes shades of blue, gray, and brown. Wall signs are proposed on all sides of the building; 90 square foot signs on the north and south facades and a 60 square foot sign on the east façade. The Applicant agreed to remove the west façade sign for a generic “Exit” sign after feedback received at the March 20 public hearing. Two menu boards, seven small convenience and directional signs, and one eight-foot-tall monument sign with message board is proposed on the southwest corner of the property (see Attachment G).

Trees are proposed throughout Lot 3 including six near the access point on Duke Parkway, three along Route 59, eight trees throughout the parking lot and queueing lane, and two near the car wash building exit. 15 ornamental trees are proposed on the north side of the car wash building. Additional trees and landscaping are proposed to fill in the area between the access drive and the westernmost vacuum stalls. The Applicant proposes shrubs, grasses, and ornamental trees are proposed to fill out the remainder of the site (see Attachment D).

Lot 3 (Dream Clean Car Wash) Proposed Land Use Data

Zoning: B-4 Motorist Service District with an automobile laundry Special Use Permit
Site Area: 1.95 acres
Building Area: 6,500 square feet
Parking Provided: 8 spaces (including one ADA space)
Vacuum Stalls: 21 spaces (including one accessible space)
Car Wash Stacking Provided: 37 cars

PUBLIC RIGHT-OF-WAY IMPROVEMENTS

The Applicants are proposing a revised right in / right out at the intersection of Route 59 and Estes Street (see Attachment C). Currently a rural cross section, Estes Street will be upgraded with full curb and gutter. The Applicants propose to install sidewalk along the south side of Estes Street and along Route 59. Twelve street trees are proposed along the south side Estes Street. All elements of the proposed development will be served by existing water and sewer utilities located along Duke Parkway, Barkley Avenue, and

I. PRELIMINARY PLAT OF RESUBDIVISION (Requires a public meeting and ultimately a Plan Commission recommendation to the City Council)
The Applicants are requesting approval of a Preliminary Plat of Resubdivision (see Attachment B), which contemplates the consolidation and resubdivision of the Subject Properties into three lots of record – Lot 1 (undeveloped parcel and access road off Barkley Avenue), Lot 2 (Starbucks), and Lot 3 (Dream Clean). This subdivision will facilitate the proposed development, allow separate ownership of lots, and create a new undeveloped lot for a future user.

II. REZONING (Requires a public hearing and ultimately a Plan Commission recommendation to the City Council)
In recommending approval or conditional approval of a **zoning map amendment (rezoning) to rezone proposed Lots 1 and 2 from R-2 Medium-Low Single Family Residential to B-2 Community Retail and proposed Lot 3 from R-2 Medium-Low Single Family Residential to B-4 Motorist Service**, the Plan Commission shall transmit to the City Council written findings of fact that all of the conditions below apply to the application. In granting approval or conditional approval, the City Council shall similarly find that all of the following conditions apply in the ways listed below (Community Development Department staff responses are in *italics*):

1. Compatible with Use or Zoning of Environs
   The proposed use(s) or the uses permitted under the proposed zoning classification are compatible with existing uses or existing zoning of property in the environs.
   Proposed Lots 1, 2, and 3 are surrounded by residentially zoning properties to the north and west, B-2 Community Retail across Route 59, a major arterial street, to the east, and B-4 Motorist Service (Thorntons gas station) to the south. However, the subarea plan also identifies that "commercial" designated properties within the subarea should be rezoned to B-4 Motorist Service. The proposed rezoning will result in Lots 1 and 2, the future development lot and Starbucks lot, respectively, as B-2 Community Retail and Lot 3, the Dream Clean car wash, as B-4 Motorist Service. The existing R-2 Medium-Low Density Single Family Residential zoning is a legacy zoning established prior to the approval of the Southwest District Subarea Plan. Today, the subject property has immediate proximity to a signalized intersection at IL Route 59 (major arterial street) and upgraded roadway and utility infrastructure. Development of the surrounding area has been consistently guided by the Southwest District Subarea Plan. Furthermore, the proposed mix of B-2 and B-4 zonings will result in B-2 Community Retail zoning providing a buffer between the proposed B-4 zoning and the existing residential zoning to the north and west of the Subject Properties.

2. Supported by Trend of Development
   The trend of development in the general area since the original zoning of the affected property was established supports the proposed use of zoning classification.
   The Subject Properties and those properties to the west were annexed into the City in the 1970's. Upon annexation, these properties were large lot single family homes and farmland. To guide development of the Subject Properties and surrounding area, and to address development opportunities brought about by increased traffic on Route 59 and demand for commercial and residential development, the City adopted the Southwest District Subarea Plan in 2016. This

document was created through a comprehensive study of natural features, infrastructure, market conditions, traffic systems, etc. The planning process included public input, hearings, and adoption by the City Council. The plan provides future land use designations for properties within the district, as well as recommendations for roadway improvements, including the signal now installed at Duke Parkway and IL Route 59. In the years since adoption of the plan, much of the Southwest District has been redeveloped and that redevelopment has largely followed and been consistent with the land use designations for future development provided in the plan. Specifically, the development of the Lexington Trace residential project, Thorntons gas station, Everton Townhomes, Everton Flats, and Everton commercial (among other projects farther from the Subject Properties) were all supported by the Plan.

The Subject Properties are designated as commercial uses in the Southwest District Subarea Plan. The Southwest District Subarea Plan defines commercial uses as including restaurants, small scale retail stores, hotels, and personal services. The designation reflects the Subject Properties direct access to a signalized intersection, marketable commercial frontage along IL Route 59 aligned with similar uses proposed directly across the street in Everton, and proximity to buffer the Lexington neighborhood from the more intensive commercial (e.g. Thorntons) and light industrial uses to the south and west of the Subject Properties. Similarly, the Thorntons parcel was rezoned from R-2 Medium-Low Density Single Family Residential to B-4 Motorist Service to accomplish the development goals of the subarea plan. The proposed rezoning from residential to commercial in accordance with the Plan is consistent with the trend of development in the surrounding area. Applicants' revised request, based on community feedback at the Public Hearing, to rezone the northern and westernmost properties to B-2, Community Retail, restricts the intensity of permissible commercial activity (as compared to B-4 Motor Services District) adjacent to the residentially zoned lots to enhance the transition between more intensive commercial and light industrial uses and the residential areas beyond.

3. Consistent With Comprehensive Plan Objectives
   The proposed use or zoning classification is in harmony with the objectives of the Comprehensive Plan of the City as viewed in light of any changed conditions since its adoption.
   The proposed rezoning is consistent with the land use designation outlined in the Southwest District Subarea Plan.

4. Furthers Public Interest
   The proposed use or zoning classification promotes the public interest and not solely the interest of the applicant.
   Staff believes the proposed uses and rezonings will further the goals outlined in the Southwest District Subarea plan by allowing the development the Subject Properties with commercial uses that will also include improvements to streetscape, high quality building designs, and a site plan with a synergy of uses.

III. SPECIAL USE PERMITS (Requires public hearing and ultimately a Plan Commission recommendation to the City Council)
In recommending or granting approval or conditional approval of **Special Use Permits for an automobile laundry, drive-through, outdoor drinking & eating patio, and Planned Unit Development**, the City Council and Plan Commission shall prepare written findings of fact that on the basis of the characteristics listed Table 7C, titled "Approval Criteria for Special Uses" and any conditions recommended to be part of the approval -- the proposed use will be compatible with existing uses in the area, and with Permitted Uses in the zoning district, in the ways listed and described below (Community Development Department

staff responses are in *italics.* **Note:** staff responses assume the Subject Properties are rezoned as proposed):

1. Traffic
   Any adverse impact of types or volumes of traffic flow not otherwise typically in the zoning district has been minimized.
   Staff does not believe that the proposed special uses will result in types or volumes of traffic not consistent with the underlying zoning or consistent with commercial uses along Route 59. Applicants' KLOA Traffic Impact Study has determined that the existing roadway system will not be significantly impacted by the proposed development.

   To minimize potential cut-through traffic, the Applicants are willing to install "local traffic only" signs on Barkley Avenue. During peak hours and after storm events (which traditionally bring additional customers to a car wash), Dream Clean proposes traffic control measures such as limiting site access to the Barkley Avenue entrance to maximize on site stacking. A second traffic study performed six to twelve months after the car wash and Starbucks are both open could identify any unforeseen traffic issues. Staff recommends that the special use permits be conditioned upon Applicants performing this follow-up traffic study and Applicants' willingness to take commercially reasonable steps to alleviate any identified issues. The Applicants are also willing to comply with this condition. The Applicant confirmed that no semi-trucks will make deliveries to either proposed business.

2. Environmental Nuisance
   Any adverse effects of noise, glare, odor, dust, waste disposal, blockage of light or air, or other adverse environmental effects of a type or degree not characteristic of Permitted Uses in the zoning district, have been appropriately controlled.
   *Based on Applicants' submissions, Staff does not believe the proposed special uses will create environmental nuisances not characteristic of permitted uses in the proposed underlying zoning districts. The Thunder Hearing & Sound Study concluded that the proposed uses will result in noise consistent with the Zoning Ordinance's Performance Standards (see **FIGURE 6** of the Thunder Hearing and Sound Study). Ambient Route 59 sounds range from approximately 50-60 dBa. The projected sound level of the car wash is approximately 50 – approximately 58 dBa. To further reduce sound pollution, Staff recommends that approval of the auto laundry special use be conditioned upon the installation of an 8' tall by 18' long sound wall on the north side of the car wash exit, which is to be shown on the final plan of planned unit development. Applicants have stated a willingness to comply with this condition. This wall will further buffer the primary noise generation point (vehicle exit from car wash dryers).*

   Regarding lighting, it is a condition of approval that the final photometric plan shall meet City Zoning Ordinance standards. Please refer to Applicants' response to the standards attached as Attachment A.

   Applicant has stated that the project will not produce unwanted odor, dust, or waste to a greater degree than permitted uses in the underlying proposed zoning districts. Staff has not identified any concerns regarding these issues. The car wash uses water recycling technologies and environmentally friendly cleaning and finishing products. In addition, the sites include native plantings and newly required EV Charging stations.

3. Neighborhood Character

The proposed use will fit harmoniously with the existing natural or man-made character of its surroundings and with Permitted Uses in the zoning district. The uses will not have undue deleterious effect on the environmental quality, property values, or neighborhood character already existing in the area or normally associated with Permitted Uses in the district.
Staff believes the proposed special uses will fit harmoniously with the existing context of the neighborhood. The development will buffer and transition more intensive activities at the Thorntons and nearby industrial/warehousing uses from the residential areas to the north. The uses balance the pattern of development on the east and west sides of IL route 59 in this area. The existing neighborhood character was guided by the Southwest District Subarea Plan. The proposed uses are consistent with the goals of the plan.

4. Public Services and Facilities
   The proposed use will not require existing community facilities or services to a degree disproportionate to that normally expected of Permitted Uses in the district, nor generate disproportionate demand for new services or facilities as compared with the Permitted Uses, in such a way as to place undue burdens upon existing development in the area.
   The proposed special uses will not require public services and facilities to a degree disproportionate to that normally expected of Permitted Uses nor will it generate a disproportionate demand for new services or facilities. The proposed car wash will use water reclamation, water recycling, and reverse osmosis technologies to ensure water quality and reduce impact on City water and sewer facilities.

5. Public Safety and Health
   The proposed use will not be detrimental to the safety or health of the employees, patrons, or visitors associated with the use nor of the general public in the vicinity.
   Staff does not believe that the proposed special uses will be detrimental to public health or safety of employees, patrons, nor visitors of the proposed uses.

6. Other Factors
   The proposed use is in harmony with any other elements of compatibility pertinent in the judgment of the Commission or Council to the particular Special Use or its particular location.
   Staff believes that the proposed special uses are compatible with the Subject Properties' existing context as compatible with the amount and type of traffic generated on Route 59, compatible with the Southwest District Subarea Plan commercial use designation, and surrounding trend of development guided by the Southwest District Subarea Plan.

IV. PRELIMINARY PLANNED UNIT DEVELOPMENT PLAN WITH DEVIATIONS APPROVAL (requires a public hearing before the Plan Commission and ultimately a recommendation to the City Council)
In recommending approval or conditional approval of a Preliminary/Final Plan for a Planned Unit Development (PUD), the Zoning Ordinance requires the Plan Commission to transmit to the City Council written findings of fact that the application meets all of the criteria below or will meet them when the Commission's conditions are fulfilled. The City Council shall, in granting approval or conditional approval, also find that all of the following criteria are met or will be met when the conditions to which the approval is made subject are fulfilled. (Community Development Department staff responses are in *italics*):

1. SUPERIOR DESIGN
The PUD represents a more creative approach to the unified planning of development and incorporates a higher standard of integrated design and amenity than could be achieved under otherwise applicable

zoning district and subdivision regulations, and solely on this basis modifications to the use and design standards established by such regulations are warranted.
By developing under one Planned Unit Development, the Subject Properties will share an internal roadway and access points, without which commercial development of the Subject Properties would not be possible. The properties will also share consistent landscaping that may not be achieved if developed separately. The proposal allows a portion of the Subject Properties to be set aside as a prairie grass amenity at the west end of proposed Lot 3. The proposed buildings use high quality building materials, such as brick and stone masonry, and include architectural features such as windows, flat and pitched roof designs, canopies, and a patio. Therefore, Staff believes the proposed three lot subdivision and development represents a higher standard of design and amenity required of a Planned Unit Development and of development in the Southwest District Subarea than would be possible under the otherwise applicable zoning districts and therefore justify the proposed modifications and deviations.

2. MEETS PUD REQUIREMENTS
The PUD meets the requirements for Planned Unit Developments set forth in this Ordinance, and no modifications to the use and design standards otherwise applicable are allowed other than those permitted herein.
*The PUD meets the requirements for planned developments provided that the Applicant is under contract for the purchase of the City Parcel before making an application for final planned unit development approval . All of the requested deviations, which are outlined in the **ANALYSIS** section, are permitted deviations by Section 8.C of the Zoning Ordinance. The deviations further a superior design and amenity in the proposed development by focusing development closer to Route 59, away from existing residential uses. Staff believes the proposed landscaping and prairie grass provide amenity consistent with PUD standards.*

3. CONSISTENT WITH CITY PLAN
The PUD is generally consistent with the objectives of the City Comprehensive Plan as viewed in light of any changed conditions since its adoption.
The proposed planned unit development is consistent with the Southwest District Subarea Plan, the most recently adopted subarea plan guiding development of the Subject Properties, which has identified the Subject Properties to be development with commercial uses. It is also consistent with the plan because the plan encourages comprehensive, unified development with consistent landscaping, architectural elements, high quality building materials, and interconnected internal drive networks, all of which are proposed as part of the development.

The 1984 Comprehensive Land Use Plan designates the Subject Properties for office/research uses for 30W063 Estes Street and single family residential for 30W081 Estes Street. However, the existing context has changed since the adoption of the 1984 Comprehensive Land Use Plan, including addition of Barkley Avenue bisecting 30W081 Estes Street. Based on its recency and established relevance in guiding development of the Southwest District, staff believes the land use designation and development guidelines should be prioritized in consideration of this development.

4. PUBLIC WELFARE
The PUD will not be detrimental to the Public health, safety, morals, or general welfare.
Staff has not identified any concerns regarding the proposed Planned Unit Development's effect on public health, safety, morals, nor general welfare of residents, employees, and visitors.

5. COMPATIBLE WITH ENVIRONS

Neither the PUD nor any portion thereof will be injurious to the use and enjoyment of other properties in its vicinity, seriously impair property values or environmental quality in the neighborhood, nor impede the orderly development of surrounding property.
Based on the information available, the proposed planned unit development plans will not be injurious to the use and enjoyment of other properties in the vicinity, seriously impair property values in the neighborhood, nor impede orderly development of the surrounding property.

6. NATURAL FEATURES
The design of the PUD is as consistent as practical with the preservation of natural features of the site such as flood plains, steep slopes, natural drainage ways, or other areas of sensitive or valuable environmental character.
There are no natural features on the property with which to be consistent or to be preserved. The Applicant proposes to install a prairie grass amenity at the west end of proposed Lot 3.

7. CIRCULATION
Streets, sidewalks, off-street driveways, and off-street loading as appropriate to the planned land uses are provided. They are adequate in location, size capacity, and design to ensure safe efficient circulation of automobiles, trucks, garbage trucks, and snow plows as appropriate without blocking traffic, creating unnecessary pedestrian-vehicular conflict, creating unnecessary through traffic within the PUD, or unduly interfering with the safety or capacity of adjacent streets.
The proposed circulation infrastructure will likely adequately serve the development. A right in / right out access point will be provided on Duke Parkway, a full access point is proposed for Barkley Avenue, and a full access point on Estes Street. The access points were located based on site constraints and an existing intergovernmental agreement with the City of Aurora pertaining to Duke Parkway. Regarding off-site traffic impact, staff and the City's traffic consultant generally concur with the KLOA Traffic Impact Study that indicates that no further traffic control devices nor changes to traffic infrastructure will be required based on the impact of this development. The Applicant stated openness to completing another traffic impact study six to twelve months out to assess the impact of the development on adjacent traffic and if site adjustments or traffic control measures are necessary. This will be documented as a condition of approval set forth in the ordinance approving the final planned development and in the development agreement(s) between the Applicants and the City.

8. OPEN SPACES AND LANDSCAPING
The quality and quantity of public and common open spaces and landscaping provided are consistent with the higher standards of design and amenity required of a PUD. The size, shape, and location of a substantial portion of the total public and common open space provided in residential areas render it useable for recreation purposes.
Staff believes the proposed open space and landscaping are consistent with the higher design standards and amenity required of a Planned Unit Development. The Applicant updated the landscape plan to include additional internal landscaping around the car wash, perimeter landscaping along the perimeter of the entire site, and adjustments to no longer require landscape relief for internal parking lot landscaping.

9. COVENANTS
Where individual parcels are to be later sold, adequate provision has been made in the form of deed restrictions, homeowners or condominium associations, or the like for:

a. The preservation and maintenance of any open spaces, thoroughfares, utilities, water retention or detention areas, and other common elements not to be dedicated to the City or another public body

b. Such control of the use and exterior design of individual structures, if any, as is necessary for continuing conformance to the PUD Plan, such provision to be binding on all future ownership.

Covenants for cross access easements, shared spaces, and maintenance shall be prepared by the Applicant in a form acceptable to the City Attorney and approved by the City Council. The Covenants will be recorded against the Subject Properties.

10. PUBLIC SERVICES

The land use and improvements are consistent with the anticipated ability of the City to support police and fire protection, water supply, sewage disposal, and other public facilities and services without placing undue burden on existing residents and businesses.

The Applicant will be upgrading Estes Street to full curb and gutter with related sidewalk and landscaping. The Applicant will also install sidewalk along Route 59. The proposed Planned Unit Development plan is consistent with the City's capacity to serve the site with emergency services, water, sewer, and other public facilities without placing an undue burden on existing residents and businesses.

11. PHASING

Each development phase of the PUD can, together with any phases that preceded it, exist as an independent unit that meets all of the foregoing criteria and all other applicable regulations herein even if no subsequent phase should ever be completed. The provision and improvement of public or common area improvements, open spaces, and amenities—or the provision of financial sureties guaranteeing their improvement—is phased generally proportionate to the phasing of the number of dwelling units or amount of non-residential floor area.

The Applicant indicated that grading, site work, public improvements, internal access drives, landscaping, and the Lot 2 and Lot 3 developments (Dream Clean and Starbucks) will be completed as a single phase. The development of Lot 1 will take place in a future phase 2.

V. CITY STAFF REVIEW COMMENTS AND CONDITIONS

Planning and Zoning

Planning and zoning staff reviewed the proposal and have the following review comments:

General Comments

- The final planned unit development landscape plan shall include a maintenance calendar as per 11.C.9;
- The final landscape plan shall include lot labels are consistent with the proposed Plat of Resubdivision.
- The City codified electric vehicle amendments that require the Starbucks proposal to install 2 level two electric vehicle charging stations. This shall be included in the application for Final Planned Unit Development approval;
- An updated traffic impact study shall be submitted to the City after 12 months of occupancy of the proposed uses.
- Signs for both the Dream Clean and Starbucks developments shall meet Sign Ordinance code requirements.
- Dream Clean must be under contract for the purchase of the City Parcel before submitting for final approvals.
- Required development agreement(s) shall be prepared and executed in a form acceptable to the City Attorney prior to City Council Final Action on the Final Plan Development Approvals

Lot 2 (Starbucks)

- Provide elevation plans for the proposed development, with all materials labeled, upon application for Final Planned Unit Development approval. Plans should show the location and height of any rooftop mechanical units so staff can confirm screening by the parapet wall;
- Provide a sign package upon application for final planned unit development approval;
- Provide a detail for the proposed dumpster enclosure upon application for final planned unit development approval;

Lot 3 (Dream Clean)

- Provide data from existing locations that support the approximately 360' long queueing lane;
- Ground and directional signage shall be updated to meet the maximum size requirement (3 square feet);

Engineering and Public Works

Engineering and Public Works staff worked with the Applicant to identify required public improvements for this project. Engineering and Public Works review comments are found in the Engineering/SWM/Public Works Review #2 memo dated April 30, 2025 (see Attachment L). Engineering and Public Works comments include noting the required public improvements on Barkley Avenue and Estes Street, drive aisle width reduction, and reduction in length of the car wash queue.

Warrenville Fire Protection District

The Warrenville Fire Protection District (WFPD) has reviewed the documents and shared comments with the Applicant related to internal turning radius, emergency access to the drive-through lane, and fire protection systems. The WFPD has no objections to the project request.

Building Department

The Building Department does not have comment at this time.

CONCLUSION

Contingent upon feedback received at the May 8, 2025, public hearing, staff recommends the Plan Commission recommend City Council approval of the Preliminary Plat of Subdivision, Preliminary Planned Unit Development Plan, and conditional approval of Rezoning and Special Use Permits for the Dream Clean and Starbucks development at 30W063 and 30W081 Estes Street in accordance with CITY STAFF REVIEW COMMENTS AND CONDITIONS outlined in the May 8, 2025, Community Development Department staff report.

Attachment A – Zoning Applications
Attachment B – Revised Subdivision Plat
Attachment C – Revised Site Plan
Attachment D – Revised Landscape Plan
Attachment E – Dream Clean Elevations and Renderings
Attachment F – Starbucks Renderings
Attachment G – Dream Clean Sign Package
Attachment H – Revised Preliminary Civil Engineering Plans
Attachment I – Auto Turn Exhibit
Attachment J – Photometric Study
Attachment K – Revised Traffic Study
Attachment L – Engineering/SWM/Public Works Review #2
Attachment M – Sound Impact Study

Attachment N – Architectural Site Plan

Attachment A

CITY OF WARRENVILLE

3S258 MANNING AVENUE • WARRENVILLE, IL 60555 • PH: (630) 393-9050 • FAX (630) 393-1531

WARRENVILLE

GENERAL APPLICATION INFORMATION FORM

(For office use only)

Name of Development/Subdivision _____ Project Number _____

$ _____ Filing Fee(s) _____ Date Paid

Instructions:

- ☐ **Before filing an application, the Warrenville Zoning Ordinance should be reviewed for filing procedures and requirements.**
- ☐ Please print or type. Application(s) must be complete before filing with the City of Warrenville.
- ☐ Filing Fees must accompany application(s). Please check the Planning and Zoning Application and Review Fees sheet.
- ☐ Proof of ownership, disclosure of beneficial interest, and authorization to represent owner must be attached to this application as provided in Zoning Ordinance No. 1018, page 2-4.
- ☐ Fifteen (15) paper copies and an electronic copy of this application, other related application forms and any additional application information required by law and/or in Chapter 2 of the Warrenville Zoning Ordinance shall be submitted simultaneously with this application. The application will not be forwarded to the Plan Commission/Zoning Board of Appeals for consideration until all required information and supporting documentation is submitted.

GENERAL APPLICATION INFORMATION:

1. Name of Applicant/Developer Dream Clean Holdings LLC
2. Address of Applicant/Developer 625 Greenleaf Ave. Wilmette, IL 60091
3. Phone (847)-989-9287 Fax N/A
4. E-mail Address mzaveduk@dreamcleancw.com
5. Subject Property Address: Vacant parcels Northwest corner of Rte 59 and Duke Parkway
6. Permanent Parcel Identification Number(s) PIN(s) of the Subject Property:
   04-33-403-003 (Lot 66) 04-33-403-007 (Lot 65)
   04-33-403-006 (Lot 64) 04-33-403-008 (Lot 67)*
   * - currently owned by City of Warrenville

7. Legal Description of the Subject Property:

Attached as Exhibit A

If additional space is required, the complete legal description may be attached to this application.

8. Name, mailing address, phone number, fax number and e-mail address of Property Owner if different from Applicant/Developer:

Leland M. Stahelin Irrevocable Trust / Michael A. Stahelin Irrevocable Trust

Address 800 Roosevelt Rd Bldg A Ste 120
Glen Ellyn, IL 60137

Phone 630.469.3331 Fax N/A

E-mail Address Tom Kolschowsky (Counsel) tom@stahelin.com

9. Name(s), mailing address(es), phone number(s), fax number(s) and e-mail address(es) of Developer, Site Engineer, Attorney and other Consultants involved in the project *(attach addendum if necessary)*:

See Attached Exhibit B

Address

Phone Fax

E-mail Address

10. Description of Present and Proposed Use of Property:

Currently vacant Parcels (3) with intent to develop into a three(3) lot Resubdivision. Development for a car wash (tunnel), Starbucks, and last lot TBD use.

11. Present Zoning of Subject Property: R-2

REQUESTS: *(Check all Proposed/Requested action(s) that apply)*

- ☐ Zoning Ordinance Variation (Submit Application Form A)
- ☑ Special Use (Submit Application Form B)
- ☑ Rezoning/Map Amendment (Submit Application Form C)
- ☐ Landscape Relief
- ☐ Subdivision Control Ordinance Variation
- ☐ Land Division
- ☑ Plat of Subdivision/Resubdivision
- ☐ Preliminary Planned Unit Development (Submit Application Form D)
- ☐ Final Planned Unit Development (Submit Application Form D)
- ☐ Planned Unit Development Exceptions (Submit Application Form D)
- ☐ Minor Amendment to Approved Final PUD Plans (Submit Minor PUD Amendment Form)
- ☐ Major Amendment to Approved Final PUD Plans (Submit Major PUD Amendment Form)
- ☐ Annexation (Submit Annexation Petition)
- ☐ Conditional Use for Outdoor Display or Community Garden

I HEREBY CERTIFY THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF AND THAT I HAVE THOROUGHLY REVIEWED THE FILING PROCEDURES AND REQUIREMENTS OUTLINED IN CHAPTER 2 OF THE CITY OF WARRENVILLE ZONING ORDINANCE.

Dream Clean~~ing~~ Holdings, LLC

Signature of Applicant/Agent

Mitchell Zavadlik,

(Print Name)

February 25, 2025

Date

EXHIBIT A

Legal description
Rte 59 and Duke Parkway

LOTS 64, 65, 66 and 67 IN BARTLETT'S GREEN ACRES, BEING A SUBDIVISION OF THE EAST 1/2 OF SECTION 33 AND IN THE WEST 1/2 OF SECTION 34, TOWNSHIP 39 NORTH, RANGE 9, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED OCTOBER 20, 1943 AS DOCUMENT 454884, IN DUPAGE COUNTY, ILLINOIS.

PINs 04-33-403-003, 04-33-403-006, 04-33-403-007, and 04-33-403-008

EXHIBIT B

Consultants, etc.

Engineer

Benedict Bussman
Webster, McGrath & Ahlberg, Ltd.
2100 Manchester Road, Building A, Suite 203
Wheaton, IL 60187
Main: 630-668-7603 Ext.106
Direct: 630-668-7620
Cell: 630-417-3611
Email: benb@wmaltd.com

Sound engineer

Steven Thunder
Thunder Hearing & Sound, LLC
847 S. Randall Rd. #218
Elgin, IL 60123
(855) 566-7488
sthunder@ThunderHearing.com

Architect

Edward F. Kurzeja
ARCHAMERICA, Inc.
34121 N. US 45, Suite 213
Grayslake, Illinois 60030
Office: 847-336-6600 Ext. 2
Mobile: 847-331-5231
Email: ekurzeja@archamerica.com

Attorney

Craig S. Krandel
Zukowski, Rogers, Flood & McArdle
50 N. Virginia Street
Crystal Lake, IL 60014
Ph: 815-459-2050 Main /F: 815-459-9057
Ph: Direct 815-526-5950
Cell (815)-482-0208
ckrandel@zrfmlaw.com

Traffic

Luay Aboona, PE, PTOE
Kenig, Lindgren, O'Hara, Aboona, Inc.
9575 West Higgins Road, Suite 400
Rosemont, IL. 60018
(847) 518-9990 office (847) 571-4331 cell
laboona@kloainc.com

CITY OF WARRENVILLE

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APPLICATION FORM D
FOR PRELIMINARY/FINAL PLANNED UNIT DEVELOPMENT

(For office use only)

Name of Development/Subdivision

Project Number

Approval Criteria for Planned Unit Development

In recommending approval or conditional approval of a General Site Plan for an SD District Development (including Development Control Regulations associated therewith) or a Preliminary or Final Plan for a Planned Unit Development (PUD), the Plan Commission shall transmit to the City Council written findings of fact that the application meets all of the criteria below or will meet them when the Commission's conditions are complied with. The City Council shall, in granting approval or conditional approval, also find that all of the following criteria are met or will be met when the conditions to which the approval is made subject are complied with.

Please review and provide a written response indicating how the proposed Planned Unit Development will meet these criteria:

1. SUPERIOR DESIGN

The PUD represents a more creative approach to the unified planning of development and incorporates a higher standard of integrated design and amenity than could be achieved under otherwise applicable zoning district and subdivision regulations, and solely on this basis modifications to the use and design standards established by such regulations are warranted.

Applicant Response: Straight Subdivision / Plan-Plat

2. MEETS PUD REQUIREMENTS

The PUD meets the requirements for Planned Unit Developments set forth in Warrenville Zoning Ordinance, and no modifications to the use and design standards otherwise applicable are allowed other than those permitted herein.

Applicant Response:

Preliminary Plan - Final Plat intended to meet application needs and conditions without any variation requests

3. CONSISTENT WITH CITY PLAN

The PUD is generally consistent with the objectives of the City Comprehensive Plan as viewed in light of any changed conditions since its adoption.

Applicant Response:

The Plat/Final Plat designed to meet all application conditions and meet Comprehensive Plan for design and uses

4. PUBLIC WELFARE

The PUD will not be detrimental to the public health, safety, morals, or general welfare.

Applicant Response:

This commercial development should be in line with nearby uses and in no way detrimental to public health, safety, morals or general welfare.

5. COMPATIBLE WITH ENVIRONS

Neither the PUD nor any portion thereof will be injurious to the use and enjoyment of other properties in its vicinity, seriously impair property values or environmental quality in the neighborhood, nor impede the orderly development of surrounding property.

Applicant Response: The Plan/Plat and uses as intended are compatible with adjoining uses along Rt 59 and in no way injurious to use or enjoyment of other properties in vicinity of the development

6. NATURAL FEATURES

The design of the PUD is as consistent as practical with the preservation of natural features of the site such as flood plains, wooded areas, steep slopes, natural drainage ways, or other areas of sensitive or valuable environmental character.

Applicant Response: N/A

7. CIRCULATION

Streets, sidewalks, pedestrian ways, bicycle paths, off-street parking, and off-street loading as appropriate to the planned land uses are provided. They are adequate in location, size, capacity, and design to ensure safe and efficient circulation of automobiles, trucks, bicycles, pedestrians, fire trucks, garbage trucks, and snow plows as appropriate without blocking traffic, creating unnecessary pedestrian-vehicular conflict, creating unnecessary through traffic within the PUD, or unduly interfering with the safety or capacity of adjacent streets

Applicant Response: All designs have been created in compliance of city requirements and applicable ordinances. Circulation designed for safety and smooth transitions

8. OPEN SPACES AND LANDSCAPING

The quality and quantity of public and common open spaces and landscaping provided are consistent with the higher standards of design and amenity required of a PUD. The size, shape, and location of a substantial portion of total public and common open space provided in residential areas render it useable for recreation purposes.

Open space between all buildings is adequate to allow for light and air, access by fire fighting equipment, and for privacy where walls have windows, terraces, or adjacent patios. Open space along the perimeter of the development is sufficient to protect existing and permitted future uses of adjacent property from adverse effects from the development.

Applicant Response: Design of open areas designed consistent with generally accepted principals and City Ordinances

9. COVENANTS

Where individual parcels are to be later sold, adequate provision has been made in the form of deed restrictions, homeowners or condominium associations, or the like for:

a. The preservation and maintenance of any open spaces, thoroughfares, utilities, water retention or detention areas, and other common elements not to be dedicated to the City or another public body

b. Such control of the use and exterior design of individual structures, if any, as is necessary for continuing conformance to the PUD Plan, such provision to be binding on all future ownership.

Applicant Response: Covenants in formation, no significant shared expenses required nor applicable

10. PUBLIC SERVICES

The land uses, intensities, and phasing of the PUD are consistent with the anticipated ability of the City, the school districts, and other public bodies to provide and economically support police and fire protection, water supply, sewage disposal, schools, and other public facilities and services without placing undue burden on existing residents and businesses.

Applicant Response: The uses proposed and allowable should not put any undue burden upon residents of other businesses in the City.

11. PHASING

Each development phase of the PUD can, together with any phases that preceded it, exist as an independent unit that meets all of the foregoing criteria and all other applicable regulations herein even if no subsequent phase should ever be completed. The provision and improvement of public or common area improvements, open spaces, and amenities--or the provision of financial sureties guaranteeing their improvement--is phased generally proportionate to the phasing of the number of dwelling units or amount of non-residential floor area.

Applicant Response: N/A - Commercial

THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF

Mitchell Zawedzki
Signature of Applicant/Agent

Mitchell Zawedzki
(Print Name)

February 2025
Application Date

CITY OF WARRENVILLE

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REZONING APPLICATION - FORM C

(For office use only)

Name of Development/Project _____ Project Number _____

A. Describe Proposed Action: SEE ATTACHED FOR RESPONSES

B. In recommending approval or conditional approval of a map amendment (rezoning), the Plan Commission shall transmit to the City Council written findings of fact that all of the conditions below apply to the application. In granting approval or conditional approval, the City Council shall similarly find that all of the following conditions apply:

1. Compatible with Use or Zoning of Environs

The proposed use(s) or the uses permitted under the proposed zoning classification are compatible with existing uses or existing zoning of property in the environs.

2. Supported by Trend of Development

The trend of development in the general area since the original zoning of the affected property was established supports the proposed use of zoning classification.

CITY OF WARRENVILLE 3S258 MANNING AVENUE • WARRENVILLE, IL 60555 • PH: (630) 393-9050 • FAX (630) 393-1531 REZONING APPLICATION –

FORM C

Name of Development/Project Project Number

A. Describe Proposed Action:

Rezoning of parcel currently zoned R-2 to B-4 along with a Special Use for operation of a car wash. Property along Rte 59 which has highest and best uses as non-residential.

B. In recommending approval or conditional approval of a map amendment (rezoning), the Plan Commission shall transmit to the City Council written findings of fact that all of the conditions below apply to the application. In granting approval or conditional approval, the City Council shall similarly find that all of the following conditions apply:

1. Compatible with Use or Zoning of Environs The proposed use(s) or the uses permitted under the proposed zoning classification are compatible with existing uses or existing zoning of property in the environs.

As noted above and as a part of this entire submittal, based on uses adjacent along Rte 59 and nearby, the proposed uses and zoning is quite compatible with the others as currently exist.

2. Supported by Trend of Development The trend of development in the general area since the original zoning of the affected property was established supports the proposed use of zoning classification.

While residential zoning at one time may have seemed to make sense and fit it, the current trend of development for this parcel is for uses as proposed and the underlying zoning necessary to accommodate these uses.

3. Consistent With Comprehensive Plan Objectives The proposed use or zoning classification is in harmony with the objectives of the Comprehensive Plan of the City as viewed in light of any changed conditions since its adoption.

The proposed uses are clearly in harmony with the City's Comprehensive Plan along Rte 59.

4. Furthers Public Interest The proposed use or zoning classification promotes the public interest and not solely the interest of the applicant.

The uses and zoning as proposed will serve the needs of the overall community as well the City with the proposed uses and taxes generated therefrom.

I HEREBY CERTIFY THAT THE ABOVE STATEMENTS AND ALL ACCOMPANYING STATEMENTS AND APPLICATION INFORMATION ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.

_____

Signature of Applicant/Agent

Dream Clean Holdings, LLC

By: Mitchell Zaveduk

Mitchell Zaveduk

Date February 25, 2025

CITY OF WARRENVILLE

3S258 MANNING AVENUE • WARRENVILLE, IL 60555 • PH: (630) 393-9050 • FAX (630) 393-1531

WARRENVILLE

SPECIAL USE PERMIT APPLICATION – FORM B

(For office use only)

Name of Development/Project _____ Project Number _____

Certain uses cannot be allowed generally in a particular zoning district, or in any zoning district, because of the impact their special character creates on surrounding areas. However, some special uses may be allowed under special conditions. These uses are listed in the Zoning Ordinance as Special Uses. Because a Special Use is compatible with the applicable zoning district only under special conditions, a Special Use Permit is required before any use listed in the Zoning Ordinance as a Special Use may be established.

A. List specific Special Use approval that is being sought *(refer to Zoning Ordinance Table 3A for a list of Special Uses possible in each zoning district).*

Special Use approval is being sought for operation of a car wash on subject parcels

B. In evaluating the suitability of a proposed Special Use, the Plan Commission and City Council shall examine the following characteristics of the proposed use and its individual structures or components:

1. Location and orientation
2. Lot Size
3. Size of facility, including floor area, structure height, design capacity, and anticipated employment
4. Site design and arrangement
5. Provisions affecting on and off-site pedestrian and traffic movement, vehicle storage, and the passage of emergency vehicles
6. Appearance
7. Screening or landscaping
8. On or off-site buffering from incompatible uses with open spaces or transitional uses
9. Operations factors, such as hours of use or environmental controls
10. Other characteristics of the proposed use pertinent in the judgment of the Commission or Council to an assessment of the impact of the use on the area.

In recommending or granting approval or conditional approval of a Special use, the City Council and Plan Commission shall prepare written findings of fact that on the basis of the ten characteristics cited above, or changes to such characteristics that conditions to which the approval is made subject require, the proposes use will be compatible with existing uses in the area, and with the Permitted Uses in the zoning district, in the following ways. Please review and provide a written response indicating how these six characteristics/criteria will be impacted by the proposed Special Use:

City of Warrenville Special Use Application Form B

1. Traffic And adverse impact of types or volumes of traffic flow not otherwise typical in the zoning district has been minimized.

Applicant Response: Pursuant to Traffic Study as completed the proposed uses (Car Wash and Starbucks) the proposed uses should not have a negative impact beyond those as typical and as currently exist in the area to be developed.

2. Environmental Nuisance Any adverse effects of noise, glare, odor, dust, waste disposal, blockage or light or air, or other adverse environmental effects of a type or degree not characteristic of Permitted Uses in the zoning district, have been appropriately controls.

Applicant Response: As a part of the development process and design criteria as to be implemented there should not be any adverse effects of noise, glare, odor, dust, waste disposal, blockage or light or air, or other adverse environmental effects of a type or degree not characteristic of Permitted Uses in the zoning district

3. Neighborhood Character The proposed use will fit harmoniously with the existing natural or man-made character of its surroundings and with Permitted Uses in the zoning district. The use will not have undue deleterious effect on the environmental quality, property values, or neighborhood character already existing in the area or normally associated with Permitted Uses in the district.

Applicant Response: The development of the property in question, as it abuts Rte 59 and other adjoining commercial uses should not have any undue deleterious effect on the environmental quality, property values, or neighborhood character already existing in the area or normally associated with Permitted Uses in the district.

4. Public Services and Facilities The proposed use will not require existing community facilities or services to a degree disproportionate to that normally expected of Permitted Uses in the district, nor generate disproportionate demand for new services or facilities as compared with the Permitted Uses, in such a way as to place undue burdens upon existing development in the area.

Applicant Response: As noted above, the proposed uses should not impact existing community facilities or services to a degree disproportionate to that normally expected of Permitted Uses in the district, nor generate disproportionate demand for new services or facilities as compared with the Permitted Uses, in such a way as to place undue burdens upon existing development in the area.

City of Warrenville Special Use Application Form

5. Public Safety and Health The proposed use will not be detrimental to the safety or health of the employees, patrons, or visitors associated with the use nor of the general public in the vicinity.

Applicant Response: The proposed uses should in no way be detrimental to the safety or health of the employees, patrons, or visitors associated with the uses proposed, nor of the general public in the vicinity.

6. Other Factors The proposed use is in harmony with any other elements of compatibility pertinent in the judgment of the Commission or Council to the particular Special use or its particular location.

Applicant Response: In light of other adjacent uses and uses along Rte 59, the proposed use is generally in harmony with any other elements of compatibility pertinent to the requested Special Use or its particular location.

I HEREBY CERTIFY THAT THE ABOVE STATEMENTS AND ALL ACCOMPANYING STATEMENTS AND APPLICATION INFORMATION ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.

Signature of Applicant/Agent

Dream Clean Holdings, LLC

By: Mitchell Zaveduk

Mitchell Zaveduk

Date February 25, 2025

Attachment B

DREAM CLEAN RESUBDIVISION

IN THE CITY OF WARRENVILLE, ILLINOIS

IN PART OF SECTION 33 AND SECTION 34, TOWNSHIP 39 NORTH, RANGE 9, EAST OF THE THIRD PRINCIPAL MERIDIAN, IN DU PAGE COUNTY, ILLINOIS.

PIN
04-33-403-003
04-33-403-006
04-33-403-007
04-33-403-008

RECORDER'S CERTIFICATE

STATE OF ILLINOIS)
COUNTY OF DUPAGE) SS

I, THE UNDERSIGNED, AS THE RECORDER OF DEEDS FOR _____ COUNTY DO HEREBY CERTIFY THAT INSTRUMENT NUMBER _____ WAS FILED FOR RECORD IN THE RECORDER'S OFFICE OF _____ COUNTY, ILLINOIS, ON THE _____ DAY OF _____, A.D., 20_____ AT _____ O'CLOCK ___.M.

_____
RECORDER OF DEEDS

_____
PLEASE TYPE/PRINT NAME

COUNTY CLERK CERTIFICATE

STATE OF ILLINOIS)
COUNTY OF DuPAGE)SS

I, THE UNDERSIGNED, AS COUNTY CLERK OF DuPAGE COUNTY, ILLINOIS, DO HEREBY CERTIFY THAT THERE ARE NO DELINQUENT GENERAL TAXES, NO UNPAID OR FORFEITED TAXES, AND NO REDEEMABLE TAX SALES AGAINST ANY OF THE LAND DEPICTED HEREON.

I FURTHER CERTIFY THAT I HAVE RECEIVED ALL STATUTORY FEES IN CONNECTION WITH THE PLAT DEPICTED HEREON.

GIVEN UNDER MY HAND AND SEAL OF THE COUNTY CLERK AT WHEATON, ILLINOIS, THIS _____ DAY

OF _____, A.D., 20_____.

_____
COUNTY CLERK

_____
PLEASE TYPE/PRINT NAME

CITY COUNCIL CERTIFICATE

STATE OF ILLINOIS)
COUNTY OF DUPAGE) SS

THIS IS TO CERTIFY THAT THE CITY COUNCIL OF THE CITY OF WARRENVILLE, DUPAGE COUNTY, ILLINOIS, HAS REVIEWED AND APPROVED THIS PLAT.

DATED AT WARRENVILLE, DUPAGE COUNTY, ILLINOIS, THIS ___ DAY OF _____20___.

_____
MAYOR

ATTEST:

_____
CITY CLERK

CITY CLERK'S CERTIFICATE

STATE OF ILLINOIS)
COUNTY OF DUPAGE) SS

I, _____, CITY CLERK OF THE CITY OF WARRENVILLE, ILLINOIS HEREBY CERTIFY THAT THE PLAT WAS PRESENTED TO AND BY RESOLUTION DULY APPROVED BY THE CITY COUNCIL OF SAID CITY AT ITS MEETING HELD ON _____, 20___, AND THAT THE REQUIRED BOND OR OTHER GUARANTEE HAS BEEN POSTED FOR THE COMPLETION OF THE IMPROVEMENTS REQUIRED BY THE REGULATIONS OF SAID CITY.

IN WITNESS WHEREOF, I HAVE HERETO SET MY HAND AND SEAL OF THE CITY OF WARRENVILLE, ILLINOIS,

THIS _____ DAY OF _____, 20___.

_____
CITY CLERK

CITY ENGINEER'S CERTIFICATE

STATE OF ILLINOIS)
COUNTY OF DUPAGE) SS

I, _____, CITY ENGINEER OF THE CITY OF WARRENVILLE, ILLINOIS, HEREBY CERTIFY THAT THE LAND IMPROVEMENTS DESCRIBED IN THE PLAT, AND THE PLANS AND SPECIFICATIONS THEREFORE, MEET THE MINIMUM REQUIREMENTS OF SAID CITY AND HAVE BEEN APPROVED BY ALL PUBLIC AUTHORITIES HAVING JURISDICTION THEREOF.

DATED AT WARRENVILLE, DUPAGE COUNTY, ILLINOIS THIS _____ DAY OF _____, 20___.

_____
CITY ENGINEER

_____
REGISTRATION NUMBER

PLAN COMMISSION CERTIFICATE

STATE OF ILLINOIS)
COUNTY OF DUPAGE) SS

THIS IS TO CERTIFY THAT THE MEMBERS OF THE PLAN COMMISSION OF THE CITY OF WARRENVILLE, ILLINOIS HAVE REVIEWED AND APPROVED THIS PLAT,

DATED AT WARRENVILLE, DUPAGE COUNTY, ILLINOIS THIS _____ DAY OF _____, 20___.

_____
CHAIRMAN

_____
SECRETARY

SCHOOL DISTRICT BOUNDARY STATEMENT

THE UNDERSIGNED, BEING DULY SWORN, UPON HIS/HER OATH DEPOSES AND STATES AS FOLLOWS:

THE HE/SHE IS THE OWNER OF THE PROPERTY LEGALLY DESCRIBED ON A PROPOSED PLAT OF SUBDIVISION SUBMITTED TO THE CITY FOR APPROVAL, WHICH LEGAL DESCRIPTION IS ATTACHED HERETO AND INCORPORATED BY REFERENCE HEREIN AND TO THE BEST OF THE OWNER'S KNOWLEDGE, THE SCHOOL DISTRICT(S) IN WHICH EACH TRACT, PARCEL, LOT OR BLOCK OF THE PROPOSED SUBDIVISION LIES IS/ARE:

COMMUNITY UNIT SCHOOL DISTRICT 200, 130 WEST PARK AVE., WHEATON, IL 60189

COMMUNITY COLLEGE DISTRICT: COLLEGE OF DUPAGE 502, 425 FAWELL BLVD. GLEN ELLYN, IL 60137

DATED THIS _____ DAY OF _____, 2017.

_____
OWNER

ILLINOIS DEPARTMENT OF TRANSPORTATION CERTIFICATE

THIS PLAT HAS BEEN APPROVED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION WITH RESPECT TO ROADWAY ACCESS PURSUANT OF SECTION 8 OF "AN ACT TO REVISE THE LAW IN RELATION TO PLATS," AS AMENDED. A PLAN THAT MEETS THE REQUIREMENTS CONTAINED IN THE DEPARTMENT'S "POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS" WILL BE REQUIRED BY THE DEPARTMENT.

_____
JOSE RIOS, P.E.

REGION ONE ENGINEER

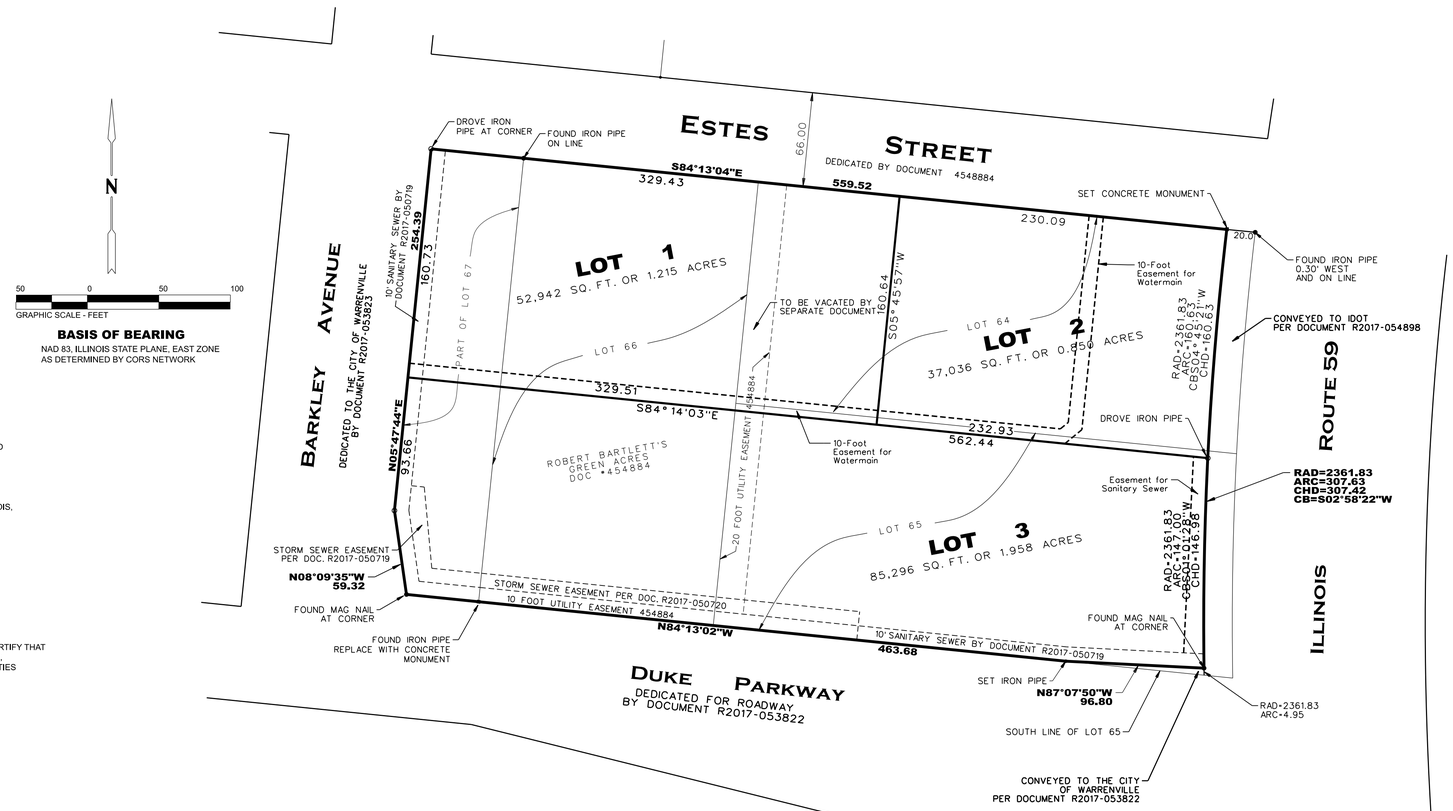
CITY COLLECTOR CERTIFICATE

STATE OF ILLINOIS)
COUNTY OF DUPAGE) SS

I, _____, COLLECTOR FOR THE CITY OF WARRENVILLE, ILLINOIS DO HEREBY CERTIFY THAT THERE ARE NO DELINQUENT OR UNPAID CURRENT OR FORFEITED SPECIAL ASSESSMENTS OR ANY DEFERRED INSTALLMENTS THEREOF THAT HAVE NOT BEEN APPORTIONED AGAINST THE TRACT, INCLUDED IN THE PLAT

DATED AT WARRENVILLE, DUPAGE COUNTY, ILLINOIS THIS _____ DAY OF _____, 20___.

_____
CITY COLLECTOR



BASIS OF BEARING

NAD 83, ILLINOIS STATE PLANE, EAST ZONE AS DETERMINED BY CORS NETWORK

OWNER'S SURFACE WATER DRAINAGE CERTIFICATE

STATE OF ILLINOIS)
COUNTY OF DUPAGE) ss

THIS IS TO CERTIFY THAT OWNER(S) OF THE LAND HEREIN DESCRIBED OR DULY AUTHORIZED ATTORNEY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF THE DRAINAGE OF SURFACE WATERS WILL NOT BE CHANGED BY THE CONSTRUCTION OF SUCH SUBDIVISION OR ANY PART THEREOF , OR THAT, IF SUCH SURFACE WATER DRAINAGE WILL BE CHANGED, ADEQUATE PROVISION HAS BEEN MADE FOR COLLECTION AND DIVERSION OF SUCH SURFACE WATERS INTO PUBLIC AREAS, OR DRAINS WHICH THE SUBDIVIDER HAS A RIGHT TO USE, AND THAT SUCH SURFACE WATERS WILL NOT BE DEPOSITED ON THE PROPERTY OF ADJOINING LAND OWNERS IN SUCH CONCENTRATIONS AS MAY CAUSE DAMAGE TO THE ADJOINING PROPERTY BECAUSE OF THE CONSTRUCTION OF THE SUBDIVISION

_____
SIGNATURE AND TITLE

_____
ADDRESS

_____

DATED THIS _____ DAY OF _____, 20____.

AUTHORIZATION TO RECORD

I, JOEL C, VIETTI, A PROFESSIONAL LAND SURVEYOR OF THE STATE OF ILLINOIS, LICENSE NUMBER 35-3561, DO HEREBY AUTHORIZE THE CITY OF WARRENVILLE, DUPAGE COUNTY, ITS STAFF OR AUTHORIZED AGENT, TO PLACE THIS DOCUMENT OF RECORD IN THE COUNTY RECORDER'S OFFICE IN MY NAME AND IN COMPLIANCE WITH ILLINOIS STATUES CHAPTER 109 PARAGRAPH 2, AS AMENDED.

SIGNED AT WHEATON, ILLINOIS THIS _____ DAY OF _____, A.D., 20__

WEBSTER, McGRATH AND AHLBERG, LTD.

BY:_____

IL, PROF. LAND SURVEYOR NO. 3561
LICENSE EXPIRATION DATE: NOVEMBER 30, 2026
2100 MANCHESTER ROAD, SUITE 203
WHEATON, ILLINOIS 60187
PHONE: (630) 668-7603

ACCESS NOTES

1. THERE SHALL BE NO DIRECT VEHICULAR ACCESS TO ILLINOIS ROUTE 59.
2. ALL ACCESS TO ILLINOIS ROUTE 59 SHALL BE FROM INTERNAL CIRCULATION.

ENGINEER'S SURFACE WATER DRAINAGE CERTIFICATE

STATE OF ILLINOIS)
COUNTY OF DUPAGE) ss

THIS IS TO CERTIFY THAT I, A REGISTERED PROFESSIONAL ENGINEER, CERTIFY THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF THAT DRAINAGE OF SURFACE WATERS WILL NOT BE CHANGED BY CONSTRUCTION OF SUCH SUBDIVISION OR ANY PART THEREOF, OR THAT IF SUCH SURFACE WATER DRAINAGE WILL BE CHANGED, ADEQUATE PROVISIONS HAVE BEEN MADE FOR COLLECTION AND DIVERSION OF SUCH SURFACE WATERS INTO PUBLIC AREAS, OR DRAINS WHICH THE SUBDIVIDER HAS THE RIGHT TO USE, AND THAT SUCH SURFACE WATERS WILL NOT BE DEPOSITED ON THE PROPERTY OF ADJOINING LAND OWNERS IN SUCH CONCENTRATIONS AS MAY CAUSE DAMAGE TO THE ADJOINING PROPERTY BECAUSE OF THE CONSTRUCTION OF THE SUBDIVISION.

DATED THIS _____ DAY OF _____, 20__..

WEBSTER, McGRATH AND AHLBERG, LTD.

BY:_____
ENGINEER

LICENSE EXPIRATION DATE: NOVEMBER 30, 2025
2100 MANCHESTER ROAD, SUITE 203
WHEATON, ILLINOIS 60187
PHONE: (630) 668-7603

OWNER'S CERTIFICATE

STATE OF ILLINOIS)
COUNTY OF_____)SS

_____, AN ILLINOIS LIMITED LIABILITY COMPANY AUTHORIZED TO DO BUSINESS IN ILLINOIS, CERTIFIES THAT IT IS THE RECORD OWNER OF THE PROPERTY DESCRIBED IN THE SURVEYOR'S CERTIFICATE AFFIXED HEREON, AND THAT IT HAS CAUSED THE SAME TO BE SURVEYED AND SUBDIVIDED AS INDICATED HEREON FOR THE USES AND PURPOSES SET FOR AND DOES HEREBY CONSENTS TO THE SUBDIVISION OF SAID PROPERTY AND THE VARIOUS DEDICATIONS, GRANTS, RESERVATION OF EASEMENTS, AND RIGHTS OF WAY SHOWN HEREON.

DATED THIS _____ DAY OF _____, A.D., 20_____.

_____
SIGNATURE TITLE

_____
ADDRESS

_____

NOTARY'S CERTIFICATE

STATE OF ILLINOIS)
COUNTY OF_____) SS

I, THE UNDERSIGNED, A NOTARY PUBLIC IN AND FOR THE AFORESAID COUNTY AND STATE, DO HEREBY CERTIFY THAT THE FOREGOING SIGNATOR OF THE OWNER'S CERTIFICATE IS PERSONALLY KNOWN TO ME TO BE THE SAME PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT, AND THAT SAID INDIVIDUAL APPEARED AND DELIVERED SAID INSTRUMENT AS A FREE AND VOLUNTARY ACT OF THE CORPORATION AND THAT SAID INDIVIDUAL DID ALSO THEN AND THERE ACKNOWLEDGE THAT HE OR SHE IS A CUSTODIAN OF THE CORPORATE SEAL OF SAID CORPORATION AND DID AFFIX SAID SEAL OF SAID CORPORATION TO SAID INSTRUMENT AS HIS OR HER OWN FREE AND VOLUNTARY ACT AND AS THE FREE AND VOLUNTARY ACT OF SAID CORPORATION, AS OWNER, FOR THE USES AND PURPOSES THEREIN SET FORTH IN AFORESAID INSTRUMENT.

GIVEN UNDER MY HAND AND NOTARIAL SEAL THIS _____ DAY OF _____

A.D., 20____.

BY:_____
NOTARY

_____
PRINT NAME

SURVEYOR'S CERTIFICATE

STATE OF ILLINOIS)
COUNTY OF DuPAGE)SS

THIS IS TO CERTIFY THAT WEBSTER, McGRATH AND AHLBERG, LTD., HAVE SURVEYED AND SUBDIVIDED THE FOLLOWING DESCRIBED PROPERTY:

LOTS 64, 65, 66 AND 67 IN ROBERT BARTLETT'S GREEN ACRES, BEING A SUBDIVISION IN THE EAST HALF OF SECTION 33 AND THE WEST HALF OF SECTION 34, TOWNSHIP 39 NORTH, RANGE 9 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED OCTOBER 20, 1943 AS DOCUMENT 454884, IN DUPAGE COUNTY, ILLINOIS.

EXCEPTING THEREFROM THE EAST 20 FEET OF SAID LOTS 64 AND 65 (AS MEASURED ON THE NORTH LINE OF LOT 64 AND ON THE SOUTH LINE OF LOT 65) CONVEYED TO IDOT PER THE PLAT OF DEDICATION RECORDED JUNE 5, 2017 AS DOCUMENT 054898.

AND EXCEPTING THEREFROM A PART OF SAID LOT 65 CONVEYED TO IDOT PER THE PLAT OF DEDICATION RECORDED JUNE 1, 2017 AS DOCUMENT 053822, IN DUPAGE COUNTY, ILLINOIS, BEING FURTHER DESCRIBED AS FOLLOWS;THAT PART OF LOT 65 OF ROBERT BARTLETT'S GREEN ACRES SUBDIVISION, RECORDED AS DOCUMENT 454884, DESCRIBED BY BEGINNING AT THE INTERSECTION OF THE SOUTH LINE OF SAID LOT 65 WITH A LINE 20 FEET WEST OF AND RADIAL DISTANT FROM THE WESTERLY RIGHT OF LINE OF ILLINOIS ROUTE 59 PER DOCUMENT 321382; THENCE NORTH 84 DEGREES 13 MINUTES 02 SECONDS WEST ALONG THE SOUTH LINE OF SAID LOT 65, A DISTANCE OF 97.25 FEET; THENCE NORTH 87 DEGREES 07 MINUTES 50 SECONDS EAST A DISTANCE OF 96.80 FEET TO A POINT ON SAID LINE WHICH IS 20 FEET WEST OF AND RADIAL DISTANT FROM SAID WESTERLY RIGHT OF WAY LINE; THENCE SOUTHERLY ALONG SAID LINE WHICH IS 20 FEET WEST OF AND RADIAL DISTANT FROM SAID WESTERLY RIGHT OF WAY LINE, BEING A CURVE TO THE LEFT, HAVING A RADIUS 2361.83 FEET, ARC DISTANCE OF 4.95 FEET, CHORD 4.95 FEET, BEARING SOUTH 00 DEGREES 49 MINUTES 07 SECONDS EAST TO THE POINT OF BEGINNING.

AND ALSO EXCEPTING THEREFROM THAT PART OF LOT 67 DEDICATED FOR BARKLEY AVENUE PER DOCUMENT R2017-053823, IN DUPAGE COUNTY, ILLINOIS.

WE FURTHER CERTIFY THAT THE PROPERTY SHOWN ON THE PLAT HEREON DRAWN IS WITHIN THE CORPORATE LIMITS OF THE CITY OF WARRENVILLE WHICH HAS AUTHORIZED A COMPREHENSIVE PLAN AND WHICH IS EXERCISING THE SPECIAL POWERS AUTHORIZED BY DIVISION 12 OF ARTICLE 11 OF THE ILLINOIS MUNICIPAL CODE AS HERETOFORE AND HEREAFTER AMENDED.

WE FURTHER CERTIFY THAT THIS PROPERTY IS WITHIN ZONES "UNSHADED X " (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN), AS DESIGNATED BY THE FLOOD INSURANCE RATE MAP (F.I.R.M.) FOR DUPAGE COUNTY AND INCORPORATED AREAS , MAP NUMBER 17043C0129J, WITH AN EFFECTIVE DATE OF AUGUST 1, 2019.

THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.

GIVEN UNDER MY HAND AND CORPORATE SEAL AT WHEATON, ILLINOIS, THIS _____

DAY OF _____, A.D., 20_____.

WEBSTER, McGRATH AND AHLBERG, LTD.

BY:_____

IL, PROF. LAND SURVEYOR NO. 3561
LICENSE EXPIRATION DATE: NOVEMBER 30, 2026
2100 MANCHESTER ROAD, SUITE 203
WHEATON, ILLINOIS 60187
PHONE: (630) 668-7603

LINE LEGEND

———	=	BOUNDARY LINE
———	=	LOT LINE
— — —	=	SETBACK LINE
- - - -	=	EASEMENT LINE
— · — · —	=	SECTION LINE

Rev	Date	Description	By
	04/11/25	ADD EASEMENT AND REV. LOT NUMBER	

WEBSTER, McGRATH & AHLBERG LTD.
WMA
LAND SURVEYING - CIVIL ENGINEERING - LANDSCAPE ARCHITECTURE
Over a Century of Service to our Clients
2100 Manchester Road, Building A, Suite 203 Wheaton, Illinois 60187
ph: (630)668-7603 web: www.wmaltd.com
Design Firm License No. 184-003101

PLAT OF RESUBDIVISION

LOCATION: NORTHWEST CORNER ROUTE 59 AND DUKE PARKWAY WARRENVILLE, IL

PREPARED FOR: DREAM CLEAN OPERATING CO. LLC. 625 GREENLEAF AVENUE WILMETTE, ILLINOIS 60091 PHONE: 847.989.9287

JOB #:	DATE:	SCALE:
41516	2-4-2025	1"=50'
SURV: CB/JCV	DRAWN: CB/JCV	DESIGN: XXX
FILE #: D-26199 SUB		SHEET #: 1 of 1

$FILE$ $DATE$ $TIME$

E:\ACTIVE-PROJECTS\41516-333909-DuPage\SURV-CL\2025 Dream Clean Topo - Duke Pkwy & Rt 59\41516 Dream Clean Subdivision Plat.dgn, Model: Default, Date: 4/14/2025

Attachment C

PAVING LEGEND

HMA PAVEMENT
1.5" HMA N-50 SURFACE
2" HMA N-50 BINDER*
10" AGGREGATE BASE

HEAVY DUTY CONCRETE
8" CONCRETE CLASS PV
4" AGGREGATE BASE

SIDEWALK
6" CONCRETE CLASS SI
4" AGGREGATE BASE

SITE DATA TABLE - PROPOSED DREAM CLEAN AND STARBUCKS
ROUTE 59 and DUKE PARKWAY, WARRENVILLE, IL
PIN 04-33-403-003,006,007,008

SITE AREA = 4.02 ACRES

BUILDING SETBACKS

FRONT - EAST	40 FEET
REAR - WEST	20 FEET
SIDE - NORTH	40 FEET
SIDE - SOUTH	15 FEET

LAND USE DATA - LOT 1

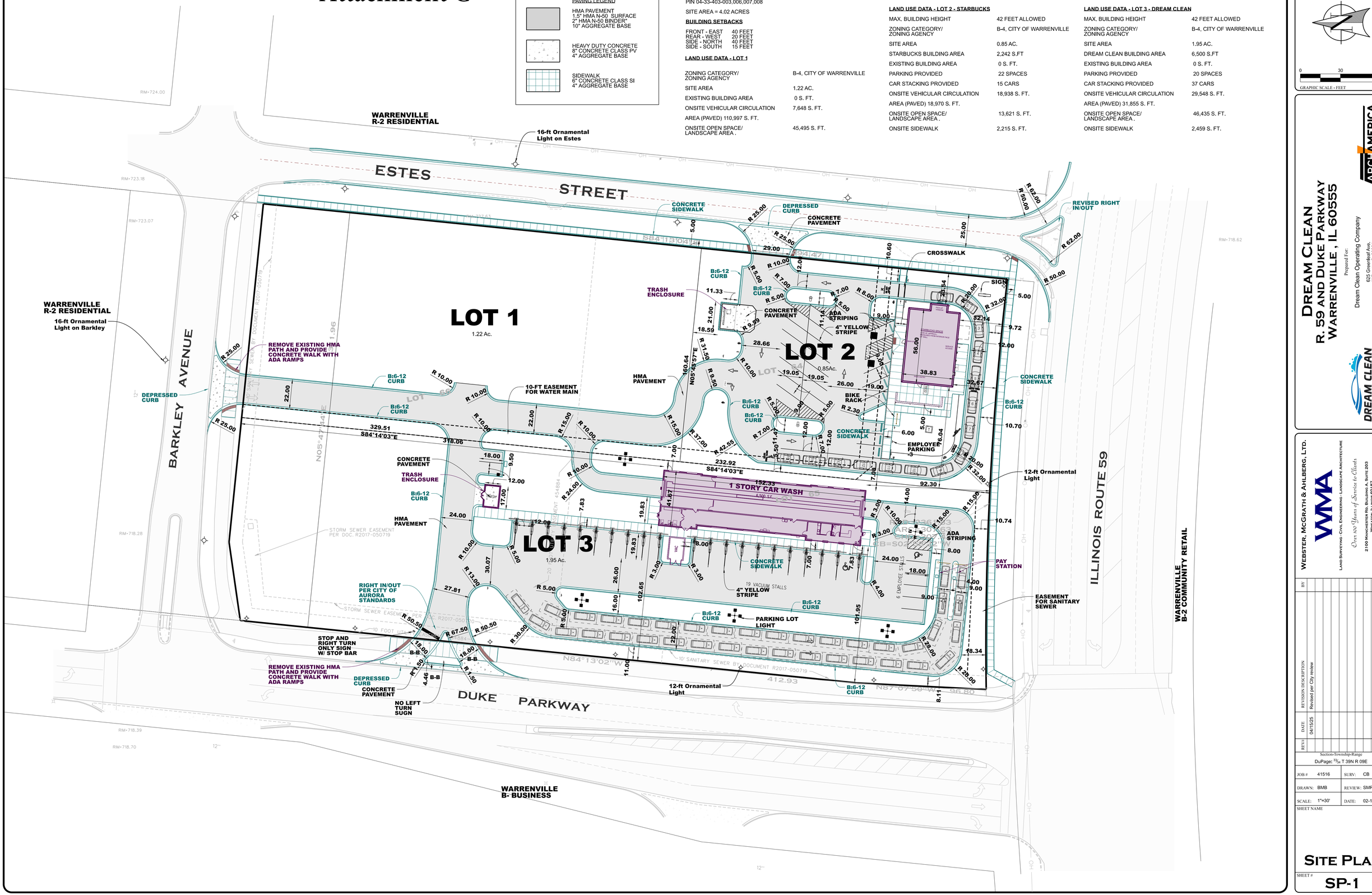
ZONING CATEGORY/ ZONING AGENCY	B-4, CITY OF WARRENVILLE
SITE AREA	1.22 AC.
EXISTING BUILDING AREA	0 S. FT.
ONSITE VEHICULAR CIRCULATION	7,648 S. FT.
AREA (PAVED) 110,997 S. FT.	
ONSITE OPEN SPACE/ LANDSCAPE AREA .	45,495 S. FT.

LAND USE DATA - LOT 2 - STARBUCKS

MAX. BUILDING HEIGHT	42 FEET ALLOWED
ZONING CATEGORY/ ZONING AGENCY	B-4, CITY OF WARRENVILLE
SITE AREA	0.85 AC.
STARBUCKS BUILDING AREA	2,242 S.FT
EXISTING BUILDING AREA	0 S. FT.
PARKING PROVIDED	22 SPACES
CAR STACKING PROVIDED	15 CARS
ONSITE VEHICULAR CIRCULATION	18,938 S. FT.
AREA (PAVED) 18,970 S. FT.	
ONSITE OPEN SPACE/ LANDSCAPE AREA .	13,621 S. FT.
ONSITE SIDEWALK	2,215 S. FT.

LAND USE DATA - LOT 3 - DREAM CLEAN

MAX. BUILDING HEIGHT	42 FEET ALLOWED
ZONING CATEGORY/ ZONING AGENCY	B-4, CITY OF WARRENVILLE
SITE AREA	1.95 AC.
DREAM CLEAN BUILDING AREA	6,500 S.FT
EXISTING BUILDING AREA	0 S. FT.
PARKING PROVIDED	20 SPACES
CAR STACKING PROVIDED	37 CARS
ONSITE VEHICULAR CIRCULATION	29,548 S. FT.
AREA (PAVED) 31,855 S. FT.	
ONSITE OPEN SPACE/ LANDSCAPE AREA .	46,435 S. FT.
ONSITE SIDEWALK	2,459 S. FT.



0 30 60
GRAPHIC SCALE - FEET

DREAM CLEAN
R. 59 AND DUKE PARKWAY
WARRENVILLE, IL 60555

Prepared For:
Dream Clean Operating Company
605 Graceland Ave.
Wheaton, IL 60187
email: mzavedyuk@dreamcleanow.com

ARCH AMERICA
Phone 847.697.7755
3413 North Rt. 31, Suite 213
Crystal Lake, IL 60012

DREAM CLEAN CAR WASH

WEBSTER, McGRATH & AHLBERG, LTD.
LAND SURVEYING - CIVIL ENGINEERING - LANDSCAPE ARCHITECTURE
Over 100 Years of Service to Clients
2100 MANCHESTER RD. BUILDING A, SUITE 253
WHEATON, ILLINOIS 60187
PH: (630)668-7003 WEB: WWW.WMLTD.COM
DESIGN FIRM LICENSE NO. 184.003161

REV'd	DATE	REVISION DESCRIPTION	BY
	04/15/25	Revised per City review	

Section-Township-Range
DuPage: 33/34 T 39N R 09E

JOB #	41516	SURV:	CB
DRAWN:	BMB	REVIEW:	SMR
SCALE:	1"=30'	DATE:	02-10-25

SHEET NAME

SITE PLAN

SHEET #

SP-1

Attachment D

Shrubs	qty./root form/size
Hinsdale Black Chokeberry Aronia melanocarpa 'Hinsdale'	17/b&b/36"
Cardinal Dogwood Cornus sericea 'Cardinal'	29/b&b/30"
Summer Stars Bushhoneysuck. Diervilla sessifolia 'Summer Stars'	4/b&b/36"
Annabelle Hydrangea Hydrangea arborescens	6/b&b/36"
SGJ - Sea Green Juniper Juniperus chinensis 'Sea Green'	52/b&b/30"
SJ - Sargent Juniper Juniperus chinensis 'Sargentii'	39/b&b/30"
Dwarf Mugo Pine Pinus mugo var. pumilio	20/b&b/30"
Fragrant Sumac Rhus aromatica	21/b&b/36"
Gro Low Sumac Rhus aromatica 'Gro Low'	27/b&b/30"
Radrazz Knockout Rose Rosa 'Radrazz'	9/b&b/30"
Miss Kim Lilac Syringa patula 'Miss Kim'	17/b&b/36"
SY - Spreading Yew Taxus media 'Dark Green Spreader'	47/b&b/30"
Hicks Yew Taxus media 'Hicksii'	8/b&b/30"
Dark Green Arborvitae Thuja occidentalis 'Nigra'	27/b&b/6'
Koreanspice Viburnum Viburnum carlesii	3/b&b/30"
Chicago Luster Viburnum Viburnum dentatum 'Chicago Luister'	28/b&b/36"

TREES	qty./root form/size
Autumn Blaze Maple Acer freemanii 'Autumn Blaze'	4/b&b/3"
Crescendo Sugar Maple Acer saccharum 'Crescendo'	1/b&b/3"
State Street Maple Acer miyabei 'Morton'	3/b&b/3"
Hackberry Celtis occidentalis	3/b&b/3"
Moraine Honeylocust Gleditsia triacanthos inermis 'Moraine'	9/b&b/3"
Canaerti Juniper Juniperus virginiana 'Canaerti'	4/b&b/6'
Espresso Kentucky Coffeetree Gymnocladus dioicu 'Espresso'	2/b&b/3"
Black Hills Spruce Picea glauca densata	12/b&b/6'
Colorado Blue Spruce Picea pungens	5/b&b/6'
Eastern White Pine Pinus strobus	18/b&b/6'
Shingle Oak Quercos imbracaria	6/b&b/3"
Greenspire Linden Tilia american 'Greenspire'	2/b&b/3"
Frontier Elm Ulmus 'Frontier'	10/b&b/3"
Accolade Elm Ulmus 'Morton'	4/b&b/3"
Triumph Elm Ulmus 'Morton Glossy	4/b&b/3"

Ornamental Trees	qty./root form/size
Autumn Brilliance Serviceb. Amelanchier grandiflora 'Autumn Brilliance'	10/b&b/6'
Heritage River Birch Betula nigra 'Heritage'	19/b&b/8-10' clump
Eastern Redbud Cercis canadensis	6/b&b/6'
Quick Fire Hydrangea Magnola soulangiana	3/b&b/6'
China Snow Lilac Syringa pekinensis 'Morton'	6/b&b/6'
Nannyberry Viburnum Viburnum lantago	6/b&b/6'

Perennials and Grasses	qty./root form/size
SBA - Summer Beauty Allium Allium tanguticum 'Summer Beauty'	52/pot/1 gal.
KFG - Korean Featherreedg. Calamgrostis brachytricha	22/pot/2 gal.
Coloratus Euonymus 'Coloratus'	115/pot/3"
HRD - Happy Returns Daylily Hemorcallis 'Happy Returns'	68/pot/1 gal.
RRD - Red Reward Daylily Hemorcallis 'Red Reward'	42/pot/1 gal.
Northwind Switchgrass Panicum virgatum 'Northwinds'	5/pot/ 1gal.
BES - Blackeyed Susan Rudbeckia fulgida 'Goldstrum'	98/pot/1 gal.
Blue Hill Salvia Salvia nemorosa 'Blue Hill'	25/pot/1 gal.
The Blues Lil Bluestem Schizachyrium scoparium	16/pot/1 gal.
Prairie Dropseed Sporobolous heterlepsis	5/pot/1 gal.

Prairie Seed Mix (Stantec Nursery)

Botanical Name	Common Name	PLS Oz/Acre
Permanent Grasses		
Bouteloua curtipendula	Side-Oats Grama	16.00
Carex spp.	Prairie Sedge Species	4.00
Elymus canadensis	Canada Wild Rye	32.00
Koeleria macrantha	June Grass	1.00
Panicum virgatum	Switch Grass	1.00
Schizachyrium scoparium	Little Bluestem	36.00
	Total	90.00
Temporary Cover		
Avena sativa	Common Oat	512.00
	Total	512.00
Forbs		
Amorpha canescens	Lead Plant	0.50
Asclepias syriaca	Common Milkweed	2.00
Asclepias tuberosa	Butterfly Weed	2.00
Baptisia lactea	White Wild Indigo	2.00
Chamaecrista fasciculata	Partridge Pea	10.00
Conopsis lanceolata	Sand Conopsis	0.50
Dalea candida	White Prairie Clover	1.50
Dalea purpurea	Purple Prairie Clover	1.50
Desmanthus illinoensis	Illinois Sensitive Plant	3.00
Echinacea purpurea	Broad-Leaved Purple Coneflower	8.00
Eryngium yuccifolium	Rattlesnake Master	2.00
Lespedeza capitata	Round-Headed Bush Clover	2.00
Liatris aspera	Rough Blazing Star	0.50
Lupinus perennis v. occidentalis	Wild Lupine	8.00
Monarda fistulosa	Wild Bergamot	0.50
Oligoneuron rigidum	Stiff Goldenrod	1.00
Parthenium integrifolium	Wild Quinine	1.00
Penstemon digitalis	Foxglove Beard Tongue	0.50
Penstemon hirsutus	Hairy Beard Tongue	1.00
Ratibida pinnata	Yellow Coneflower	4.00
Rudbeckia hirta	Black-Eyed Susan	5.00
Rudbeckia subtomentosa	Sweet Black-Eyed Susan	1.00
Silphium laciniatum	Compass Plant	2.00
Solidago juncea	Early Goldenrod	0.25
Solidago speciosa	Showy Goldenrod	0.50
Symphyotrichum laeve	Smooth Blue Aster	1.00
Symphyotrichum novae-angliae	New England Aster	0.50
Symphyotrichum oolentangiense	Sky-Blue Aster	0.50
Tradescantia virginiana	Virginia Spiderwort	1.00
Verbena stricta	Hoary Vervain	1.00
Veronicastrum virginicum	Culver's Root	0.25
	Total	65.00

WARRENVILLE R-2 RESIDENTIAL

WARRENVILLE R-2 RESIDENTIAL

WARRENVILLE B-2 COMMUNITY RETAIL

WARRENVILLE B- BUSINESS

ESTES STREET

DUKE PARKWAY

BARKLEY AVENUE

ILLINOIS ROUTE 59

1 STORY CAR WASH 4,100 s.f.

Existing Landscape Buffer

Existing Parkway Trees

Existing Landscape Buffer

Existing Parkway Trees

Existing Landscape Buffer

Remove ex. Tree

Remove ex. Tree

Remove ex. Tree

Parking Lot Perimeter Landscape Requirements:
100% of the street frontage shall be planted with continuous landscaping.

Route 59 and Estes Right of Way Landscape Requirements:
1 tree per 40 feet or 1 tree per 800 s.f. of parkway area

Parking Lot Landscape Requirements:
10% of the interior of the lot shall be devoted to landscaping

Lot 1 = 22,502 s. ft. Parking Area
Interior landscaping Required = 2,250 s. ft.
Interior Landscape Area Provided = 5,432 s. ft.

Lot 2 = 30,023 s. ft. Parking Area
Interior Landscaping Required = 3,002 s. ft.
Interior Landscape Area Provided = 6,742 s. ft.

Trees and Shrub beds shall have a spaded edge and be mulched with shredded harwood mulch

Transitional Yard Landscaping:
Sreening with solid fence, trees at 50' spacing, and shrub masses two rows deep.
West transtional yard, variance to landscape code requested.

Duke Parkway Landscape Requirements:
Trees Previously Provided in ROW per City of Aurora Requirements.

GRAPHIC SCALE - FEET
0 30 60

DREAM CLEAN
R. 59 AND DUKE PARKWAY
WARRENVILLE, IL 60555

Prepared For:
Dream Clean Operating Company
605 Greenleaf Ave.
Wilmette, IL 60091
email: mzavecdak@dreamcleansnow.com

ARCH AMERICA
3413 North Lk. A. Blvd. #13
Chesterton, IN 46304
Phone 847.497.7755

DREAM CLEAN CAR WASH

WEBSTER, MCGRATH & AHLBERG, LTD.
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WHEATON, ILLINOIS 60187
PH: (630)668-7003 WEB: WWW.WMALTD.COM
DESIGN FIRM LICENSE NO.: 184.005131

REVI	DATE	REVISION DESCRIPTION	BY
	04/15/25	Revised per City review	

Section-Township-Range
DuPage: 35a T 39N R 09E

JOB # 41516	SURV: CB
DRAWN: BMB	REVIEW: SMR
SCALE: 1"=30'	DATE: 02-10-25

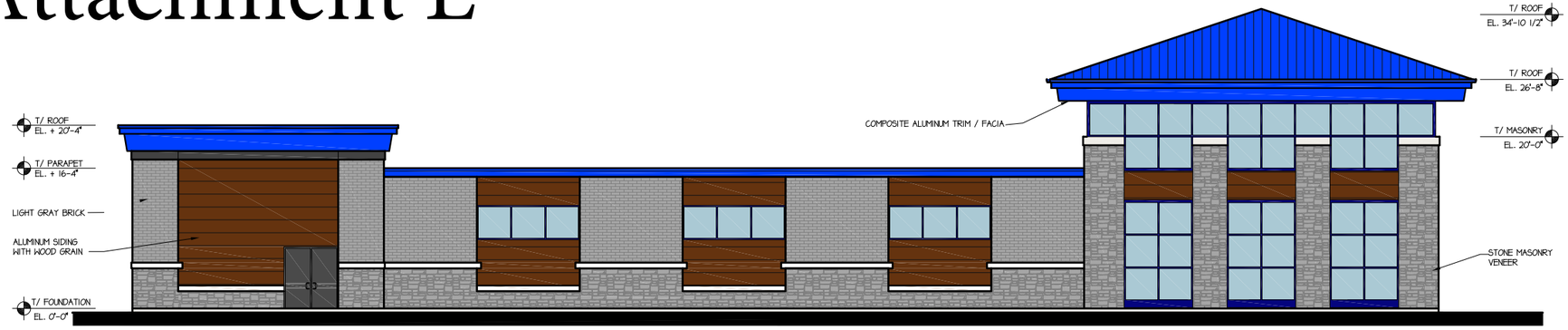
SHEET NAME

LANDSCAPE PLAN

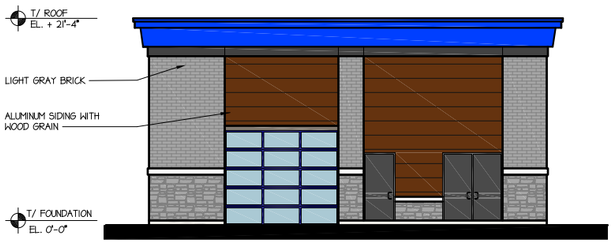
SHEET # **L-1**

E:\ACTIVE-PROJECTS\41516-333909-DuPage\ENGR-BB\FINAL ENGINEERING PLANS\UNIT 6\Dream Clean and Starbucks\41516 Dream Clean.dgn, Model: L-1, Date: 4/14/2025

Attachment E

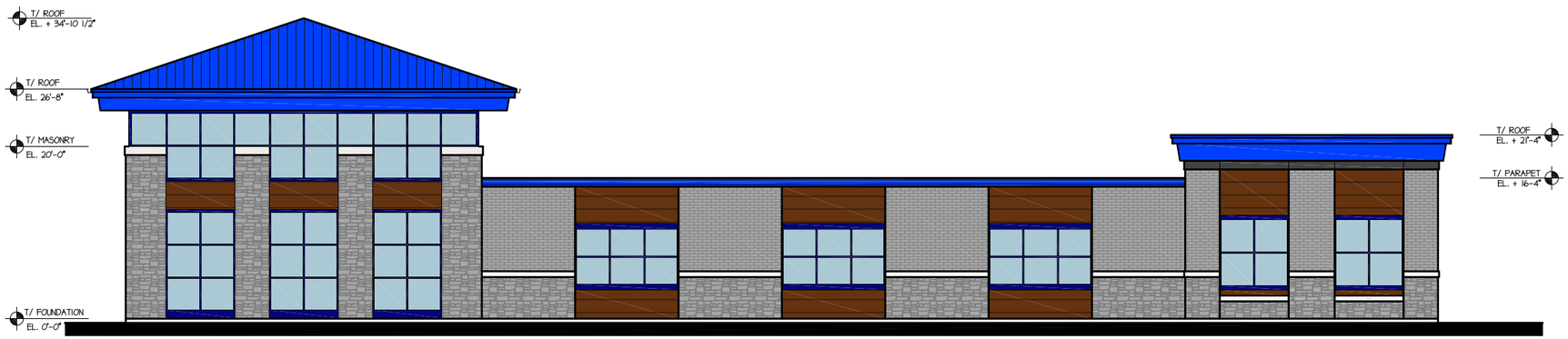


FRONT ELEVATION



SIDE ELEVATION TUNNEL EXIT

SIDE ELEVATION TUNNEL ENTRANCE



BACK ELEVATION

ARCHAMERICA
34121 N. US 45, Suite 213
Grayslake, Illinois 60030
Phone 847-336-6600
Fax 847-336-6601

Exterior Elevations

PROPOSED NEW CAR WASH

Dream Clean

WARRENVILLE, ILLINOIS

NOVEMBER 6, 2024

Archamerica Job No. 24086

Renderings

Renderings

Attachment F

NOTE : SHOWN FOR DESIGN INTENT ONLY.

STARBUCKS®
2401 UTAH AVENUE SOUTH
SEATTLE, WASHINGTON 98134
(206) 318-1575

SHEET TITLE:
3D RENDERINGS
(EXTERIOR VIEWS)
SCALE: AS SHOWN

SHEET NUMBER:
G003

Attachment G

Client Signature | Client Print Name | Date

☐ Artwork is APPROVED Proceed with order

☐ Make Changes & send NEW Proof

☐ Make Changes & Proceed with order

Dream Clean Car Wash
Branding Guidelines & Paint Colors

3M Translucent Vinyl
Olympic Blue

3M Translucent Vinyl
Sultan Blue

3M Translucent Vinyl
Black

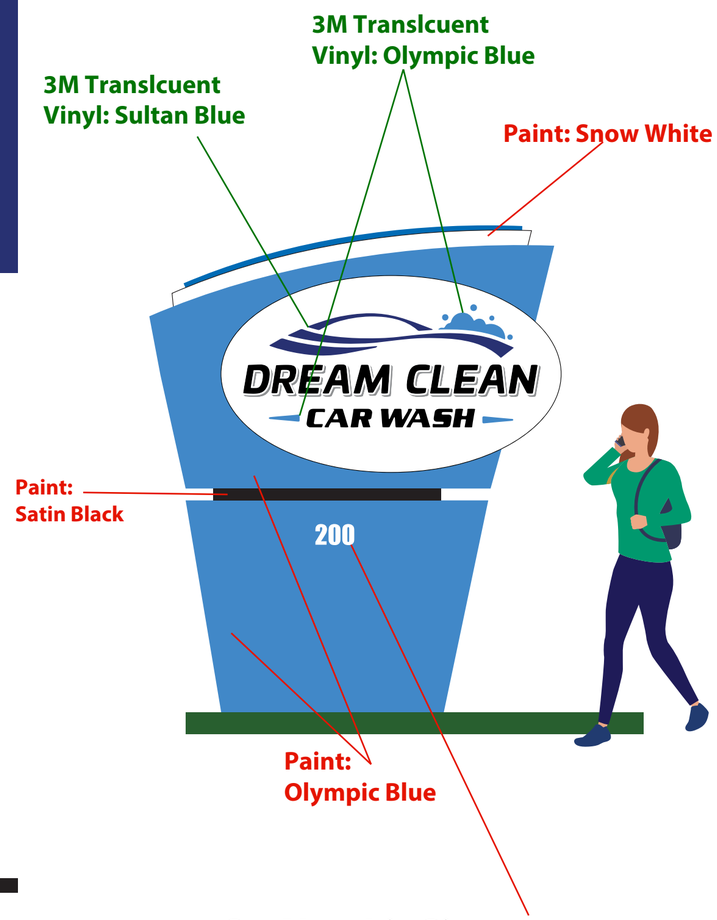
3M Translucent Vinyl
Slate Grey

Paint Match:
3M Olympic Blue
Satin Finish

Paint Match:
3M Sultan Blue
Satin Finish

Paint Match:
Mathews - Black
Satin Finish

Paint Match:
Mathews - Snow White
Satin Finish



On Non Lit Signage:
Reflective Vinyl
Color = White

CAR WASH

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COLORS DEPICTED ON THIS PROOF ARE PRINTED SIMULATIONS TO ASSIST IN VISUALIZING THE DESIGN. THEY MAY NOT ACCURATELY REFLECT THE ACTUAL COLOR SPECIFIED. ALL SCREENS SHOW COLORS IN VARIOUS WAYS. OURS SCREENS ARE COLOR CALIBRATED FOR DESIGN PROCESSES.

Job Name: Paint/Vinyl Guideline		Contact: Tim/Mitch	
Location: ALL Locations			
Design By: CH	Survey By: CLH	Sales Person: CLH	
Date: 2-25-25	Manufacturer: IC Signs & Graphics Inc. / Underwriters Laboratories	Drawing #: Pending	

417 Sheridan Rd. Highwood, IL 60040 P: 708.669.7177 E: Cory@icsignsinc.com W: icsignsinc.com

Client Signature _____ Client Print Name _____ Date _____

☐ Artwork is APPROVED Proceed with order

☐ Make Changes & send NEW Proof

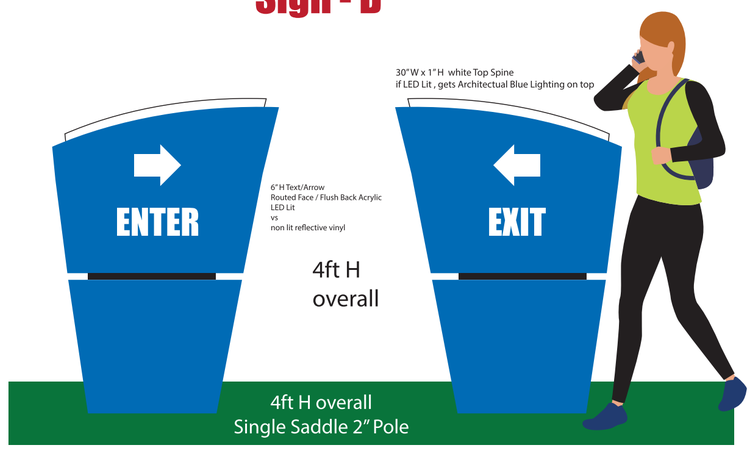
☐ Make Changes & Proceed with order

Sign - C

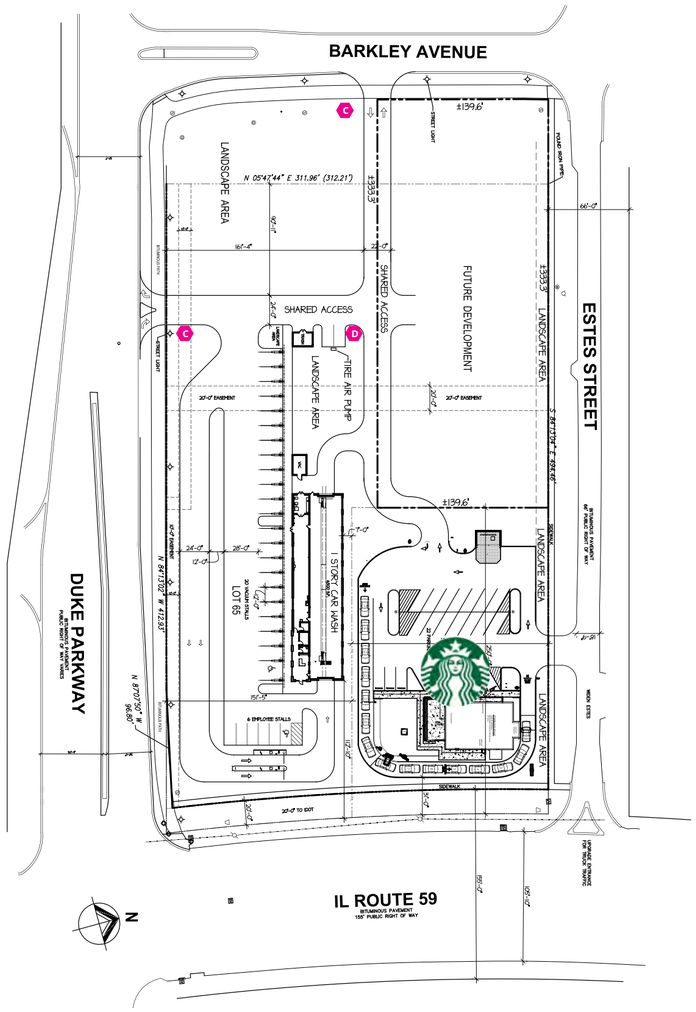
Enter / Exit - Directional Signs w/ Branded Logos Total Sq ft = 12 sqft

Per Village Signage: Directional Signage 3 Sq ft Per Sign

Sign - D



Enter / Exit - Directional Signs No Branded Logos Total Sq ft = 4 sqft



Site Plan Map = Sign C or D

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Job Name: Enter/Exit Directional		Contact: Tim/Mitch	
Location: Warrenville IL			
Design By: CH	Survey By: CLH	Sales Person: CLH	
Date: 2-25-25	Manufacturer: IC Signs & Graphics Inc. Underwriters Laboratories	Drawing #: Pending	

417 Sheridan Rd. Highwood, IL 60040 P: 708.669.7177 E: Cory@icsignsinc.com W: icsignsinc.com

Client Signature _____ Client Print Name _____ Date _____

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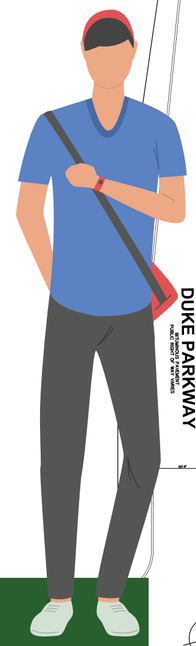
☐ Make Changes & Proceed with order

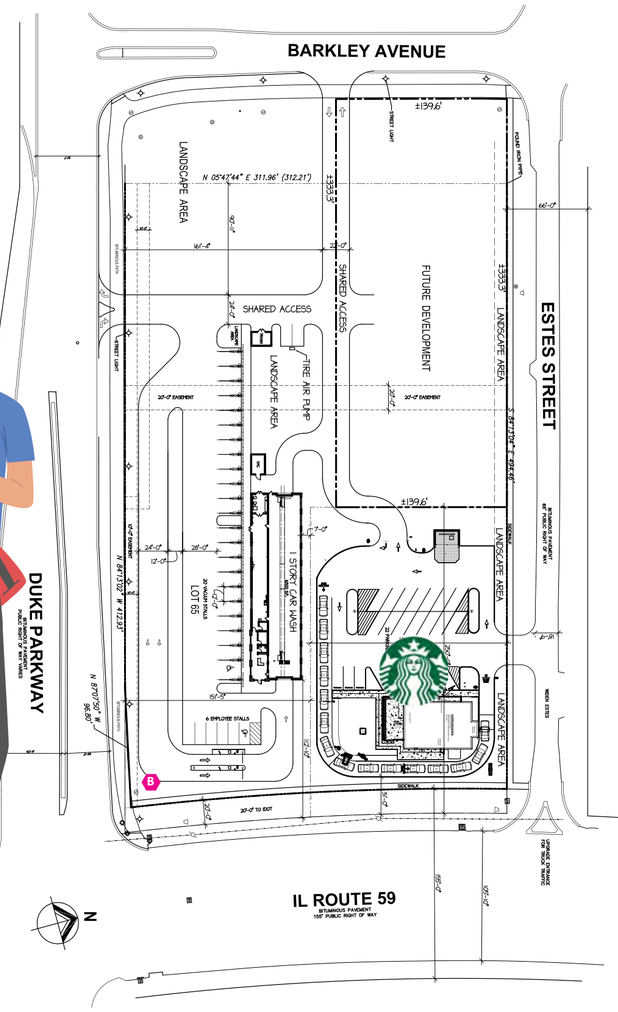
Nite View

Per Village Signage:
No Pole Signs allowed
Monument Style - 8ft H max - up to 50 sq ft MAX of signage including EMC Video per side
EMC Video allowed up to 16 sqft max

Total Sq ft = 38.16 sqft

Monument Style - shorter - 96" H Overall





Monument Style (Some villages may only Allow)
w/ EMC Video if allowed - Height may vary
***Note bases may be required to be fuax or real brick materials)**

Site Plan Map = Sign B

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Job Name: Monument Signs		Contact: Tim/Mitch
Location: Warrenville IL		
Design By: CH	Survey By: CLH	Sales Person: CLH
Date: 2-25-25	Manufacturer: IC Signs & Graphics Inc. (UL Underwriters Laboratories)	Drawing #: Pending

417 Sheridan Rd. Highwood, IL 60040 P: 708.669.7177 E: Cory@icsignsinc.com W: icsignsinc.com

Client Signature _____ Client Print Name _____ Date _____

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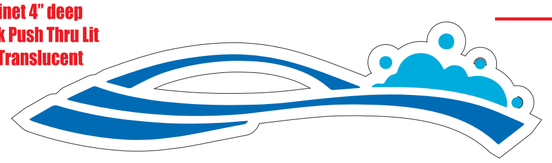
(i) recomended building signage Look

Sign - i-1 - Building Length Sides

Frontlit Channel Letters - Flush Mounted

90 sqft

Icon =
Shaped Cabinet 4" deep
w/ 1/2" Thick Push Thru Lit
Edge / Face Translucent



30" H x 120"

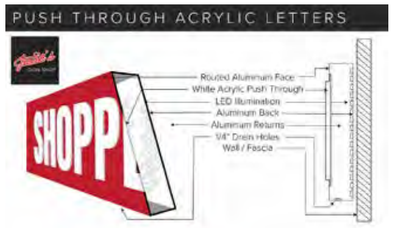
DREAM CLEAN

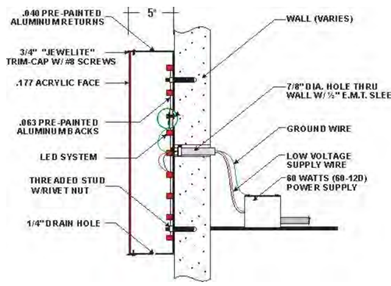
18" H x 180" W

CAR WASH

12" H x 144" W

72" H Overall

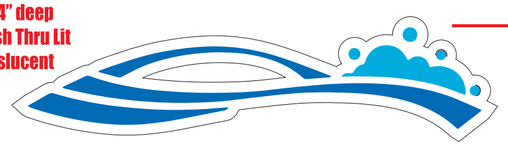




Sign - i-2 - Tunnel Exit/Enter

60 sqft

Icon =
Shaped Cabinet 4" deep
w/ 1/2" Thick Push Thru Lit
Edge / Face Translucent



26" H x 104"

DREAM CLEAN

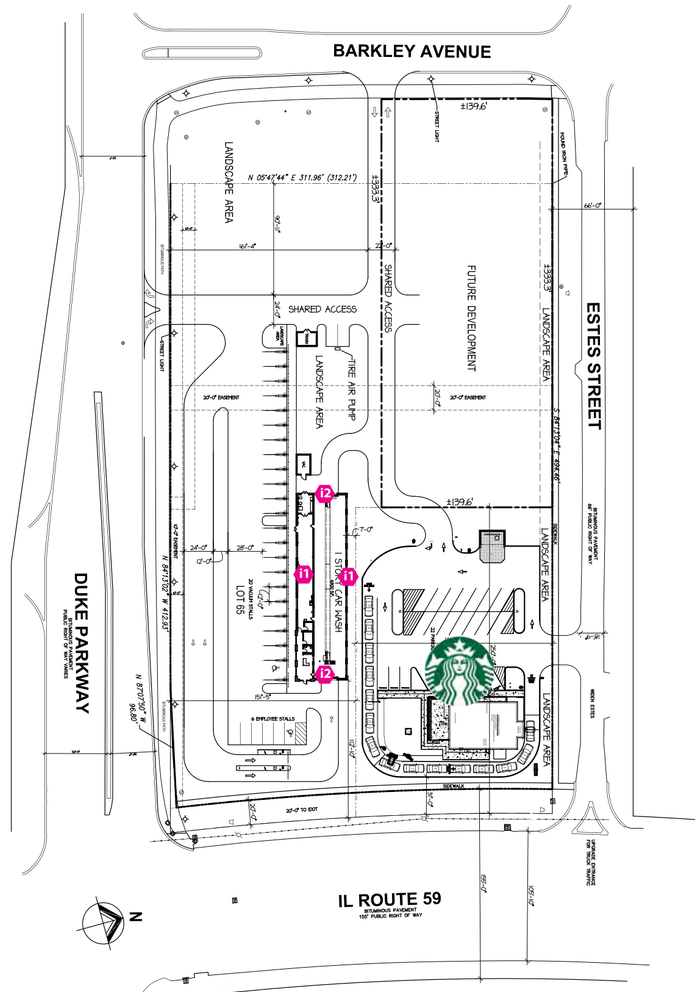
14.5" H x 144" W

CAR WASH

8.75" H x 114" W

60" H Overall

Per Village Signage:
1.5 sq ft Linear building Sign Area
or 125 Sq ft Max
Per Building Frontage



Site Plan Map = Signs i1 or i2

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Job Name: Building Signs		Contact: Tim/Mitch	
Location: Warrenville IL			
Design By: CH	Survey By: CLH	Sales Person: CLH	
Date: 2-25-25	Manufacturer: IC Signs & Graphics Inc. UL Underwriters Laboratories	Drawing #: Pending	

417 Sheridan Rd. Highwood, IL 60040 P: 708.669.7177 E: Cory@icsignsinc.com W: icsignsinc.com

Client Signature _____ Client Print Name _____ Date _____

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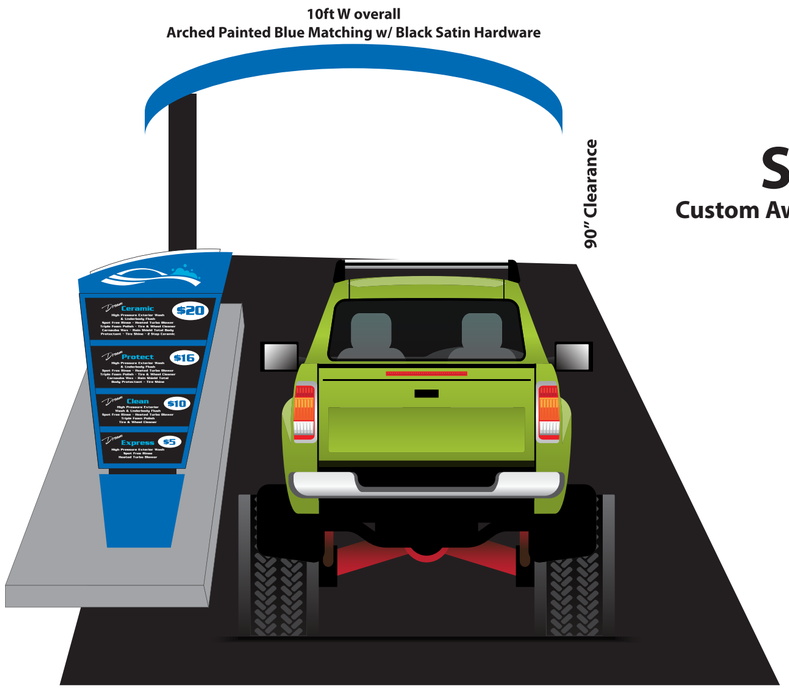
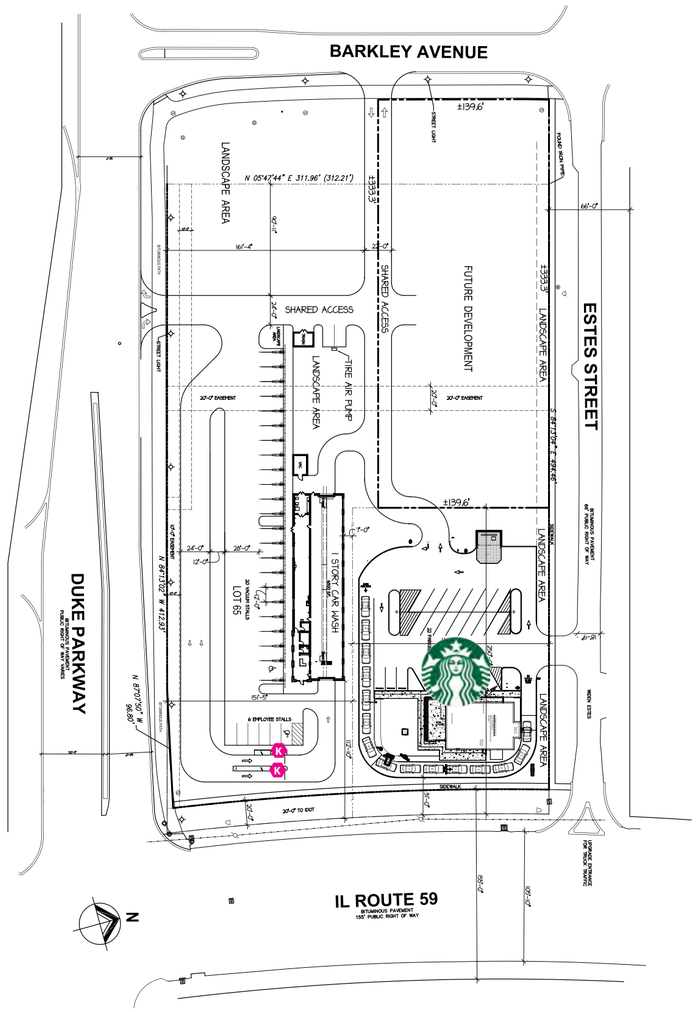
☐ Make Changes & Proceed with order



SIGN - K

Custom Awning Canopy Fabrication

Per Village Signage:



Site Plan Map = Signs - K

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Job Name: Canopy - Pay Station		Contact: Tim/Mitch	
Location: Warrenville IL			
Design By: CH	Survey By: CLH	Sales Person: CLH	
Date: 2-25-25	Manufacturer: IC Signs & Graphics Inc. (UL Underwriters Laboratories)	Drawing #: Pending	

417 Sheridan Rd. Highwood, IL 60040 P: 708.669.7177 E: Cory@icsignsinc.com W: icsignsinc.com

Client Signature | Client Print Name | Date

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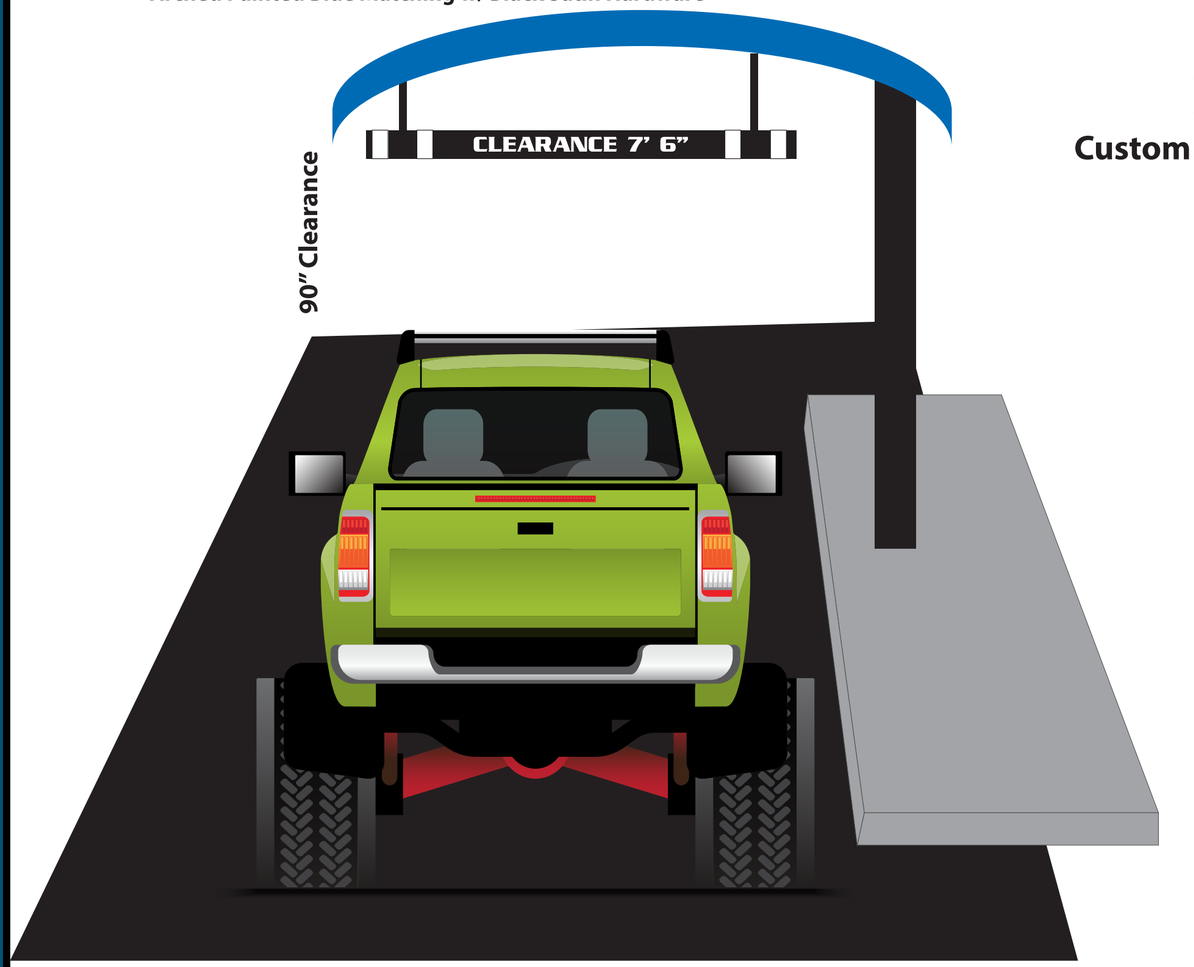
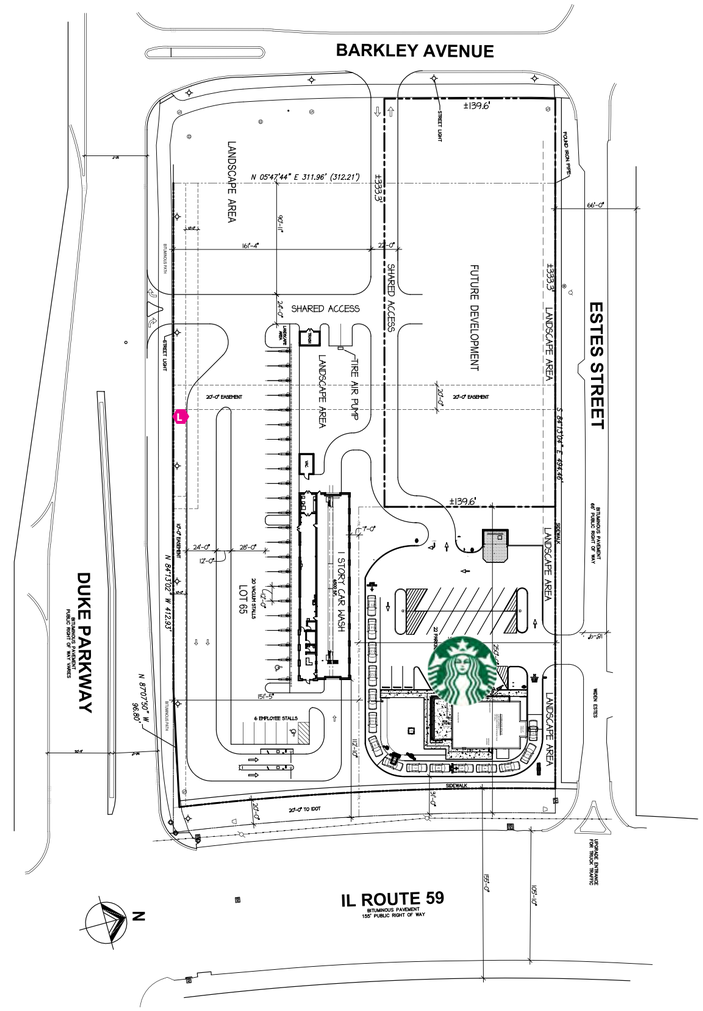
10ft W overall
Arched Painted Blue Matching w/ Black Satin Hardware



SIGN - L

Custom Clearance Bar - Fabrication



Site Plan Map = Signs - L

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Job Name: Clearance Bar		Contact: Tim/Mitch	
Location: Warrenville iL			
Design By: CH	Survey By: CLH	Sales Person: CLH	
Date: 2-25-25	Manufacturer: IC Signs & Graphics Inc. (UL Underwriters Laboratories)	Drawing #: Pending	

417 Sheridan Rd. Highwood, IL 60040 P: 708.669.7177 E: Cory@icsignsinc.com W: icsignsinc.com

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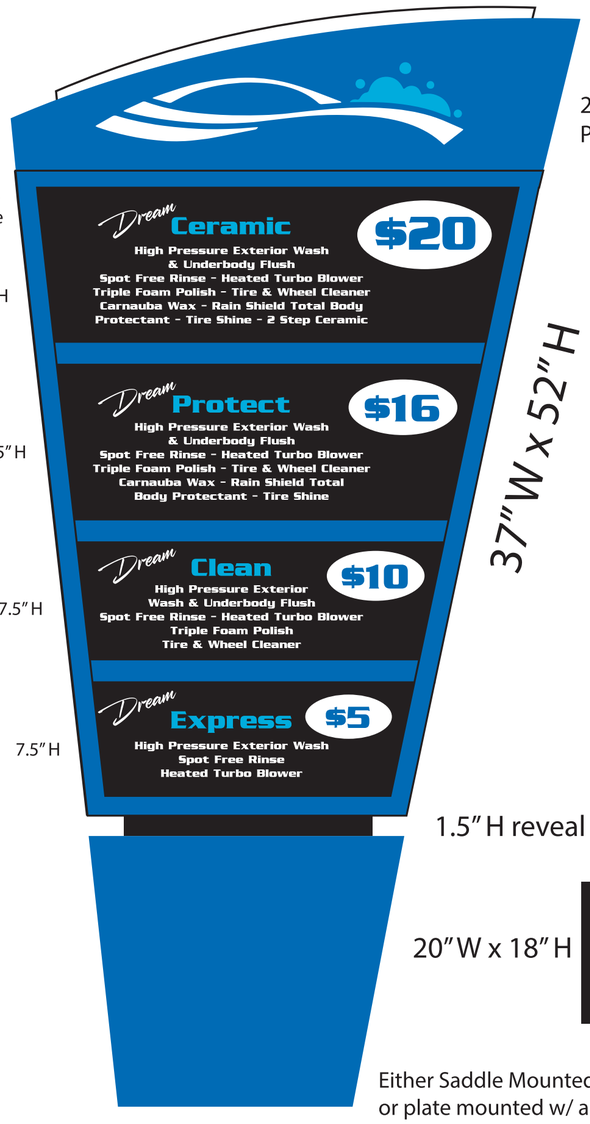
SIGN J

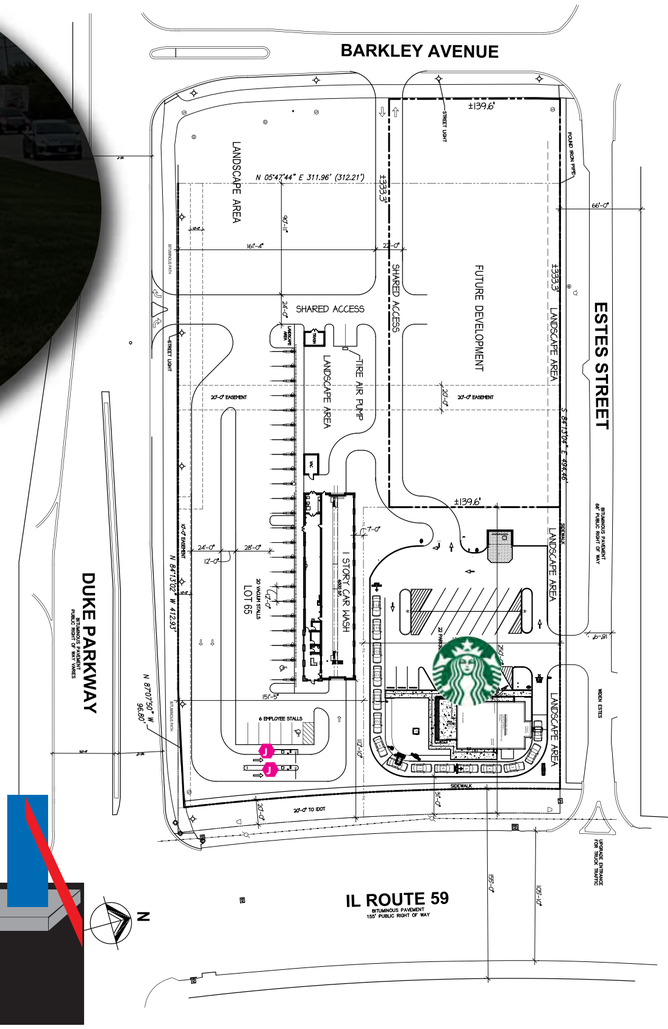
Single Sided - Custom Lit Cabinet - Menu Boards

30″W x 1″H white Top Spine

LED Lit , gets Architectual Blue Lighting on top



Per Village Signage:
Incidental Internal Signage
does not count against allowances



Site Plan Map = Signs J

**Per Village Signage: Incidental Internal Signage does not count against allowances

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Job Name: Menu Boards		Contact: Tim/Mitch
Location: Warrenville IL		
Design By: CH	Survey By: CLH	Sales Person: CLH
Date: 2-25-25	Manufacturer: IC Signs & Graphics Inc. UL Underwriters Laboratories	Drawing #: Pending

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Client Signature | Client Print Name | Date

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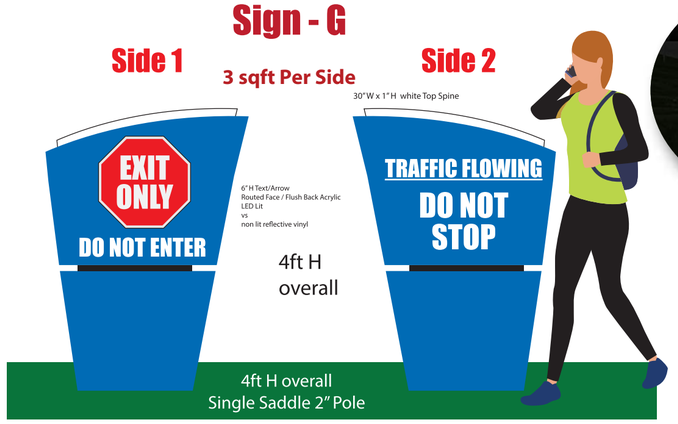
☐ Make Changes & Proceed with order

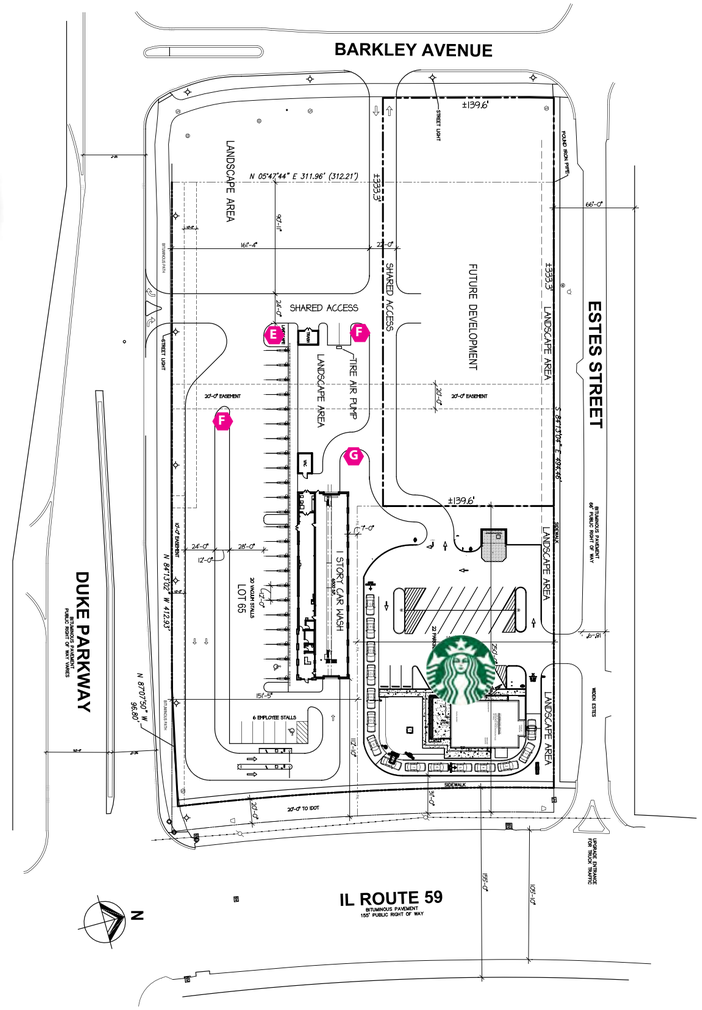
Per Village Signage:
Directional Signage
3 Sq ft Per Sign

Sign - G

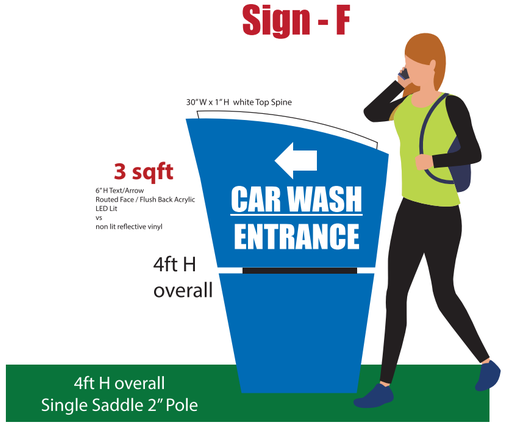


Tunnel Exit Signs
(when grass/soil is at exit)

Total Sq ft = 11.75 sqft
***text subject to change if needed**

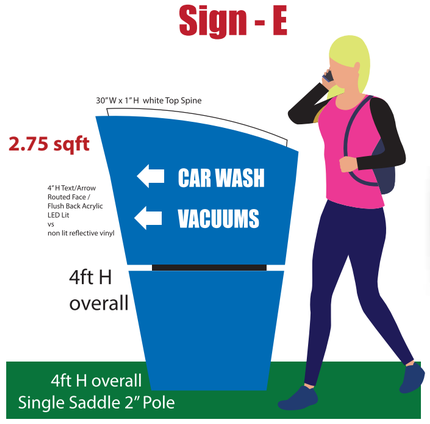


Sign - F



Directional Signs
For Internal Traffic Flow

Sign - E



Directional Signs
For Internal Traffic Flow

Site Plan Map = Signs E,F,G

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Job Name: Directional Signs		Contact: Tim/Mitch	
Location: Warrenville IL			
Design By: CH	Survey By: CLH	Sales Person: CLH	
Date: 2-25-25	Manufacturer: IC Signs & Graphics Inc. / Underwriters Laboratories	Drawing #: Pending	

417 Sheridan Rd. Highwood, IL 60040 P: 708.669.7177 E: Cory@icsignsinc.com W: icsignsinc.com

Attachment H

LEGEND

EXISTING SANITARY MANHOLE	EXISTING LIGHT POLE	TELEPHONE MANHOLE	PROPOSED COMBINED SEWER
PROPOSED SANITARY MANHOLE	PROPOSED LIGHT POLE	ELECTRIC METER	EXISTING STORM SEWER
SANITARY CLEANOUT	OVERHEAD LIGHT POLE	GAS METER	PROPOSED STORM SEWER
EXISTING STORM MANHOLE	RAILROAD SIGNAL POLE	GAS VALVE	FENCE LINE
PROPOSED STORM MANHOLE	RAILROAD SIGNAL VAULT	B-BOX	GUARD RAIL
EXISTING STORM CATCH BASIN	UTILITY POLE	WATER VALVE	DECIDUOUS TREE
PROPOSED STORM CATCH BASIN	OH — OVERHEAD WIRES	EXISTING WATER VALVE VAULT	PINE TREE
EXISTING STORM INLET	E — UNDERGROUND ELECTRIC	PROPOSED WATER VALVE VLT	OVERFLOW ARROW
PROPOSED STORM INLET	G — UNDERGROUND GAS	EXISTING FIRE HYDRANT	DROVE IRON PIPE
FLARED END SECTION	T — UNDERGROUND TELEPHONE	PROPOSED FIRE HYDRANT	FOUND IRON PIPE
DOWNSPOUT	C — T — UNDERGROUND CABLE T.V.	POST INDICATOR VALVE	R — RECORD DIMENSION
TRANSFORMER	W — EXISTING WATER MAIN	SIGN	M — MEASURED DIMENSION
ELECTRIC MANHOLE	W — PROPOSED WATER MAIN	FLAG POLE	FE — FLOOR ELEVATION
ELECTRICAL BOX	EXISTING SANITARY SEWER	MAILBOX	TW — TOP OF WALL
CABLE T.V. BOX	PROPOSED SANITARY SEWER	TRAFFIC SIGNAL POLE	TC — TOP OF CURB
TELEPHONE BOX	EXISTING COMBINED SEWER	TRAFFIC SIGNAL VAULT	FL — CURB FLOW LINE

0 30 60

GRAPHIC SCALE - FEET

ESTES STREET

ILLINOIS ROUTE 59

BARKLEY AVENUE

DUKE PARKWAY

12X8 REDUCER

RELOCATED HYDRANT

ABANDON EX. WATER MAIN

12" VALVE AND VALVE VAULT

12" PVC WATER MAIN

LOT 1
1.22 Ac.

LOT 2
0.85Ac.

LOT 3
1.35 Ac.

1 STORY CAR WASH
6,500 S.F.
FFE 726.0

FFE 726.0

4" DIWM

6" PVC WATER

6" Sewer Service

Grit/Oil Sepratos

STORM SEWER EASEMENT PER DOC. R2017-050719

10' SANITARY SEWER EASEMENT PER DOCUMENT R2017-050719

STORMWATER MANAGEMENT SUMMARY

DETENTION PROVIDED AS PART OF DUKE UNIT 6 BASIN	**6.95 ac-ft**
DETENTION REQUIRED FOR THORNTONS DEVELOPMENT + BASIN	**4.42 ac-ft**
DETENTION VOLUME AVAILABLE FOR DREAM CLEAN/STARBUCKS	**2.53 ac-ft**
PROPOSED PROJECT CN VALUE = (OUTSIDE OF DETENTION EASEMENT)	**84**
BASIN DESIGN CN VALUE =	**87**
EXISTING CONDITION IMPERVIOUS AREA =	**0 AC.**
DISTURBED AREA =	**2.79 AC.**

DREAM CLEAN
R. 59 AND DUKE PARKWAY
WARRENVILLE, IL 60555

Prepared For:
Dream Clean Operating Company
605 Greenleaf Ave.
Wilmette, IL 60091
email- mzavedyuk@dreamcleanow.com

ARCH AMERICA
3413 North IL-31, Suite 213
Crystal Lake, IL 60012
Phone 847.697.7755

DREAM CLEAN — CAR WASH

WEBSTER, McGRATH & AHLBERG, LTD.
LAND SURVEYING - CIVIL ENGINEERING - LANDSCAPE ARCHITECTURE
Over 100 Years of Service to Clients
2100 MANCHESTER RD. BUILDING A, SUITE 203
WHEATON, ILLINOIS 60187
PH: (630)668-7603 WEB: WWW.WMLTD.COM
DESIGN FIRM LICENSE NO.: IL-184-003161

REVN	DATE	REVISION DESCRIPTION	BY
	04/15/25	Revised per City review	

Section-Township-Range
DuPage: 35/4 T 39N R 09E

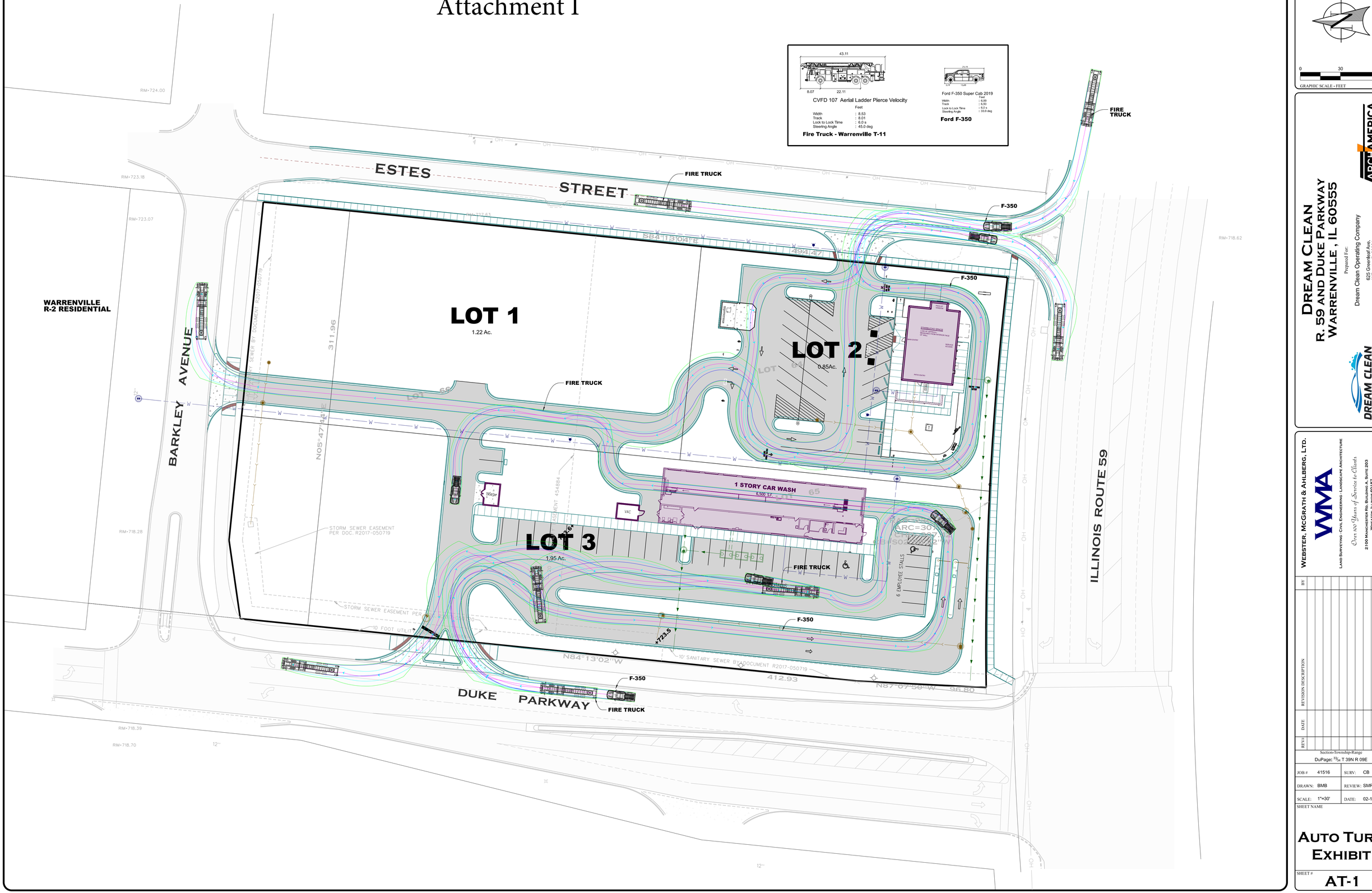
JOB # 41516	SURV: CB
DRAWN: BMB	REVIEW: SMR
SCALE: 1"=30'	DATE: 02-10-25

SHEET NAME

PRELIMINARY CIVIL PLAN

SHEET # **C-1**

Attachment I



0 30 60

GRAPHIC SCALE - FEET

DREAM CLEAN
R. 59 AND DUKE PARKWAY
WARRENVILLE , IL 60555

Prepared For:
Dream Clean Operating Company
605 Crossroad Ave.
Wheaton, IL 60187
email- mzavedyk@dreamcleanow.com

ARCH AMERICA
3413 North Ill. 83, Suite 213
Grayslake, IL 60030
Phone 847.497.7755

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PH: (630)668-7603 WEB: WWW.WMALTD.COM
DESIGN FIRM LICENSE NO.: 184.005013

BY	REVISION DESCRIPTION	DATE	REV#

Section-Township-Range
DuPage: 25/34 T.39N R.09E

JOB # 41516	SURV: CB
DRAWN: BMB	REVIEW: SMR
SCALE: 1"=30'	DATE: 02-10-25

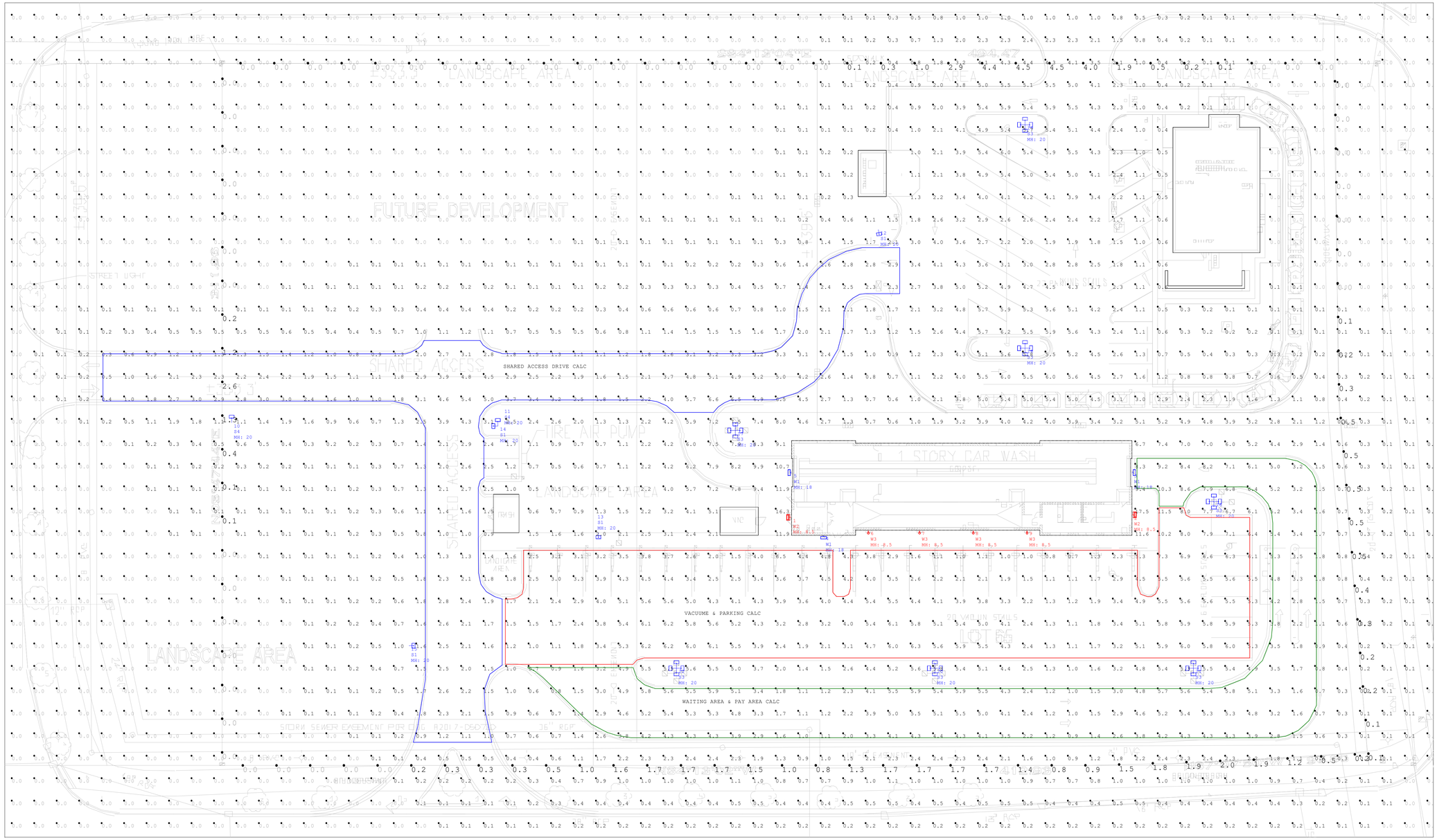
SHEET NAME

AUTO TURN EXHIBIT

SHEET # **AT-1**

E:\ACTIVE-PROJECTS\41516-333909-DuPage\ENGR-BB\FINAL ENGINEERING PLANS\UNIT 6\Dream Clean and Starbucks\41516 Dream Clean.dgn, Model: AT-1, Date: 2/5/2025

Attachment J



Not to Scale

Calculation Summary								
Label	**CalcType**	**Units**	**Avg**	**Max**	**Min**	**Max/Min**	**Avg/Min**	**Calc Plane Ht**
FULL AREA_Planar	Illuminance	Fc	0.54	17.5	0.0	N.A.	N.A.	0
PROPERTY LINE CALC	Illuminance	Fc	0.64	4.5	0.0	N.A.	N.A.	N.A.
SHARED ACCESS DRIVE CALC	Illuminance	Fc	2.63	6.9	0.9	7.67	2.92	
VACUUME & PARKING CALC	Illuminance	Fc	3.90	8.0	0.7	11.43	5.57	
WAITING AREA & PAY AREA CALC	Illuminance	Fc	3.74	10.3	0.7	14.71	5.34	

Luminaire Schedule - Part numbers are provided by the manufacturer and are only intended to be used as a reference to output and optics used.

Symbol	Qty	Tag	Manufacturer	Description	Arrangement	Luminaire Lumens	Arr. Lum. Lumens	Luminaire Watts	Arr. Watts	LLF
	4	S1	BEACON	VP-1-160L-75-4K7-4W	Single	10070	10070	72.5	72.5	0.900
	7	S3	BEACON	VP-1-160L-75-4K7-4W	4 @ 90 Degrees	10070	40280	72.5	290	0.900
	2	S4	BEACON	VP-1-160L-75-4K7-3	Single	10242	10242	72.5	72.5	0.900
	3	W1	EXO	TRP2-24L-90-4K7-4	Single	9659	9659	86.68	86.68	0.900
	2	W2	EXO	PRL-C-LS-4K(26W)	Single	3665	3665	26	26	0.900
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5	TRP2-24L-90-4K7-4	18
6	UC3UD-09L-U-40-N-N-WM	8.5
7	UC3UD-09L-U-40-N-N-WM	8.5
8	UC3UD-09L-U-40-N-N-WM	8.5
9	UC3UD-09L-U-40-N-N-WM	8.5
10	VP-1-160L-75-4K7-3	20
11	VP-1-160L-75-4K7-3	20
12	VP-1-160L-75-4K7-4W_1	20
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15	VP-1-160L-75-4K7-4W_1	20
16	VP-1-160L-75-4K7-4W_2	20
17	VP-1-160L-75-4K7-4W_2	20
18	VP-1-160L-75-4K7-4W_2	20
19	VP-1-160L-75-4K7-4W_2	20
20	VP-1-160L-75-4K7-4W_2	20
21	VP-1-160L-75-4K7-4W_2	20
22	VP-1-160L-75-4K7-4W_2	20

NOTES

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- CALCULATION GRID VALUES 10'-0" O.C.

enlighten

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847.228.1199

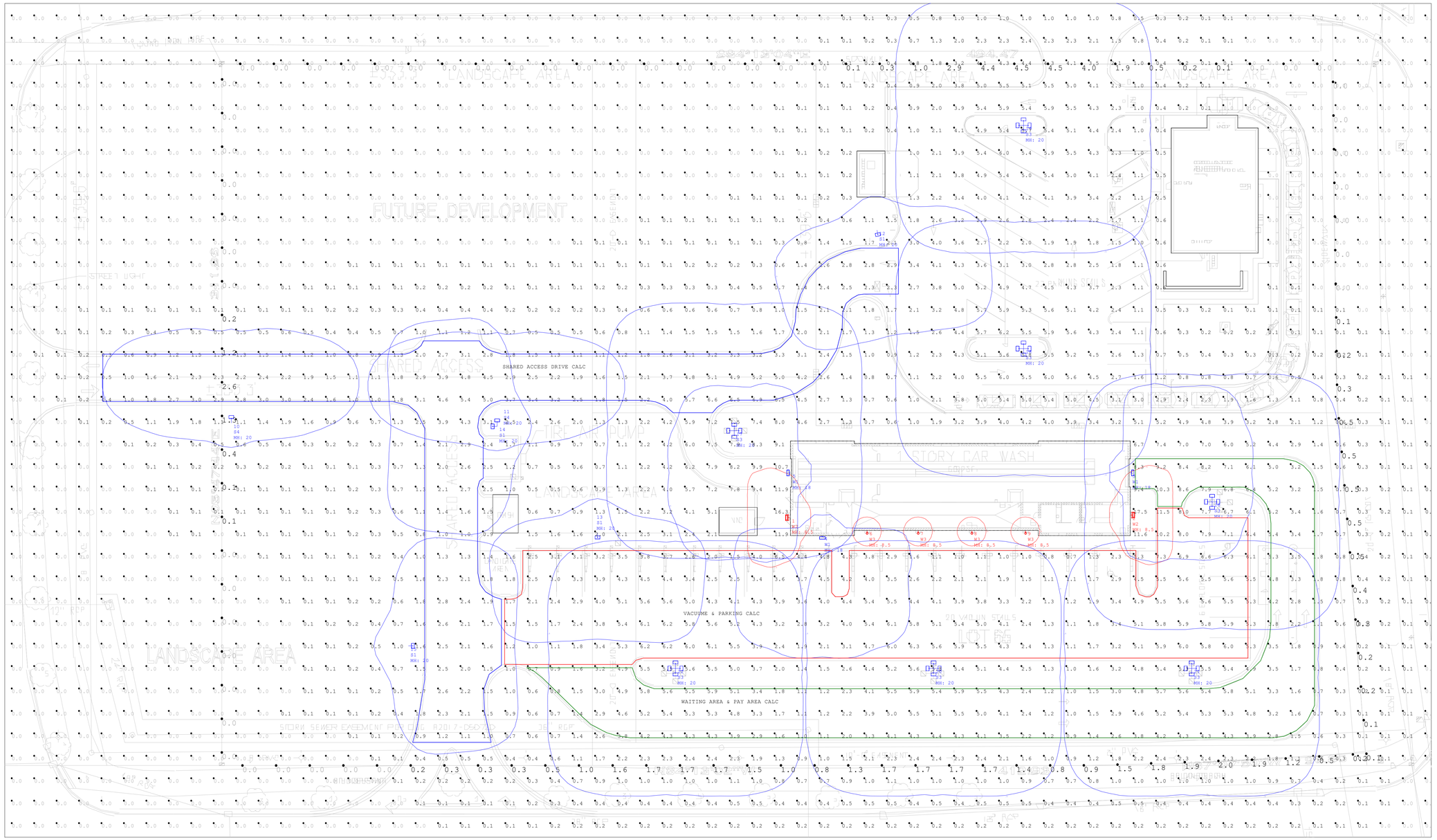
PG CONTACT:
Dan Ardelean
dan.ardelean@pg-enlighten.com
630.816.9420

REVISIONS	DESCRIPTION
1	XX/XX/XXXX
2	XX/XX/XXXX
3	XX/XX/XXXX

PROJECT NAME:
DREAM CLEAN - WARRENVILLE, IL

CLIENT NAME:
ARCHAMERICA

Date:2/18/2025



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enlighten

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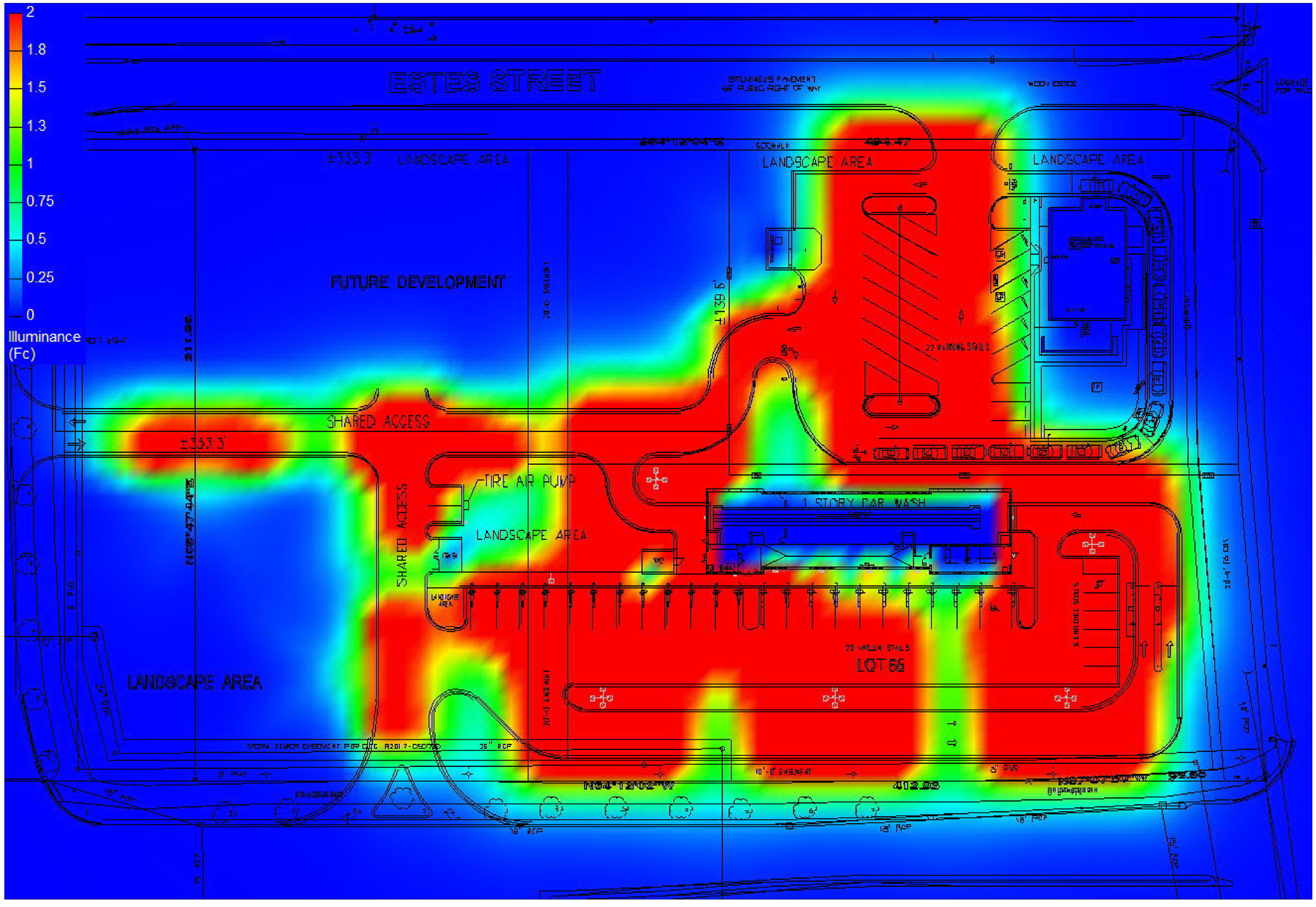
PG CONTACT:
Dan Ardelean
dan.ardelean@pg-enlighten.com
630.816.6420

REVISIONS			
1	XX/XX/XXXX	DESCRIPTION	
2	XX/XX/XXXX	DESCRIPTION	
3	XX/XX/XXXX	DESCRIPTION	

PROJECT NAME:
DREAM CLEAN - WARRENVILLE, IL

CLIENT NAME:
ARCHAMERICA

Date:2/18/2025



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15	VP-1-160L-75-4K7-4W_1	20
16	VP-1-160L-75-4K7-4W_2	20
17	VP-1-160L-75-4K7-4W_2	20
18	VP-1-160L-75-4K7-4W_2	20
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enlighten

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847.228.1199

PG CONTACT:
Dan Ardelean
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630.816.9420

REVISIONS		
1	XX/XX/XXXX	DESCRIPTION
2	XX/XX/XXXX	DESCRIPTION
3	XX/XX/XXXX	DESCRIPTION

PROJECT NAME:
DREAM CLEAN - WARRENVILLE, IL

CLIENT NAME:
ARCHAMERICA

Date:2/18/2025

Attachment K

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

9575 West Higgins Road, Suite 400 | Rosemont, Illinois 60018
p: 847-518-9990 | f: 847-518-9987

April 17, 2025

Mitch Zaveduk
Director of Development
Dream Clean Car Wash
400 N. Milwaukee Avenue
Wheeling, Illinois 60090

Re: Proposed Starbucks/Dream Clean Development
Warrenville, Illinois

Dear Mitch:

Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) has received Kimley-Horn's comments regarding the above-referenced development in the March 10, 2025 memorandum and offers the following responses.

Traffic Impact Study Review

1. **The traffic impact study reflects an automatic car wash with 20 vacuum stalls (Lot 3) and a 2,050 square-foot Starbucks coffee shop on Lot 2. No assumptions were included for Lot 1. Note that the site plan reflects a 2,242 square-foot Starbucks. The traffic study should be updated for consistency; however, no material changes to the analysis are anticipated.**

   The most current site plan indicates a 2,050 square-foot Starbucks. The car wash will provide 19 vacuum stalls and Lot 1 was assumed to be developed with a 10,000 square foot office building. Please see revised traffic impact study.

2. **Please review the site boundaries included in the exhibits – it appears Lot 1 was included in the traffic study; however, the traffic study was prepared for development proposed on Lot 2 and Lot 3 only.**

   Noted. See the revised traffic impact study.

3. **Page 10 and Page 29 – the narrative indicates the right-in/right-out driveway is approximately 505 west of IL Route 59, which is measured from centerline-to-centerline. For consistency with the IGA between the City of Warrenville and City of Aurora, please add a reference to the spacing distance as measured from the west right-of-way line of IL Route 59.**

   Noted. Please see revised traffic impact study.

4. **Site trip generation was estimated using data presented in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 11th Edition. We concur with the trip generation methodology with additional information requested below.**
    a. **The traffic study indicated 70% of trips generated by the coffee should with drive-through window are diverted from the existing traffic on the roadway network per ITE survey data. The ITE *Trip Generation Manual* does not provide pass-by data for LUC 937, Coffee Shop with Drive-Through Window. Please clarify the pass-by trip assumption applied to this land use.**

    Based on a review of the ITE Trip Generation Manual, 11th Edition the average pass-by rate for a coffee/donut shop with drive-through window and no indoor seating (LUC 938) is 90 percent. While the proposed land use will provide indoor seating, it is worth noting that pass-by is a function of convenience and it is independent of indoor seating or no indoor seating. It is important to note that this land use is driven by existing traffic and that is one of the main reasons why these type of land uses desire to be on high volume roads where the majority of the movements are typically right-in/right-out movements. The 70 percent pass-by reduction is based on previous work that KLOA, Inc. has conducted over the past 20 years for different coffee shops with drive-throughs and has been accepted by the Illinois Department of Transportation as well as the DuPage County Division of Transportation and many municipalities.

5. **Background traffic projections were developed using a 0.94 percent annual growth rate obtained from CMAP. Site traffic assumptions were not developed for Lot 1. Based on proximity to the site, development assumptions should be considered based on parcel size and zoning.**

    Lot 1 has been assumed to be developed with a 10,000 square foot general office building. Please see the revised traffic impact study.

6. **Page 21 – clarify the existing conditions analysis was prepared for Year 2025; counts were conducted in January 2025.**

    This was a typo and has been corrected in the revised traffic impact study to reflect Year 2025.

7. **Page 26 – correct the future year analysis was completed for Year 2031; text references Year 2030.**

    This was a typo and has been corrected in the revised traffic impact study to reflect Year 2031.

8. We generally concur with the analysis and recommendations presented in the traffic impact study.

- **a. Please specify existing and projected queues for the southbound approach of Barkley Avenue at Butterfield Road, which is projected to operate at LOS F in the weekday peak hours.**
- **b. Specify projected outbound queues at the site access driveways in order to evaluate onsite circulation.**

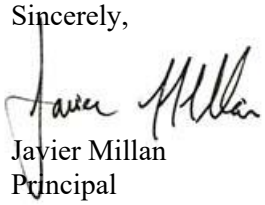
Noted. Please see revised traffic impact study.

9. Please provide the technical appendices in the next submittal.

All of the technical appendices were included in the original traffic study and are also included in the revised traffic impact study.

If you have any questions or require further information, please let me know.

Sincerely,



Javier Millan
Principal

Enc.

Traffic Impact Study
Proposed Car Wash

Warrenville, Illinois

Prepared For:

Dream Clean Car Wash

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

April 17, 2025

1. Introduction

This report summarizes the methodologies, results, and findings of a traffic impact study conducted by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) for a proposed development to be located in the northwest corner of the intersection of IL Route 59 with Duke Parkway/Everton Drive. As proposed, the south portion of the site will be developed with an automatic car wash tunnel with 19 vacuum stalls and eight employee stalls. The northeast portion of the site will contain an approximately 2,050 square-foot Starbucks coffee shop with a drive-through lane and 22 parking spaces and the northwest portion of the site, based on the proposed zoning, was assumed to be developed with a 10,000 square-foot general office building. Access to the site will be provided off Estes Street, Barkley Avenue, and Duke Parkway.

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

The sections of this report present the following:

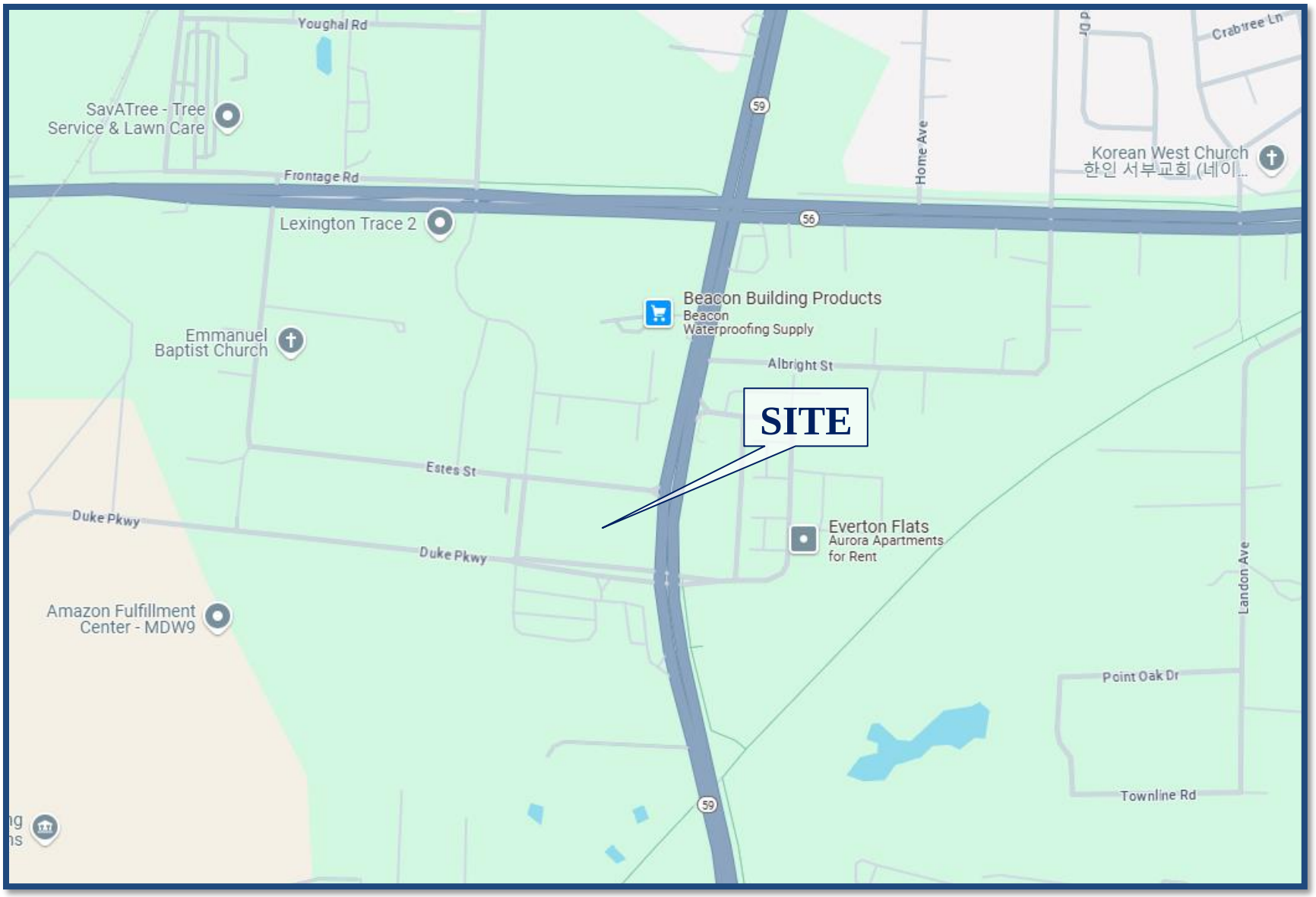
- Existing roadway conditions
- A description of the development
- Directional distribution of the development traffic
- Vehicle trip generation for the development
- Future traffic conditions including access to the development
- Traffic analyses for the weekday morning, weekday evening, and Saturday midday peak hours
- Recommendations with respect to adequacy of the site access and adjacent roadway system

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

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

2. No-Build Conditions – Analyzes the capacity of the existing roadway system using the ambient area growth not attributable to any particular development and any additional developments not associated with the development.

3. Projected Conditions – Analyzes the capacity of the future roadway system using the projected traffic volumes that include the existing traffic volumes, ambient area growth not attributable to any particular development, and the traffic estimated to be generated by the proposed development.



Site Location **Figure 1**

Aerial View of Site **Figure 2**

2. Existing Conditions

The following provides a description of the geographical location of the site, physical characteristics of the area roadway system including lane usage and traffic control devices, and existing peak hour traffic volumes.

Site Location

The site, which is currently vacant, is located in the northwest quadrant of the intersection of IL Route 59 with Duke Parkway/Everton Drive. Surrounding land uses are a mixture of residential and commercial land uses including Thorntons fuel center to the south, Culver's to the northeast, and residential uses to the north, west, and east.

Existing Roadway System Characteristics

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

Illinois Route 59 (IL 59) is a north-south, other principal arterial roadway that provides two travel lanes in each direction generally divided by a 12-foot striped median. At its signalized intersection with Duke Parkway/Everton Drive, IL 59 provides dual left-turn lanes, two through lanes, and an exclusive right-turn lane on the northbound approach, an exclusive left-turn lane, two through lanes, and an exclusive right-turn lane on the southbound approach. High visibility crosswalks are provided on all four legs of this intersection. At its unsignalized "T" intersection with Estes Street, IL 59 provides two through lanes on the northbound approach, two through lanes and an exclusive right-turn lane on the southbound approach. IL 59 is under the jurisdiction of the Illinois Department of Transportation (IDOT), has a posted speed limit of 45 mph, and is designated as a Strategic Regional Arterial (SRA). IL 59 carries an Annual Average Daily Traffic (AADT) volume of 34,200 vehicles (IDOT 2023) and has a posted speed limit of 45 miles per hour.

Duke Parkway is a local roadway that extends from IL 59 west and then south to Ferry Road. It generally provides one travel lane in each direction. At its signalized intersection with IL 59/Everton Drive, Duke Parkway provides an exclusive left-turn lane, a through lane, and an exclusive right-turn lane on the eastbound approach while the Everton Drive provides an exclusive left-turn lane and a shared through/right-turn lane on the westbound approach. At its unsignalized intersection with Barkley Drive, Duke Parkway provides an exclusive left-turn lane and a shared through/right-turn lane on the eastbound approach and an exclusive left-turn lane, a through lane, and an exclusive right-turn lane on the westbound approach. High visibility crosswalks are provided on the west and north legs of this intersection. Duke Parkway is under the jurisdiction of the City of Aurora and has a posted speed limit of 20 mph.

LEGEND

- TRAVEL LANE
- TRAFFIC SIGNAL
- STOP SIGN
- XX - SPEED LIMIT SIGN
- NO PARKING
- HIGH VISIBILITY CROSSWALK
- NO LEFT TURN SIGN

N

NOT TO SCALE

BARKLEY AVENUE

20

56

BUTTERFIELD ROAD

RESIDENTIAL

RESIDENTIAL

59

CULVER'S

ESTES STREET

20

LOT 1

LOT 2

SITE

LOT 3

RESIDENTIAL

DUKE PARKWAY

THORNTONS

CAR WASH
WARRENVILLE,
ILLINOIS

EXISTING ROADWAY CHARACTERISTICS

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Job No: 25-009 Figure: 3

Barkley Avenue is a local roadway that provides one travel lane in each direction. At its unsignalized intersection with Duke Parkway, Barkley Avenue provides a shared left-turn/through/right-turn lane on both approaches. At its unsignalized intersection with Estes Street, Barkley Avenue provides a shared left-turn/through/right-turn lane on b approaches. At its unsignalized intersection with Butterfield Road, Barkley Avenue provides a shared left-turn/through lane, an exclusive right-turn lane, and a high visibility crosswalk on the northbound approach. Barkley Drive is under the jurisdiction of the city of Warrenville and has a posted speed limit of 25 miles per hour.

Butterfield Road (IL Route 56) is an east-west, other principal arterial that in the vicinity of the site provides two travel lanes in each direction separated by a landscaped raised median. At its unsignalized intersection with Barkley Avenue, Butterfield Road provides an exclusive left-turn lane, a through lane, and a shared through/right-turn lane on both approaches. Butterfield Road is under the jurisdiction of IDOT, is designated as an SRA, carries an AADT volume of 22,600 vehicles (IDOT 2023, and has a posted speed limit of 45 miles per hour in the vicinity of the site.

Estes Street is an east-west local roadway that provides one travel lane in each direction. At its unsignalized intersection with IL 59, Estes Street provides an exclusive right-turn lane under stop sign control. Estes Street is under the jurisdiction of the city of Warrenville and has a posted speed limit of 20 miles per hour.

Existing Traffic Volumes

In order to determine current traffic conditions in the vicinity of the site, KLOA, Inc. conducted peak period traffic counts utilizing Miovision Scout Video Collection Units during the weekday morning (7:00 to 9:00 A.M.), weekday evening (4:00 to 6:00 P.M.), and Saturday midday (12:00 to 2:00 P.M.) peak periods at the following intersections:

- IL Route 59 with Duke Parkway/Everton Drive
- IL Route 59 with Estes Drive
- Barkley Avenue with Butterfield Road
- Barkley Avenue with Estes Drive
- Barkley Avenue with Duke Parkway

All counts were conducted on January 25th and 28th, 2025. The results of the traffic counts showed that the weekday morning peak hour of traffic generally occurs from 7:15 A.M. to 8:15 A.M., the weekday evening peak hour of traffic generally occurs from 4:30 P.M. to 5:30 P.M., and the Saturday midday peak hour generally occurs from 1:00 P.M. to 2:00 P.M.

Figure 4 illustrates the existing traffic volumes. Copies of the traffic count summary sheets are included in the Appendix.

LEGEND

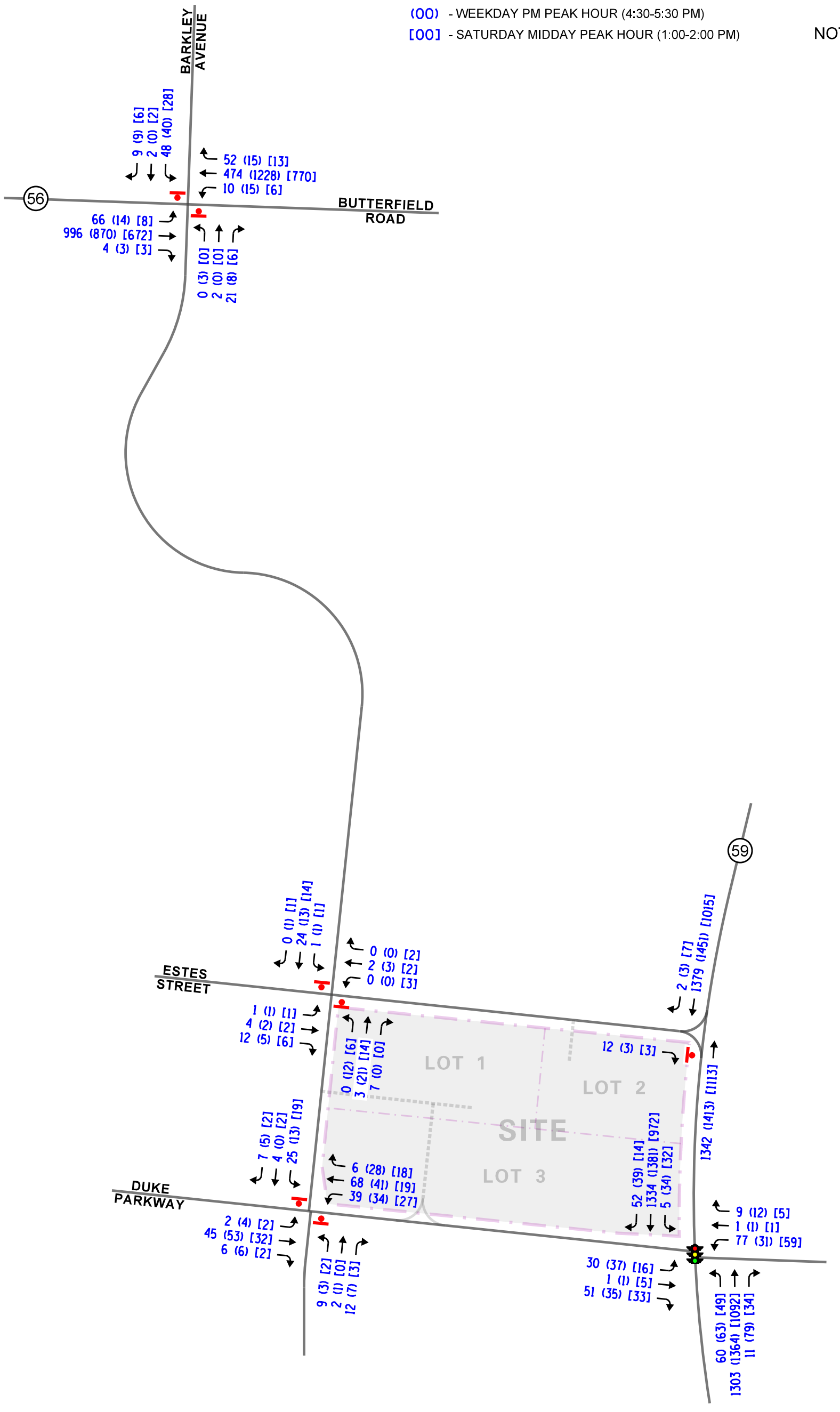
00 - WEEKDAY AM PEAK HOUR (7:15-8:15 AM)

(00) - WEEKDAY PM PEAK HOUR (4:30-5:30 PM)

[00] - SATURDAY MIDDAY PEAK HOUR (1:00-2:00 PM)

N

NOT TO SCALE



CAR WASH
WARRENVILLE,
ILLINOIS

EXISTING TRAFFIC VOLUMES

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Job No: 25-009 Figure: 4

Crash Data Summary

KLOA, Inc. obtained crash data[1] for the most recent available past five years (2019 to 2023) for the intersections within the study area. It should be noted that no crashes were reported at the intersections of Barkley Road with Estes Street and Duke Parkway during the review period. The crash data for the other intersections is summarized in **Tables 1** through **3**. A review of the crash data revealed that no fatalities were reported at the intersections during the reviewed period.

Table 1
IL 59 WITH DUKE PARKWAY/EVERTON DRIVE – CRASH SUMMARY

Year	Type of Crash Frequency							
	Angle	Head On	Object	Rear End	Sideswipe	Turning	Other	Total
2019	0	0	0	0	0	0	0	0
2020	0	0	0	1	0	0	0	1
2021	0	0	0	2	0	1	0	3
2022	0	0	0	1	0	1	0	2
2023	0	0	0	2	0	0	0	2
Total	**0**	**0**	**0**	**6**	**0**	**2**	**0**	**8**
Average	**--**	**--**	**--**	**1.2**	**--**	**<1.0**	**--**	**1.6**

Table 2
BUTTERFIELD ROAD AND BARKLEY AVENUE – CRASH SUMMARY

Year	Type of Crash Frequency							
	Angle	Head On	Object	Rear End	Sideswipe	Turning	Other	Total
2019	0	0	0	0	0	1	0	1
2020	0	0	0	0	0	0	0	0
2021	0	0	0	1	0	0	0	1
2022	0	0	0	0	0	0	0	0
2023	0	0	0	0	0	1	0	1
Total	**0**	**0**	**0**	**1**	**0**	**2**	**0**	**3**
Average	**--**	**--**	**--**	**<1.0**	**--**	**<1.0**	**--**	**<1.0**

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

Table 3
IL 59 WITH ESTES STREET – CRASH SUMMARY

Year	Type of Crash Frequency							
	Angle	Head On	Object	Rear End	Sideswipe	Turning	Other	Total
2019	0	0	0	0	0	0	0	0
2020	0	0	0	0	0	0	0	0
2021	0	0	0	0	0	0	0	0
2022	0	0	0	0	0	1	0	1
2023	0	0	0	0	0	0	0	0
Total	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**
Average	**--**	**--**	**--**	**--**	**--**	**<1.0**	**--**	**<1.0**

3. Traffic Characteristics of the Proposed Development

To properly evaluate future traffic conditions in the surrounding area, it was necessary to determine the traffic characteristics of the proposed development, including the directional distribution and volumes of traffic that it generates.

Proposed Site and Development Plan

As proposed, the south portion of the site will be developed with an automatic car wash tunnel with 19 vacuum stalls and eight employee stalls. The northeast portion of the site will contain an approximately 2,050 square-foot Starbucks coffee shop with a drive-through lane and 22 parking spaces and the northwest portion of the site, based on the proposed zoning, was assumed to be developed with a 10,000 square-foot general office building. Access to the proposed development will be provided via the following access drives:

- A proposed full-movement access drive off Estes Street located approximately 270 feet west of IL 59. This access drive will provide one inbound lane and one outbound lane with the outbound movements under stop sign control. It should be noted that this access drive will provide direct access to Starbucks and indirect access to the car wash via an internal shared driveway.

- A proposed full movement access drive off Barkley Avenue approximately 170 feet south of Estes Street. This access drive will provide one inbound lane and one outbound lane with the outbound movements under stop sign control.

- A proposed right-in/right-out access drive located approximately 430 feet west of the IL 59 westerly right-of-way line. This access drive will provide one inbound lane and one outbound lane with the outbound movement under stop sign control. This access drive will provide direct access to the car wash and indirect access to Starbucks via an internal shared driveway.

A copy of the preliminary site plan is included in the Appendix.

Car Wash Operations and Circulation

The car wash tunnel will be located in the southeast portion of the property, oriented east-west. The vacuum stalls will be located on the south side of the car wash tunnel. Circulation through the vacuum stalls will be provided via a two-way drive aisle. All vehicles will have access to the vacuum stalls before and after utilizing the car wash.

Access to the car wash tunnel entrance will be provided via a two-way drive aisle on the west side of the building. The two queue lanes will be provided with two pay stations before the merger. Immediately after the pay stations, the two approach lanes will narrow to one lane that leads to the entrance of the car wash tunnel.

As proposed, the single-lane automatic car wash tunnel will be an exterior-only car wash system and will provide one-way, counterclockwise circulation. Manual and automated controls will increase, decrease, or stop vehicle flow through the car wash. The entrance to the car wash will be oriented towards the east of the site and the exit will be located towards the west of the site. Each of the two approach lanes will be individually gated with a separate automatic pay station. The gates will meter the traffic flow proceeding to the car wash tunnel entrance and will open in sequence based on the order of vehicle arrival.

Once the gate is lifted for the respective lane, the individual vehicle will proceed north and east to the entrance to the car wash tunnel. At the entrance to the car wash tunnel, the driver will remain in the vehicle and the car wash will automatically pull the vehicle through the tunnel. After exiting the tunnel, the vehicles will proceed to either use the vacuum stalls or exit the site via the access drives.

Car Wash Stacking

According to the site plan, there will be stacking for a total of approximately 37 to 38 vehicles to queue in the two approach lanes to the two pay stations. In addition, there will be stacking for approximately four vehicles between the pay stations and the entrance to the tunnel. As such, the plan provides stacking for a total of approximately 41 to 42 vehicles from the drive aisle to the entrance to the drive-through system.

Car Wash Wayfinding and Traffic Control Signage

The following wayfinding and traffic control signage is recommended:

- Wayfinding signage should be posted to guide vehicles to the respective car wash stacking area to minimize vehicle turning movements within the internal site circulation area.
- Wayfinding signage should be posted at the exit of the car wash tunnel to direct vehicles exiting the car wash to either the access drives or the vacuum stalls.
- A “Do Not Enter” sign should be posted at the exit of the car wash tunnel to deter opposing traffic from entering the car wash tunnel from the one-way exit direction.

- A stop sign should be provided at the western end of the vacuum stall drive aisle in order to promote free-flow movement for vehicles entering and exiting the site.

Vacuum Stalls

All the 19 vacuum stalls will be located on the south side of the car wash tunnel, of which one will be accessible. A two-way drive aisle will be provided, allowing flexibility for vehicles to access the south vacuum area before or after the car wash and vehicles exiting the vacuum stalls to utilize the two-way drive aisle to exit the site.

Peak Day Operations

Typical of any car wash, its peak operations (design day) typically occur after a weather event such as a snowfall or a rain event. Based on historical data from other car washes, this typically occurs 12 to 15 times per year.

When this peak demand occurs, the following operational procedures are implemented:

- Increase the service rate of the tunnel to the maximum it can process.
- Provide staff at critical locations within the circulation system during peak periods at the car wash to help direct and manage the flow of traffic through the site. Critical internal locations where staff should be located include the pay stations and at the exit of the car wash.

Starbucks Stacking

All vehicles will enter the drive-through lane from the southwest corner of the site. After ordering, the vehicles will make a left-turn to drive north and make another left to the pick-up window located on the north side of the building. After picking up the order, vehicles can make a right turn to exit onto Estes Street or continue west to access the other two access drives. Exiting movements from the drive-through should be under stop sign control. A review of the site plan showed a stacking of approximately 15 vehicles within the drive-through layout.

Directional Distribution of Site Traffic

The directions from which traffic will approach and depart the site were estimated based on existing travel patterns, as determined from the traffic counts. **Figure 5** illustrates the directional distribution of vehicles to/from the proposed development.

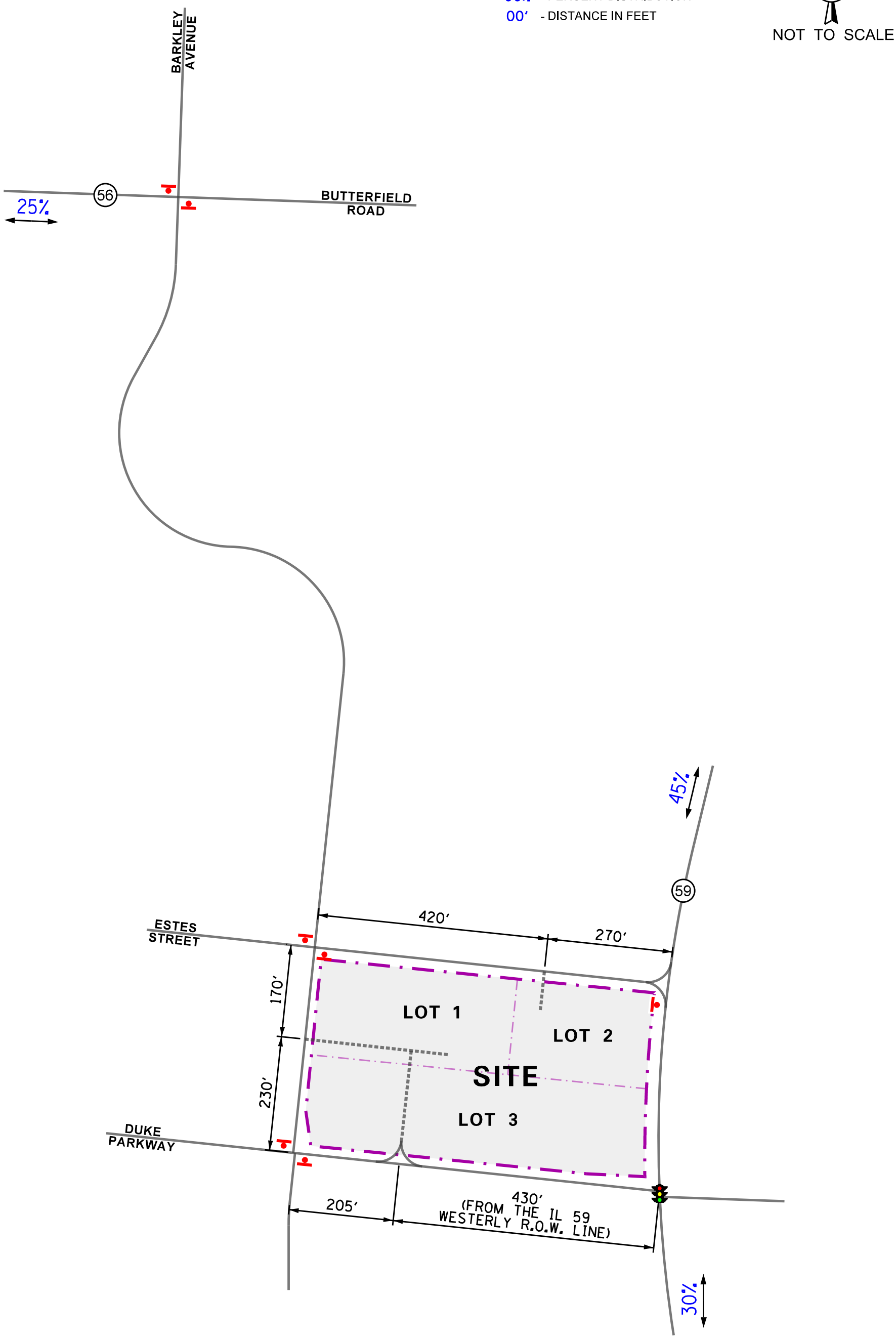
LEGEND

00% - PERCENT DISTRIBUTION

00′ - DISTANCE IN FEET

N

NOT TO SCALE



CAR WASH
WARRENVILLE,
ILLINOIS

DIRECTIONAL DISTRIBUTION

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Job No: 25-009 Figure: 5

Development-Generated Traffic Volumes

The number of peak hour trips estimated to be generated by the proposed development was based on vehicle trip generation rates contained in *Trip Generation Manual*, 11th Edition, published by the Institute of Transportation Engineers (ITE). The "Automated Car Wash" (Land-Use Code 948) rate was utilized for the car wash tunnel.

It is important to note that trips made to car washes are typically diverted from the existing traffic on the roadway system. This is particularly true during the weekday morning and evening peak hours when traffic is diverted from the home-to-work and work-to-home trips. Such diverted trips are referred to as pass-by traffic. However, in order to present a worst-case scenario, no reduction in the site-generated traffic was taken into account. Based on the data provided in the ITE Manual for an automated car wash (Land-Use Code 948), the typical usage is approximately 71 vehicles per hour during the weekday evening peak hour. The ITE Manual does not provide data for the morning peak hour for an automated car wash. For the purposes of the evaluation, it was assumed to be approximately one-third of the weekday evening peak hour trip generation.

The "Coffee Shop with Drive-Through" (Land-Use Code 937) rate was used for the Starbucks with drive-through facility. It is important to note that surveys conducted by ITE have shown that as much as 90 percent of trips made to coffee shops are diverted from the existing traffic on the roadway system. However, in order to provide for a conservative analysis and consistent with other studies approved by IDOT, DuPage County and other municipalities, the number of new passenger vehicle trips estimated to be generated by Starbucks was reduced by 70 percent to account for pass-by traffic.

Lot 1 of the development, based on the proposed zoning, was assumed to be developed with a 10,000 square-foot general office building. The ITE "General Office Building" (Land-Use Code 710) was utilized to estimate the number of trips for this lot.

Table 4 summarizes the estimated peak hour trips. A copy of the ITE trip generation sheets is included in the Appendix.

Table 4
PEAK HOUR SITE-GENERATED TRAFFIC VOLUMES

ITE Land-Use Code	Type/Size	Weekday Morning Peak Hour			Weekday Evening Peak Hour			Saturday Midday Peak Hour		
		In	Out	Total	In	Out	Total	In	Out	Total
948	Automated Car Wash (1 Tunnel)	13	13	26	39	39	78	19	22	41
937	Coffee Shop with Drive-Through (2,050 s.f.)	90	86	176	40	40	80	90	90	180
	Total Trips	103	99	202	79	79	158	109	112	221
	70% Pass-By Reduction	*-60*	*-60*	*-120*	*-28*	*-28*	*-56*	*-63*	*-63*	*-126*
710	General Office (10,000 s.f.)	20	3	23	4	21	25	3	2	5
	Total New Trips	**63**	**42**	**105**	**55**	**72**	**127**	**49**	**51**	**100**

4. Projected Traffic Conditions

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

Site-Generated Traffic Assignment

The estimated weekday morning, weekday evening, and Saturday midday peak hour traffic volumes that will be generated by the proposed development were assigned to the roadway system in accordance with the previously described directional distribution (Figure 5). The traffic assignment for the car wash is illustrated in **Figure 6**, for the Starbucks in **Figure 7** and for the assumed general office building in **Figure 8**. The pass-by traffic volumes are illustrated in **Figure 9.**

Background (No-Build) Traffic Conditions

The existing traffic volumes (Figure 4) were increased by a regional growth factor to account for the increase in existing traffic related to regional growth in the area (i.e., not attributable to any particular planned development). Based on 2050 Average Daily Traffic (ADT) projections provided by the Chicago Metropolitan Agency for Planning (CMAP) in a letter, the existing traffic volumes were increased by an annually compounded growth rate of 0.94 percent for six years totaling approximately seven percent to represent Year 2031 background conditions. **Figure 10** shows the Year 2031 no-build traffic volumes.

Year 2031 Total Projected Traffic Volumes

The Year 2031 total projected traffic volumes include the no-build traffic volumes and the traffic estimated to be generated by the proposed car wash and Starbucks. **Figure 11** shows the Year 2031 total projected traffic volumes.

LEGEND

00 - WEEKDAY AM PEAK HOUR (7:15-8:15 AM)

(00) - WEEKDAY PM PEAK HOUR (4:30-5:30 PM)

[00] - SATURDAY MIDDAY PEAK HOUR (1:00-2:00 PM)

N

NOT TO SCALE

BARKLEY AVENUE

56

BUTTERFIELD ROAD

3 (10) [5]

3 (10) [6]
3 (8) [4]

1 (3) [1]
1 (3) [2]

2 (6) [4]

A ESTES STREET @ ACCESS DRIVE

1 (3) [2]

8 (23) [11]

5 (15) [8]

C DUKE PARKWAY @ RI/RO ACCESS DRIVE

4 (13) [6]

5 (15) [8]
5 (15) [8]

1 (3) [2]

B BARKLEY AVENUE @ ACCESS DRIVE

59

3 (10) [5]

1 (3) [1]

2 (6) [3]
4 (11) [5]

ESTES STREET

A

LOT 1

LOT 2

SITE

LOT 3

B

6 (18) [10]

5 (15) [8]

2 (6) [4]

3 (9) [5]

4 (11) [5]
2 (6) [4]

DUKE PARKWAY

1 (3) [2]

C

3 (9) [5]
2 (6) [3]

4 (12) [6]

CAR WASH
WARRENVILLE,
ILLINOIS

CAR WASH-GENERATED TRAFFIC VOLUMES

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Job No: 25-009 Figure: 6

LEGEND

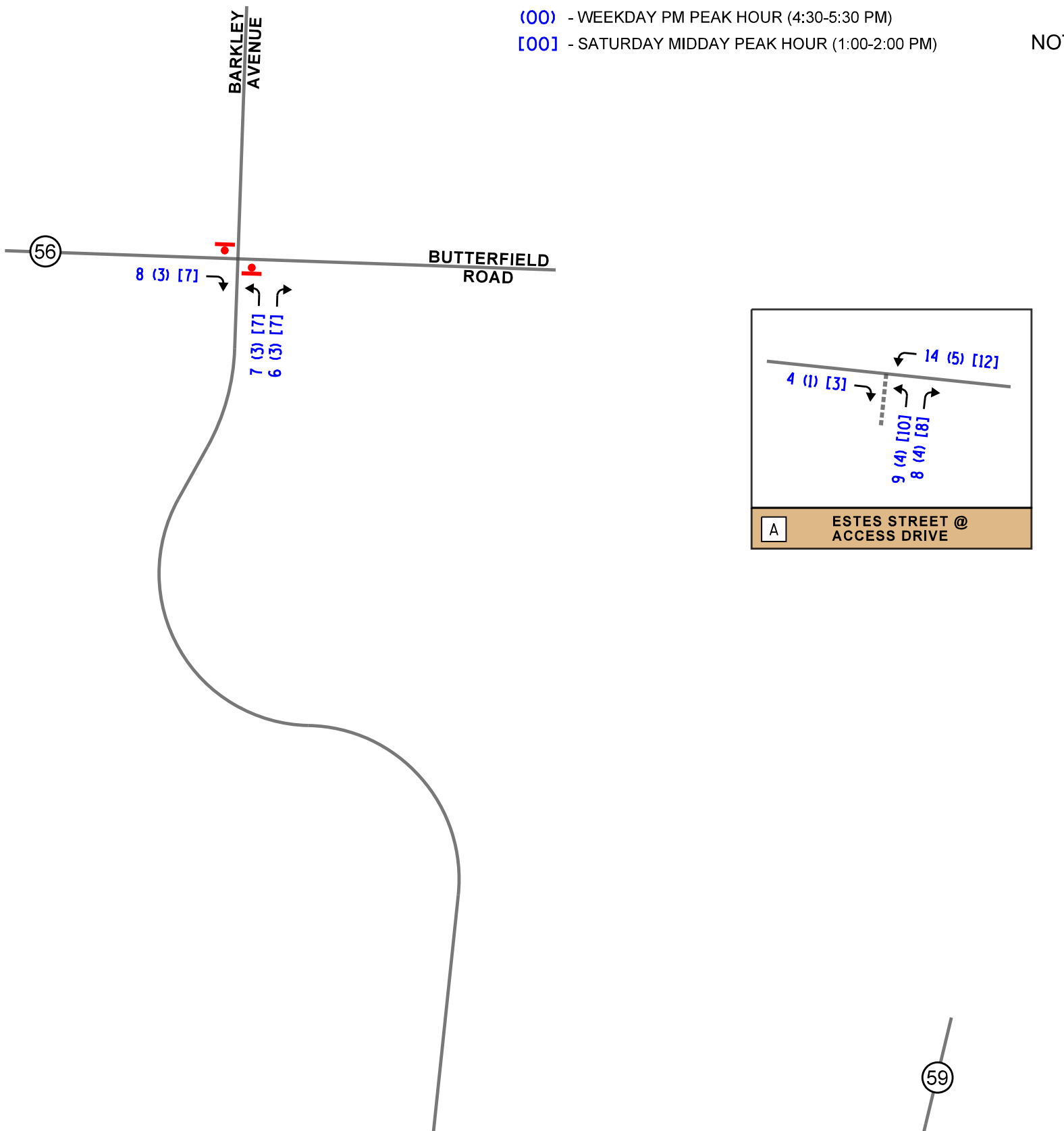
00 - WEEKDAY AM PEAK HOUR (7:15-8:15 AM)

(00) - WEEKDAY PM PEAK HOUR (4:30-5:30 PM)

[00] - SATURDAY MIDDAY PEAK HOUR (1:00-2:00 PM)

N

NOT TO SCALE



CAR WASH
WARRENVILLE, ILLINOIS

STARBUCKS-GENERATED TRAFFIC VOLUMES

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Job No: 25-009 Figure: 7

LEGEND

00 - WEEKDAY AM PEAK HOUR (7:15-8:15 AM)

(00) - WEEKDAY PM PEAK HOUR (4:30-5:30 PM)

[00] - SATURDAY MIDDAY PEAK HOUR (1:00-2:00 PM)

N

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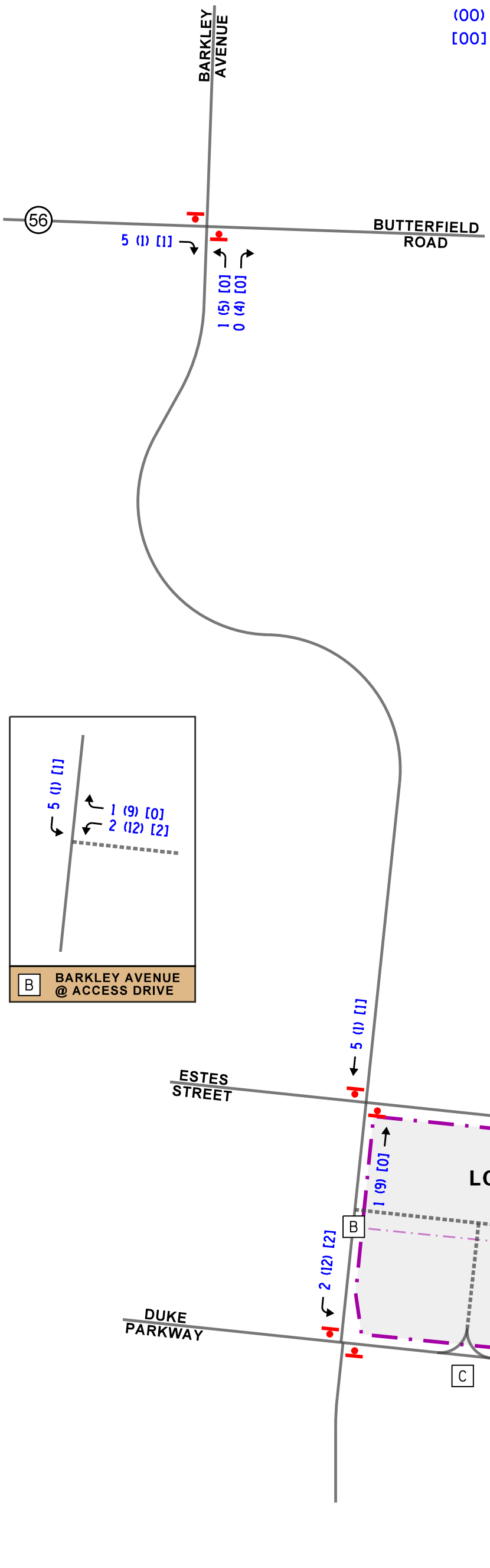

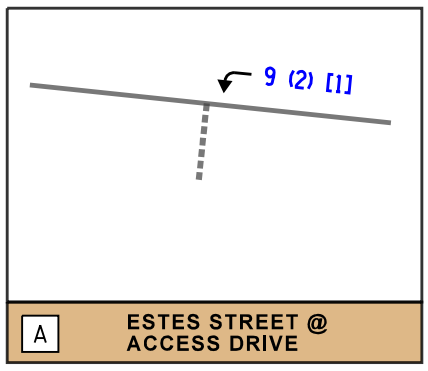

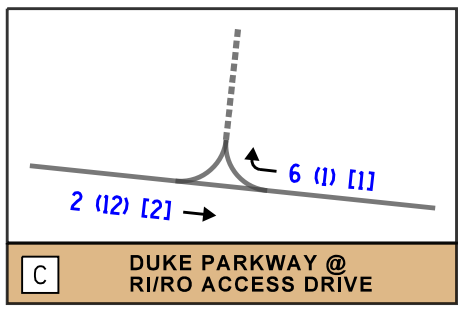

CAR WASH
WARRENVILLE, ILLINOIS

GENERAL OFFICE TRAFFIC VOLUMES

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Job No: 25-009 Figure: 8

LEGEND

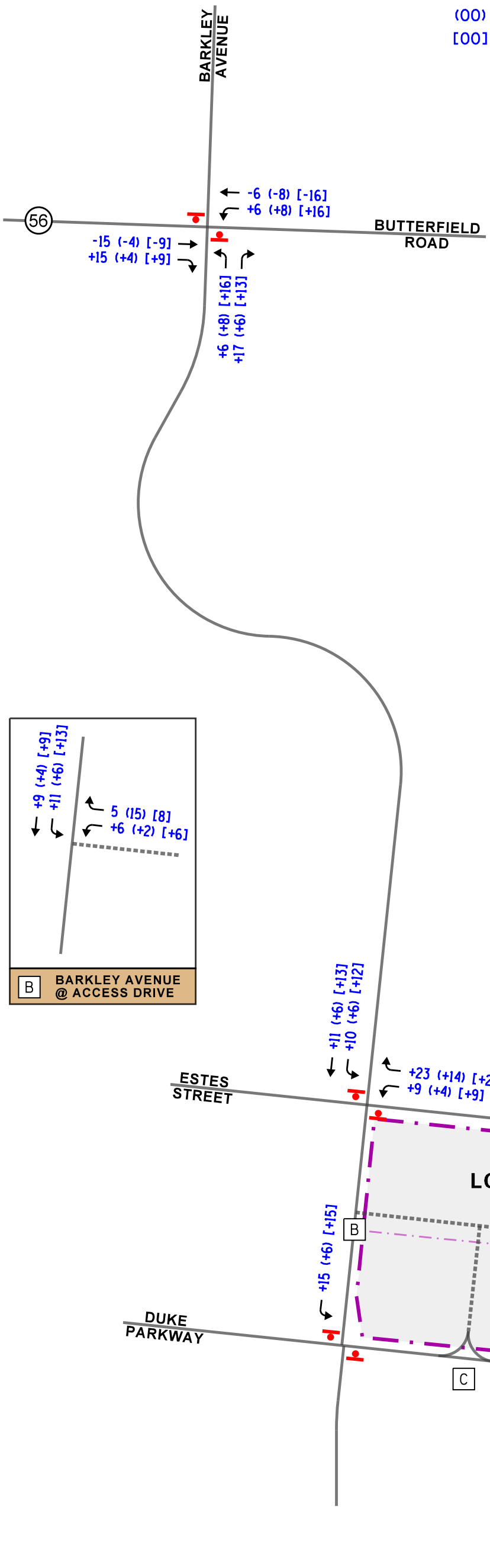
00 - WEEKDAY AM PEAK HOUR (7:15-8:15 AM)

(00) - WEEKDAY PM PEAK HOUR (4:30-5:30 PM)

[00] - SATURDAY MIDDAY PEAK HOUR (1:00-2:00 PM)

N

NOT TO SCALE



CAR WASH
WARRENVILLE,
ILLINOIS

PASS-BY TRAFFIC VOLUMES

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Job No: 25-009 Figure: 9

LEGEND

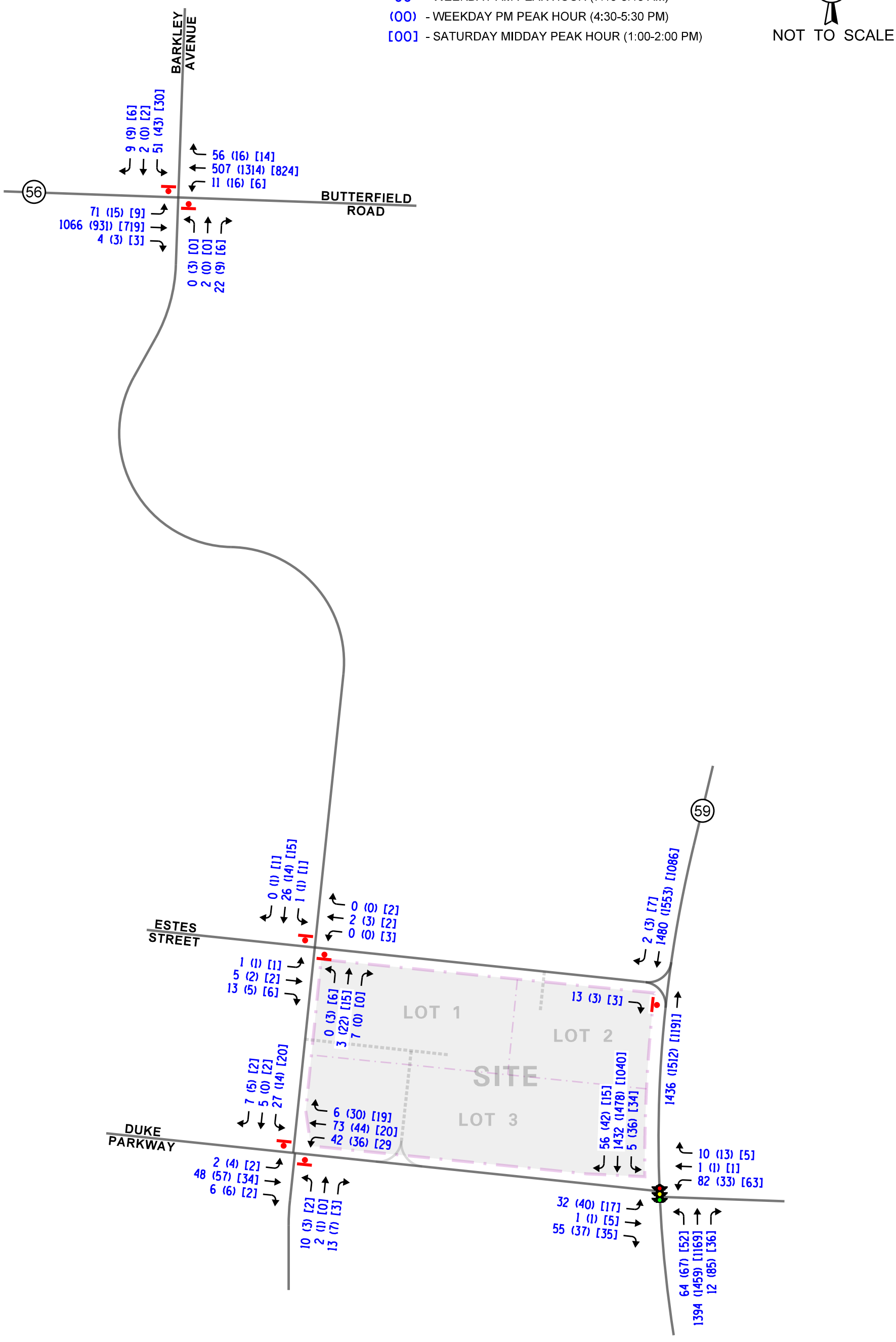
00 - WEEKDAY AM PEAK HOUR (7:15-8:15 AM)

(00) - WEEKDAY PM PEAK HOUR (4:30-5:30 PM)

[00] - SATURDAY MIDDAY PEAK HOUR (1:00-2:00 PM)

N

NOT TO SCALE



CAR WASH
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YEAR 2031 NO-BUILD TRAFFIC VOLUMES

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Job No: 25-009 Figure: 10

LEGEND

00 - WEEKDAY AM PEAK HOUR (7:15-8:15 AM)
(00) - WEEKDAY PM PEAK HOUR (4:30-5:30 PM)
[00] - SATURDAY MIDDAY PEAK HOUR (1:00-2:00 PM)

N

NOT TO SCALE

BARKLEY AVENUE

BUTTERFIELD ROAD

56

10 (10) [6]
2 (0) [2]
51 (43) [30]

56 (16) [14]
501 (1306) [808]
17 (24) [22]

71 (15) [9]
105] (927) [710]
35 (21) [25]

17 (29) [29]
2 (0) [0]
48 (30) [30]

3 (6) [8]
45 (18) [34]
13 (3) [3]
14 (7) [15]
41 (22) [48]
31 (18) [31]

A ESTES STREET @ ACCESS DRIVE

1 (3) [2]
40 (36) [39]
121 (110) [68]
115 (113) [87]

C DUKE PARKWAY @ RI/RO ACCESS DRIVE

5] (24) [36]
24 (22) [24]
6 (24) [8]
15 (30) [18]
11 (38) [23]
0 (0) [0]

B BARKLEY AVENUE @ ACCESS DRIVE

59

ESTES STREET

DUKE PARKWAY

SITE

LOT 1

LOT 2

LOT 3

A

B

C

0 (1) [1]
49 (33) [38]
15 (8) [16]
29 (17) [38]
2 (3) [2]
13 (8) [16]
1 (1) [1]
5 (2) [2]
13 (5) [6]
0 (3) [6]
10 (49) [25]
7 (0) [0]
44 (21) [34]
48 (24) [42]
1463 (1556) [1072]
1442 (1526) [1198]
7 (5) [2]
5 (0) [2]
54 (49) [50]
7 (33) [21]
73 (44) [20]
42 (36) [29]
60 (53) [20]
1442 (1488) [1052]
5 (36) [34]
2 (4) [2]
48 (57) [34]
6 (6) [2]
10 (3) [2]
2 (1) [0]
13 (7) [3]
56 (62) [43]
1 (1) [5]
58 (50) [39]
10 (13) [5]
1 (1) [1]
82 (33) [63]
100 (92) [86]
1376 (1451) [1150]
12 (85) [36]

CAR WASH
WARRENVILLE, ILLINOIS

YEAR 2031 TOTAL TRAFFIC VOLUMES

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

Job No: 25-009 Figure: 11

5. Traffic Analysis and Recommendations

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

Traffic Analyses

Roadway and adjacent or nearby intersection analyses were performed for the weekday morning, weekday evening, and Saturday midday peak hours for the existing (Year 2025), no-build, and future projected (Year 2031) traffic volumes.

The traffic analyses were performed using the methodologies outlined in the Transportation Research Board's *Highway Capacity Manual (HCM), 7*th Edition and analyzed using the Synchro/SimTraffic 12 software. The analysis for the traffic-signal controlled intersections were accomplished using actual cycle lengths, phasings, and offsets to determine the average overall vehicle delay and levels of service.

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

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

Summaries of the traffic analysis results showing the level of service and overall intersection delay (measured in seconds) for the existing, Year 2031 no-build, and Year 2031 total projected conditions are presented in **Tables 5** through **8**. A discussion of the intersections follows. Summary sheets for the capacity analyses are included in the Appendix.

Table 5
IL 59 WITH DUKE PARKWAY – SIGNALIZED

	Peak Hour	Eastbound			Westbound		Northbound			Southbound			Overall
		L	T	R	L	T/R	L	T	R	L	T	R	
Existing Conditions	Weekday Morning	E 59.5	E 63.0	B 18.4	E 63.4	E 63.0	E 66.2	A 6.5	A 1.6	E 65.6	B 10.2	A 0.2	B 11.8
		C – 33.9			E – 63.4		A – 9.1			B – 10.0			
	Weekday Evening	E 62.1	E 60.0	A 8.1	D 54.0	E 64.3	E 66.3	B 11.6	A 2.7	E 71.2	B 12.2	A 0.1	B 14.5
		D – 35.4			E – 57.0		B – 13.4			B – 13.3			
	Saturday Midday	E 56.3	E 63.0	A 7.9	E 62.9	E 61.0	E 65.5	A 7.2	A 2.4	E 71.1	A 7.4	A 0.0	B 11.3
		C – 27.0			E – 62.8		A – 9.5			A – 9.3			
No-Build Conditions	Weekday Morning	E 61.1	E 63.0	B 19.3	E 59.0	E 63.0	E 66.3	A 8.0	A 1.6	E 65.6	B 13.3	A 0.3	B 13.8
		C – 34.9			E – 59.5		B – 10.5			B – 13.0			
	Weekday Evening	E 62.3	E 60.0	A 9.1	D 53.8	E 64.4	E 66.4	B 12.7	A 2.7	E 71.5	B 13.4	A 0.1	B 15.5
		D – 36.3			E – 57.0		B – 14.4			B – 14.4			
	Saturday Midday	E 56.4	E 63.0	A 8.7	E 63.4	E 61.0	E 65.6	A 8.3	A 2.5	E 71.4	A 7.7	A 0.0	B 12.0
		C – 27.8			E – 63.2		B – 10.5			A – 9.6			
Projected Conditions	Weekday Morning	E 63.4	E 62.0	B 17.4	E 58.7	E 63.8	E 66.5	A 8.2	A 1.7	E 65.6	B 14.7	A 0.4	B 15.5
		D – 40.2			E – 59.3		B – 12.1			B – 14.3			
	Weekday Evening	E 62.9	E 58.0	B 14.8	D 51.9	E 64.4	E 66.5	B 13.5	A 3.0	E 71.5	B 15.6	A 0.3	B 17.5
		D – 41.0			E – 55.6		B – 16.0			B – 16.3			
	Saturday Midday	E 60.9	E 63.0	A 9.9	E 63.8	E 62.5	E 66.1	A 8.1	A 2.5	E 71.4	A 8.5	A 0.1	B 13.5
		D – 38.1			E – 63.7		B – 11.9			B – 10.3			

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

Table 6
UNSIGNALIZED – EXISTING CONDITIONS

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour		Saturday Midday Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay
Butterfield Road with Barkley Avenue[1]						
• Northbound Approach	C	15.7	B	16.9	B	10.6
• Southbound Approach	E	47.4	F	77.9	C	21.5
• Eastbound Left Turn	A	8.2	A	10.0	A	8.5
• Westbound Left Turn	B	10.9	A	9.9	A	9.0
Barkley Avenue with Estes Street[1]						
• Northbound Approach	A	8.6	A	9.2	A	9.1
• Southbound Approach	A	9.3	A	9.1	A	9.2
• Eastbound Left Turn	A	7.2	A	7.2	A	7.2
• Westbound Left Turn	A	0.0	A	0.0	A	7.2
Barkley Avenue with Duke Parkway[1]						
• Northbound Approach	B	10.6	B	10.5	A	9.5
• Southbound Approach	B	10.9	B	10.0	A	9.5
• Eastbound Left Turn	A	7.4	A	7.4	A	7.3
• Westbound Left Turn	A	8.0	A	7.9	A	7.6
IL 59 with Estes Street[2]						
• Eastbound Approach	B	10.3	B	10.3	A	9.5

LOS = Level of Service
Delay is measured in seconds.
1 – Two-way stop control
2 – One-way stop control

Table 7
UNSIGNALIZED – YEAR 2031 NO-BUILD CONDITIONS

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour		Saturday Midday Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay
Butterfield Road with Barkley Avenue[1]						
• Northbound Approach	C	16.9	C	18.6	B	10.8
• Southbound Approach	F	63.4	F	142.3	C	24.6
• Eastbound Left Turn	A	8.3	B	10.5	A	8.7
• Westbound Left Turn	B	11.4	B	10.1	A	9.2
Barkley Avenue with Estes Street[1]						
• Northbound Approach	A	8.6	A	9.3	A	9.1
• Southbound Approach	A	9.3	A	9.2	A	9.2
• Eastbound Left Turn	A	7.2	A	7.2	A	7.2
• Westbound Left Turn	A	0.0	A	0.0	A	7.2
Barkley Avenue with Duke Parkway[1]						
• Northbound Approach	B	10.7	B	10.6	A	9.5
• Southbound Approach	B	11.2	B	10.2	A	9.6
• Eastbound Left Turn	A	7.4	A	7.4	A	7.3
• Westbound Left Turn	A	8.0	A	7.9	A	7.6
IL 59 with Estes Street[2]						
• Eastbound Approach	B	10.4	B	10.6	A	9.6

LOS = Level of Service
Delay is measured in seconds.
1 – Two-way stop control
2 – One-way stop control

Table 8
UNSIGNALIZED – YEAR 2031 TOTAL CONDITIONS

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour		Saturday Midday Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay
Butterfield Road with Barkley Avenue[1]						
• Northbound Approach	D	28.7	D	32.5	C	17.9
• Southbound Approach	F	70.8	F	161.5	D	26.6
• Eastbound Left Turn	A	8.3	B	10.4	A	8.6
• Westbound Left Turn	B	11.1	B	10.3	A	9.3
Barkley Avenue with Estes Street[1]						
• Northbound Approach	A	9.1	B	10.0	A	9.7
• Southbound Approach	A	9.8	A	9.8	A	9.7
• Eastbound Left Turn	A	7.3	A	7.3	A	7.3
• Westbound Left Turn	A	7.3	A	7.2	A	7.2
Barkley Avenue with Duke Parkway[1]						
• Northbound Approach	B	10.7	B	10.6	A	9.5
• Southbound Approach	B	11.8	B	11.0	A	9.8
• Eastbound Left Turn	A	7.4	A	7.4	A	7.3
• Westbound Left Turn	A	8.0	A	7.9	A	7.6
IL 59 with Estes Street[2]						
• Eastbound Approach	B	10.7	B	10.7	A	9.8
Barkley Avenue with Proposed Access Drive[2]						
• Westbound Approach	A	9.0	A	9.1	A	9.0
• Southbound Left Turn	A	7.3	A	7.3	A	7.3
Estes Street with Proposed Access Drive[2]						
• Northbound Approach	A	9.2	A	8.7	A	9.1
• Westbound Left Turn	A	7.3	A	7.2	A	7.3
Duke Parkway with Proposed Right-In/Right-Out[2]						
• Southbound Approach	A	9.0	A	8.9	A	8.7

LOS = Level of Service
Delay is measured in seconds.
1 – Two-way stop control
2 – One-way stop control

Discussion and Recommendations

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

IL 59 with Duke Parkway

The results of the capacity analysis indicate that this signalized intersection currently operates overall at Level of Service (LOS) B during the weekday morning, weekday afternoon, and weekday evening peak hours. All the approaches operate at LOS D or better during the peak hours except for the westbound approach that operates at LOS E during all three peak hours which is due to the long cycle length (140 seconds) of the signal.

Under Year 2031 no-build and total projected conditions, the intersection is projected to continue operating at LOS B during all three peak hours with increases in delay of less than four seconds over the existing conditions. All the approaches are projected to continue operating at LOS D or better during the peak hours except for the westbound approach that is projected to continue operating at LOS E during all three peak hours. Additionally, the maximum 95th percentile queue for the eastbound left-turn movement is projected to be approximately 90 feet during the weekday evening peak hour and will not extend back to the location of the proposed right-in/right-out access drive. It should be noted that the proposed development is estimated to increase traffic traversing this intersection by less than two percent during the peak hours. As such, this intersection will not be significantly impacted by the proposed development and no roadway or traffic signal modifications will be required.

Butterfield Road with Barkley Avenue

The results of the capacity analysis indicate the northbound and southbound approaches currently operate at LOS D or better during the weekday morning, weekday evening, and Saturday midday peak hours except for the southbound approach that operates at LOS E during the weekday morning peak hour and LOS F during the weekday evening peak hour. The eastbound and westbound left-turn movements operate at LOS B or better during the peak hours.

Under Year 2031 no-build and total projected conditions, the northbound and southbound approaches are projected to operate at LOS C or better during the peak hours except for the southbound approach during the weekday morning and evening peak hours where it is projected to operate at LOS F with a Volume to Capacity ratio (v/c) of less than one during the weekday morning and weekday evening peak hours and queues of two to four vehicle length. This lower level of service is common and expected when a minor road intersects a major roadway such as Butterfield Road. **Table 9** in the Appendix shows a comparison of the existing and proposed queues for the northbound and southbound approaches.

The eastbound and westbound left-turn movements are projected to continue operating at LOS B or better during all three peak hours. As such, this intersection has adequate reserve capacity to

accommodate the traffic estimated to be generated by the proposed development and no roadway improvements or traffic control adjustments will be required.

Barkley Avenue with Estes Street

The results of the capacity analysis indicate that all the approaches and their critical movements currently operate at LOS A during the weekday morning, weekday evening, and Saturday midday peak hours and will continue to do so under Year 2031 no-build conditions. Under Year 2031 total projected conditions, all of the critical movements will continue operating at acceptable LOS with increases in delay of less than one second over the existing conditions. The 95th percentile queues for all approaches are projected to be one to two vehicles and will not interrupt the traffic flow on either road. As such, this intersection has adequate reserve capacity to accommodate the traffic estimated to be generated by the proposed development and no roadway improvements or traffic control adjustments will be required.

Barkley Avenue with Duke Parkway

The results of the capacity analysis indicate that the northbound and southbound approaches currently operate at LOS B or better during the weekday morning, weekday evening, and Saturday midday peak hours while the eastbound and westbound approaches operate at LOS A during all three peak hours.

Under Year 2031 no-build and total projected conditions, all the approaches are their critical movements are projected to continue operating at the same existing levels of service during the peak hours with increases in delay of less than one second over the existing conditions. The 95th percentile queues for the westbound and eastbound approaches are projected to be one to two vehicles and will not interrupt the traffic flow on Duke Parkway. As such, this intersection has adequate reserve capacity to accommodate the traffic estimated to be generated by the proposed development and no roadway improvements or traffic control adjustments will be required.

IL 59 with Estes Street

The results of the capacity analysis indicate that currently the eastbound approach operates at LOS B during the weekday morning, weekday evening, and Saturday midday peak hours and will continue to do so under Year 2031 no-build and total projected conditions with increases in delay of less than two seconds over the existing conditions. The 95th percentile queue for the eastbound approach is projected to be one to vehicles during all three peak hours and will not extend to the location of the proposed access drive. As such, this intersection has adequate reserve capacity to accommodate the traffic estimated to be generated by the proposed development and no roadway improvements or traffic control adjustments will be required.

Barkley Avenue with Proposed Full Movement Access Drive

The results of the capacity analysis indicate that under Year 2031 total projected conditions, the westbound approach and the southbound left-turn movement are projected to operate at LOS A during the weekday morning, weekday evening, and Saturday midday peak hours. The 95th percentile queue for the southbound left-turn movement is projected to be one to two vehicles during all three peak hours and will not interrupt the traffic flow along Barkley Avenue. Furthermore, the 95th percentile queue for the outbound movements will be 25 feet or less. As such this access drive is projected to provide flexible and efficient access to the site and no additional roadway or traffic control measures are required.

Estes Street with Proposed Full Movement Access Drive

The results of the capacity analysis indicate that under Year 2031 total projected conditions, the northbound approach and the westbound left-turn movement are projected to operate at LOS A during the weekday morning, weekday evening, and Saturday midday peak hours. The 95th percentile queue for the westbound left turn movement is projected to be one to two vehicles during all three peak hours and will not interrupt the traffic flow along Estes Street. Furthermore, the 95th percentile queue for the outbound movements will be 25 feet or less. As such this access drive is projected to provide flexible and efficient access to the site and no additional roadway or traffic control measures are required.

Duke Parkway with Proposed Right-In/Right-Out Access Drive

The results of the capacity analysis indicate that under Year 2031 total projected conditions, the southbound approach is projected to operate at LOS A during the weekday morning, weekday evening, and Saturday midday peak hours. Furthermore, the 95th percentile queue for the outbound movements will be 25 feet or less. As such this access drive is projected to provide efficient access to the site and no additional roadway or traffic control measures are required.

6. Conclusion

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

- The site will be developed into an automatic car wash with one car wash tunnel with 19 vacuum stalls and eight employee parking spaces, a Starbucks coffee shop with drive-through and 22 parking spaces and a potential 10,000 square-foot general office building.

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

    - A proposed full-movement access drive off Estes Street located approximately 205 feet west of IL 59. This access drive will provide one inbound lane and one outbound lane with the outbound movements under stop sign control. It should be noted that this access drive will provide direct access to Starbucks and indirect access to the car wash via an internal shared driveway.

    - A proposed full-movement access drive off Barkley Avenue approximately 170 feet south of Estes Street. This access drive will provide one inbound lane and one outbound lane with the outbound movements under stop sign control.

    - A proposed right-in/right-out access drive located approximately 430 feet west of IL 59 westerly right-of way line. This access drive will provide one inbound lane and one outbound lane with the outbound movement under stop sign control. This access drive will provide direct access to the car wash and indirect access to Starbucks via an internal shared driveway.

- The results of the capacity analysis indicated that the existing roadway system will not be significantly impacted by the proposed car wash and no additional roadway improvements or traffic control modifications are required.

- In order to enhance the flow of traffic through the car wash site on peak days, the operator should consider implementing the following recommendations:

    - Increase the service rate of the tunnel to the maximum it can process.

    - Provide staff at critical locations within the circulation system during peak periods at the car wash to help direct and manage the flow of traffic through the site. Critical internal locations where staff should be located include at the pay stations and at the exit of the car wash.

Appendix

Traffic Count Summary Sheets
Site Plan
ITE Trip Generation Summary Sheets
CMAP 2050 Projections Letter
Level of Service Criteria
Capacity Analysis Summary Sheets
Butterfield Road and Barkley Avenue Queue Comparison Table

Traffic Count Summary Sheets

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

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

Count Name: Barkley Avenue with Duke Pkwy
TMC
Site Code:
Start Date: 01/25/2025

Turning Movement Data

Start Time	Duke Pkwy Eastbound						Duke Pkwy Westbound						Barkley Avenue Northbound						Barkley Avenue Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
12:00 PM	0	1	2	2	0	5	0	12	4	5	0	21	0	1	0	1	0	2	0	3	1	1	0	5	33
12:15 PM	0	0	1	0	0	1	2	7	1	3	0	13	0	2	0	2	0	4	0	2	0	0	0	2	20
12:30 PM	0	0	2	0	0	2	0	9	2	2	0	13	0	0	1	1	0	2	0	3	0	0	0	3	20
12:45 PM	0	0	4	0	0	4	1	5	2	6	0	14	0	0	0	0	1	0	0	2	0	0	0	2	20
Hourly Total	0	1	9	2	0	12	3	33	9	16	0	61	0	3	1	4	1	8	0	10	1	1	0	12	93
1:00 PM	0	0	5	1	2	6	0	6	2	2	0	10	0	0	0	1	0	1	0	8	0	1	0	9	26
1:15 PM	0	2	4	0	0	6	0	5	1	5	0	11	0	2	0	1	0	3	0	2	0	1	0	3	23
1:30 PM	0	0	1	0	0	1	0	9	4	6	0	19	0	0	0	0	0	0	0	3	0	0	0	3	23
1:45 PM	0	0	5	1	2	6	1	6	3	5	0	15	0	0	0	1	0	1	0	6	2	0	0	8	30
Hourly Total	0	2	15	2	4	19	1	26	10	18	0	55	0	2	0	3	0	5	0	19	2	2	0	23	102
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7:00 AM	0	0	6	1	0	7	0	6	26	1	0	33	0	3	0	2	0	5	0	4	1	5	0	10	55
7:15 AM	0	1	4	2	0	7	0	12	29	1	0	42	0	3	0	4	0	7	0	10	0	5	0	15	71
7:30 AM	0	0	5	3	1	8	0	9	11	0	0	20	0	2	1	4	0	7	0	4	1	2	0	7	42
7:45 AM	0	0	3	1	0	4	0	11	9	3	1	23	0	1	0	2	0	3	0	7	0	0	0	7	37
Hourly Total	0	1	18	7	1	26	0	38	75	5	1	118	0	9	1	12	0	22	0	25	2	12	0	39	205
8:00 AM	0	1	9	0	0	10	0	7	16	2	0	25	0	3	1	2	0	6	0	4	2	0	0	6	47
8:15 AM	0	0	2	2	0	4	0	17	15	3	0	35	0	1	0	2	0	3	0	2	0	0	0	2	44
8:30 AM	0	0	3	1	0	4	0	10	15	2	0	27	0	1	1	3	0	5	0	6	0	1	0	7	43
8:45 AM	1	0	3	2	0	6	0	9	10	3	0	22	0	1	0	4	0	5	0	2	0	0	0	2	35
Hourly Total	1	1	17	5	0	24	0	43	56	10	0	109	0	6	2	11	0	19	0	14	2	1	0	17	169
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	0	16	2	0	18	0	10	4	7	0	21	0	0	0	4	0	4	0	3	0	0	0	3	46
4:15 PM	0	1	4	0	0	5	0	10	3	5	0	18	0	1	0	1	0	2	0	0	0	0	0	0	25
4:30 PM	0	0	12	3	0	15	1	8	2	8	0	19	0	1	0	1	0	2	0	1	0	0	0	1	37
4:45 PM	0	3	2	0	0	5	0	4	5	8	0	17	0	1	1	0	0	2	0	3	0	0	0	3	27
Hourly Total	0	4	34	5	0	43	1	32	14	28	0	75	0	3	1	6	0	10	0	7	0	0	0	7	135
5:00 PM	0	1	11	1	0	13	0	15	12	7	0	34	0	0	0	3	0	3	0	8	0	3	1	11	61
5:15 PM	0	0	12	2	1	14	0	6	14	5	0	25	0	1	0	3	0	4	0	1	0	2	1	3	46
5:30 PM	1	0	36	1	0	38	0	6	15	9	0	30	0	1	0	4	0	5	0	3	0	1	0	4	77
5:45 PM	0	2	13	0	0	15	0	8	21	10	0	39	0	2	1	0	0	3	0	4	0	0	0	4	61
Hourly Total	1	3	72	4	1	80	0	35	62	31	0	128	0	4	1	10	0	15	0	16	0	6	2	22	245
Grand Total	2	12	165	25	6	204	5	207	226	108	1	546	0	27	6	46	1	79	0	91	7	22	2	120	949
Approach %	1.0	5.9	80.9	12.3	-	-	0.9	37.9	41.4	19.8	-	-	0.0	34.2	7.6	58.2	-	-	0.0	75.8	5.8	18.3	-	-	-
Total %	0.2	1.3	17.4	2.6	-	21.5	0.5	21.8	23.8	11.4	-	57.5	0.0	2.8	0.6	4.8	-	8.3	0.0	9.6	0.7	2.3	-	12.6	-

Lights	0	12	144	10	-	166	5	136	205	104	-	450	0	15	6	6	-	27	0	90	7	22	-	119	762
% Lights	0.0	100.0	87.3	40.0	-	81.4	100.0	65.7	90.7	96.3	-	82.4	-	55.6	100.0	13.0	-	34.2	-	98.9	100.0	100.0	-	99.2	80.3
Buses	0	0	0	0	-	0	0	1	0	1	-	2	0	0	0	0	-	0	0	0	0	0	-	0	2
% Buses	0.0	0.0	0.0	0.0	-	0.0	0.0	0.5	0.0	0.9	-	0.4	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.2
Single-Unit Trucks	1	0	6	8	-	15	0	19	3	2	-	24	0	6	0	6	-	12	0	1	0	0	-	1	52
% Single-Unit Trucks	50.0	0.0	3.6	32.0	-	7.4	0.0	9.2	1.3	1.9	-	4.4	-	22.2	0.0	13.0	-	15.2	-	1.1	0.0	0.0	-	0.8	5.5
Articulated Trucks	1	0	15	7	-	23	0	51	18	0	-	69	0	6	0	34	-	40	0	0	0	0	-	0	132
% Articulated Trucks	50.0	0.0	9.1	28.0	-	11.3	0.0	24.6	8.0	0.0	-	12.6	-	22.2	0.0	73.9	-	50.6	-	0.0	0.0	0.0	-	0.0	13.9
Bicycles on Road	0	0	0	0	-	0	0	0	0	1	-	1	0	0	0	0	-	0	0	0	0	0	-	0	1
% Bicycles on Road	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.9	-	0.2	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.1
Pedestrians	-	-	-	-	6	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

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9575 W. Higgins Rd., Suite 400

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

Count Name: Barkley Avenue with Duke Pkwy
TMC
Site Code:
Start Date: 01/25/2025

Turning Movement Peak Hour Data (1:00 PM)

Start Time	Duke Pkwy Eastbound						Duke Pkwy Westbound						Barkley Avenue Northbound						Barkley Avenue Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
1:00 PM	0	0	5	1	2	6	0	6	2	2	0	10	0	0	0	1	0	1	0	8	0	1	0	9	26
1:15 PM	0	2	4	0	0	6	0	5	1	5	0	11	0	2	0	1	0	3	0	2	0	1	0	3	23
1:30 PM	0	0	1	0	0	1	0	9	4	6	0	19	0	0	0	0	0	0	0	3	0	0	0	3	23
1:45 PM	0	0	5	1	2	6	1	6	3	5	0	15	0	0	0	1	0	1	0	6	2	0	0	8	30
Total	0	2	15	2	4	19	1	26	10	18	0	55	0	2	0	3	0	5	0	19	2	2	0	23	102
Approach %	0.0	10.5	78.9	10.5	-	-	1.8	47.3	18.2	32.7	-	-	0.0	40.0	0.0	60.0	-	-	0.0	82.6	8.7	8.7	-	-	-
Total %	0.0	2.0	14.7	2.0	-	18.6	1.0	25.5	9.8	17.6	-	53.9	0.0	2.0	0.0	2.9	-	4.9	0.0	18.6	2.0	2.0	-	22.5	-
PHF	0.000	0.250	0.750	0.500	-	0.792	0.250	0.722	0.625	0.750	-	0.724	0.000	0.250	0.000	0.750	-	0.417	0.000	0.594	0.250	0.500	-	0.639	0.850
Lights	0	2	11	0	-	13	1	18	8	18	-	45	0	1	0	1	-	2	0	18	2	2	-	22	82
% Lights	-	100.0	73.3	0.0	-	68.4	100.0	69.2	80.0	100.0	-	81.8	-	50.0	-	33.3	-	40.0	-	94.7	100.0	100.0	-	95.7	80.4
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Buses	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	0	2	1	-	3	0	6	0	0	-	6	0	0	0	0	-	0	0	1	0	0	-	1	10
% Single-Unit Trucks	-	0.0	13.3	50.0	-	15.8	0.0	23.1	0.0	0.0	-	10.9	-	0.0	-	0.0	-	0.0	-	5.3	0.0	0.0	-	4.3	9.8
Articulated Trucks	0	0	2	1	-	3	0	2	2	0	-	4	0	1	0	2	-	3	0	0	0	0	-	0	10
% Articulated Trucks	-	0.0	13.3	50.0	-	15.8	0.0	7.7	20.0	0.0	-	7.3	-	50.0	-	66.7	-	60.0	-	0.0	0.0	0.0	-	0.0	9.8
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	4	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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(847)518-9990 sainkeshavarzi@kloainc.com

Count Name: Barkley Avenue with Duke Pkwy
TMC
Site Code:
Start Date: 01/25/2025

Turning Movement Peak Hour Data (7:15 AM)

Start Time	Duke Pkwy Eastbound						Duke Pkwy Westbound						Barkley Avenue Northbound						Barkley Avenue Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:15 AM	0	1	4	2	0	7	0	12	29	1	0	42	0	3	0	4	0	7	0	10	0	5	0	15	71
7:30 AM	0	0	5	3	1	8	0	9	11	0	0	20	0	2	1	4	0	7	0	4	1	2	0	7	42
7:45 AM	0	0	3	1	0	4	0	11	9	3	1	23	0	1	0	2	0	3	0	7	0	0	0	7	37
8:00 AM	0	1	9	0	0	10	0	7	16	2	0	25	0	3	1	2	0	6	0	4	2	0	0	6	47
Total	0	2	21	6	1	29	0	39	65	6	1	110	0	9	2	12	0	23	0	25	3	7	0	35	197
Approach %	0.0	6.9	72.4	20.7	-	-	0.0	35.5	59.1	5.5	-	-	0.0	39.1	8.7	52.2	-	-	0.0	71.4	8.6	20.0	-	-	-
Total %	0.0	1.0	10.7	3.0	-	14.7	0.0	19.8	33.0	3.0	-	55.8	0.0	4.6	1.0	6.1	-	11.7	0.0	12.7	1.5	3.6	-	17.8	-
PHF	0.000	0.500	0.583	0.500	-	0.725	0.000	0.813	0.560	0.500	-	0.655	0.000	0.750	0.500	0.750	-	0.821	0.000	0.625	0.375	0.350	-	0.583	0.694
Lights	0	2	18	2	-	22	0	18	61	4	-	83	0	8	2	0	-	10	0	25	3	7	-	35	150
% Lights	-	100.0	85.7	33.3	-	75.9	-	46.2	93.8	66.7	-	75.5	-	88.9	100.0	0.0	-	43.5	-	100.0	100.0	100.0	-	100.0	76.1
Buses	0	0	0	0	-	0	0	1	0	1	-	2	0	0	0	0	-	0	0	0	0	0	-	0	2
% Buses	-	0.0	0.0	0.0	-	0.0	-	2.6	0.0	16.7	-	1.8	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	1.0
Single-Unit Trucks	0	0	2	3	-	5	0	4	1	0	-	5	0	0	0	2	-	2	0	0	0	0	-	0	12
% Single-Unit Trucks	-	0.0	9.5	50.0	-	17.2	-	10.3	1.5	0.0	-	4.5	-	0.0	0.0	16.7	-	8.7	-	0.0	0.0	0.0	-	0.0	6.1
Articulated Trucks	0	0	1	1	-	2	0	16	3	0	-	19	0	1	0	10	-	11	0	0	0	0	-	0	32
% Articulated Trucks	-	0.0	4.8	16.7	-	6.9	-	41.0	4.6	0.0	-	17.3	-	11.1	0.0	83.3	-	47.8	-	0.0	0.0	0.0	-	0.0	16.2
Bicycles on Road	0	0	0	0	-	0	0	0	0	1	-	1	0	0	0	0	-	0	0	0	0	0	-	0	1
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	16.7	-	0.9	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.5
Pedestrians	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Barkley Avenue with Duke Pkwy
TMC
Site Code:
Start Date: 01/25/2025

Turning Movement Peak Hour Data (4:30 PM)

Start Time	Duke Pkwy Eastbound						Duke Pkwy Westbound						Barkley Avenue Northbound						Barkley Avenue Southbound						
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
4:30 PM	0	0	12	3	0	15	1	8	2	8	0	19	0	1	0	1	0	2	0	1	0	0	0	1	37
4:45 PM	0	3	2	0	0	5	0	4	5	8	0	17	0	1	1	0	0	2	0	3	0	0	0	3	27
5:00 PM	0	1	11	1	0	13	0	15	12	7	0	34	0	0	0	3	0	3	0	8	0	3	1	11	61
5:15 PM	0	0	12	2	1	14	0	6	14	5	0	25	0	1	0	3	0	4	0	1	0	2	1	3	46
Total	0	4	37	6	1	47	1	33	33	28	0	95	0	3	1	7	0	11	0	13	0	5	2	18	171
Approach %	0.0	8.5	78.7	12.8	-	-	1.1	34.7	34.7	29.5	-	-	0.0	27.3	9.1	63.6	-	-	0.0	72.2	0.0	27.8	-	-	-
Total %	0.0	2.3	21.6	3.5	-	27.5	0.6	19.3	19.3	16.4	-	55.6	0.0	1.8	0.6	4.1	-	6.4	0.0	7.6	0.0	2.9	-	10.5	-
PHF	0.000	0.333	0.771	0.500	-	0.783	0.250	0.550	0.589	0.875	-	0.699	0.000	0.750	0.250	0.583	-	0.688	0.000	0.406	0.000	0.417	-	0.409	0.701
Lights	0	4	32	4	-	40	1	19	25	27	-	72	0	0	1	1	-	2	0	13	0	5	-	18	132
% Lights	-	100.0	86.5	66.7	-	85.1	100.0	57.6	75.8	96.4	-	75.8	-	0.0	100.0	14.3	-	18.2	-	100.0	-	100.0	-	100.0	77.2
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Buses	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.0
Single-Unit Trucks	0	0	1	1	-	2	0	1	2	1	-	4	0	2	0	0	-	2	0	0	0	0	-	0	8
% Single-Unit Trucks	-	0.0	2.7	16.7	-	4.3	0.0	3.0	6.1	3.6	-	4.2	-	66.7	0.0	0.0	-	18.2	-	0.0	-	0.0	-	0.0	4.7
Articulated Trucks	0	0	4	1	-	5	0	13	6	0	-	19	0	1	0	6	-	7	0	0	0	0	-	0	31
% Articulated Trucks	-	0.0	10.8	16.7	-	10.6	0.0	39.4	18.2	0.0	-	20.0	-	33.3	0.0	85.7	-	63.6	-	0.0	-	0.0	-	0.0	18.1
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

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9575 W. Higgins Rd., Suite 400

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Count Name: Butterfield+Road+and+Barkley+Avenue TMC
Site Code:
Start Date: 01/25/2025

Turning Movement Data

Start Time	Butterfield Road Eastbound						Butterfield Road Westbound						Barley Avenue Northbound						Barkley Avenue Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
12:00 PM	0	2	150	2	2	154	1	2	175	2	0	180	0	2	0	0	2	2	0	6	1	5	0	12	348
12:15 PM	0	3	158	1	0	162	0	0	176	4	0	180	0	1	0	2	0	3	0	9	1	3	0	13	358
12:30 PM	0	2	149	2	0	153	0	3	179	1	0	183	0	0	0	0	0	0	0	5	0	2	0	7	343
12:45 PM	0	2	163	0	0	165	0	1	183	5	0	189	0	1	0	2	0	3	0	2	0	2	0	4	361
Hourly Total	0	9	620	5	2	634	1	6	713	12	0	732	0	4	0	4	2	8	0	22	2	12	0	36	1410
1:00 PM	0	3	163	0	0	166	0	0	173	0	0	173	0	0	0	0	0	0	0	6	1	2	0	9	348
1:15 PM	0	3	180	2	0	185	0	0	193	4	0	197	0	0	0	4	2	4	0	9	0	2	0	11	397
1:30 PM	0	1	167	0	0	168	0	2	207	3	0	212	0	0	0	1	0	1	0	6	1	1	0	8	389
1:45 PM	0	1	162	1	0	164	2	2	197	6	0	207	0	0	0	1	0	1	0	7	0	1	0	8	380
Hourly Total	0	8	672	3	0	683	2	4	770	13	0	789	0	0	0	6	2	6	0	28	2	6	0	36	1514
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7:00 AM	0	3	228	3	0	234	0	0	164	9	0	173	0	0	0	6	0	6	0	5	0	1	0	6	419
7:15 AM	0	7	239	2	0	248	0	1	190	12	0	203	0	0	0	4	0	4	0	9	1	4	0	14	469
7:30 AM	0	10	296	1	0	307	1	2	187	8	0	198	0	0	0	7	0	7	0	8	1	1	0	10	522
7:45 AM	0	30	242	0	0	272	0	3	199	12	0	214	0	0	2	5	0	7	0	15	0	2	0	17	510
Hourly Total	0	50	1005	6	0	1061	1	6	740	41	0	788	0	0	2	22	0	24	0	37	2	8	0	47	1920
8:00 AM	1	18	219	1	0	239	1	2	171	20	0	194	0	0	0	5	0	5	0	16	0	2	0	18	456
8:15 AM	0	8	260	1	0	269	1	2	176	9	0	188	0	0	0	5	0	5	0	8	0	3	0	11	473
8:30 AM	0	9	237	0	0	246	0	1	156	16	0	173	0	2	0	3	0	5	0	17	0	0	0	17	441
8:45 AM	0	9	197	0	0	206	1	0	147	18	0	166	0	1	0	3	0	4	0	13	0	2	0	15	391
Hourly Total	1	44	913	2	0	960	3	5	650	63	0	721	0	3	0	16	0	19	0	54	0	7	0	61	1761
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	6	222	1	0	229	0	1	296	6	0	303	0	0	0	1	0	1	0	11	2	4	0	17	550
4:15 PM	0	4	212	0	0	216	0	4	296	3	0	303	0	0	0	1	0	1	0	14	0	3	0	17	537
4:30 PM	1	5	230	0	0	236	2	3	278	3	0	286	0	0	0	4	0	4	0	12	0	3	0	15	541
4:45 PM	0	3	216	0	0	219	1	1	297	3	0	302	0	1	0	0	0	1	0	7	0	1	0	8	530
Hourly Total	1	18	880	1	0	900	3	9	1167	15	0	1194	0	1	0	6	0	7	0	44	2	11	0	57	2158
5:00 PM	0	4	185	1	0	190	1	3	358	7	0	369	0	2	0	1	0	3	0	8	0	4	0	12	574
5:15 PM	0	1	239	2	0	242	0	4	295	2	0	301	0	0	0	3	0	3	0	13	0	1	0	14	560
5:30 PM	0	2	203	1	0	206	0	4	274	2	0	280	0	0	0	5	0	5	0	8	0	4	0	12	503
5:45 PM	0	3	169	2	0	174	0	6	240	2	0	248	0	0	0	3	0	3	0	6	0	0	0	6	431
Hourly Total	0	10	796	6	0	812	1	17	1167	13	0	1198	0	2	0	12	0	14	0	35	0	9	0	44	2068
Grand Total	2	139	4886	23	2	5050	11	47	5207	157	0	5422	0	10	2	66	4	78	0	220	8	53	0	281	10831
Approach %	0.0	2.8	96.8	0.5	-	-	0.2	0.9	96.0	2.9	-	-	0.0	12.8	2.6	84.6	-	-	0.0	78.3	2.8	18.9	-	-	-
Total %	0.0	1.3	45.1	0.2	-	46.6	0.1	0.4	48.1	1.4	-	50.1	0.0	0.1	0.0	0.6	-	0.7	0.0	2.0	0.1	0.5	-	2.6	-

Lights	2	132	4743	23	-	4900	11	47	5070	142	-	5270	0	10	1	66	-	77	0	198	8	51	-	257	10504
% Lights	100.0	95.0	97.1	100.0	-	97.0	100.0	100.0	97.4	90.4	-	97.2	-	100.0	50.0	100.0	-	98.7	-	90.0	100.0	96.2	-	91.5	97.0
Buses	0	1	10	0	-	11	0	0	11	2	-	13	0	0	0	0	-	0	0	0	0	0	-	0	24
% Buses	0.0	0.7	0.2	0.0	-	0.2	0.0	0.0	0.2	1.3	-	0.2	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.2
Single-Unit Trucks	0	4	66	0	-	70	0	0	59	10	-	69	0	0	0	0	-	0	0	12	0	2	-	14	153
% Single-Unit Trucks	0.0	2.9	1.4	0.0	-	1.4	0.0	0.0	1.1	6.4	-	1.3	-	0.0	0.0	0.0	-	0.0	-	5.5	0.0	3.8	-	5.0	1.4
Articulated Trucks	0	2	67	0	-	69	0	0	67	3	-	70	0	0	0	0	-	0	0	10	0	0	-	10	149
% Articulated Trucks	0.0	1.4	1.4	0.0	-	1.4	0.0	0.0	1.3	1.9	-	1.3	-	0.0	0.0	0.0	-	0.0	-	4.5	0.0	0.0	-	3.6	1.4
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	0	0	0	0	-	0	1
% Bicycles on Road	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	-	0.0	50.0	0.0	-	1.3	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	4	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-

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

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

Count Name: Butterfield+Road+and+Barkley+Avenue TMC
Site Code:
Start Date: 01/25/2025

Turning Movement Peak Hour Data (1:00 PM)

Start Time	Butterfield Road Eastbound						Butterfield Road Westbound						Barley Avenue Northbound						Barkley Avenue Southbound						
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
1:00 PM	0	3	163	0	0	166	0	0	173	0	0	173	0	0	0	0	0	0	0	6	1	2	0	9	348
1:15 PM	0	3	180	2	0	185	0	0	193	4	0	197	0	0	0	4	2	4	0	9	0	2	0	11	397
1:30 PM	0	1	167	0	0	168	0	2	207	3	0	212	0	0	0	1	0	1	0	6	1	1	0	8	389
1:45 PM	0	1	162	1	0	164	2	2	197	6	0	207	0	0	0	1	0	1	0	7	0	1	0	8	380
Total	0	8	672	3	0	683	2	4	770	13	0	789	0	0	0	6	2	6	0	28	2	6	0	36	1514
Approach %	0.0	1.2	98.4	0.4	-	-	0.3	0.5	97.6	1.6	-	-	0.0	0.0	0.0	100.0	-	-	0.0	77.8	5.6	16.7	-	-	-
Total %	0.0	0.5	44.4	0.2	-	45.1	0.1	0.3	50.9	0.9	-	52.1	0.0	0.0	0.0	0.4	-	0.4	0.0	1.8	0.1	0.4	-	2.4	-
PHF	0.000	0.667	0.933	0.375	-	0.923	0.250	0.500	0.930	0.542	-	0.930	0.000	0.000	0.000	0.375	-	0.375	0.000	0.778	0.500	0.750	-	0.818	0.953
Lights	0	8	656	3	-	667	2	4	759	12	-	777	0	0	0	6	-	6	0	28	2	6	-	36	1486
% Lights	-	100.0	97.6	100.0	-	97.7	100.0	100.0	98.6	92.3	-	98.5	-	-	-	100.0	-	100.0	-	100.0	100.0	100.0	-	100.0	98.2
Buses	0	0	3	0	-	3	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	3
% Buses	-	0.0	0.4	0.0	-	0.4	0.0	0.0	0.0	0.0	-	0.0	-	-	-	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.2
Single-Unit Trucks	0	0	9	0	-	9	0	0	9	0	-	9	0	0	0	0	-	0	0	0	0	0	-	0	18
% Single-Unit Trucks	-	0.0	1.3	0.0	-	1.3	0.0	0.0	1.2	0.0	-	1.1	-	-	-	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	1.2
Articulated Trucks	0	0	4	0	-	4	0	0	2	1	-	3	0	0	0	0	-	0	0	0	0	0	-	0	7
% Articulated Trucks	-	0.0	0.6	0.0	-	0.6	0.0	0.0	0.3	7.7	-	0.4	-	-	-	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.5
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	-	-	-	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-

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

Count Name: Butterfield+Road+and+Barkley+Avenue TMC
Site Code:
Start Date: 01/25/2025

Turning Movement Peak Hour Data (7:15 AM)

Start Time	Butterfield Road Eastbound						Butterfield Road Westbound						Barley Avenue Northbound						Barkley Avenue Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:15 AM	0	7	239	2	0	248	0	1	190	12	0	203	0	0	0	4	0	4	0	9	1	4	0	14	469
7:30 AM	0	10	296	1	0	307	1	2	187	8	0	198	0	0	0	7	0	7	0	8	1	1	0	10	522
7:45 AM	0	30	242	0	0	272	0	3	199	12	0	214	0	0	2	5	0	7	0	15	0	2	0	17	510
8:00 AM	1	18	219	1	0	239	1	2	171	20	0	194	0	0	0	5	0	5	0	16	0	2	0	18	456
Total	1	65	996	4	0	1066	2	8	747	52	0	809	0	0	2	21	0	23	0	48	2	9	0	59	1957
Approach %	0.1	6.1	93.4	0.4	-	-	0.2	1.0	92.3	6.4	-	-	0.0	0.0	8.7	91.3	-	-	0.0	81.4	3.4	15.3	-	-	-
Total %	0.1	3.3	50.9	0.2	-	54.5	0.1	0.4	38.2	2.7	-	41.3	0.0	0.0	0.1	1.1	-	1.2	0.0	2.5	0.1	0.5	-	3.0	-
PHF	0.250	0.542	0.841	0.500	-	0.868	0.500	0.667	0.938	0.650	-	0.945	0.000	0.000	0.250	0.750	-	0.821	0.000	0.750	0.500	0.563	-	0.819	0.937
Lights	1	65	963	4	-	1033	2	8	711	52	-	773	0	0	1	21	-	22	0	36	2	8	-	46	1874
% Lights	100.0	100.0	96.7	100.0	-	96.9	100.0	100.0	95.2	100.0	-	95.6	-	-	50.0	100.0	-	95.7	-	75.0	100.0	88.9	-	78.0	95.8
Buses	0	0	2	0	-	2	0	0	4	0	-	4	0	0	0	0	-	0	0	0	0	0	-	0	6
% Buses	0.0	0.0	0.2	0.0	-	0.2	0.0	0.0	0.5	0.0	-	0.5	-	-	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.3
Single-Unit Trucks	0	0	17	0	-	17	0	0	13	0	-	13	0	0	0	0	-	0	0	5	0	1	-	6	36
% Single-Unit Trucks	0.0	0.0	1.7	0.0	-	1.6	0.0	0.0	1.7	0.0	-	1.6	-	-	0.0	0.0	-	0.0	-	10.4	0.0	11.1	-	10.2	1.8
Articulated Trucks	0	0	14	0	-	14	0	0	19	0	-	19	0	0	0	0	-	0	0	7	0	0	-	7	40
% Articulated Trucks	0.0	0.0	1.4	0.0	-	1.3	0.0	0.0	2.5	0.0	-	2.3	-	-	0.0	0.0	-	0.0	-	14.6	0.0	0.0	-	11.9	2.0
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	0	0	0	0	-	0	1
% Bicycles on Road	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	-	-	50.0	0.0	-	4.3	-	0.0	0.0	0.0	-	0.0	0.1
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Butterfield+Road+and+Barkley+Avenue TMC
Site Code:
Start Date: 01/25/2025

Turning Movement Peak Hour Data (4:30 PM)

Start Time	Butterfield Road Eastbound						Butterfield Road Westbound						Barley Avenue Northbound						Barkley Avenue Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
4:30 PM	1	5	230	0	0	236	2	3	278	3	0	286	0	0	0	4	0	4	0	12	0	3	0	15	541
4:45 PM	0	3	216	0	0	219	1	1	297	3	0	302	0	1	0	0	0	1	0	7	0	1	0	8	530
5:00 PM	0	4	185	1	0	190	1	3	358	7	0	369	0	2	0	1	0	3	0	8	0	4	0	12	574
5:15 PM	0	1	239	2	0	242	0	4	295	2	0	301	0	0	0	3	0	3	0	13	0	1	0	14	560
Total	1	13	870	3	0	887	4	11	1228	15	0	1258	0	3	0	8	0	11	0	40	0	9	0	49	2205
Approach %	0.1	1.5	98.1	0.3	-	-	0.3	0.9	97.6	1.2	-	-	0.0	27.3	0.0	72.7	-	-	0.0	81.6	0.0	18.4	-	-	-
Total %	0.0	0.6	39.5	0.1	-	40.2	0.2	0.5	55.7	0.7	-	57.1	0.0	0.1	0.0	0.4	-	0.5	0.0	1.8	0.0	0.4	-	2.2	-
PHF	0.250	0.650	0.910	0.375	-	0.916	0.500	0.688	0.858	0.536	-	0.852	0.000	0.375	0.000	0.500	-	0.688	0.000	0.769	0.000	0.563	-	0.817	0.960
Lights	1	13	846	3	-	863	4	11	1204	11	-	1230	0	3	0	8	-	11	0	37	0	9	-	46	2150
% Lights	100.0	100.0	97.2	100.0	-	97.3	100.0	100.0	98.0	73.3	-	97.8	-	100.0	-	100.0	-	100.0	-	92.5	-	100.0	-	93.9	97.5
Buses	0	0	0	0	-	0	0	0	3	0	-	3	0	0	0	0	-	0	0	0	0	0	-	0	3
% Buses	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.2	0.0	-	0.2	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.1
Single-Unit Trucks	0	0	9	0	-	9	0	0	4	4	-	8	0	0	0	0	-	0	0	1	0	0	-	1	18
% Single-Unit Trucks	0.0	0.0	1.0	0.0	-	1.0	0.0	0.0	0.3	26.7	-	0.6	-	0.0	-	0.0	-	0.0	-	2.5	-	0.0	-	2.0	0.8
Articulated Trucks	0	0	15	0	-	15	0	0	17	0	-	17	0	0	0	0	-	0	0	2	0	0	-	2	34
% Articulated Trucks	0.0	0.0	1.7	0.0	-	1.7	0.0	0.0	1.4	0.0	-	1.4	-	0.0	-	0.0	-	0.0	-	5.0	-	0.0	-	4.1	1.5
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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9575 W. Higgins Rd., Suite 400

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

Count Name: Estes Street with Barley Avenue
TMC
Site Code:
Start Date: 01/25/2025

Turning Movement Data

Start Time	Estes Street Eastbound						Estes Street Westbound						Barkley Avenue Northbound						Barkley Avenue Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
12:00 PM	0	1	1	2	0	4	0	0	0	0	0	0	0	3	4	0	0	7	0	1	2	0	2	3	14
12:15 PM	0	0	1	2	0	3	0	0	1	0	0	1	0	1	2	0	0	3	0	2	2	0	0	4	11
12:30 PM	0	0	1	1	0	2	0	0	0	1	0	1	0	0	2	0	0	2	0	0	2	0	1	2	7
12:45 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	1	6	0	0	7	0	0	2	0	0	2	10
Hourly Total	0	1	4	5	0	10	0	0	1	1	0	2	0	5	14	0	0	19	0	3	8	0	3	11	42
1:00 PM	0	1	1	3	2	5	0	1	1	2	0	4	0	1	0	0	0	1	0	0	5	0	0	5	15
1:15 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	3	2	0	0	5	0	0	2	0	0	2	8
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	7	0	0	9	0	1	2	1	0	4	13
1:45 PM	0	0	1	2	0	3	0	2	1	0	0	3	0	0	3	0	0	3	0	0	5	0	0	5	14
Hourly Total	0	1	2	6	2	9	0	3	2	2	0	7	0	6	12	0	0	18	0	1	14	1	0	16	50
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7:00 AM	0	0	1	4	0	5	0	0	0	0	0	0	0	1	1	0	0	2	0	0	5	0	1	5	12
7:15 AM	0	0	0	6	0	6	0	0	1	0	0	1	0	1	1	0	0	2	0	1	7	0	0	8	17
7:30 AM	0	1	1	3	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	11
7:45 AM	0	0	1	2	0	3	0	0	0	0	0	0	0	1	3	0	0	4	0	0	6	0	0	6	13
Hourly Total	0	1	3	15	0	19	0	0	1	0	0	1	0	3	5	0	0	8	0	1	24	0	1	25	53
8:00 AM	0	0	2	1	0	3	0	0	1	0	0	1	0	1	3	0	0	4	0	0	5	0	0	5	13
8:15 AM	0	1	3	1	0	5	0	0	0	1	0	1	0	1	2	0	0	3	0	0	1	0	0	1	10
8:30 AM	0	0	1	1	0	2	0	0	0	0	0	0	0	2	1	0	0	3	0	0	5	0	1	5	10
8:45 AM	0	1	3	2	0	6	0	0	0	1	0	1	0	0	2	0	0	2	0	0	1	0	1	1	10
Hourly Total	0	2	9	5	0	16	0	0	1	2	0	3	0	4	8	0	0	12	0	0	12	0	2	12	43
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	0	0	1	0	1	0	0	2	0	0	2	0	2	5	0	0	7	0	2	1	0	0	3	13
4:15 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	3	3	0	0	6	0	0	0	0	0	0	7
4:30 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	3	5	0	0	8	0	0	0	0	2	0	9
4:45 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	4	8	0	0	12	0	1	3	0	0	4	17
Hourly Total	0	0	0	4	0	4	0	0	2	0	0	2	0	12	21	0	0	33	0	3	4	0	2	7	46
5:00 PM	0	1	1	1	0	3	0	0	2	0	1	2	0	3	4	0	0	7	0	0	10	1	0	11	23
5:15 PM	0	0	1	2	0	3	0	0	1	0	0	1	0	2	1	0	0	3	0	0	0	0	0	0	7
5:30 PM	0	1	0	1	0	2	0	0	1	2	0	3	0	9	4	0	0	13	0	0	2	1	0	3	21
5:45 PM	0	0	2	3	0	5	0	0	1	0	0	1	0	4	8	0	0	12	0	0	3	0	0	3	21
Hourly Total	0	2	4	7	0	13	0	0	5	2	1	7	0	18	17	0	0	35	0	0	15	2	0	17	72
Grand Total	0	7	22	42	2	71	0	3	12	7	1	22	0	48	77	0	0	125	0	8	77	3	8	88	306
Approach %	0.0	9.9	31.0	59.2	-	-	0.0	13.6	54.5	31.8	-	-	0.0	38.4	61.6	0.0	-	-	0.0	9.1	87.5	3.4	-	-	-
Total %	0.0	2.3	7.2	13.7	-	23.2	0.0	1.0	3.9	2.3	-	7.2	0.0	15.7	25.2	0.0	-	40.8	0.0	2.6	25.2	1.0	-	28.8	-

Lights	0	7	22	41	-	70	0	3	12	7	-	22	0	47	74	0	-	121	0	8	77	3	-	88	301
% Lights	-	100.0	100.0	97.6	-	98.6	-	100.0	100.0	100.0	-	100.0	-	97.9	96.1	-	-	96.8	-	100.0	100.0	100.0	-	100.0	98.4
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	0	0	0	0	-	0	1
% Buses	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	2.1	0.0	-	-	0.8	-	0.0	0.0	0.0	-	0.0	0.3
Single-Unit Trucks	0	0	0	1	-	1	0	0	0	0	-	0	0	0	2	0	-	2	0	0	0	0	-	0	3
% Single-Unit Trucks	-	0.0	0.0	2.4	-	1.4	-	0.0	0.0	0.0	-	0.0	-	0.0	2.6	-	-	1.6	-	0.0	0.0	0.0	-	0.0	1.0
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	0	0	0	0	-	0	1
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	1.3	-	-	0.8	-	0.0	0.0	0.0	-	0.0	0.3
Pedestrians	-	-	-	-	2	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	8	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

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

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

Count Name: Estes Street with Barley Avenue
TMC
Site Code:
Start Date: 01/25/2025

Turning Movement Peak Hour Data (1:00 PM)

Start Time	Estes Street Eastbound						Estes Street Westbound						Barkley Avenue Northbound						Barkley Avenue Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
1:00 PM	0	1	1	3	2	5	0	1	1	2	0	4	0	1	0	0	0	1	0	0	5	0	0	5	15
1:15 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	3	2	0	0	5	0	0	2	0	0	2	8
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	7	0	0	9	0	1	2	1	0	4	13
1:45 PM	0	0	1	2	0	3	0	2	1	0	0	3	0	0	3	0	0	3	0	0	5	0	0	5	14
Total	0	1	2	6	2	9	0	3	2	2	0	7	0	6	12	0	0	18	0	1	14	1	0	16	50
Approach %	0.0	11.1	22.2	66.7	-	-	0.0	42.9	28.6	28.6	-	-	0.0	33.3	66.7	0.0	-	-	0.0	6.3	87.5	6.3	-	-	-
Total %	0.0	2.0	4.0	12.0	-	18.0	0.0	6.0	4.0	4.0	-	14.0	0.0	12.0	24.0	0.0	-	36.0	0.0	2.0	28.0	2.0	-	32.0	-
PHF	0.000	0.250	0.500	0.500	-	0.450	0.000	0.375	0.500	0.250	-	0.438	0.000	0.500	0.429	0.000	-	0.500	0.000	0.250	0.700	0.250	-	0.800	0.833
Lights	0	1	2	5	-	8	0	3	2	2	-	7	0	6	12	0	-	18	0	1	14	1	-	16	49
% Lights	-	100.0	100.0	83.3	-	88.9	-	100.0	100.0	100.0	-	100.0	-	100.0	100.0	-	-	100.0	-	100.0	100.0	100.0	-	100.0	98.0
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Buses	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	0	0	1	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1
% Single-Unit Trucks	-	0.0	0.0	16.7	-	11.1	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	0.0	0.0	0.0	-	0.0	2.0
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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9575 W. Higgins Rd., Suite 400

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

Count Name: Estes Street with Barley Avenue
TMC
Site Code:
Start Date: 01/25/2025

Turning Movement Peak Hour Data (7:15 AM)

Start Time	Estes Street Eastbound						Estes Street Westbound						Barkley Avenue Northbound						Barkley Avenue Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:15 AM	0	0	0	6	0	6	0	0	1	0	0	1	0	1	1	0	0	2	0	1	7	0	0	8	17
7:30 AM	0	1	1	3	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	11
7:45 AM	0	0	1	2	0	3	0	0	0	0	0	0	0	1	3	0	0	4	0	0	6	0	0	6	13
8:00 AM	0	0	2	1	0	3	0	0	1	0	0	1	0	1	3	0	0	4	0	0	5	0	0	5	13
Total	0	1	4	12	0	17	0	0	2	0	0	2	0	3	7	0	0	10	0	1	24	0	0	25	54
Approach %	0.0	5.9	23.5	70.6	-	-	0.0	0.0	100.0	0.0	-	-	0.0	30.0	70.0	0.0	-	-	0.0	4.0	96.0	0.0	-	-	-
Total %	0.0	1.9	7.4	22.2	-	31.5	0.0	0.0	3.7	0.0	-	3.7	0.0	5.6	13.0	0.0	-	18.5	0.0	1.9	44.4	0.0	-	46.3	-
PHF	0.000	0.250	0.500	0.500	-	0.708	0.000	0.000	0.500	0.000	-	0.500	0.000	0.750	0.583	0.000	-	0.625	0.000	0.250	0.857	0.000	-	0.781	0.794
Lights	0	1	4	12	-	17	0	0	2	0	-	2	0	2	6	0	-	8	0	1	24	0	-	25	52
% Lights	-	100.0	100.0	100.0	-	100.0	-	-	100.0	-	-	100.0	-	66.7	85.7	-	-	80.0	-	100.0	100.0	-	-	100.0	96.3
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	0	0	0	0	-	0	1
% Buses	-	0.0	0.0	0.0	-	0.0	-	-	0.0	-	-	0.0	-	33.3	0.0	-	-	10.0	-	0.0	0.0	-	-	0.0	1.9
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Single-Unit Trucks	-	0.0	0.0	0.0	-	0.0	-	-	0.0	-	-	0.0	-	0.0	0.0	-	-	0.0	-	0.0	0.0	-	-	0.0	0.0
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
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	0	0	0	0	-	0	1
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	-	0.0	-	-	0.0	-	0.0	14.3	-	-	10.0	-	0.0	0.0	-	-	0.0	1.9
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
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Count Name: Estes Street with Barley Avenue
TMC
Site Code:
Start Date: 01/25/2025

Turning Movement Peak Hour Data (4:30 PM)

Start Time	Estes Street Eastbound						Estes Street Westbound						Barkley Avenue Northbound						Barkley Avenue Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
4:30 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	3	5	0	0	8	0	0	0	0	2	0	9
4:45 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	4	8	0	0	12	0	1	3	0	0	4	17
5:00 PM	0	1	1	1	0	3	0	0	2	0	1	2	0	3	4	0	0	7	0	0	10	1	0	11	23
5:15 PM	0	0	1	2	0	3	0	0	1	0	0	1	0	2	1	0	0	3	0	0	0	0	0	0	7
Total	0	1	2	5	0	8	0	0	3	0	1	3	0	12	18	0	0	30	0	1	13	1	2	15	56
Approach %	0.0	12.5	25.0	62.5	-	-	0.0	0.0	100.0	0.0	-	-	0.0	40.0	60.0	0.0	-	-	0.0	6.7	86.7	6.7	-	-	-
Total %	0.0	1.8	3.6	8.9	-	14.3	0.0	0.0	5.4	0.0	-	5.4	0.0	21.4	32.1	0.0	-	53.6	0.0	1.8	23.2	1.8	-	26.8	-
PHF	0.000	0.250	0.500	0.625	-	0.667	0.000	0.000	0.375	0.000	-	0.375	0.000	0.750	0.563	0.000	-	0.625	0.000	0.250	0.325	0.250	-	0.341	0.609
Lights	0	1	2	5	-	8	0	0	3	0	-	3	0	12	17	0	-	29	0	1	13	1	-	15	55
% Lights	-	100.0	100.0	100.0	-	100.0	-	-	100.0	-	-	100.0	-	100.0	94.4	-	-	96.7	-	100.0	100.0	100.0	-	100.0	98.2
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Buses	-	0.0	0.0	0.0	-	0.0	-	-	0.0	-	-	0.0	-	0.0	0.0	-	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	0	0	0	0	-	0	1
% Single-Unit Trucks	-	0.0	0.0	0.0	-	0.0	-	-	0.0	-	-	0.0	-	0.0	5.6	-	-	3.3	-	0.0	0.0	0.0	-	0.0	1.8
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
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	-	0.0	-	-	0.0	-	0.0	0.0	-	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

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9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
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Count Name: IL 59 with Duke Pkwy/Everton Drive TMC
Site Code:
Start Date: 01/25/2025

Turning Movement Data

Start Time	Duke Pkwy Eastbound						Everton Drive Westbound						IL 59 Northbound						IL 59 Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
12:00 PM	0	4	0	7	0	11	0	7	1	1	0	9	0	14	208	11	0	233	0	14	218	5	0	237	490
12:15 PM	0	3	2	6	0	11	0	11	2	1	0	14	3	10	230	12	0	255	0	4	246	4	0	254	534
12:30 PM	0	6	1	5	0	12	0	15	1	0	0	16	1	7	256	9	1	273	0	4	227	2	0	233	534
12:45 PM	0	4	0	4	0	8	0	17	1	3	0	21	0	10	216	12	0	238	0	9	248	3	0	260	527
Hourly Total	0	17	3	22	0	42	0	50	5	5	0	60	4	41	910	44	1	999	0	31	939	14	0	984	2085
1:00 PM	0	4	0	13	0	17	0	11	0	1	0	12	1	9	239	5	0	254	1	9	265	3	0	278	561
1:15 PM	0	3	1	5	0	9	0	20	0	0	0	20	2	10	260	7	0	279	0	7	212	2	0	221	529
1:30 PM	0	2	2	6	0	10	0	16	1	3	0	20	1	16	239	9	0	265	0	5	225	2	0	232	527
1:45 PM	0	7	2	9	0	18	0	12	0	1	0	13	2	8	215	13	0	238	0	10	267	7	0	284	553
Hourly Total	0	16	5	33	0	54	0	59	1	5	0	65	6	43	953	34	0	1036	1	31	969	14	0	1015	2170
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7:00 AM	0	1	0	11	0	12	0	7	0	2	0	9	3	19	254	4	0	280	0	2	315	15	0	332	633
7:15 AM	0	4	1	13	0	18	0	12	0	2	0	14	0	23	321	1	0	345	0	2	321	19	0	342	719
7:30 AM	0	12	0	13	0	25	0	24	1	3	0	28	2	9	318	2	0	331	0	1	315	9	0	325	709
7:45 AM	0	5	0	13	0	18	0	21	0	2	0	23	0	13	283	3	0	299	0	0	384	14	0	398	738
Hourly Total	0	22	1	50	0	73	0	64	1	9	0	74	5	64	1176	10	0	1255	0	5	1335	57	0	1397	2799
8:00 AM	0	9	0	12	0	21	0	20	0	2	0	22	1	12	314	5	0	332	0	2	304	10	0	316	691
8:15 AM	0	8	1	7	0	16	0	11	0	2	0	13	1	22	244	3	0	270	0	4	323	13	0	340	639
8:30 AM	0	5	0	16	0	21	0	8	0	2	0	10	2	14	301	7	0	324	0	2	276	13	0	291	646
8:45 AM	0	5	0	8	0	13	0	18	1	1	0	20	0	12	233	1	0	246	0	3	272	9	0	284	563
Hourly Total	0	27	1	43	0	71	0	57	1	7	0	65	4	60	1092	16	0	1172	0	11	1175	45	0	1231	2539
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	13	0	13	0	26	0	2	1	1	0	4	2	17	300	10	0	329	0	8	313	3	0	324	683
4:15 PM	0	11	2	4	0	17	1	14	0	4	1	19	2	15	274	14	0	305	0	9	310	2	0	321	662
4:30 PM	0	10	0	6	0	16	0	6	0	0	0	6	1	14	345	11	0	371	0	5	375	7	0	387	780
4:45 PM	0	3	0	5	0	8	0	8	1	3	0	12	0	11	281	16	0	308	0	4	323	7	0	334	662
Hourly Total	0	37	2	28	0	67	1	30	2	8	1	41	5	57	1200	51	0	1313	0	26	1321	19	0	1366	2787
5:00 PM	0	13	0	18	0	31	0	12	0	3	0	15	0	24	327	24	0	375	1	15	318	12	0	346	767
5:15 PM	0	11	1	6	0	18	0	5	0	6	0	11	2	11	369	28	0	410	1	8	365	13	0	387	826
5:30 PM	0	16	1	33	0	50	0	13	0	2	1	15	2	22	295	17	0	336	1	16	262	9	0	288	689
5:45 PM	0	5	1	11	0	17	0	6	4	3	0	13	2	19	281	16	0	318	0	18	291	13	0	322	670
Hourly Total	0	45	3	68	0	116	0	36	4	14	1	54	6	76	1272	85	0	1439	3	57	1236	47	0	1343	2952
Grand Total	0	164	15	244	0	423	1	296	14	48	2	359	30	341	6603	240	1	7214	4	161	6975	196	0	7336	15332
Approach %	0.0	38.8	3.5	57.7	-	-	0.3	82.5	3.9	13.4	-	-	0.4	4.7	91.5	3.3	-	-	0.1	2.2	95.1	2.7	-	-	-
Total %	0.0	1.1	0.1	1.6	-	2.8	0.0	1.9	0.1	0.3	-	2.3	0.2	2.2	43.1	1.6	-	47.1	0.0	1.1	45.5	1.3	-	47.8	-

Lights	0	140	15	171	-	326	1	294	14	48	-	357	30	289	6194	236	-	6749	4	157	6591	155	-	6907	14339
% Lights	-	85.4	100.0	70.1	-	77.1	100.0	99.3	100.0	100.0	-	99.4	100.0	84.8	93.8	98.3	-	93.6	100.0	97.5	94.5	79.1	-	94.2	93.5
Buses	0	2	0	0	-	2	0	0	0	0	-	0	0	2	9	1	-	12	0	3	12	0	-	15	29
% Buses	-	1.2	0.0	0.0	-	0.5	0.0	0.0	0.0	0.0	-	0.0	0.0	0.6	0.1	0.4	-	0.2	0.0	1.9	0.2	0.0	-	0.2	0.2
Single-Unit Trucks	0	6	0	20	-	26	0	2	0	0	-	2	0	18	137	1	-	156	0	1	99	5	-	105	289
% Single-Unit Trucks	-	3.7	0.0	8.2	-	6.1	0.0	0.7	0.0	0.0	-	0.6	0.0	5.3	2.1	0.4	-	2.2	0.0	0.6	1.4	2.6	-	1.4	1.9
Articulated Trucks	0	16	0	53	-	69	0	0	0	0	-	0	0	32	263	2	-	297	0	0	273	36	-	309	675
% Articulated Trucks	-	9.8	0.0	21.7	-	16.3	0.0	0.0	0.0	0.0	-	0.0	0.0	9.4	4.0	0.8	-	4.1	0.0	0.0	3.9	18.4	-	4.2	4.4
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	1	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-

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

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

Count Name: IL 59 with Duke Pkwy/Everton Drive TMC
Site Code:
Start Date: 01/25/2025

Turning Movement Peak Hour Data (1:00 PM)

Start Time	Duke Pkwy Eastbound						Everton Drive Westbound						IL 59 Northbound						IL 59 Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
1:00 PM	0	4	0	13	0	17	0	11	0	1	0	12	1	9	239	5	0	254	1	9	265	3	0	278	561
1:15 PM	0	3	1	5	0	9	0	20	0	0	0	20	2	10	260	7	0	279	0	7	212	2	0	221	529
1:30 PM	0	2	2	6	0	10	0	16	1	3	0	20	1	16	239	9	0	265	0	5	225	2	0	232	527
1:45 PM	0	7	2	9	0	18	0	12	0	1	0	13	2	8	215	13	0	238	0	10	267	7	0	284	553
Total	0	16	5	33	0	54	0	59	1	5	0	65	6	43	953	34	0	1036	1	31	969	14	0	1015	2170
Approach %	0.0	29.6	9.3	61.1	-	-	0.0	90.8	1.5	7.7	-	-	0.6	4.2	92.0	3.3	-	-	0.1	3.1	95.5	1.4	-	-	-
Total %	0.0	0.7	0.2	1.5	-	2.5	0.0	2.7	0.0	0.2	-	3.0	0.3	2.0	43.9	1.6	-	47.7	0.0	1.4	44.7	0.6	-	46.8	-
PHF	0.000	0.571	0.625	0.635	-	0.750	0.000	0.738	0.250	0.417	-	0.813	0.750	0.672	0.916	0.654	-	0.928	0.250	0.775	0.907	0.500	-	0.893	0.967
Lights	0	14	5	23	-	42	0	59	1	5	-	65	6	36	926	34	-	1002	1	30	941	11	-	983	2092
% Lights	-	87.5	100.0	69.7	-	77.8	-	100.0	100.0	100.0	-	100.0	100.0	83.7	97.2	100.0	-	96.7	100.0	96.8	97.1	78.6	-	96.8	96.4
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Buses	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	2	0	3	-	5	0	0	0	0	-	0	0	6	18	0	-	24	0	1	8	0	-	9	38
% Single-Unit Trucks	-	12.5	0.0	9.1	-	9.3	-	0.0	0.0	0.0	-	0.0	0.0	14.0	1.9	0.0	-	2.3	0.0	3.2	0.8	0.0	-	0.9	1.8
Articulated Trucks	0	0	0	7	-	7	0	0	0	0	-	0	0	1	9	0	-	10	0	0	20	3	-	23	40
% Articulated Trucks	-	0.0	0.0	21.2	-	13.0	-	0.0	0.0	0.0	-	0.0	0.0	2.3	0.9	0.0	-	1.0	0.0	0.0	2.1	21.4	-	2.3	1.8
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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9575 W. Higgins Rd., Suite 400

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(847)518-9990 sainkeshavarzi@kloainc.com

Count Name: IL 59 with Duke Pkwy/Everton Drive TMC
Site Code:
Start Date: 01/25/2025

Turning Movement Peak Hour Data (7:15 AM)

Start Time	Duke Pkwy Eastbound						Everton Drive Westbound						IL 59 Northbound						IL 59 Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:15 AM	0	4	1	13	0	18	0	12	0	2	0	14	0	23	321	1	0	345	0	2	321	19	0	342	719
7:30 AM	0	12	0	13	0	25	0	24	1	3	0	28	2	9	318	2	0	331	0	1	315	9	0	325	709
7:45 AM	0	5	0	13	0	18	0	21	0	2	0	23	0	13	283	3	0	299	0	0	384	14	0	398	738
8:00 AM	0	9	0	12	0	21	0	20	0	2	0	22	1	12	314	5	0	332	0	2	304	10	0	316	691
Total	0	30	1	51	0	82	0	77	1	9	0	87	3	57	1236	11	0	1307	0	5	1324	52	0	1381	2857
Approach %	0.0	36.6	1.2	62.2	-	-	0.0	88.5	1.1	10.3	-	-	0.2	4.4	94.6	0.8	-	-	0.0	0.4	95.9	3.8	-	-	-
Total %	0.0	1.1	0.0	1.8	-	2.9	0.0	2.7	0.0	0.3	-	3.0	0.1	2.0	43.3	0.4	-	45.7	0.0	0.2	46.3	1.8	-	48.3	-
PHF	0.000	0.625	0.250	0.981	-	0.820	0.000	0.802	0.250	0.750	-	0.777	0.375	0.620	0.963	0.550	-	0.947	0.000	0.625	0.862	0.684	-	0.867	0.968
Lights	0	20	1	31	-	52	0	77	1	9	-	87	3	44	1136	9	-	1192	0	5	1231	39	-	1275	2606
% Lights	-	66.7	100.0	60.8	-	63.4	-	100.0	100.0	100.0	-	100.0	100.0	77.2	91.9	81.8	-	91.2	-	100.0	93.0	75.0	-	92.3	91.2
Buses	0	2	0	0	-	2	0	0	0	0	-	0	0	2	3	1	-	6	0	0	2	0	-	2	10
% Buses	-	6.7	0.0	0.0	-	2.4	-	0.0	0.0	0.0	-	0.0	0.0	3.5	0.2	9.1	-	0.5	-	0.0	0.2	0.0	-	0.1	0.4
Single-Unit Trucks	0	1	0	6	-	7	0	0	0	0	-	0	0	1	19	1	-	21	0	0	33	3	-	36	64
% Single-Unit Trucks	-	3.3	0.0	11.8	-	8.5	-	0.0	0.0	0.0	-	0.0	0.0	1.8	1.5	9.1	-	1.6	-	0.0	2.5	5.8	-	2.6	2.2
Articulated Trucks	0	7	0	14	-	21	0	0	0	0	-	0	0	10	78	0	-	88	0	0	58	10	-	68	177
% Articulated Trucks	-	23.3	0.0	27.5	-	25.6	-	0.0	0.0	0.0	-	0.0	0.0	17.5	6.3	0.0	-	6.7	-	0.0	4.4	19.2	-	4.9	6.2
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: IL 59 with Duke Pkwy/Everton Drive TMC
Site Code:
Start Date: 01/25/2025

Turning Movement Peak Hour Data (4:30 PM)

Start Time	Duke Pkwy Eastbound						Everton Drive Westbound						IL 59 Northbound						IL 59 Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
4:30 PM	0	10	0	6	0	16	0	6	0	0	0	6	1	14	345	11	0	371	0	5	375	7	0	387	780
4:45 PM	0	3	0	5	0	8	0	8	1	3	0	12	0	11	281	16	0	308	0	4	323	7	0	334	662
5:00 PM	0	13	0	18	0	31	0	12	0	3	0	15	0	24	327	24	0	375	1	15	318	12	0	346	767
5:15 PM	0	11	1	6	0	18	0	5	0	6	0	11	2	11	369	28	0	410	1	8	365	13	0	387	826
Total	0	37	1	35	0	73	0	31	1	12	0	44	3	60	1322	79	0	1464	2	32	1381	39	0	1454	3035
Approach %	0.0	50.7	1.4	47.9	-	-	0.0	70.5	2.3	27.3	-	-	0.2	4.1	90.3	5.4	-	-	0.1	2.2	95.0	2.7	-	-	-
Total %	0.0	1.2	0.0	1.2	-	2.4	0.0	1.0	0.0	0.4	-	1.4	0.1	2.0	43.6	2.6	-	48.2	0.1	1.1	45.5	1.3	-	47.9	-
PHF	0.000	0.712	0.250	0.486	-	0.589	0.000	0.646	0.250	0.500	-	0.733	0.375	0.625	0.896	0.705	-	0.893	0.500	0.533	0.921	0.750	-	0.939	0.919
Lights	0	30	1	27	-	58	0	31	1	12	-	44	3	47	1261	79	-	1390	2	32	1305	29	-	1368	2860
% Lights	-	81.1	100.0	77.1	-	79.5	-	100.0	100.0	100.0	-	100.0	100.0	78.3	95.4	100.0	-	94.9	100.0	100.0	94.5	74.4	-	94.1	94.2
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	0	0	0	0	-	0	1
% Buses	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.1	0.0	-	0.1	0.0	0.0	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	0	0	1	-	1	0	0	0	0	-	0	0	3	17	0	-	20	0	0	10	1	-	11	32
% Single-Unit Trucks	-	0.0	0.0	2.9	-	1.4	-	0.0	0.0	0.0	-	0.0	0.0	5.0	1.3	0.0	-	1.4	0.0	0.0	0.7	2.6	-	0.8	1.1
Articulated Trucks	0	7	0	7	-	14	0	0	0	0	-	0	0	10	43	0	-	53	0	0	66	9	-	75	142
% Articulated Trucks	-	18.9	0.0	20.0	-	19.2	-	0.0	0.0	0.0	-	0.0	0.0	16.7	3.3	0.0	-	3.6	0.0	0.0	4.8	23.1	-	5.2	4.7
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

Count Name: IL 59 with Estes Street TMC
Site Code:
Start Date: 01/25/2025

Turning Movement Data

Start Time	Estes Street Eastbound					IL 59 Northbound					IL 59 Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
12:00 PM	0	0	2	0	2	0	0	196	0	196	0	244	1	0	245	443
12:15 PM	0	0	2	0	2	0	0	251	0	251	0	252	1	0	253	506
12:30 PM	0	0	1	0	1	0	0	250	0	250	0	241	0	0	241	492
12:45 PM	0	0	1	0	1	0	0	203	0	203	0	240	0	0	240	444
Hourly Total	0	0	6	0	6	0	0	900	0	900	0	977	2	0	979	1885
1:00 PM	0	0	1	0	1	0	0	274	0	274	0	277	4	0	281	556
1:15 PM	0	0	0	0	0	0	0	257	0	257	0	233	0	0	233	490
1:30 PM	0	0	1	0	1	0	0	295	0	295	0	224	0	0	224	520
1:45 PM	0	0	0	0	0	0	0	287	0	287	0	281	3	0	284	571
Hourly Total	0	0	2	0	2	0	0	1113	0	1113	0	1015	7	0	1022	2137
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7:00 AM	0	0	1	0	1	0	0	283	0	283	0	296	0	0	296	580
7:15 AM	0	0	1	0	1	0	0	348	0	348	0	353	1	0	354	703
7:30 AM	0	0	2	0	2	0	0	360	0	360	0	312	0	0	312	674
7:45 AM	0	0	1	0	1	0	0	322	0	322	0	365	0	0	365	688
Hourly Total	0	0	5	0	5	0	0	1313	0	1313	0	1326	1	0	1327	2645
8:00 AM	0	0	2	0	2	0	0	312	0	312	0	349	1	0	350	664
8:15 AM	0	0	2	0	2	0	0	279	0	279	0	328	1	0	329	610
8:30 AM	0	0	1	0	1	0	0	310	0	310	0	283	0	0	283	594
8:45 AM	0	0	3	0	3	0	0	243	0	243	0	296	1	0	297	543
Hourly Total	0	0	8	0	8	0	0	1144	0	1144	0	1256	3	0	1259	2411
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	0	2	0	2	0	0	298	0	298	0	311	1	0	312	612
4:15 PM	0	0	0	1	0	0	0	300	0	300	0	330	0	0	330	630
4:30 PM	0	0	0	0	0	0	0	394	0	394	0	355	1	0	356	750
4:45 PM	0	0	1	0	1	0	0	304	0	304	0	331	0	0	331	636
Hourly Total	0	0	3	1	3	0	0	1296	0	1296	0	1327	2	0	1329	2628
5:00 PM	0	0	1	0	1	0	0	355	0	355	0	355	1	0	356	712
5:15 PM	0	0	1	0	1	0	0	360	0	360	0	370	1	0	371	732
5:30 PM	0	0	0	0	0	0	0	321	0	321	0	326	3	0	329	650
5:45 PM	0	0	2	0	2	0	0	305	0	305	0	293	1	0	294	601
Hourly Total	0	0	4	0	4	0	0	1341	0	1341	0	1344	6	0	1350	2695
Grand Total	0	0	28	1	28	0	0	7107	0	7107	0	7245	21	0	7266	14401
Approach %	0.0	0.0	100.0	-	-	0.0	0.0	100.0	-	-	0.0	99.7	0.3	-	-	-
Total %	0.0	0.0	0.2	-	0.2	0.0	0.0	49.4	-	49.4	0.0	50.3	0.1	-	50.5	-
Lights	0	0	28	-	28	0	0	6688	-	6688	0	6824	21	-	6845	13561

% Lights	-	-	100.0	-	100.0	-	-	94.1	-	94.1	-	94.2	100.0	-	94.2	94.2
Buses	0	0	0	-	0	0	0	13	-	13	0	15	0	-	15	28
% Buses	-	-	0.0	-	0.0	-	-	0.2	-	0.2	-	0.2	0.0	-	0.2	0.2
Single-Unit Trucks	0	0	0	-	0	0	0	118	-	118	0	109	0	-	109	227
% Single-Unit Trucks	-	-	0.0	-	0.0	-	-	1.7	-	1.7	-	1.5	0.0	-	1.5	1.6
Articulated Trucks	0	0	0	-	0	0	0	288	-	288	0	297	0	-	297	585
% Articulated Trucks	-	-	0.0	-	0.0	-	-	4.1	-	4.1	-	4.1	0.0	-	4.1	4.1
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	-	0.0	-	0.0	-	-	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	1	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: IL 59 with Estes Street TMC
Site Code:
Start Date: 01/25/2025

Turning Movement Peak Hour Data (1:00 PM)

Start Time	Estes Street Eastbound					IL 59 Northbound					IL 59 Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
1:00 PM	0	0	1	0	1	0	0	274	0	274	0	277	4	0	281	556
1:15 PM	0	0	0	0	0	0	0	257	0	257	0	233	0	0	233	490
1:30 PM	0	0	1	0	1	0	0	295	0	295	0	224	0	0	224	520
1:45 PM	0	0	0	0	0	0	0	287	0	287	0	281	3	0	284	571
Total	0	0	2	0	2	0	0	1113	0	1113	0	1015	7	0	1022	2137
Approach %	0.0	0.0	100.0	-	-	0.0	0.0	100.0	-	-	0.0	99.3	0.7	-	-	-
Total %	0.0	0.0	0.1	-	0.1	0.0	0.0	52.1	-	52.1	0.0	47.5	0.3	-	47.8	-
PHF	0.000	0.000	0.500	-	0.500	0.000	0.000	0.943	-	0.943	0.000	0.903	0.438	-	0.900	0.936
Lights	0	0	2	-	2	0	0	1079	-	1079	0	989	7	-	996	2077
% Lights	-	-	100.0	-	100.0	-	-	96.9	-	96.9	-	97.4	100.0	-	97.5	97.2
Buses	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Buses	-	-	0.0	-	0.0	-	-	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	0	0	-	0	0	0	19	-	19	0	8	0	-	8	27
% Single-Unit Trucks	-	-	0.0	-	0.0	-	-	1.7	-	1.7	-	0.8	0.0	-	0.8	1.3
Articulated Trucks	0	0	0	-	0	0	0	15	-	15	0	18	0	-	18	33
% Articulated Trucks	-	-	0.0	-	0.0	-	-	1.3	-	1.3	-	1.8	0.0	-	1.8	1.5
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	-	0.0	-	0.0	-	-	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

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

Count Name: IL 59 with Estes Street TMC
Site Code:
Start Date: 01/25/2025

Turning Movement Peak Hour Data (7:15 AM)

Start Time	Estes Street Eastbound					IL 59 Northbound					IL 59 Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
7:15 AM	0	0	1	0	1	0	0	348	0	348	0	353	1	0	354	703
7:30 AM	0	0	2	0	2	0	0	360	0	360	0	312	0	0	312	674
7:45 AM	0	0	1	0	1	0	0	322	0	322	0	365	0	0	365	688
8:00 AM	0	0	2	0	2	0	0	312	0	312	0	349	1	0	350	664
Total	0	0	6	0	6	0	0	1342	0	1342	0	1379	2	0	1381	2729
Approach %	0.0	0.0	100.0	-	-	0.0	0.0	100.0	-	-	0.0	99.9	0.1	-	-	-
Total %	0.0	0.0	0.2	-	0.2	0.0	0.0	49.2	-	49.2	0.0	50.5	0.1	-	50.6	-
PHF	0.000	0.000	0.750	-	0.750	0.000	0.000	0.932	-	0.932	0.000	0.945	0.500	-	0.946	0.970
Lights	0	0	6	-	6	0	0	1231	-	1231	0	1277	2	-	1279	2516
% Lights	-	-	100.0	-	100.0	-	-	91.7	-	91.7	-	92.6	100.0	-	92.6	92.2
Buses	0	0	0	-	0	0	0	4	-	4	0	2	0	-	2	6
% Buses	-	-	0.0	-	0.0	-	-	0.3	-	0.3	-	0.1	0.0	-	0.1	0.2
Single-Unit Trucks	0	0	0	-	0	0	0	21	-	21	0	38	0	-	38	59
% Single-Unit Trucks	-	-	0.0	-	0.0	-	-	1.6	-	1.6	-	2.8	0.0	-	2.8	2.2
Articulated Trucks	0	0	0	-	0	0	0	86	-	86	0	62	0	-	62	148
% Articulated Trucks	-	-	0.0	-	0.0	-	-	6.4	-	6.4	-	4.5	0.0	-	4.5	5.4
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	-	0.0	-	0.0	-	-	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

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

Count Name: IL 59 with Estes Street TMC
Site Code:
Start Date: 01/25/2025

Turning Movement Peak Hour Data (4:30 PM)

Start Time	Estes Street Eastbound					IL 59 Northbound					IL 59 Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
4:30 PM	0	0	0	0	0	0	0	394	0	394	0	355	1	0	356	750
4:45 PM	0	0	1	0	1	0	0	304	0	304	0	331	0	0	331	636
5:00 PM	0	0	1	0	1	0	0	355	0	355	0	355	1	0	356	712
5:15 PM	0	0	1	0	1	0	0	360	0	360	0	370	1	0	371	732
Total	0	0	3	0	3	0	0	1413	0	1413	0	1411	3	0	1414	2830
Approach %	0.0	0.0	100.0	-	-	0.0	0.0	100.0	-	-	0.0	99.8	0.2	-	-	-
Total %	0.0	0.0	0.1	-	0.1	0.0	0.0	49.9	-	49.9	0.0	49.9	0.1	-	50.0	-
PHF	0.000	0.000	0.750	-	0.750	0.000	0.000	0.897	-	0.897	0.000	0.953	0.750	-	0.953	0.943
Lights	0	0	3	-	3	0	0	1351	-	1351	0	1327	3	-	1330	2684
% Lights	-	-	100.0	-	100.0	-	-	95.6	-	95.6	-	94.0	100.0	-	94.1	94.8
Buses	0	0	0	-	0	0	0	2	-	2	0	0	0	-	0	2
% Buses	-	-	0.0	-	0.0	-	-	0.1	-	0.1	-	0.0	0.0	-	0.0	0.1
Single-Unit Trucks	0	0	0	-	0	0	0	13	-	13	0	11	0	-	11	24
% Single-Unit Trucks	-	-	0.0	-	0.0	-	-	0.9	-	0.9	-	0.8	0.0	-	0.8	0.8
Articulated Trucks	0	0	0	-	0	0	0	47	-	47	0	73	0	-	73	120
% Articulated Trucks	-	-	0.0	-	0.0	-	-	3.3	-	3.3	-	5.2	0.0	-	5.2	4.2
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	-	0.0	-	0.0	-	-	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Site Plan

PAVING LEGEND

HMA PAVEMENT
1.5" HMA N-50 SURFACE
2" HMA N-50 BINDER*
10" AGGREGATE BASE

HEAVY DUTY CONCRETE
8" CONCRETE CLASS PV
4" AGGREGATE BASE

SIDEWALK
5" CONCRETE CLASS SI
4" AGGREGATE BASE

SITE DATA TABLE - PROPOSED DREAM CLEAN AND STARBUCKS
ROUTE 59 and DUKE PARKWAY, WARRENVILLE, IL
PIN 04-33-403-003,006,007,008

SITE AREA = 4.02 ACRES

BUILDING SETBACKS

FRONT - EAST	40 FEET
REAR - WEST	20 FEET
SIDE - NORTH	40 FEET
SIDE - SOUTH	15 FEET

LAND USE DATA - LOT 1

ZONING CATEGORY/ ZONING AGENCY	B-4, CITY OF WARRENVILLE
SITE AREA	1.22 AC.
EXISTING BUILDING AREA	0 S. FT.
ONSITE VEHICULAR CIRCULATION	7,648 S. FT.
AREA (PAVED) 110,997 S. FT.	
ONSITE OPEN SPACE/ LANDSCAPE AREA .	45,495 S. FT.

LAND USE DATA - LOT 2 - STARBUCKS

MAX. BUILDING HEIGHT	42 FEET ALLOWED
ZONING CATEGORY/ ZONING AGENCY	B-4, CITY OF WARRENVILLE
SITE AREA	0.85 AC.
STARBUCKS BUILDING AREA	2,242 S.FT
EXISTING BUILDING AREA	0 S. FT.
PARKING PROVIDED	22 SPACES
CAR STACKING PROVIDED	15 CARS
ONSITE VEHICULAR CIRCULATION	18,938 S. FT.
AREA (PAVED) 18,970 S. FT.	
ONSITE OPEN SPACE/ LANDSCAPE AREA .	13,621 S. FT.
ONSITE SIDEWALK	2,215 S. FT.

LAND USE DATA - LOT 3 - DREAM CLEAN

MAX. BUILDING HEIGHT	42 FEET ALLOWED
ZONING CATEGORY/ ZONING AGENCY	B-4, CITY OF WARRENVILLE
SITE AREA	1.95 AC.
DREAM CLEAN BUILDING AREA	6,500 S.FT
EXISTING BUILDING AREA	0 S. FT.
PARKING PROVIDED	20 SPACES
CAR STACKING PROVIDED	37 CARS
ONSITE VEHICULAR CIRCULATION	29,548 S. FT.
AREA (PAVED) 31,855 S. FT.	
ONSITE OPEN SPACE/ LANDSCAPE AREA .	46,435 S. FT.
ONSITE SIDEWALK	2,459 S. FT.

0 30 60
GRAPHIC SCALE - FEET

WARRENVILLE R-2 RESIDENTIAL
16-ft Ornamental Light on Estes
ESTES STREET
CONCRETE SIDEWALK
DEPRESSED CURB
CONCRETE PAVEMENT
REVISED RIGHT IN/OUT
CROSSWALK
WARRENVILLE R-2 RESIDENTIAL
16-ft Ornamental Light on Barkley
BARKLEY AVENUE
LOT 1
1.22 Ac.
TRASH ENCLOSURE
B:6-12 CURB
CONCRETE PAVEMENT
ADA STRIPING
4" YELLOW STRIPE
SIGN
REMOVE EXISTING HMA PATH AND PROVIDE CONCRETE WALK WITH ADA RAMPS
HMA PAVEMENT
10-FT EASEMENT FOR WATER MAIN
LOT 2
0.85Ac.
BIKE RACK
EMPLOYEE PARKING
CONCRETE SIDEWALK
12-ft Ornamental Light
LOT 3
1.95 Ac.
1 STORY CAR WASH
19 VACUUM STALLS
6 EMPLOYEE STALLS
PAY STATION
EASEMENT FOR SANITARY SEWER
ILLINOIS ROUTE 59
WARRENVILLE B-2 COMMUNITY RETAIL
RIGHT IN/OUT PER CITY OF AURORA STANDARDS
PARKING LOT LIGHT
STOP AND RIGHT TURN ONLY SIGN W/ STOP BAR
REMOVE EXISTING HMA PATH AND PROVIDE CONCRETE WALK WITH ADA RAMPS
NO LEFT TURN SUGN
DUKE PARKWAY
WARRENVILLE B- BUSINESS

DREAM CLEAN
R. 59 AND DUKE PARKWAY
WARRENVILLE, IL 60555

Prepared For:
Dream Clean Operating Company
605 Graceland Ave.
Wheaton, IL 60187
email- mzavedyuk@dreamcleanow.com

ARCH AMERICA
Phone 847.697.7755
3413 North Rt. 31, Suite 213
Crystal Lake, IL 60012

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DESIGN FIRM LICENSE NO. 184.003161

REV'd	DATE	REVISION DESCRIPTION	BY
	04/15/25	Revised per City review	

Section-Township-Range
DuPage: 33/34 T 39N R 09E

JOB #	41516	SURV:	CB
DRAWN:	BMB	REVIEW:	SMR
SCALE:	1"=30'	DATE:	02-10-25

SHEET NAME
SITE PLAN

SHEET #
SP-1

E:\ACTIVE-PROJECTS\41516-333909-DuPage\ENGR-BB\FINAL ENGINEERING PLANS\UNIT 6\Dream Clean and Starbucks\41516 Dream Clean.dgn, Model: SP-1, Date: 4/14/2025

ITE Trip Generation Summary Sheets

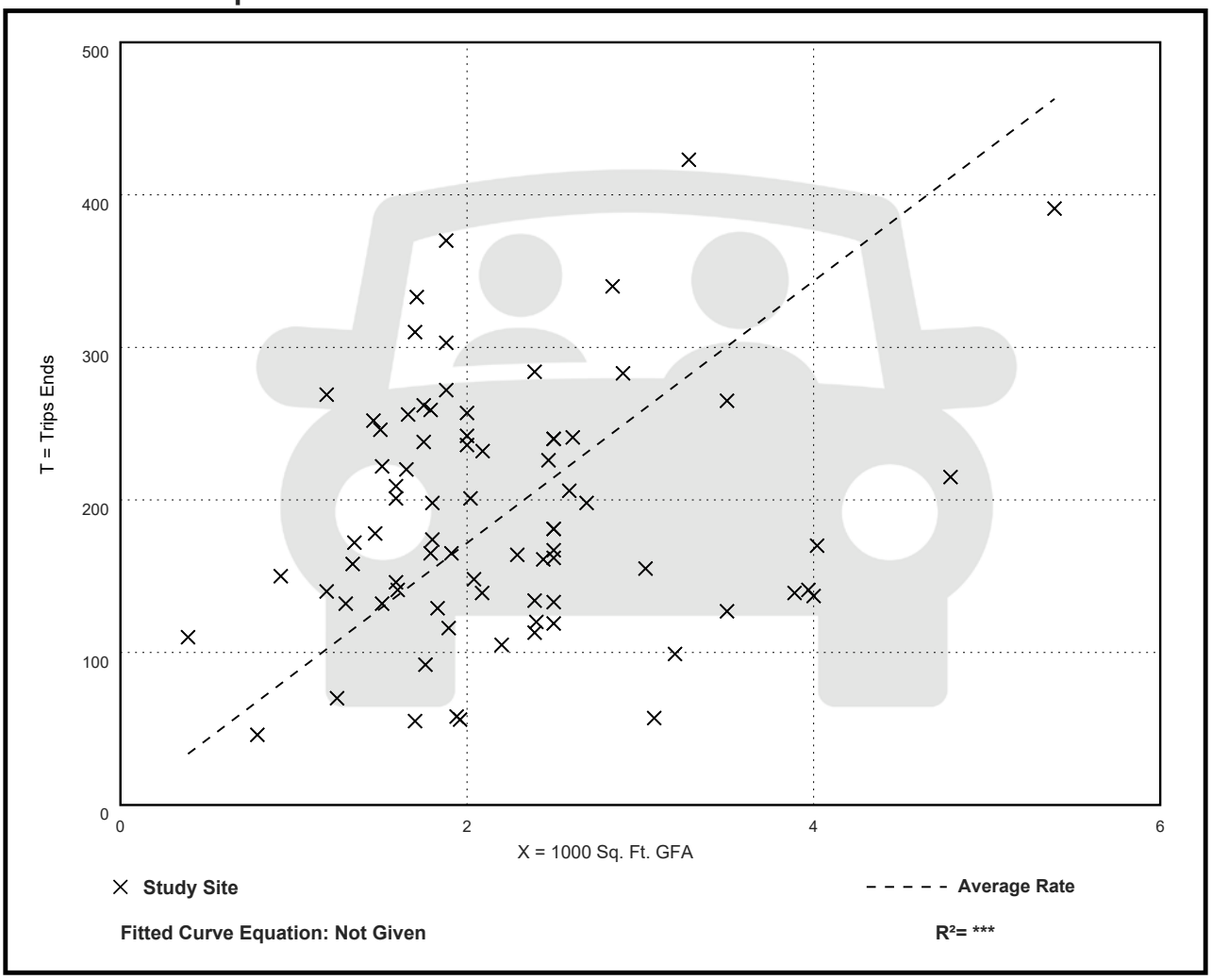
Coffee/Donut Shop with Drive-Through Window (937)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 78
Avg. 1000 Sq. Ft. GFA: 2
Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
85.88	18.51 - 282.05	44.92

Data Plot and Equation



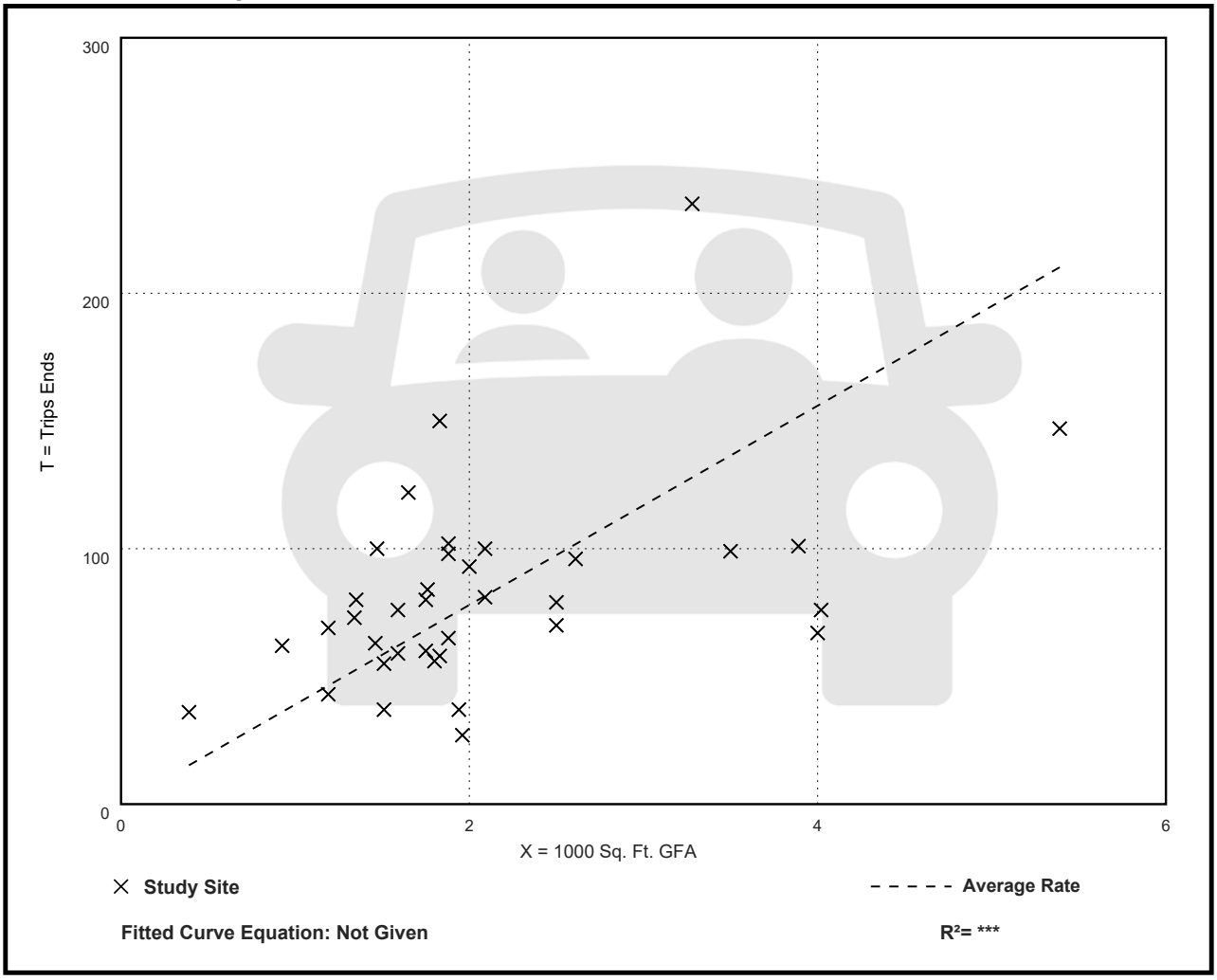
Coffee/Donut Shop with Drive-Through Window (937)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 36
Avg. 1000 Sq. Ft. GFA: 2
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
38.99	13.78 - 92.31	17.79

Data Plot and Equation



Coffee/Donut Shop with Drive-Through Window (937)

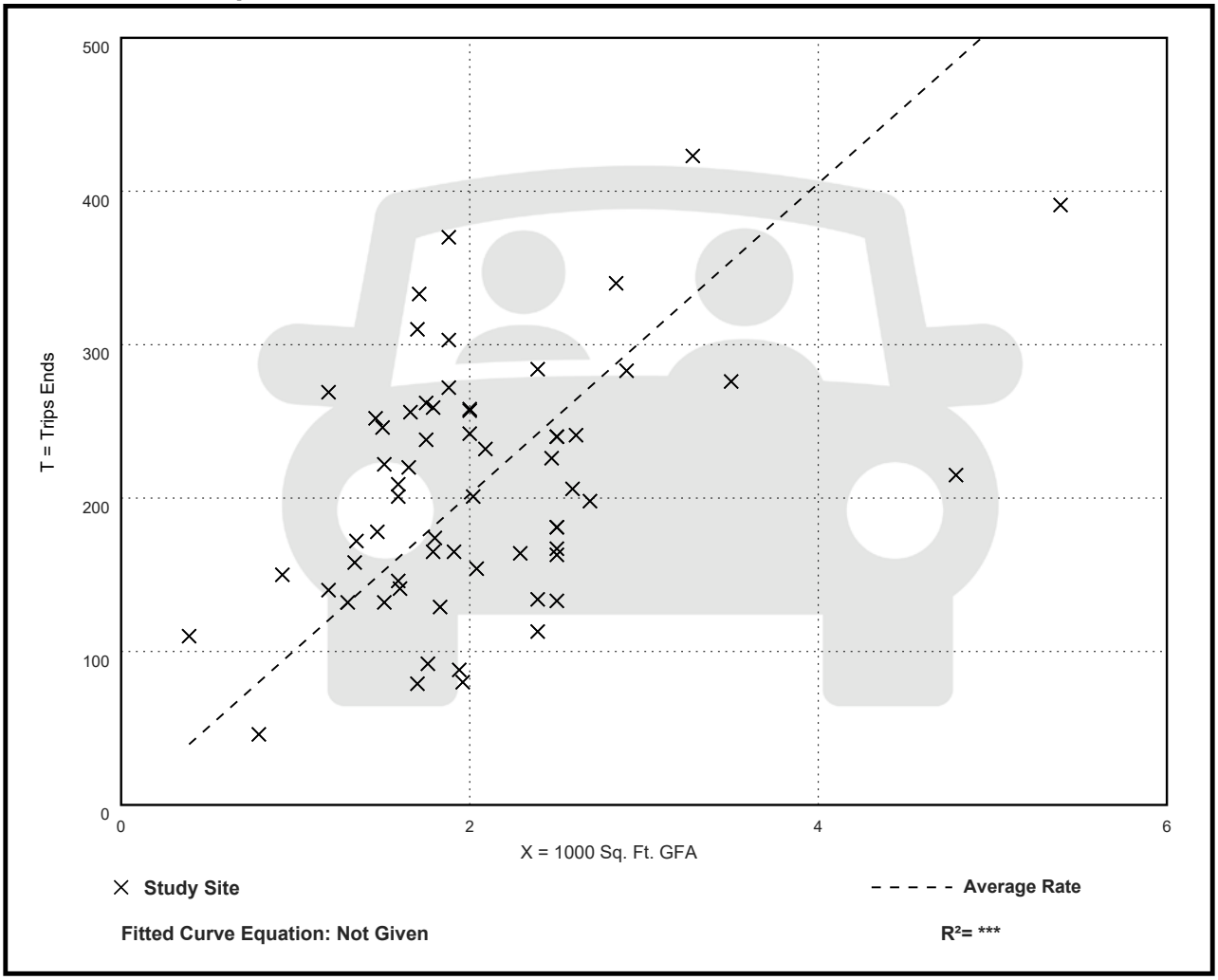
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
AM Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 62
Avg. 1000 Sq. Ft. GFA: 2
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
101.27	40.82 - 282.05	41.74

Data Plot and Equation



Coffee/Donut Shop with Drive-Through Window (937)

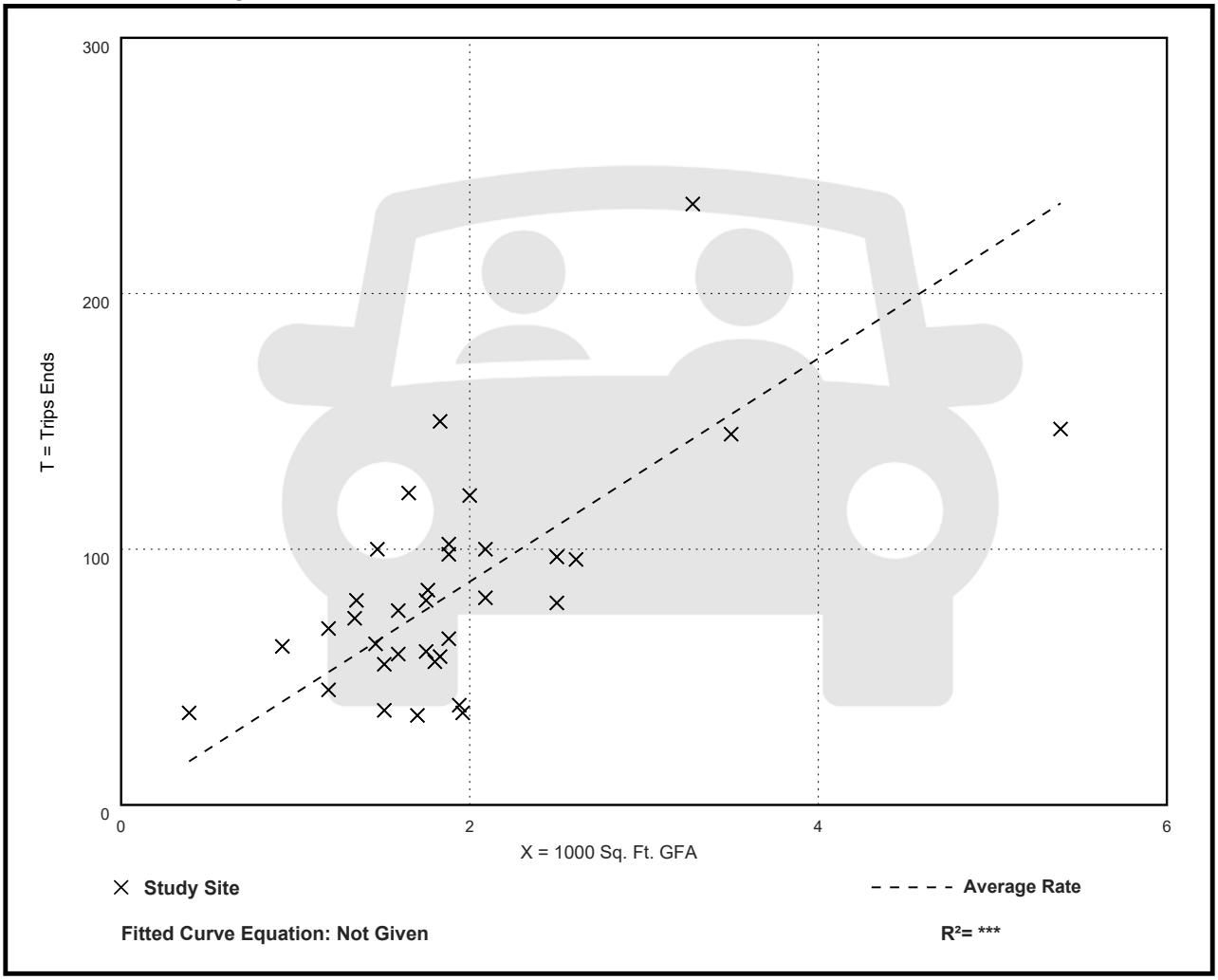
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
PM Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 34
Avg. 1000 Sq. Ft. GFA: 2
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
43.65	18.37 - 92.31	16.74

Data Plot and Equation



Coffee/Donut Shop with Drive-Through Window (937)

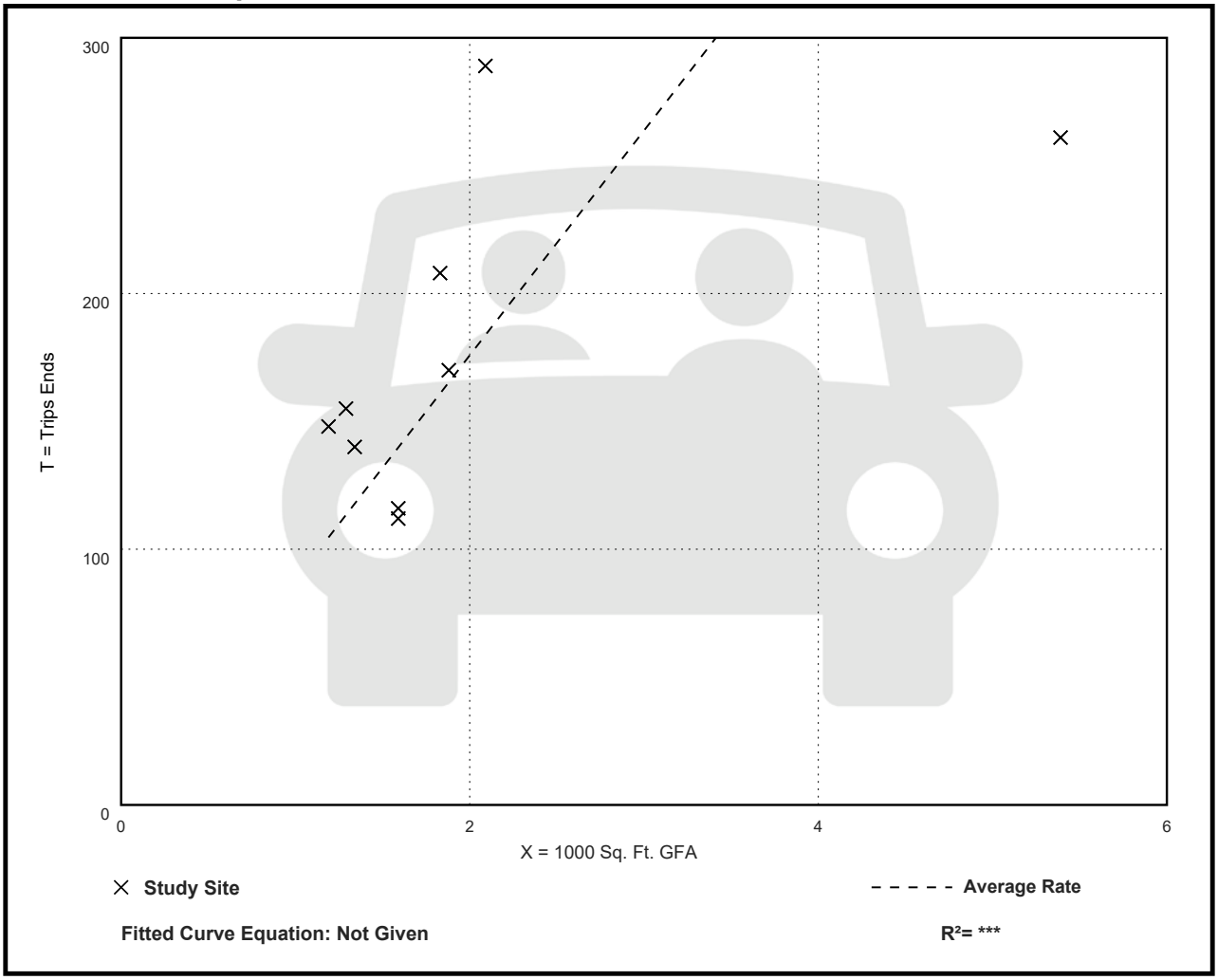
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 9
Avg. 1000 Sq. Ft. GFA: 2
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
87.91	48.42 - 138.28	34.34

Data Plot and Equation



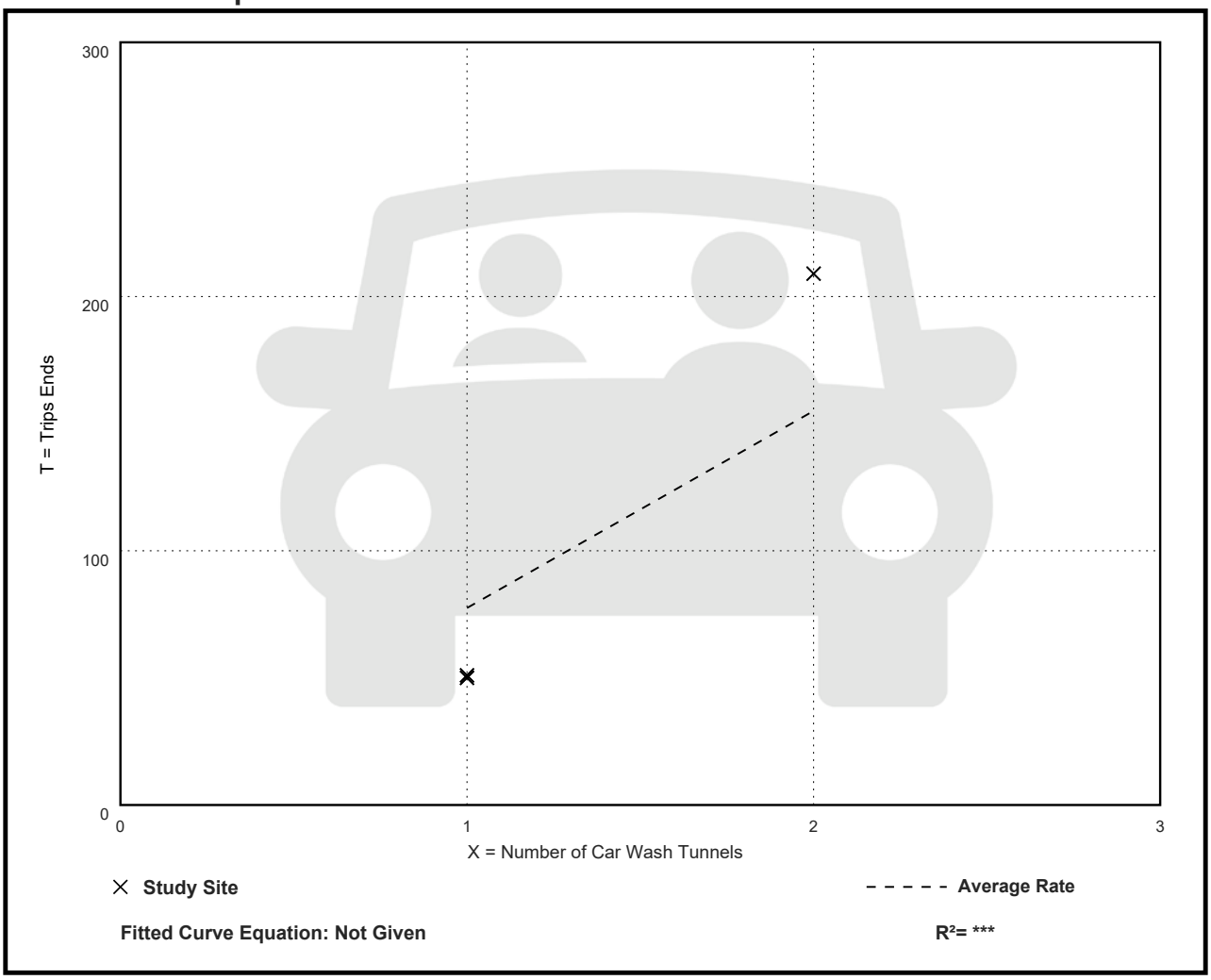
Automated Car Wash
(948)

Vehicle Trip Ends vs: Car Wash Tunnels
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 3
Avg. Num. of Car Wash Tunnels: 1
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Car Wash Tunnel

Average Rate	Range of Rates	Standard Deviation
77.50	50.00 - 104.50	33.07

Data Plot and Equation



Fitted Curve Equation: Not Given

R^2= *

Automated Car Wash
(948)

Vehicle Trip Ends vs: Car Wash Tunnels
On a: Saturday, Peak Hour of Generator

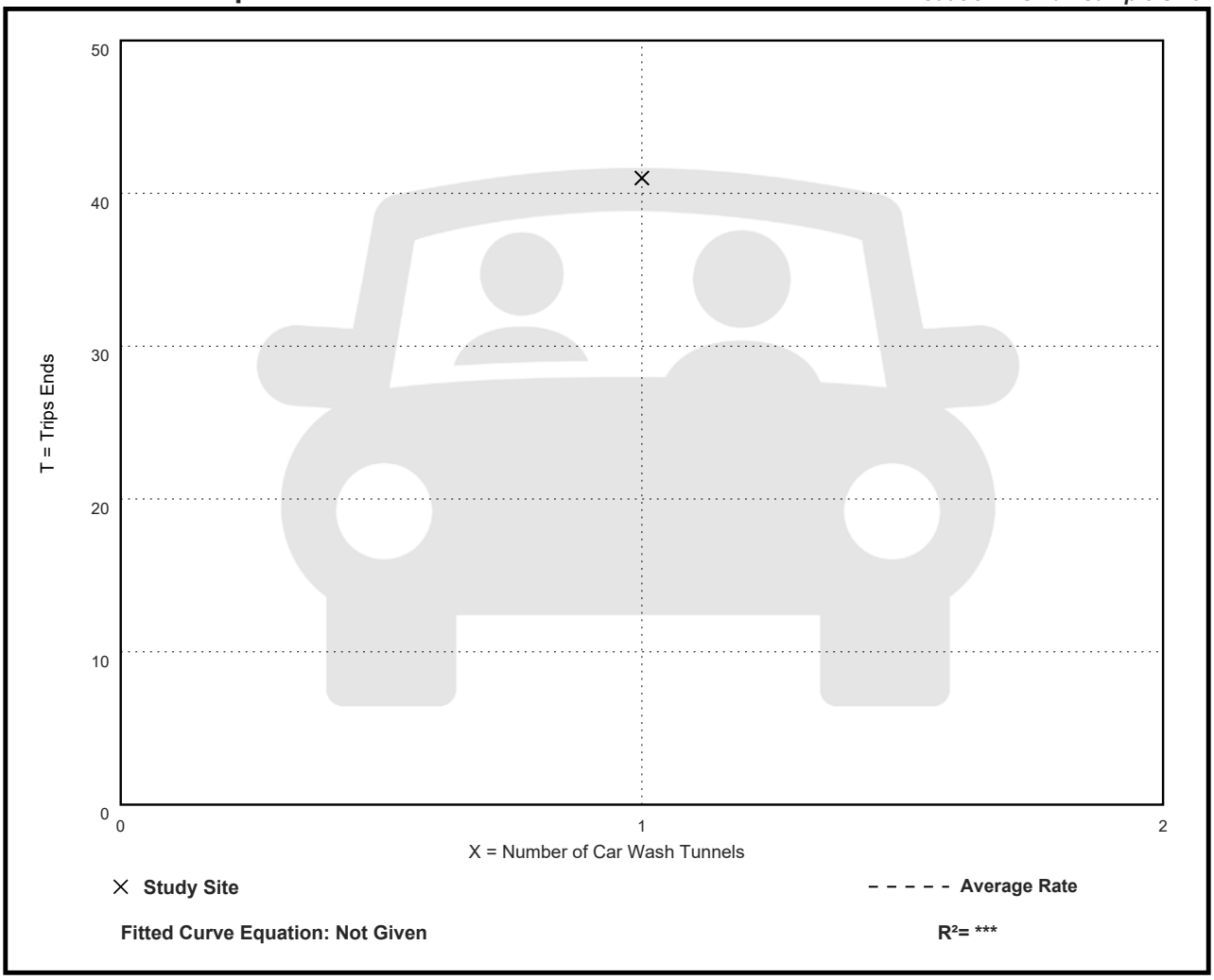
Setting/Location: General Urban/Suburban
Number of Studies: 1
Avg. Num. of Car Wash Tunnels: 1
Directional Distribution: 46% entering, 54% exiting

Vehicle Trip Generation per Car Wash Tunnel

Average Rate	Range of Rates	Standard Deviation
41.00	41.00 - 41.00	***

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= *

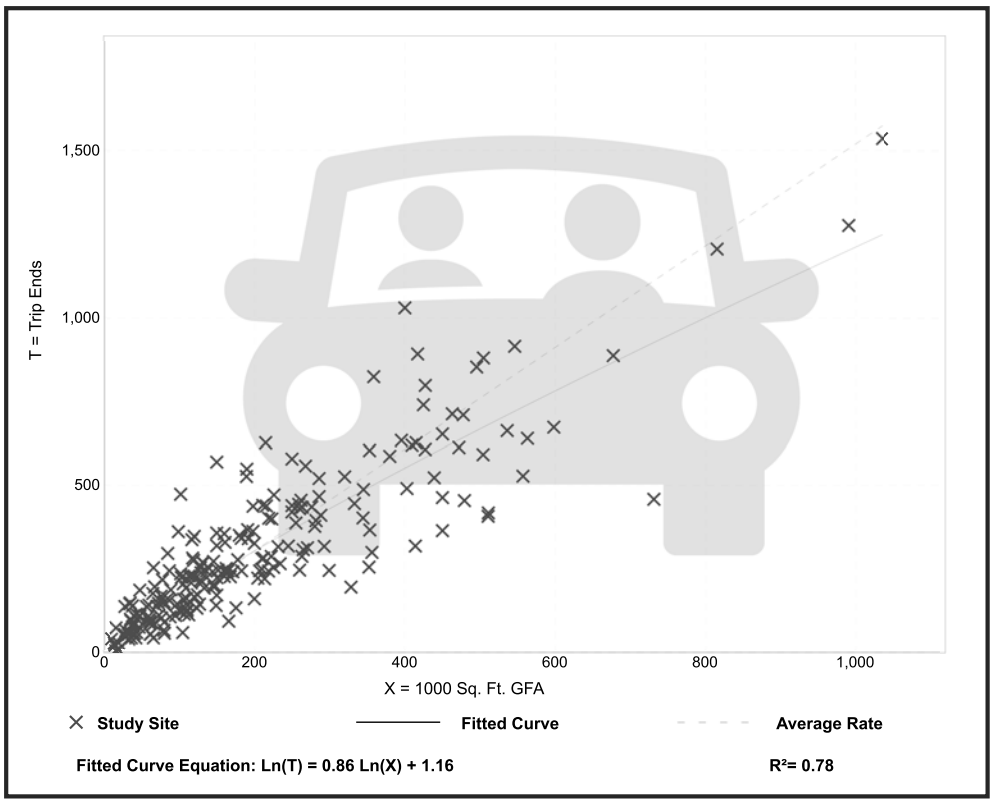
General Office Building
(710)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 221
Avg. 1000 Sq. Ft. GFA: 201
Directional Distribution: 88% entering, 12% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.52	0.32 - 4.93	0.58

Data Plot and Equation



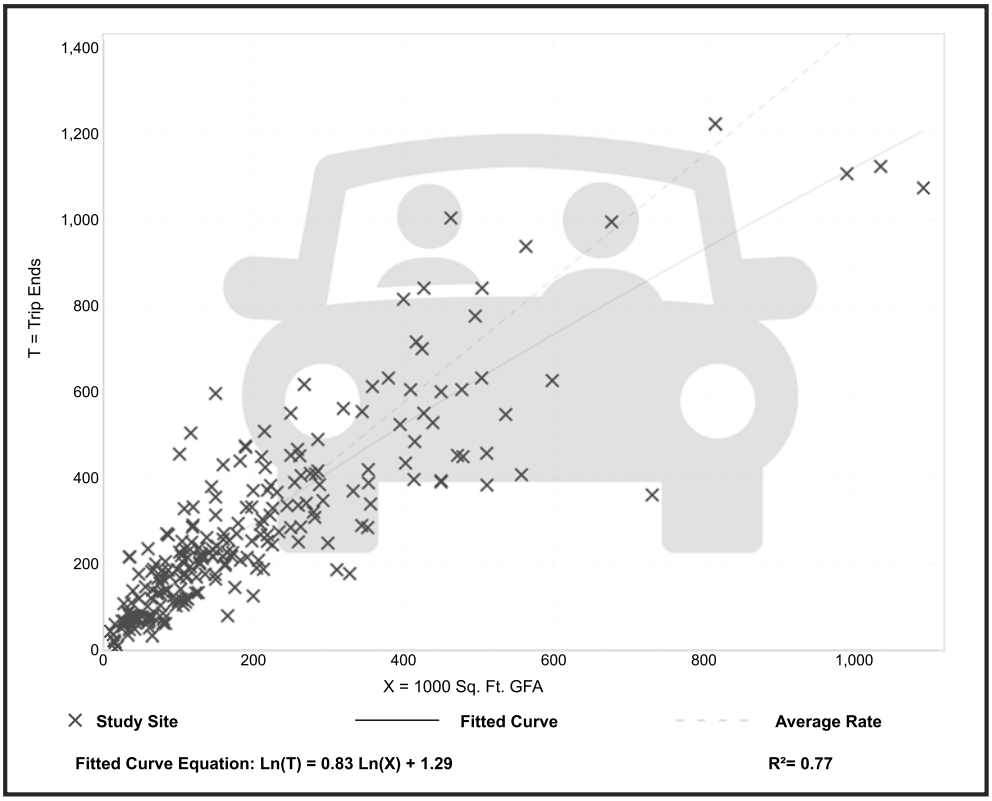
General Office Building
(710)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 232
Avg. 1000 Sq. Ft. GFA: 199
Directional Distribution: 17% entering, 83% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.44	0.26 - 6.20	0.60

Data Plot and Equation



General Office Building
(710)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Saturday, Peak Hour of Generator**

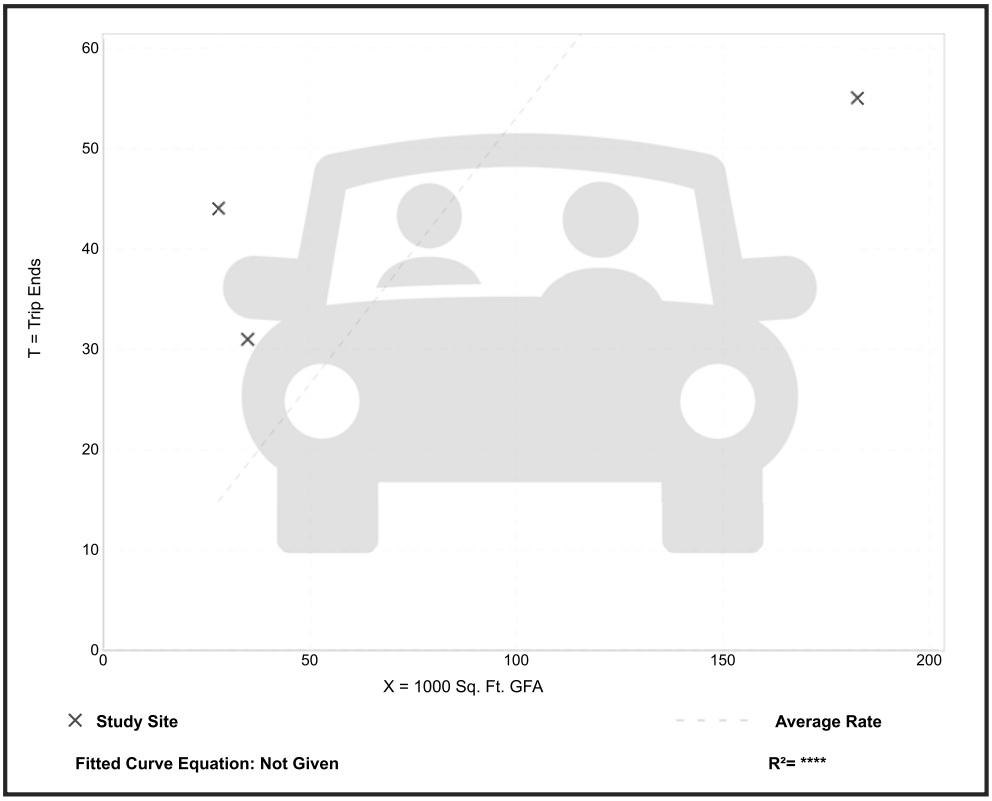
Setting/Location: **General Urban/Suburban**
Number of Studies: 3
Avg. 1000 Sq. Ft. GFA: 82
Directional Distribution: 54% entering, 46% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.53	0.30 - 1.57	0.52

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= ****

Trip Gen Manual, 11th Edition • Institute of Transportation Engineers

CMAP 2050 Projections Letter

Chicago Metropolitan Agency for Planning

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

January 8, 2025

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

Subject: IL 56 at Barley Avenue // IL 59 at Duke Parkway/Everton Drive
IDOT

Dear Ms. May

In response to a request made on your behalf and dated January 8, 2025, we have developed year 2050 average daily traffic (ADT) projections for the subject location.

ROAD SEGMENT	Current ADT	Year 2050 ADT
IL 56, at Barkley Ave	22,600	29,100
IL 59, at Duke Pky/Everton Dr	34,300	44,100

Traffic projections are developed using existing ADT data provided in the request letter and the results from the June 2024 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)
2025_TrafficcForecasts\Warrenville\du-01-25\du-01-25.docx

Level of Service Criteria

LEVEL OF SERVICE CRITERIA

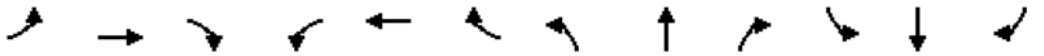
Signalized Intersections		
Level of Service	**Interpretation**	**Average Control Delay (seconds per vehicle)**
A	Favorable progression. Most vehicles arrive during the green indication and travel through the intersection without stopping.	≤10
B	Good progression, with more vehicles stopping than for Level of Service A.	> 10 - 20
C	Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear. Number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.	> 20 - 35
D	The volume-to-capacity ratio is high and either progression is ineffective or the cycle length is too long. Many vehicles stop and individual cycle failures are noticeable.	> 35 - 55
E	Progression is unfavorable. The volume-to-capacity ratio is high and the cycle length is long. Individual cycle failures are frequent.	> 55 - 80
F	The volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.	> 80

Unsignalized Intersections	
Level of Service	**Average Total Delay (sec/veh)**
A	0 - 10
B	> 10 - 15
C	> 15 - 25
D	> 25 - 35
E	> 35 - 50
F	> 50

Source: *Highway Capacity Manual*, 6th Edition.

Capacity Analysis Summary Sheets

Existing Weekday Morning Peak Hour

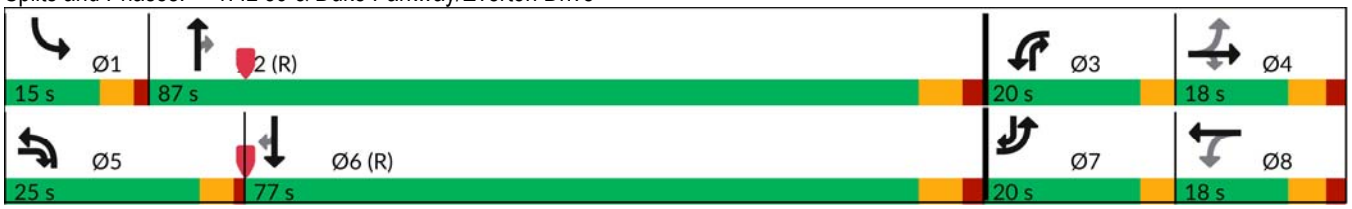


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	1	51	77	1	9	60	1303	11	5	1334	52
Future Volume (vph)	30	1	51	77	1	9	60	1303	11	5	1334	52
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	2000	1900	1900	2000	1900
Storage Length (ft)	375		230	0		0	230		245	215		0
Storage Lanes	1		1	1		0	2		1	1		1
Taper Length (ft)	120			25			300			230		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.865				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1357	2000	1162	1805	1644	0	2870	3519	1369	1805	3551	1292
Flt Permitted				0.930			0.950			0.950		
Satd. Flow (perm)	1429	2000	1162	1767	1644	0	2870	3519	1369	1805	3551	1292
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)			55									97
Link Speed (mph)		25			30			50			50	
Link Distance (ft)		713			332			2388			366	
Travel Time (s)		19.4			7.5			32.6			5.0	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	33%	0%	39%	0%	0%	0%	22%	8%	18%	0%	7%	25%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	31	1	53	79	10	0	62	1343	11	5	1375	54
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases	4		4	8					2			6
Detector Phase	7	4	5	3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	3.0	8.0	3.0	3.0	8.0		3.0	15.0	3.0	3.0	15.0	3.0
Minimum Split (s)	9.5	18.0	14.0	9.5	18.0		14.0	35.5	9.5	9.5	43.5	9.5
Total Split (s)	20.0	18.0	25.0	20.0	18.0		25.0	87.0	20.0	15.0	77.0	20.0
Total Split (%)	14.3%	12.9%	17.9%	14.3%	12.9%		17.9%	62.1%	14.3%	10.7%	55.0%	14.3%
Yellow Time (s)	3.5	4.0	3.5	3.5	4.0		3.5	4.5	3.5	3.5	4.5	3.5
All-Red Time (s)	0.0	2.0	1.0	0.0	2.0		1.0	2.0	0.0	1.5	2.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0	4.5	3.5	6.0		4.5	6.5	3.5	5.0	6.5	3.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Min	None	None	C-Min	None
Act Effct Green (s)	12.4	8.0	12.2	14.7	8.9		9.4	112.9	134.1	6.0	103.7	120.4
Actuated g/C Ratio	0.09	0.06	0.09	0.11	0.06		0.07	0.81	0.96	0.04	0.74	0.86
v/c Ratio	0.26	0.01	0.35	0.42	0.10		0.32	0.47	0.01	0.06	0.52	0.05
Control Delay (s/veh)	59.5	63.0	18.4	63.4	63.0		66.2	6.5	1.6	65.6	10.2	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	59.5	63.0	18.4	63.4	63.0		66.2	6.5	1.6	65.6	10.2	0.2
LOS	E	E	B	E	E		E	A	A	E	B	A
Approach Delay (s/veh)		33.9			63.4			9.1			10.0	
Approach LOS		C			E			A			B	
Queue Length 50th (ft)	27	1	0	70	9		28	123	0	5	241	0
Queue Length 95th (ft)	53	7	38	109	28		52	418	6	20	473	2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		633			252			2308			286	
Turn Bay Length (ft)	375		230				230		245	215		
Base Capacity (vph)	181	171	239	243	140		420	2836	1314	128	2629	1174
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.01	0.22	0.33	0.07		0.15	0.47	0.01	0.04	0.52	0.05

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 138.6 (99%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 85			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.52			
Intersection Signal Delay (s/veh): 11.8		Intersection LOS: B	
Intersection Capacity Utilization 56.4%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: IL 59 & Duke Parkway/Everton Drive



Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	45	6	39	68	6	9	2	12	25	4	7
Future Vol, veh/h	2	45	6	39	68	6	9	2	12	25	4	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	130	-	120	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	69	69	69	69	69	69	69	69	69	69	69	69
Heavy Vehicles, %	0	14	67	54	6	17	11	0	100	0	0	0
Mvmt Flow	3	65	9	57	99	9	13	3	17	36	6	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	107	0	0	74	0	0	290	296	70	284	291	99
Stage 1	-	-	-	-	-	-	75	75	-	212	212	-
Stage 2	-	-	-	-	-	-	214	220	-	72	80	-
Critical Hdwy	4.1	-	-	4.64	-	-	7.21	6.5	7.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.21	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.21	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.686	-	-	3.599	4	4.2	3.5	4	3.3
Pot Cap-1 Maneuver	1496	-	-	1252	-	-	645	619	776	672	623	963
Stage 1	-	-	-	-	-	-	912	836	-	795	731	-
Stage 2	-	-	-	-	-	-	768	725	-	942	833	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1496	-	-	1252	-	-	602	590	776	623	593	963
Mov Cap-2 Maneuver	-	-	-	-	-	-	602	590	-	623	593	-
Stage 1	-	-	-	-	-	-	910	835	-	759	698	-
Stage 2	-	-	-	-	-	-	719	692	-	916	831	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.28	2.76	10.56	10.87
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	681	1496	-	-	1252	-	-	665
HCM Lane V/C Ratio	0.049	0.002	-	-	0.045	-	-	0.078
HCM Control Delay (s/veh)	10.6	7.4	-	-	8	-	-	10.9
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0.1	-	-	0.3

Intersection	
Int Delay, s/veh	6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	4	12	0	2	0	0	3	7	1	24	0
Future Vol, veh/h	1	4	12	0	2	0	0	3	7	1	24	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	2
Mvmt Flow	1	5	15	0	3	0	0	4	9	1	30	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	3	0	0	20	0	0	33	18	13	12	25	3
Stage 1	-	-	-	-	-	-	15	15	-	3	3	-
Stage 2	-	-	-	-	-	-	18	3	-	9	23	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.22
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	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.318
Pot Cap-1 Maneuver	1633	-	-	1609	-	-	979	880	1074	1010	872	1082
Stage 1	-	-	-	-	-	-	1010	887	-	1025	898	-
Stage 2	-	-	-	-	-	-	1007	898	-	1017	880	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1633	-	-	1609	-	-	945	880	1074	997	871	1082
Mov Cap-2 Maneuver	-	-	-	-	-	-	945	880	-	997	871	-
Stage 1	-	-	-	-	-	-	1009	886	-	1025	898	-
Stage 2	-	-	-	-	-	-	973	898	-	1003	880	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.42	0	8.62	9.27
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1007	92	-	-	1609	-	-	876
HCM Lane V/C Ratio	0.013	0.001	-	-	-	-	-	0.036
HCM Control Delay (s/veh)	8.6	7.2	0	-	0	-	-	9.3
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	12	0	1342	1379	2
Future Vol, veh/h	0	12	0	1342	1379	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	85
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	8	7	0
Mvmt Flow	0	12	0	1384	1422	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	711	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	*695	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %		0		-	-	-
Mov Cap-1 Maneuver	-	*695	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	10.27	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	695	-	-
HCM Lane V/C Ratio	-	0.018	-	-
HCM Control Delay (s/veh)	-	10.3	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	66	996	4	10	474	52	0	2	21	48	2	9
Future Vol, veh/h	66	996	4	10	474	52	0	2	21	48	2	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	215	-	-	355	-	-	-	-	50	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	3	0	8	0	0	0	0	0	25	0	0
Mvmt Flow	70	1060	4	11	504	55	0	2	22	51	2	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	560	0	0	1064	0	0	1477	1783	532	1224	1757	280
Stage 1	-	-	-	-	-	-	1202	1202	-	553	553	-
Stage 2	-	-	-	-	-	-	274	581	-	671	1204	-
Critical Hdwy	4.1	-	-	4.26	-	-	7.5	6.5	6.9	8	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	7	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	7	5.5	-
Follow-up Hdwy	2.2	-	-	2.28	-	-	3.5	4	3.3	3.75	4	3.3
Pot Cap-1 Maneuver	1179	-	-	616	-	-	*110	91	497	149	95	*968
Stage 1	-	-	-	-	-	-	*199	260	-	602	629	-
Stage 2	-	-	-	-	-	-	*912	610	-	362	259	-
Platoon blocked, %	0	-	-		-	-	0	0		0	0	0
Mov Cap-1 Maneuver	1179	-	-	616	-	-	*99	84	497	128	88	*968
Mov Cap-2 Maneuver	-	-	-	-	-	-	*99	84	-	128	88	-
Stage 1	-	-	-	-	-	-	*187	244	-	592	618	-
Stage 2	-	-	-	-	-	-	*885	599	-	322	244	-

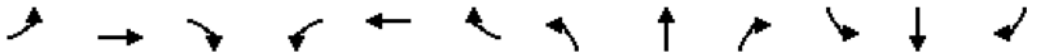
Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.51	0.2	15.72	47.36
HCM LOS			C	E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	84	497	1179	-	-	616	-	-	145
HCM Lane V/C Ratio	0.025	0.045	0.06	-	-	0.017	-	-	0.432
HCM Control Delay (s/veh)	48.7	12.6	8.2	-	-	10.9	-	-	47.4
HCM Lane LOS	E	B	A	-	-	B	-	-	E
HCM 95th %tile Q(veh)	0.1	0.1	0.2	-	-	0.1	-	-	1.9

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Capacity Analysis Summary Sheets

Existing Weekday Evening Peak Hour

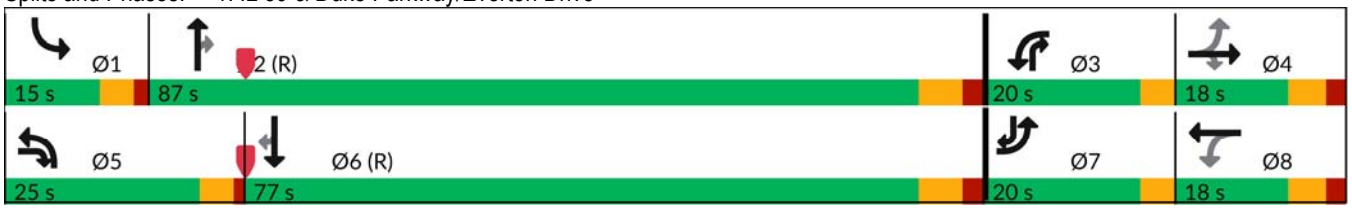


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	1	35	31	1	12	63	1364	79	34	1381	39
Future Volume (vph)	37	1	35	31	1	12	63	1364	79	34	1381	39
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	2000	1900	1900	2000	1900
Storage Length (ft)	375		230	0		0	230		245	215		0
Storage Lanes	1		1	1		0	2		1	1		1
Taper Length (ft)	120			25			300			230		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.861				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1517	2000	1313	1805	1636	0	2894	3619	1615	1805	3585	1538
Flt Permitted				0.678			0.950			0.950		
Satd. Flow (perm)	1597	2000	1313	1288	1636	0	2894	3619	1615	1805	3585	1538
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)			55									97
Link Speed (mph)		25			30			50			50	
Link Distance (ft)		713			332			2388			366	
Travel Time (s)		19.4			7.5			32.6			5.0	
Peak Hour Factor	0.97	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	19%	0%	23%	0%	0%	0%	21%	5%	0%	0%	6%	5%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	38	1	38	34	14	0	68	1483	86	37	1501	42
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases	4		4	8					2			6
Detector Phase	7	4	5	3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	3.0	8.0	3.0	3.0	8.0		3.0	15.0	3.0	3.0	15.0	3.0
Minimum Split (s)	9.5	18.0	14.0	9.5	18.0		14.0	35.5	9.5	9.5	43.5	9.5
Total Split (s)	20.0	18.0	25.0	20.0	18.0		25.0	87.0	20.0	15.0	77.0	20.0
Total Split (%)	14.3%	12.9%	17.9%	14.3%	12.9%		17.9%	62.1%	14.3%	10.7%	55.0%	14.3%
Yellow Time (s)	3.5	4.0	3.5	3.5	4.0		3.5	4.5	3.5	3.5	4.5	3.5
All-Red Time (s)	0.0	2.0	1.0	0.0	2.0		1.0	2.0	0.0	1.5	2.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0	4.5	3.5	6.0		4.5	6.5	3.5	5.0	6.5	3.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Min	None	None	C-Min	None
Act Effct Green (s)	11.7	8.8	13.3	15.2	8.9		9.7	102.6	122.3	8.3	102.0	117.3
Actuated g/C Ratio	0.08	0.06	0.10	0.11	0.06		0.07	0.73	0.87	0.06	0.73	0.84
v/c Ratio	0.30	0.01	0.22	0.18	0.13		0.34	0.56	0.06	0.35	0.57	0.03
Control Delay (s/veh)	62.1	60.0	8.1	54.0	64.3		66.3	11.6	2.7	71.2	12.2	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	62.1	60.0	8.1	54.0	64.3		66.3	11.6	2.7	71.2	12.2	0.1
LOS	E	E	A	D	E		E	B	A	E	B	A
Approach Delay (s/veh)		35.4			57.0			13.4			13.3	
Approach LOS		D			E			B			B	
Queue Length 50th (ft)	34	1	0	30	12		30	241	7	33	256	0
Queue Length 95th (ft)	62	7	18	57	36		56	523	36	70	542	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		633			252			2308			286	
Turn Bay Length (ft)	375		230				230		245	215		
Base Capacity (vph)	205	172	272	258	140		423	2652	1464	131	2611	1378
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.01	0.14	0.13	0.10		0.16	0.56	0.06	0.28	0.57	0.03

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 7 (5%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 85			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.57			
Intersection Signal Delay (s/veh): 14.5		Intersection LOS: B	
Intersection Capacity Utilization 55.4%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: IL 59 & Duke Parkway/Everton Drive



Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	53	6	34	41	28	3	1	7	13	0	5
Future Vol, veh/h	4	53	6	34	41	28	3	1	7	13	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	130	-	120	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	70	70	70	70	70	70	70	70	70	70	70	70
Heavy Vehicles, %	0	14	33	41	24	4	100	0	86	0	0	0
Mvmt Flow	6	76	9	49	59	40	4	1	10	19	0	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	99	0	0	84	0	0	247	287	80	244	251	59
Stage 1	-	-	-	-	-	-	91	91	-	156	156	-
Stage 2	-	-	-	-	-	-	156	196	-	88	96	-
Critical Hdwy	4.1	-	-	4.51	-	-	8.1	6.5	7.06	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	7.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.569	-	-	4.4	4	4.074	3.5	4	3.3
Pot Cap-1 Maneuver	1507	-	-	1299	-	-	544	626	790	715	655	1013
Stage 1	-	-	-	-	-	-	722	823	-	851	773	-
Stage 2	-	-	-	-	-	-	661	743	-	925	820	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1507	-	-	1299	-	-	518	600	790	675	628	1013
Mov Cap-2 Maneuver	-	-	-	-	-	-	518	600	-	675	628	-
Stage 1	-	-	-	-	-	-	719	820	-	820	744	-
Stage 2	-	-	-	-	-	-	632	715	-	908	817	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.47	2.6	10.47	10.01
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	674	1507	-	-	1299	-	-	744
HCM Lane V/C Ratio	0.023	0.004	-	-	0.037	-	-	0.035
HCM Control Delay (s/veh)	10.5	7.4	-	-	7.9	-	-	10
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0.1

Intersection	
Int Delay, s/veh	7.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	2	5	0	3	0	12	21	0	1	13	1
Future Vol, veh/h	1	2	5	0	3	0	12	21	0	1	13	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	61	61	61	61	61	61	61	61	61	61	61	61
Heavy Vehicles, %	0	0	0	0	0	0	0	6	0	0	0	0
Mvmt Flow	2	3	8	0	5	0	20	34	0	2	21	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	5	0	0	11	0	0	26	16	7	29	20	5
Stage 1	-	-	-	-	-	-	11	11	-	5	5	-
Stage 2	-	-	-	-	-	-	16	5	-	24	15	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.56	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.56	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.56	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4.054	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1630	-	-	1621	-	-	989	871	1081	986	878	1084
Stage 1	-	-	-	-	-	-	1015	879	-	1022	896	-
Stage 2	-	-	-	-	-	-	1009	884	-	999	887	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1630	-	-	1621	-	-	963	870	1081	946	877	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	963	870	-	946	877	-
Stage 1	-	-	-	-	-	-	1014	878	-	1022	896	-
Stage 2	-	-	-	-	-	-	984	884	-	959	886	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.9	0	9.25	9.15
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	902	197	-	-	1621	-	-	893
HCM Lane V/C Ratio	0.06	0.001	-	-	-	-	-	0.028
HCM Control Delay (s/veh)	9.2	7.2	0	-	0	-	-	9.1
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	3	0	1413	1451	3
Future Vol, veh/h	0	3	0	1413	1451	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	85
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	4	6	2
Mvmt Flow	0	3	0	1503	1544	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	772	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	*680	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %		0		-	-	-
Mov Cap-1 Maneuver	-	*680	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	10.32	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	680	-	-
HCM Lane V/C Ratio	-	0.005	-	-
HCM Control Delay (s/veh)	-	10.3	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	870	3	15	1228	15	3	0	8	40	0	9
Future Vol, veh/h	14	870	3	15	1228	15	3	0	8	40	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	215	-	-	355	-	-	-	-	50	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	3	0	0	2	27	0	0	0	8	0	2
Mvmt Flow	15	906	3	16	1279	16	3	0	8	42	0	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1295	0	0	909	0	0	1608	2263	455	1801	2257	647
Stage 1	-	-	-	-	-	-	937	937	-	1318	1318	-
Stage 2	-	-	-	-	-	-	671	1326	-	482	939	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.66	6.5	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.66	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.66	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.58	4	3.32
Pot Cap-1 Maneuver	735	-	-	757	-	-	*147	46	558	86	47	*738
Stage 1	-	-	-	-	-	-	*289	346	-	331	361	-
Stage 2	-	-	-	-	-	-	*700	357	-	519	346	-
Platoon blocked, %	0	-	-		-	-	0	0		0	0	0
Mov Cap-1 Maneuver	735	-	-	757	-	-	*139	45	558	81	45	*738
Mov Cap-2 Maneuver	-	-	-	-	-	-	*139	45	-	81	45	-
Stage 1	-	-	-	-	-	-	*283	339	-	324	354	-
Stage 2	-	-	-	-	-	-	*677	350	-	501	339	-

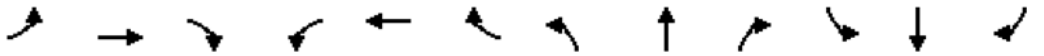
Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.16	0.12	16.96	77.9
HCM LOS			C	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	139	558	735	-	-	757	-	-	97
HCM Lane V/C Ratio	0.022	0.015	0.02	-	-	0.021	-	-	0.528
HCM Control Delay (s/veh)	31.4	11.5	10	-	-	9.9	-	-	77.9
HCM Lane LOS	D	B	A	-	-	A	-	-	F
HCM 95th %tile Q(veh)	0.1	0	0.1	-	-	0.1	-	-	2.4

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Capacity Analysis Summary Sheets

Existing Saturday Midday Peak Hour

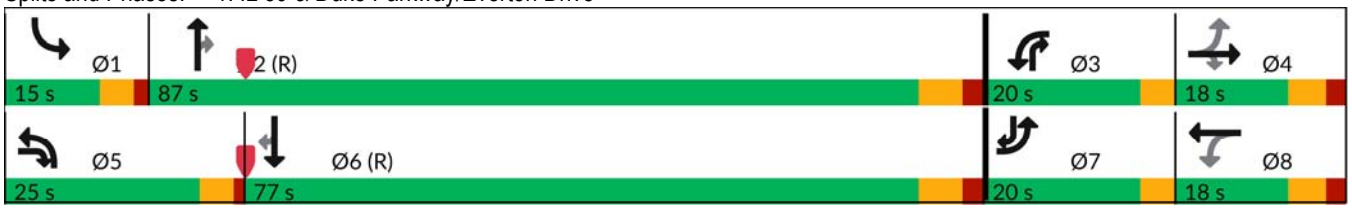


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	5	33	59	1	5	49	1092	34	32	972	14
Future Volume (vph)	16	5	33	59	1	5	49	1092	34	32	972	14
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	2000	1900	1900	2000	1900
Storage Length (ft)	375		230	0		0	230		245	215		0
Storage Lanes	1		1	1		0	2		1	1		1
Taper Length (ft)	120			25			300			230		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.875				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1597	2000	1242	1805	1662	0	3072	3689	1615	1752	3689	1335
Flt Permitted				0.851			0.950			0.950		
Satd. Flow (perm)	1681	2000	1242	1617	1662	0	3072	3689	1615	1752	3689	1335
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)			55									97
Link Speed (mph)		25			30			50			50	
Link Distance (ft)		713			332			2388			366	
Travel Time (s)		19.4			7.5			32.6			5.0	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	13%	0%	30%	0%	0%	0%	14%	3%	0%	3%	3%	21%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	16	5	34	61	6	0	51	1126	35	33	1002	14
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases	4		4	8					2			6
Detector Phase	7	4	5	3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	3.0	8.0	3.0	3.0	8.0		3.0	15.0	3.0	3.0	15.0	3.0
Minimum Split (s)	9.5	18.0	14.0	9.5	18.0		14.0	35.5	9.5	9.5	43.5	9.5
Total Split (s)	20.0	18.0	25.0	20.0	18.0		25.0	87.0	20.0	15.0	77.0	20.0
Total Split (%)	14.3%	12.9%	17.9%	14.3%	12.9%		17.9%	62.1%	14.3%	10.7%	55.0%	14.3%
Yellow Time (s)	3.5	4.0	3.5	3.5	4.0		3.5	4.5	3.5	3.5	4.5	3.5
All-Red Time (s)	0.0	2.0	1.0	0.0	2.0		1.0	2.0	0.0	1.5	2.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0	4.5	3.5	6.0		4.5	6.5	3.5	5.0	6.5	3.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Min	None	None	C-Min	None
Act Effct Green (s)	10.6	8.2	11.7	13.2	9.1		8.7	111.4	126.3	8.1	109.0	121.4
Actuated g/C Ratio	0.08	0.06	0.08	0.09	0.07		0.06	0.80	0.90	0.06	0.78	0.87
v/c Ratio	0.13	0.04	0.22	0.37	0.06		0.27	0.38	0.02	0.33	0.35	0.01
Control Delay (s/veh)	56.3	63.0	7.9	62.9	61.0		65.5	7.2	2.4	71.1	7.4	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	56.3	63.0	7.9	62.9	61.0		65.5	7.2	2.4	71.1	7.4	0.0
LOS	E	E	A	E	E		E	A	A	E	A	A
Approach Delay (s/veh)		27.0			62.8			9.5			9.3	
Approach LOS		C			E			A			A	
Queue Length 50th (ft)	14	4	0	54	5		23	160	3	30	137	0
Queue Length 95th (ft)	33	19	15	89	20		45	335	16	65	282	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		633			252			2308			286	
Turn Bay Length (ft)	375		230				230		245	215		
Base Capacity (vph)	215	171	253	238	145		449	2934	1491	127	2872	1223
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.03	0.13	0.26	0.04		0.11	0.38	0.02	0.26	0.35	0.01

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 135.8 (97%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 85			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.38			
Intersection Signal Delay (s/veh): 11.3		Intersection LOS: B	
Intersection Capacity Utilization 49.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1: IL 59 & Duke Parkway/Everton Drive



Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	32	2	27	19	18	2	0	3	19	2	2
Future Vol, veh/h	2	32	2	27	19	18	2	0	3	19	2	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	130	-	120	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	27	100	30	20	0	50	0	67	5	0	0
Mvmt Flow	2	38	2	32	22	21	2	0	4	22	2	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	44	0	0	40	0	0	131	151	39	128	131	22
Stage 1	-	-	-	-	-	-	44	44	-	86	86	-
Stage 2	-	-	-	-	-	-	87	107	-	42	45	-
Critical Hdwy	4.1	-	-	4.4	-	-	7.6	6.5	6.87	7.15	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.6	5.5	-	6.15	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.6	5.5	-	6.15	5.5	-
Follow-up Hdwy	2.2	-	-	2.47	-	-	3.95	4	3.903	3.545	4	3.3
Pot Cap-1 Maneuver	1578	-	-	1407	-	-	743	745	875	838	764	1061
Stage 1	-	-	-	-	-	-	862	863	-	915	828	-
Stage 2	-	-	-	-	-	-	815	811	-	964	862	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1578	-	-	1407	-	-	721	727	875	814	745	1061
Mov Cap-2 Maneuver	-	-	-	-	-	-	721	727	-	814	745	-
Stage 1	-	-	-	-	-	-	860	861	-	894	809	-
Stage 2	-	-	-	-	-	-	792	792	-	959	860	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.4	3.21	9.5	9.51
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	806	1578	-	-	1407	-	-	824
HCM Lane V/C Ratio	0.007	0.001	-	-	0.023	-	-	0.033
HCM Control Delay (s/veh)	9.5	7.3	-	-	7.6	-	-	9.5
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0.1	-	-	0.1

Intersection	
Int Delay, s/veh	7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	2	6	3	2	2	6	15	0	1	15	1
Future Vol, veh/h	1	2	6	3	2	2	6	15	0	1	15	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	0	0	17	0	0	0	0	0	0	0	0	0
Mvmt Flow	1	2	7	4	2	2	7	18	0	1	18	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	5	0	0	10	0	0	27	20	6	25	23	4
Stage 1	-	-	-	-	-	-	8	8	-	11	11	-
Stage 2	-	-	-	-	-	-	19	12	-	14	12	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
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	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1630	-	-	1623	-	-	988	877	1083	991	875	1086
Stage 1	-	-	-	-	-	-	1018	893	-	1015	891	-
Stage 2	-	-	-	-	-	-	1006	890	-	1011	890	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1630	-	-	1623	-	-	964	875	1083	968	872	1086
Mov Cap-2 Maneuver	-	-	-	-	-	-	964	875	-	968	872	-
Stage 1	-	-	-	-	-	-	1017	892	-	1013	889	-
Stage 2	-	-	-	-	-	-	982	888	-	990	889	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.8	3.1	9.12	9.15
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	898	174	-	-	701	-	-	887
HCM Lane V/C Ratio	0.028	0.001	-	-	0.002	-	-	0.023
HCM Control Delay (s/veh)	9.1	7.2	0	-	7.2	0	-	9.2
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	3	0	1113	1015	7
Future Vol, veh/h	0	3	0	1113	1015	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	85
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	3	3	0
Mvmt Flow	0	3	0	1184	1080	7

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	540	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	*801	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %		0		-	-	-
Mov Cap-1 Maneuver	-	*801	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	9.51	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	801	-	-
HCM Lane V/C Ratio	-	0.004	-	-
HCM Control Delay (s/veh)	-	9.5	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	672	3	6	770	13	0	0	6	28	2	6
Future Vol, veh/h	8	672	3	6	770	13	0	0	6	28	2	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	215	-	-	355	-	-	-	-	50	-	-	-
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	2	0	0	1	8	0	0	0	0	0	0
Mvmt Flow	8	707	3	6	811	14	0	0	6	29	2	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	824	0	0	711	0	0	1145	1563	355	1201	1557	412
Stage 1	-	-	-	-	-	-	726	726	-	830	830	-
Stage 2	-	-	-	-	-	-	419	837	-	371	727	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1028	-	-	898	-	-	*268	147	647	239	149	*878
Stage 1	-	-	-	-	-	-	*387	433	-	553	537	-
Stage 2	-	-	-	-	-	-	*827	532	-	627	432	-
Platoon blocked, %	0	-	-		-	-	0	0		0	0	0
Mov Cap-1 Maneuver	1028	-	-	898	-	-	*258	145	647	233	147	*878
Mov Cap-2 Maneuver	-	-	-	-	-	-	*258	145	-	233	147	-
Stage 1	-	-	-	-	-	-	*384	429	-	549	533	-
Stage 2	-	-	-	-	-	-	*812	529	-	616	428	-

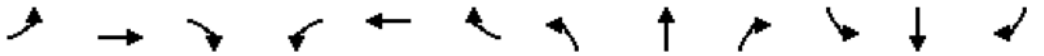
Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.1	0.07	10.62	21.48
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	647	1028	-	-	898	-	-	256
HCM Lane V/C Ratio	-	0.01	0.008	-	-	0.007	-	-	0.148
HCM Control Delay (s/veh)	0	10.6	8.5	-	-	9	-	-	21.5
HCM Lane LOS	A	B	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	-	0	0	-	-	0	-	-	0.5

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Capacity Analysis Summary Sheets

Year 2031 No-Build Weekday Morning Peak Hour

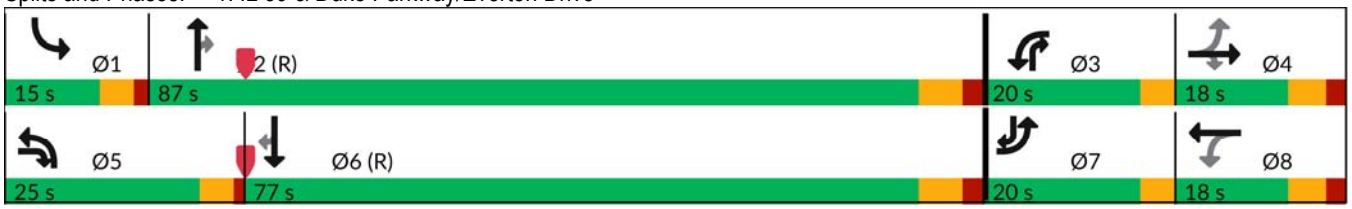


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	1	55	82	1	10	64	1394	12	5	1432	56
Future Volume (vph)	32	1	55	82	1	10	64	1394	12	5	1432	56
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	2000	1900	1900	2000	1900
Storage Length (ft)	375		230	0		0	230		245	215		0
Storage Lanes	1		1	1		0	2		1	1		1
Taper Length (ft)	120			25			300			230		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.864				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1357	2000	1162	1805	1642	0	2870	3519	1369	1805	3551	1292
Flt Permitted				0.784			0.950			0.950		
Satd. Flow (perm)	1429	2000	1162	1490	1642	0	2870	3519	1369	1805	3551	1292
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)			57									97
Link Speed (mph)		25			30			50			50	
Link Distance (ft)		713			332			2388			366	
Travel Time (s)		19.4			7.5			32.6			5.0	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	33%	0%	39%	0%	0%	0%	22%	8%	18%	0%	7%	25%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	33	1	57	85	11	0	66	1437	12	5	1476	58
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases	4		4	8					2			6
Detector Phase	7	4	5	3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	3.0	8.0	3.0	3.0	8.0		3.0	15.0	3.0	3.0	15.0	3.0
Minimum Split (s)	9.5	18.0	14.0	9.5	18.0		14.0	35.5	9.5	9.5	43.5	9.5
Total Split (s)	20.0	18.0	25.0	20.0	18.0		25.0	87.0	20.0	15.0	77.0	20.0
Total Split (%)	14.3%	12.9%	17.9%	14.3%	12.9%		17.9%	62.1%	14.3%	10.7%	55.0%	14.3%
Yellow Time (s)	3.5	4.0	3.5	3.5	4.0		3.5	4.5	3.5	3.5	4.5	3.5
All-Red Time (s)	0.0	2.0	1.0	0.0	2.0		1.0	2.0	0.0	1.5	2.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0	4.5	3.5	6.0		4.5	6.5	3.5	5.0	6.5	3.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Min	None	None	C-Min	None
Act Effct Green (s)	12.0	8.0	12.4	17.4	9.0		9.6	110.2	134.1	6.0	98.5	114.9
Actuated g/C Ratio	0.09	0.06	0.09	0.12	0.06		0.07	0.79	0.96	0.04	0.70	0.82
v/c Ratio	0.28	0.01	0.37	0.39	0.10		0.34	0.52	0.01	0.06	0.59	0.05
Control Delay (s/veh)	61.1	63.0	19.3	59.0	63.0		66.3	8.0	1.6	65.6	13.3	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	61.1	63.0	19.3	59.0	63.0		66.3	8.0	1.6	65.6	13.3	0.3
LOS	E	E	B	E	E		E	A	A	E	B	A
Approach Delay (s/veh)		34.9			59.5			10.5			13.0	
Approach LOS		C			E			B			B	
Queue Length 50th (ft)	29	1	0	76	10		29	142	0	5	277	0
Queue Length 95th (ft)	56	7	40	116	30		55	473	6	20	540	3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		633			252			2308			286	
Turn Bay Length (ft)	375		230				230		245	215		
Base Capacity (vph)	181	171	240	262	140		420	2769	1314	128	2498	1134
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.01	0.24	0.32	0.08		0.16	0.52	0.01	0.04	0.59	0.05

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 138.6 (99%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 85			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.59			
Intersection Signal Delay (s/veh): 13.8		Intersection LOS: B	
Intersection Capacity Utilization 59.2%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: IL 59 & Duke Parkway/Everton Drive



Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	48	6	42	73	6	10	2	13	27	5	7
Future Vol, veh/h	2	48	6	42	73	6	10	2	13	27	5	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	130	-	120	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	69	69	69	69	69	69	69	69	69	69	69	69
Heavy Vehicles, %	0	14	67	54	6	17	11	0	100	0	0	0
Mvmt Flow	3	70	9	61	106	9	14	3	19	39	7	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	114	0	0	78	0	0	311	316	74	304	312	106
Stage 1	-	-	-	-	-	-	80	80	-	228	228	-
Stage 2	-	-	-	-	-	-	231	236	-	77	84	-
Critical Hdwy	4.1	-	-	4.64	-	-	7.21	6.5	7.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.21	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.21	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.686	-	-	3.599	4	4.2	3.5	4	3.3
Pot Cap-1 Maneuver	1487	-	-	1247	-	-	624	603	772	652	607	954
Stage 1	-	-	-	-	-	-	907	833	-	780	719	-
Stage 2	-	-	-	-	-	-	752	713	-	937	829	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1487	-	-	1247	-	-	579	573	772	601	576	954
Mov Cap-2 Maneuver	-	-	-	-	-	-	579	573	-	601	576	-
Stage 1	-	-	-	-	-	-	905	831	-	742	684	-
Stage 2	-	-	-	-	-	-	700	678	-	909	827	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.27	2.79	10.73	11.17
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	665	1487	-	-	1247	-	-	640
HCM Lane V/C Ratio	0.054	0.002	-	-	0.049	-	-	0.088
HCM Control Delay (s/veh)	10.7	7.4	-	-	8	-	-	11.2
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0.2	-	-	0.3

Intersection	
Int Delay, s/veh	5.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	5	13	0	2	0	0	3	7	1	26	0
Future Vol, veh/h	1	5	13	0	2	0	0	3	7	1	26	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	2
Mvmt Flow	1	6	16	0	3	0	0	4	9	1	33	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	3	0	0	23	0	0	36	20	15	13	28	3
Stage 1	-	-	-	-	-	-	17	17	-	3	3	-
Stage 2	-	-	-	-	-	-	19	3	-	11	25	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.22
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	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.318
Pot Cap-1 Maneuver	1633	-	-	1606	-	-	975	878	1071	1008	869	1082
Stage 1	-	-	-	-	-	-	1008	885	-	1025	898	-
Stage 2	-	-	-	-	-	-	1005	898	-	1015	878	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1633	-	-	1606	-	-	937	877	1071	995	868	1082
Mov Cap-2 Maneuver	-	-	-	-	-	-	937	877	-	995	868	-
Stage 1	-	-	-	-	-	-	1007	884	-	1025	898	-
Stage 2	-	-	-	-	-	-	968	898	-	1002	877	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.38	0	8.63	9.29
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1005	83	-	-	1606	-	-	873
HCM Lane V/C Ratio	0.013	0.001	-	-	-	-	-	0.039
HCM Control Delay (s/veh)	8.6	7.2	0	-	0	-	-	9.3
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	13	0	1436	1480	2
Future Vol, veh/h	0	13	0	1436	1480	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	85
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	8	7	0
Mvmt Flow	0	13	0	1480	1526	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	763	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	*680	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %		0		-	-	-
Mov Cap-1 Maneuver	-	*680	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	10.4	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	680	-	-
HCM Lane V/C Ratio	-	0.02	-	-
HCM Control Delay (s/veh)	-	10.4	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	71	1066	4	11	507	56	0	2	22	51	2	9
Future Vol, veh/h	71	1066	4	11	507	56	0	2	22	51	2	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	215	-	-	355	-	-	-	-	50	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	3	0	8	0	0	0	0	0	25	0	0
Mvmt Flow	76	1134	4	12	539	60	0	2	23	54	2	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	599	0	0	1138	0	0	1581	1910	569	1312	1882	299
Stage 1	-	-	-	-	-	-	1287	1287	-	593	593	-
Stage 2	-	-	-	-	-	-	294	622	-	719	1289	-
Critical Hdwy	4.1	-	-	4.26	-	-	7.5	6.5	6.9	8	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	7	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	7	5.5	-
Follow-up Hdwy	2.2	-	-	2.28	-	-	3.5	4	3.3	3.75	4	3.3
Pot Cap-1 Maneuver	1159	-	-	576	-	-	*93	76	470	130	79	*953
Stage 1	-	-	-	-	-	-	*176	237	-	591	619	-
Stage 2	-	-	-	-	-	-	*898	598	-	337	236	-
Platoon blocked, %	0	-	-		-	-	0	0		0	0	0
Mov Cap-1 Maneuver	1159	-	-	576	-	-	*82	69	470	110	72	*953
Mov Cap-2 Maneuver	-	-	-	-	-	-	*82	69	-	110	72	-
Stage 1	-	-	-	-	-	-	*165	221	-	579	606	-
Stage 2	-	-	-	-	-	-	*868	586	-	296	221	-

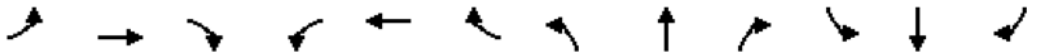
Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.52	0.22	16.86	63.44
HCM LOS			C	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	69	470	1159	-	-	576	-	-	124
HCM Lane V/C Ratio	0.031	0.05	0.065	-	-	0.02	-	-	0.534
HCM Control Delay (s/veh)	58.7	13.1	8.3	-	-	11.4	-	-	63.4
HCM Lane LOS	F	B	A	-	-	B	-	-	F
HCM 95th %tile Q(veh)	0.1	0.2	0.2	-	-	0.1	-	-	2.5

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Capacity Analysis Summary Sheets

Year 2031 No-Build Weekday Evening Peak Hour

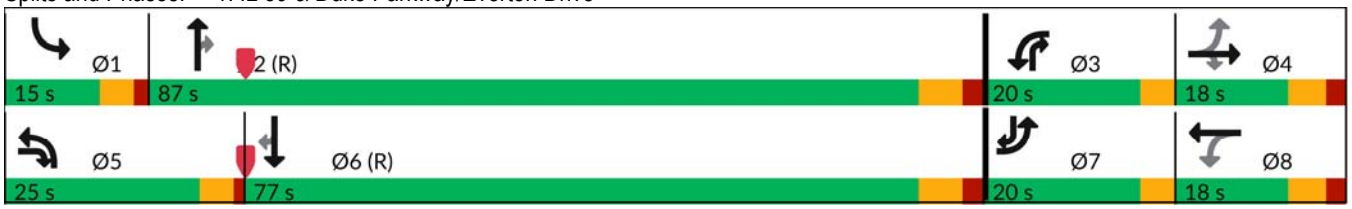


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	1	37	33	1	13	67	1459	85	36	1478	42
Future Volume (vph)	40	1	37	33	1	13	67	1459	85	36	1478	42
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	2000	1900	1900	2000	1900
Storage Length (ft)	375		230	0		0	230		245	215		0
Storage Lanes	1		1	1		0	2		1	1		1
Taper Length (ft)	120			25			300			230		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.860				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1517	2000	1313	1805	1634	0	2894	3619	1615	1805	3585	1282
Flt Permitted				0.667			0.950			0.950		
Satd. Flow (perm)	1597	2000	1313	1267	1634	0	2894	3619	1615	1805	3585	1282
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)			55									97
Link Speed (mph)		25			30			50			50	
Link Distance (ft)		713			332			2388			366	
Travel Time (s)		19.4			7.5			32.6			5.0	
Peak Hour Factor	0.97	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	19%	0%	23%	0%	0%	0%	21%	5%	0%	0%	6%	26%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	41	1	40	36	15	0	73	1586	92	39	1607	46
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases	4		4	8					2			6
Detector Phase	7	4	5	3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	3.0	8.0	3.0	3.0	8.0		3.0	15.0	3.0	3.0	15.0	3.0
Minimum Split (s)	9.5	18.0	14.0	9.5	18.0		14.0	35.5	9.5	9.5	43.5	9.5
Total Split (s)	20.0	18.0	25.0	20.0	18.0		25.0	87.0	20.0	15.0	77.0	20.0
Total Split (%)	14.3%	12.9%	17.9%	14.3%	12.9%		17.9%	62.1%	14.3%	10.7%	55.0%	14.3%
Yellow Time (s)	3.5	4.0	3.5	3.5	4.0		3.5	4.5	3.5	3.5	4.5	3.5
All-Red Time (s)	0.0	2.0	1.0	0.0	2.0		1.0	2.0	0.0	1.5	2.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0	4.5	3.5	6.0		4.5	6.5	3.5	5.0	6.5	3.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Min	None	None	C-Min	None
Act Effct Green (s)	12.0	8.9	13.6	15.4	9.0		9.9	102.2	122.1	8.4	101.5	117.0
Actuated g/C Ratio	0.09	0.06	0.10	0.11	0.06		0.07	0.73	0.87	0.06	0.73	0.84
v/c Ratio	0.31	0.01	0.23	0.19	0.14		0.36	0.60	0.07	0.36	0.62	0.04
Control Delay (s/veh)	62.3	60.0	9.1	53.8	64.4		66.4	12.7	2.7	71.5	13.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	62.3	60.0	9.1	53.8	64.4		66.4	12.7	2.7	71.5	13.4	0.1
LOS	E	E	A	D	E		E	B	A	E	B	A
Approach Delay (s/veh)		36.3			57.0			14.4			14.4	
Approach LOS		D			E			B			B	
Queue Length 50th (ft)	37	1	0	32	13		33	275	7	35	294	0
Queue Length 95th (ft)	66	7	21	59	37		59	596	39	73	622	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		633			252			2308			286	
Turn Bay Length (ft)	375		230				230		245	215		
Base Capacity (vph)	207	173	272	259	140		423	2641	1460	132	2598	1146
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.01	0.15	0.14	0.11		0.17	0.60	0.06	0.30	0.62	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 7 (5%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 85			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay (s/veh): 15.5		Intersection LOS: B	
Intersection Capacity Utilization 58.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: IL 59 & Duke Parkway/Everton Drive



Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	57	6	36	44	30	3	1	7	14	0	5
Future Vol, veh/h	4	57	6	36	44	30	3	1	7	14	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	130	-	120	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	70	70	70	70	70	70	70	70	70	70	70	70
Heavy Vehicles, %	0	14	33	41	24	4	100	0	86	0	0	0
Mvmt Flow	6	81	9	51	63	43	4	1	10	20	0	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	106	0	0	90	0	0	263	306	86	259	267	63
Stage 1	-	-	-	-	-	-	97	97	-	166	166	-
Stage 2	-	-	-	-	-	-	166	209	-	94	101	-
Critical Hdwy	4.1	-	-	4.51	-	-	8.1	6.5	7.06	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	7.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.569	-	-	4.4	4	4.074	3.5	4	3.3
Pot Cap-1 Maneuver	1498	-	-	1293	-	-	530	611	784	698	642	1007
Stage 1	-	-	-	-	-	-	716	818	-	841	765	-
Stage 2	-	-	-	-	-	-	652	733	-	918	815	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1498	-	-	1293	-	-	503	585	784	657	614	1007
Mov Cap-2 Maneuver	-	-	-	-	-	-	503	585	-	657	614	-
Stage 1	-	-	-	-	-	-	714	815	-	808	735	-
Stage 2	-	-	-	-	-	-	621	704	-	902	812	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.44	2.59	10.57	10.17
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	662	1498	-	-	1293	-	-	724
HCM Lane V/C Ratio	0.024	0.004	-	-	0.04	-	-	0.038
HCM Control Delay (s/veh)	10.6	7.4	-	-	7.9	-	-	10.2
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0.1

Intersection	
Int Delay, s/veh	7.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	2	5	0	3	0	13	22	0	1	14	1
Future Vol, veh/h	1	2	5	0	3	0	13	22	0	1	14	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	61	61	61	61	61	61	61	61	61	61	61	61
Heavy Vehicles, %	0	0	0	0	0	0	0	6	0	0	0	0
Mvmt Flow	2	3	8	0	5	0	21	36	0	2	23	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	5	0	0	11	0	0	27	16	7	30	20	5
Stage 1	-	-	-	-	-	-	11	11	-	5	5	-
Stage 2	-	-	-	-	-	-	16	5	-	25	15	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.56	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.56	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.56	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4.054	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1630	-	-	1621	-	-	988	871	1081	984	878	1084
Stage 1	-	-	-	-	-	-	1015	879	-	1022	896	-
Stage 2	-	-	-	-	-	-	1008	884	-	998	887	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1630	-	-	1621	-	-	960	870	1081	943	877	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	960	870	-	943	877	-
Stage 1	-	-	-	-	-	-	1014	878	-	1022	896	-
Stage 2	-	-	-	-	-	-	981	884	-	956	886	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.9	0	9.27	9.16
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	901	197	-	-	1621	-	-	892
HCM Lane V/C Ratio	0.064	0.001	-	-	-	-	-	0.029
HCM Control Delay (s/veh)	9.3	7.2	0	-	0	-	-	9.2
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	3	0	1512	1553	3
Future Vol, veh/h	0	3	0	1512	1553	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	85
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	4	6	2
Mvmt Flow	0	3	0	1609	1652	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	826	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	*650	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %		0		-	-	-
Mov Cap-1 Maneuver	-	*650	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	10.57	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	650	-	-
HCM Lane V/C Ratio	-	0.005	-	-
HCM Control Delay (s/veh)	-	10.6	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	931	3	16	1314	16	3	0	9	43	0	9
Future Vol, veh/h	15	931	3	16	1314	16	3	0	9	43	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	215	-	-	355	-	-	-	-	50	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	3	0	0	2	27	0	0	0	8	0	2
Mvmt Flow	16	970	3	17	1369	17	3	0	9	45	0	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1385	0	0	973	0	0	1720	2421	486	1927	2415	693
Stage 1	-	-	-	-	-	-	1003	1003	-	1410	1410	-
Stage 2	-	-	-	-	-	-	718	1419	-	516	1004	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.66	6.5	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.66	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.66	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.58	4	3.32
Pot Cap-1 Maneuver	670	-	-	717	-	-	*117	33	532	64	34	*723
Stage 1	-	-	-	-	-	-	*263	323	-	287	323	-
Stage 2	-	-	-	-	-	-	*686	319	-	495	322	-
Platoon blocked, %	0	-	-		-	-	0	0		0	0	0
Mov Cap-1 Maneuver	670	-	-	717	-	-	*110	32	532	60	32	*723
Mov Cap-2 Maneuver	-	-	-	-	-	-	*110	32	-	60	32	-
Stage 1	-	-	-	-	-	-	*257	315	-	280	316	-
Stage 2	-	-	-	-	-	-	*661	312	-	475	315	-

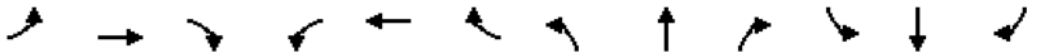
Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.17	0.12	18.6	142.3
HCM LOS			C	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	110	532	670	-	-	717	-	-	72
HCM Lane V/C Ratio	0.028	0.018	0.023	-	-	0.023	-	-	0.756
HCM Control Delay (s/veh)	38.7	11.9	10.5	-	-	10.1	-	-	142.3
HCM Lane LOS	E	B	B	-	-	B	-	-	F
HCM 95th %tile Q(veh)	0.1	0.1	0.1	-	-	0.1	-	-	3.5

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Capacity Analysis Summary Sheets

Year 2031 No-Build Saturday Midday Peak Hour

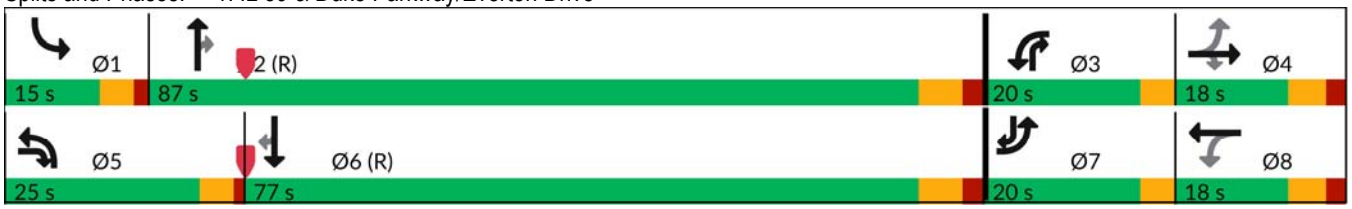


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	5	35	63	1	5	52	1169	36	34	1040	15
Future Volume (vph)	17	5	35	63	1	5	52	1169	36	34	1040	15
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	2000	1900	1900	2000	1900
Storage Length (ft)	375		230	0		0	230		245	215		0
Storage Lanes	1		1	1		0	2		1	1		1
Taper Length (ft)	120			25			300			230		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.875				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1597	2000	1242	1805	1662	0	3072	3689	1615	1752	3689	1335
Flt Permitted				0.833			0.950			0.950		
Satd. Flow (perm)	1681	2000	1242	1583	1662	0	3072	3689	1615	1752	3689	1335
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)			55									97
Link Speed (mph)		25			30			50			50	
Link Distance (ft)		713			332			2388			366	
Travel Time (s)		19.4			7.5			32.6			5.0	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	13%	0%	30%	0%	0%	0%	14%	3%	0%	3%	3%	21%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	18	5	36	65	6	0	54	1205	37	35	1072	15
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases	4		4	8					2			6
Detector Phase	7	4	5	3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	3.0	8.0	3.0	3.0	8.0		3.0	15.0	3.0	3.0	15.0	3.0
Minimum Split (s)	9.5	18.0	14.0	9.5	18.0		14.0	35.5	9.5	9.5	43.5	9.5
Total Split (s)	20.0	18.0	25.0	20.0	18.0		25.0	87.0	20.0	15.0	77.0	20.0
Total Split (%)	14.3%	12.9%	17.9%	14.3%	12.9%		17.9%	62.1%	14.3%	10.7%	55.0%	14.3%
Yellow Time (s)	3.5	4.0	3.5	3.5	4.0		3.5	4.5	3.5	3.5	4.5	3.5
All-Red Time (s)	0.0	2.0	1.0	0.0	2.0		1.0	2.0	0.0	1.5	2.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0	4.5	3.5	6.0		4.5	6.5	3.5	5.0	6.5	3.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Min	None	None	C-Min	None
Act Effct Green (s)	10.8	8.2	11.8	13.5	9.1		8.8	108.7	123.1	8.2	108.7	121.4
Actuated g/C Ratio	0.08	0.06	0.08	0.10	0.07		0.06	0.78	0.88	0.06	0.78	0.87
v/c Ratio	0.15	0.04	0.23	0.39	0.06		0.28	0.42	0.03	0.34	0.37	0.01
Control Delay (s/veh)	56.4	63.0	8.7	63.4	61.0		65.6	8.3	2.5	71.4	7.7	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	56.4	63.0	8.7	63.4	61.0		65.6	8.3	2.5	71.4	7.7	0.0
LOS	E	E	A	E	E		E	A	A	E	A	A
Approach Delay (s/veh)		27.8			63.2			10.5			9.6	
Approach LOS		C			E			B			A	
Queue Length 50th (ft)	16	4	0	58	5		24	180	3	31	153	0
Queue Length 95th (ft)	36	19	17	94	20		47	373	16	68	313	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		633			252			2308			286	
Turn Bay Length (ft)	375		230				230		245	215		
Base Capacity (vph)	215	171	253	238	145		449	2863	1466	128	2865	1221
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.03	0.14	0.27	0.04		0.12	0.42	0.03	0.27	0.37	0.01

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 135.8 (97%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 85			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.42			
Intersection Signal Delay (s/veh): 12.0		Intersection LOS: B	
Intersection Capacity Utilization 51.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1: IL 59 & Duke Parkway/Everton Drive



Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	34	2	29	20	19	2	0	3	20	2	2
Future Vol, veh/h	2	34	2	29	20	19	2	0	3	20	2	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	130	-	120	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	27	100	30	20	0	50	0	67	5	0	0
Mvmt Flow	2	40	2	34	24	22	2	0	4	24	2	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	46	0	0	42	0	0	139	160	41	136	139	24
Stage 1	-	-	-	-	-	-	46	46	-	92	92	-
Stage 2	-	-	-	-	-	-	93	114	-	45	47	-
Critical Hdwy	4.1	-	-	4.4	-	-	7.6	6.5	6.87	7.15	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.6	5.5	-	6.15	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.6	5.5	-	6.15	5.5	-
Follow-up Hdwy	2.2	-	-	2.47	-	-	3.95	4	3.903	3.545	4	3.3
Pot Cap-1 Maneuver	1575	-	-	1404	-	-	733	736	872	828	756	1059
Stage 1	-	-	-	-	-	-	859	861	-	908	823	-
Stage 2	-	-	-	-	-	-	808	805	-	962	860	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1575	-	-	1404	-	-	710	717	872	803	736	1059
Mov Cap-2 Maneuver	-	-	-	-	-	-	710	717	-	803	736	-
Stage 1	-	-	-	-	-	-	858	859	-	886	803	-
Stage 2	-	-	-	-	-	-	785	785	-	956	858	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.38	3.25	9.54	9.59
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	799	1575	-	-	1404	-	-	813
HCM Lane V/C Ratio	0.007	0.001	-	-	0.024	-	-	0.035
HCM Control Delay (s/veh)	9.5	7.3	-	-	7.6	-	-	9.6
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0.1	-	-	0.1

Intersection	
Int Delay, s/veh	7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	2	6	3	2	2	6	15	0	1	15	1
Future Vol, veh/h	1	2	6	3	2	2	6	15	0	1	15	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	0	0	17	0	0	0	0	0	0	0	0	0
Mvmt Flow	1	2	7	4	2	2	7	18	0	1	18	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	5	0	0	10	0	0	27	20	6	25	23	4
Stage 1	-	-	-	-	-	-	8	8	-	11	11	-
Stage 2	-	-	-	-	-	-	19	12	-	14	12	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
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	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1630	-	-	1623	-	-	988	877	1083	991	875	1086
Stage 1	-	-	-	-	-	-	1018	893	-	1015	891	-
Stage 2	-	-	-	-	-	-	1006	890	-	1011	890	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1630	-	-	1623	-	-	964	875	1083	968	872	1086
Mov Cap-2 Maneuver	-	-	-	-	-	-	964	875	-	968	872	-
Stage 1	-	-	-	-	-	-	1017	892	-	1013	889	-
Stage 2	-	-	-	-	-	-	982	888	-	990	889	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.8	3.1	9.12	9.15
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	898	174	-	-	701	-	-	887
HCM Lane V/C Ratio	0.028	0.001	-	-	0.002	-	-	0.023
HCM Control Delay (s/veh)	9.1	7.2	0	-	7.2	0	-	9.2
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	3	0	1191	1086	7
Future Vol, veh/h	0	3	0	1191	1086	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	85
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	3	3	0
Mvmt Flow	0	3	0	1267	1155	7

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	578	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	*786	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %		0		-	-	-
Mov Cap-1 Maneuver	-	*786	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	9.6	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	786	-	-
HCM Lane V/C Ratio	-	0.004	-	-
HCM Control Delay (s/veh)	-	9.6	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	719	3	6	824	14	0	0	6	30	2	6
Future Vol, veh/h	9	719	3	6	824	14	0	0	6	30	2	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	215	-	-	355	-	-	-	-	50	-	-	-
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	2	0	0	1	8	0	0	0	0	0	0
Mvmt Flow	9	757	3	6	867	15	0	0	6	32	2	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	882	0	0	760	0	0	1225	1672	380	1285	1666	441
Stage 1	-	-	-	-	-	-	777	777	-	887	887	-
Stage 2	-	-	-	-	-	-	447	895	-	397	779	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	988	-	-	861	-	-	*238	125	624	210	126	*863
Stage 1	-	-	-	-	-	-	*360	410	-	525	514	-
Stage 2	-	-	-	-	-	-	*813	510	-	605	409	-
Platoon blocked, %	0	-	-		-	-	0	0		0	0	0
Mov Cap-1 Maneuver	988	-	-	861	-	-	*229	123	624	204	124	*863
Mov Cap-2 Maneuver	-	-	-	-	-	-	*229	123	-	204	124	-
Stage 1	-	-	-	-	-	-	*357	406	-	522	511	-
Stage 2	-	-	-	-	-	-	*798	506	-	593	405	-

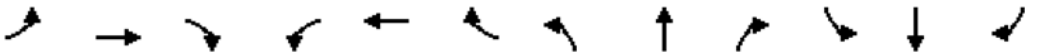
Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.11	0.07	10.83	24.56
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	624	988	-	-	861	-	-	224
HCM Lane V/C Ratio	-	0.01	0.01	-	-	0.007	-	-	0.179
HCM Control Delay (s/veh)	0	10.8	8.7	-	-	9.2	-	-	24.6
HCM Lane LOS	A	B	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	-	0	0	-	-	0	-	-	0.6

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Capacity Analysis Summary Sheets

Year 2031 Total Projected Weekday Morning Peak Hour

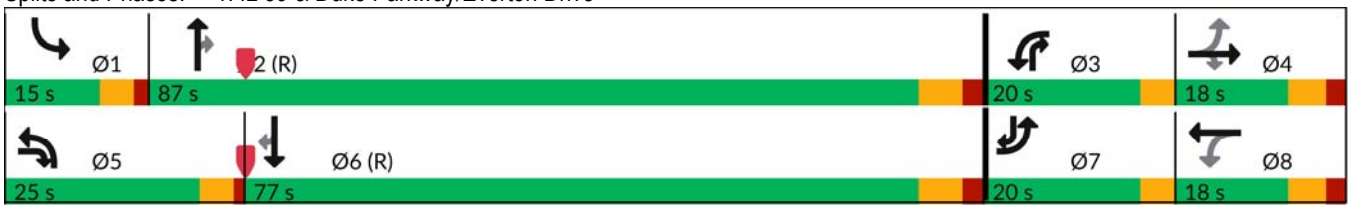


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	56	1	58	82	1	10	100	1376	12	5	1442	60
Future Volume (vph)	56	1	58	82	1	10	100	1376	12	5	1442	60
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	2000	1900	1900	2000	1900
Storage Length (ft)	375		230	0		0	230		245	215		0
Storage Lanes	1		1	1		0	2		1	1		1
Taper Length (ft)	120			25			300			230		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.864				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1517	2000	1170	1805	1642	0	3045	3519	1369	1805	3551	1313
Flt Permitted				0.800			0.950			0.950		
Satd. Flow (perm)	1597	2000	1170	1520	1642	0	3045	3519	1369	1805	3551	1313
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)			60									97
Link Speed (mph)		25			30			50			50	
Link Distance (ft)		367			332			2388			366	
Travel Time (s)		10.0			7.5			32.6			5.0	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	19%	0%	38%	0%	0%	0%	15%	8%	18%	0%	7%	23%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	58	1	60	85	11	0	103	1419	12	5	1487	62
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases	4		4	8					2			6
Detector Phase	7	4	5	3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	3.0	8.0	3.0	3.0	8.0		3.0	15.0	3.0	3.0	15.0	3.0
Minimum Split (s)	9.5	18.0	14.0	9.5	18.0		14.0	35.5	9.5	9.5	43.5	9.5
Total Split (s)	20.0	18.0	25.0	20.0	18.0		25.0	87.0	20.0	15.0	77.0	20.0
Total Split (%)	14.3%	12.9%	17.9%	14.3%	12.9%		17.9%	62.1%	14.3%	10.7%	55.0%	14.3%
Yellow Time (s)	3.5	4.0	3.5	3.5	4.0		3.5	4.5	3.5	3.5	4.5	3.5
All-Red Time (s)	0.0	2.0	1.0	0.0	2.0		1.0	2.0	0.0	1.5	2.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0	4.5	3.5	6.0		4.5	6.5	3.5	5.0	6.5	3.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Min	None	None	C-Min	None
Act Effct Green (s)	13.5	8.2	14.1	17.0	8.7		11.1	110.2	133.9	6.0	97.0	114.7
Actuated g/C Ratio	0.10	0.06	0.10	0.12	0.06		0.08	0.79	0.96	0.04	0.69	0.82
v/c Ratio	0.39	0.01	0.35	0.40	0.11		0.43	0.51	0.01	0.06	0.60	0.06
Control Delay (s/veh)	63.4	62.0	17.4	58.7	63.8		66.5	8.2	1.7	65.6	14.7	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	63.4	62.0	17.4	58.7	63.8		66.5	8.2	1.7	65.6	14.7	0.4
LOS	E	E	B	E	E		E	A	A	E	B	A
Approach Delay (s/veh)		40.2			59.3			12.1			14.3	
Approach LOS		D			E			B			B	
Queue Length 50th (ft)	51	1	0	76	10		46	139	0	5	295	0
Queue Length 95th (ft)	85	7	40	115	31		76	473	7	20	579	4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		287			252			2308			286	
Turn Bay Length (ft)	375		230				230		245	215		
Base Capacity (vph)	205	171	246	269	140		445	2769	1312	128	2459	1139
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.01	0.24	0.32	0.08		0.23	0.51	0.01	0.04	0.60	0.05

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 138.6 (99%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 85			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.60			
Intersection Signal Delay (s/veh): 15.5		Intersection LOS: B	
Intersection Capacity Utilization 64.4%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: IL 59 & Duke Parkway/Everton Drive



Intersection	
Int Delay, s/veh	5.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	48	6	42	73	7	10	2	13	54	5	7
Future Vol, veh/h	2	48	6	42	73	7	10	2	13	54	5	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	130	-	120	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	69	69	69	69	69	69	69	69	69	69	69	69
Heavy Vehicles, %	0	14	67	54	6	17	11	0	100	0	0	0
Mvmt Flow	3	70	9	61	106	10	14	3	19	78	7	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	116	0	0	78	0	0	311	317	74	304	312	106
Stage 1	-	-	-	-	-	-	80	80	-	228	228	-
Stage 2	-	-	-	-	-	-	231	238	-	77	84	-
Critical Hdwy	4.1	-	-	4.64	-	-	7.21	6.5	7.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.21	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.21	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.686	-	-	3.599	4	4.2	3.5	4	3.3
Pot Cap-1 Maneuver	1485	-	-	1247	-	-	624	602	772	652	607	954
Stage 1	-	-	-	-	-	-	907	833	-	780	719	-
Stage 2	-	-	-	-	-	-	752	712	-	937	829	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1485	-	-	1247	-	-	579	572	772	601	576	954
Mov Cap-2 Maneuver	-	-	-	-	-	-	579	572	-	601	576	-
Stage 1	-	-	-	-	-	-	905	831	-	742	684	-
Stage 2	-	-	-	-	-	-	700	677	-	909	827	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.27	2.77	10.73	11.82
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	665	1485	-	-	1247	-	-	623
HCM Lane V/C Ratio	0.054	0.002	-	-	0.049	-	-	0.153
HCM Control Delay (s/veh)	10.7	7.4	-	-	8	-	-	11.8
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0.2	-	-	0.5

Intersection	
Int Delay, s/veh	3.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	15	6	11	0	24	51
Future Vol, veh/h	15	6	11	0	24	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	16	6	12	0	25	54

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	116	12	0	0	12	0
Stage 1	12	-	-	-	-	-
Stage 2	104	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	885	1075	-	-	1621	-
Stage 1	1017	-	-	-	-	-
Stage 2	925	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	871	1075	-	-	1621	-
Mov Cap-2 Maneuver	871	-	-	-	-	-
Stage 1	1017	-	-	-	-	-
Stage 2	910	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.01	0	2.32
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	921	576	-
HCM Lane V/C Ratio	-	-	0.024	0.016	-
HCM Control Delay (s/veh)	-	-	9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	6.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	5	13	13	2	29	0	10	7	15	49	0
Future Vol, veh/h	1	5	13	13	2	29	0	10	7	15	49	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	2
Mvmt Flow	1	6	16	16	3	37	0	13	9	19	62	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	39	0	0	23	0	0	84	89	15	69	79	21
Stage 1	-	-	-	-	-	-	17	17	-	54	54	-
Stage 2	-	-	-	-	-	-	66	72	-	15	25	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.22
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	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.318
Pot Cap-1 Maneuver	1584	-	-	1606	-	-	908	805	1071	928	815	1057
Stage 1	-	-	-	-	-	-	1008	885	-	964	854	-
Stage 2	-	-	-	-	-	-	949	839	-	1010	878	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1584	-	-	1606	-	-	830	796	1071	896	806	1057
Mov Cap-2 Maneuver	-	-	-	-	-	-	830	796	-	896	806	-
Stage 1	-	-	-	-	-	-	1007	884	-	954	845	-
Stage 2	-	-	-	-	-	-	870	830	-	986	877	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.38	2.15	9.15	9.84
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	890	83	-	-	448	-	-	825
HCM Lane V/C Ratio	0.024	0.001	-	-	0.01	-	-	0.098
HCM Control Delay (s/veh)	9.1	7.3	0	-	7.3	0	-	9.8
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	44	0	1442	1463	48
Future Vol, veh/h	0	44	0	1442	1463	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	85
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	8	7	0
Mvmt Flow	0	45	0	1487	1508	49

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	754	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	*680	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %		0		-	-	-
Mov Cap-1 Maneuver	-	*680	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	10.67	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	680	-	-
HCM Lane V/C Ratio	-	0.067	-	-
HCM Control Delay (s/veh)	-	10.7	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.2	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	71	1051	35	17	501	56	17	2	48	51	2	10
Future Vol, veh/h	71	1051	35	17	501	56	17	2	48	51	2	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	215	-	-	355	-	-	-	-	50	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	3	0	0	8	0	0	0	0	25	0	11
Mvmt Flow	76	1118	37	18	533	60	18	2	51	54	2	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	593	0	0	1155	0	0	1591	1916	578	1310	1905	296
Stage 1	-	-	-	-	-	-	1288	1288	-	599	599	-
Stage 2	-	-	-	-	-	-	304	629	-	711	1306	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	8	6.5	7.12
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	7	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	7	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.75	4	3.41
Pot Cap-1 Maneuver	1166	-	-	612	-	-	*91	75	464	130	76	*922
Stage 1	-	-	-	-	-	-	*176	237	-	585	614	-
Stage 2	-	-	-	-	-	-	*898	593	-	341	232	-
Platoon blocked, %	0	-	-		-	-	0	0		0	0	0
Mov Cap-1 Maneuver	1166	-	-	612	-	-	*79	68	464	102	69	*922
Mov Cap-2 Maneuver	-	-	-	-	-	-	*79	68	-	102	69	-
Stage 1	-	-	-	-	-	-	*165	221	-	568	596	-
Stage 2	-	-	-	-	-	-	*859	576	-	281	217	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.51	0.33	28.73	70.84
HCM LOS			D	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	78	464	1166	-	-	612	-	-	117
HCM Lane V/C Ratio	0.259	0.11	0.065	-	-	0.03	-	-	0.574
HCM Control Delay (s/veh)	66.7	13.7	8.3	-	-	11.1	-	-	70.8
HCM Lane LOS	F	B	A	-	-	B	-	-	F
HCM 95th %tile Q(veh)	0.9	0.4	0.2	-	-	0.1	-	-	2.8

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	6.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	13	14	45	3	41	31
Future Vol, veh/h	13	14	45	3	41	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	14	15	47	3	43	33

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	28	0	119	21
Stage 1	-	-	-	-	21	-
Stage 2	-	-	-	-	98	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1598	-	882	1062
Stage 1	-	-	-	-	1007	-
Stage 2	-	-	-	-	931	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1598	-	855	1062
Mov Cap-2 Maneuver	-	-	-	-	855	-
Stage 1	-	-	-	-	1007	-
Stage 2	-	-	-	-	903	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	6.86	9.2
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	934	-	-	1595	-
HCM Lane V/C Ratio	0.081	-	-	0.03	-
HCM Control Delay (s/veh)	9.2	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	115	121	40	0	1
Future Vol, veh/h	0	115	121	40	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	121	127	42	0	1

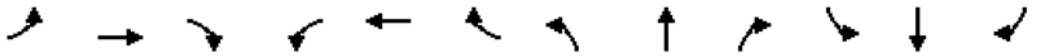
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	148
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	-	0	904
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	904
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0	0	8.99
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	904
HCM Lane V/C Ratio	-	-	-	0.001
HCM Control Delay (s/veh)	-	-	-	9
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	0

Capacity Analysis Summary Sheets

Year 2031 Total Projected Weekday Evening Peak Hour

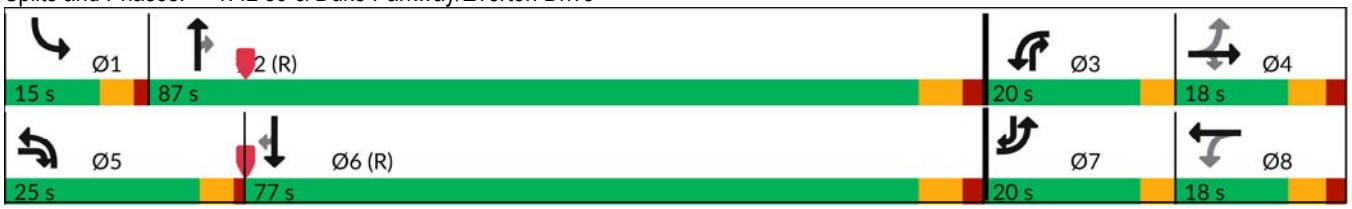


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	62	1	50	33	1	13	92	1451	85	36	1488	53
Future Volume (vph)	62	1	50	33	1	13	92	1451	85	36	1488	53
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	2000	1900	1900	2000	1900
Storage Length (ft)	375		230	0		0	230		245	215		0
Storage Lanes	1		1	1		0	2		1	1		1
Taper Length (ft)	120			25			300			230		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.860				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1597	2000	1346	1805	1634	0	3045	3619	1615	1805	3619	1346
Flt Permitted				0.769			0.950			0.950		
Satd. Flow (perm)	1681	2000	1346	1461	1634	0	3045	3619	1615	1805	3619	1346
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)			55									97
Link Speed (mph)		25			30			50			50	
Link Distance (ft)		367			332			2388			366	
Travel Time (s)		10.0			7.5			32.6			5.0	
Peak Hour Factor	0.97	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	13%	0%	20%	0%	0%	0%	15%	5%	0%	0%	5%	20%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	64	1	54	36	15	0	100	1577	92	39	1617	58
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases	4		4	8					2			6
Detector Phase	7	4	5	3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	3.0	8.0	3.0	3.0	8.0		3.0	15.0	3.0	3.0	15.0	3.0
Minimum Split (s)	9.5	18.0	14.0	9.5	18.0		14.0	35.5	9.5	9.5	43.5	9.5
Total Split (s)	20.0	18.0	25.0	20.0	18.0		25.0	87.0	20.0	15.0	77.0	20.0
Total Split (%)	14.3%	12.9%	17.9%	14.3%	12.9%		17.9%	62.1%	14.3%	10.7%	55.0%	14.3%
Yellow Time (s)	3.5	4.0	3.5	3.5	4.0		3.5	4.5	3.5	3.5	4.5	3.5
All-Red Time (s)	0.0	2.0	1.0	0.0	2.0		1.0	2.0	0.0	1.5	2.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0	4.5	3.5	6.0		4.5	6.5	3.5	5.0	6.5	3.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Min	None	None	C-Min	None
Act Effct Green (s)	14.2	9.4	15.1	15.7	9.0		10.9	101.4	121.6	8.4	97.3	114.6
Actuated g/C Ratio	0.10	0.07	0.11	0.11	0.06		0.08	0.72	0.87	0.06	0.70	0.82
v/c Ratio	0.39	0.01	0.28	0.18	0.14		0.42	0.60	0.07	0.36	0.64	0.05
Control Delay (s/veh)	62.9	58.0	14.8	51.9	64.4		66.5	13.5	3.0	71.5	15.6	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	62.9	58.0	14.8	51.9	64.4		66.5	13.5	3.0	71.5	15.6	0.3
LOS	E	E	B	D	E		E	B	A	E	B	A
Approach Delay (s/veh)		41.0			55.6			16.0			16.3	
Approach LOS		D			E			B			B	
Queue Length 50th (ft)	57	1	0	31	13		45	290	7	35	324	0
Queue Length 95th (ft)	91	7	35	57	37		75	618	42	73	669	3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		287			252			2308			286	
Turn Bay Length (ft)	375		230				230		245	215		
Base Capacity (vph)	224	180	283	270	140		445	2620	1447	132	2516	1170
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.01	0.19	0.13	0.11		0.22	0.60	0.06	0.30	0.64	0.05

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 7 (5%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 85			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.64			
Intersection Signal Delay (s/veh): 17.5		Intersection LOS: B	
Intersection Capacity Utilization 59.9%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: IL 59 & Duke Parkway/Everton Drive



Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	57	6	36	44	33	3	1	7	49	0	5
Future Vol, veh/h	4	57	6	36	44	33	3	1	7	49	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	130	-	120	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	70	70	70	70	70	70	70	70	70	70	70	70
Heavy Vehicles, %	0	14	33	41	24	4	100	0	86	0	0	0
Mvmt Flow	6	81	9	51	63	47	4	1	10	70	0	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	110	0	0	90	0	0	263	310	86	259	267	63
Stage 1	-	-	-	-	-	-	97	97	-	166	166	-
Stage 2	-	-	-	-	-	-	166	213	-	94	101	-
Critical Hdwy	4.1	-	-	4.51	-	-	8.1	6.5	7.06	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	7.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.569	-	-	4.4	4	4.074	3.5	4	3.3
Pot Cap-1 Maneuver	1493	-	-	1293	-	-	530	608	784	698	642	1007
Stage 1	-	-	-	-	-	-	716	818	-	841	765	-
Stage 2	-	-	-	-	-	-	652	730	-	918	815	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1493	-	-	1293	-	-	503	581	784	657	614	1007
Mov Cap-2 Maneuver	-	-	-	-	-	-	503	581	-	657	614	-
Stage 1	-	-	-	-	-	-	714	815	-	808	735	-
Stage 2	-	-	-	-	-	-	621	701	-	902	812	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.44	2.52	10.57	10.98
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	662	1493	-	-	1293	-	-	679
HCM Lane V/C Ratio	0.024	0.004	-	-	0.04	-	-	0.114
HCM Control Delay (s/veh)	10.6	7.4	-	-	7.9	-	-	11
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0.4

Intersection	
Int Delay, s/veh	4.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	30	24	38	0	22	24
Future Vol, veh/h	30	24	38	0	22	24
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	32	25	40	0	23	25

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	112	40	0	0	40	0
Stage 1	40	-	-	-	-	-
Stage 2	72	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	890	1037	-	-	1583	-
Stage 1	988	-	-	-	-	-
Stage 2	956	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	877	1037	-	-	1583	-
Mov Cap-2 Maneuver	877	-	-	-	-	-
Stage 1	988	-	-	-	-	-
Stage 2	942	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.07	0	3.5
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	942	861	-
HCM Lane V/C Ratio	-	-	0.06	0.015	-
HCM Control Delay (s/veh)	-	-	9.1	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	7.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	2	5	8	3	17	13	49	0	8	33	1
Future Vol, veh/h	1	2	5	8	3	17	13	49	0	8	33	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	61	61	61	61	61	61	61	61	61	61	61	61
Heavy Vehicles, %	0	0	0	0	0	0	0	6	0	0	0	0
Mvmt Flow	2	3	8	13	5	28	21	80	0	13	54	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	33	0	0	11	0	0	69	70	7	92	60	19
Stage 1	-	-	-	-	-	-	11	11	-	45	45	-
Stage 2	-	-	-	-	-	-	58	59	-	47	15	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.56	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.56	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.56	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4.054	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1592	-	-	1621	-	-	928	813	1081	897	835	1065
Stage 1	-	-	-	-	-	-	1015	879	-	974	861	-
Stage 2	-	-	-	-	-	-	959	838	-	972	887	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1592	-	-	1621	-	-	859	806	1081	801	827	1065
Mov Cap-2 Maneuver	-	-	-	-	-	-	859	806	-	801	827	-
Stage 1	-	-	-	-	-	-	1014	878	-	966	854	-
Stage 2	-	-	-	-	-	-	889	831	-	882	886	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.91	2.07	10.04	9.75
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	816	197	-	-	440	-	-	826
HCM Lane V/C Ratio	0.125	0.001	-	-	0.008	-	-	0.083
HCM Control Delay (s/veh)	10	7.3	0	-	7.2	0	-	9.8
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.4	0	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	21	0	1526	1556	24
Future Vol, veh/h	0	21	0	1526	1556	24
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	85
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	4	6	0
Mvmt Flow	0	22	0	1623	1655	26

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	828	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	*650	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %		0		-	-	-
Mov Cap-1 Maneuver	-	*650	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	10.74	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	650	-	-
HCM Lane V/C Ratio	-	0.034	-	-
HCM Control Delay (s/veh)	-	10.7	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	4.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	927	21	24	1306	16	29	0	30	43	0	10
Future Vol, veh/h	15	927	21	24	1306	16	29	0	30	43	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	215	-	-	355	-	-	-	-	50	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	3	0	0	2	27	0	0	0	8	0	0
Mvmt Flow	16	966	22	25	1360	17	30	0	31	45	0	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1377	0	0	988	0	0	1738	2435	494	1933	2438	689
Stage 1	-	-	-	-	-	-	1008	1008	-	1419	1419	-
Stage 2	-	-	-	-	-	-	730	1427	-	514	1019	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.66	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.66	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.66	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.58	4	3.3
Pot Cap-1 Maneuver	678	-	-	708	-	-	*112	32	526	63	32	*727
Stage 1	-	-	-	-	-	-	*262	321	-	282	319	-
Stage 2	-	-	-	-	-	-	*686	315	-	496	317	-
Platoon blocked, %	0	-	-		-	-	0	0		0	0	0
Mov Cap-1 Maneuver	678	-	-	708	-	-	*104	31	526	56	30	*727
Mov Cap-2 Maneuver	-	-	-	-	-	-	*104	31	-	56	30	-
Stage 1	-	-	-	-	-	-	*255	313	-	272	308	-
Stage 2	-	-	-	-	-	-	*652	304	-	456	310	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.16	0.18	32.51	161.51
HCM LOS			D	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	104	526	678	-	-	708	-	-	68
HCM Lane V/C Ratio	0.292	0.059	0.023	-	-	0.035	-	-	0.813
HCM Control Delay (s/veh)	53.4	12.3	10.4	-	-	10.3	-	-	161.5
HCM Lane LOS	F	B	B	-	-	B	-	-	F
HCM 95th %tile Q(veh)	1.1	0.2	0.1	-	-	0.1	-	-	3.8

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	6.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	3	7	18	6	22	18
Future Vol, veh/h	3	7	18	6	22	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	7	19	6	23	19

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	11	0	51	7
Stage 1	-	-	-	-	7	-
Stage 2	-	-	-	-	44	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1622	-	963	1082
Stage 1	-	-	-	-	1021	-
Stage 2	-	-	-	-	983	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1622	-	952	1082
Mov Cap-2 Maneuver	-	-	-	-	952	-
Stage 1	-	-	-	-	1021	-
Stage 2	-	-	-	-	972	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	5.43	8.74
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1006	-	-	1350	-
HCM Lane V/C Ratio	0.042	-	-	0.012	-
HCM Control Delay (s/veh)	8.7	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	113	110	36	0	3
Future Vol, veh/h	0	113	110	36	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	119	116	38	0	3

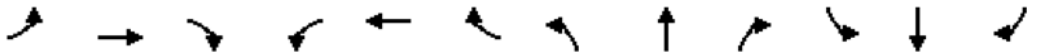
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	135
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	-	0	920
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	920
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0	0	8.93
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	920
HCM Lane V/C Ratio	-	-	-	0.003
HCM Control Delay (s/veh)	-	-	-	8.9
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	0

Capacity Analysis Summary Sheets

Year 2031 Total Projected Saturday Midday Peak Hour

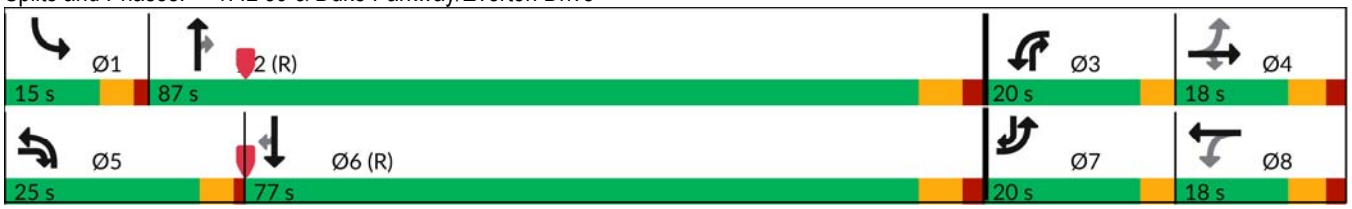


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	5	39	63	1	5	86	1150	36	34	1052	20
Future Volume (vph)	43	5	39	63	1	5	86	1150	36	34	1052	20
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	2000	1900	1900	2000	1900
Storage Length (ft)	375		230	0		0	230		245	215		0
Storage Lanes	1		1	1		0	2		1	1		1
Taper Length (ft)	120			25			300			230		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.875				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1719	2000	1262	1805	1662	0	3213	3689	1615	1752	3689	1392
Flt Permitted							0.950			0.950		
Satd. Flow (perm)	1810	2000	1262	1900	1662	0	3213	3689	1615	1752	3689	1392
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)			55									97
Link Speed (mph)		25			30			50			50	
Link Distance (ft)		367			332			2388			366	
Travel Time (s)		10.0			7.5			32.6			5.0	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	5%	0%	28%	0%	0%	0%	9%	3%	0%	3%	3%	16%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	44	5	40	65	6	0	89	1186	37	35	1085	21
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases	4		4	8					2			6
Detector Phase	7	4	5	3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	3.0	8.0	3.0	3.0	8.0		3.0	15.0	3.0	3.0	15.0	3.0
Minimum Split (s)	9.5	18.0	14.0	9.5	18.0		14.0	35.5	9.5	9.5	43.5	9.5
Total Split (s)	20.0	18.0	25.0	20.0	18.0		25.0	87.0	20.0	15.0	77.0	20.0
Total Split (%)	14.3%	12.9%	17.9%	14.3%	12.9%		17.9%	62.1%	14.3%	10.7%	55.0%	14.3%
Yellow Time (s)	3.5	4.0	3.5	3.5	4.0		3.5	4.5	3.5	3.5	4.5	3.5
All-Red Time (s)	0.0	2.0	1.0	0.0	2.0		1.0	2.0	0.0	1.5	2.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0	4.5	3.5	6.0		4.5	6.5	3.5	5.0	6.5	3.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Min	None	None	C-Min	None
Act Effct Green (s)	11.9	8.2	13.2	12.8	8.6		10.2	109.0	123.1	8.2	104.1	120.3
Actuated g/C Ratio	0.09	0.06	0.09	0.09	0.06		0.07	0.78	0.88	0.06	0.74	0.86
v/c Ratio	0.30	0.04	0.24	0.39	0.06		0.38	0.41	0.03	0.34	0.40	0.02
Control Delay (s/veh)	60.9	63.0	9.9	63.8	62.5		66.1	8.1	2.5	71.4	8.5	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	60.9	63.0	9.9	63.8	62.5		66.1	8.1	2.5	71.4	8.5	0.1
LOS	E	E	A	E	E		E	A	A	E	A	A
Approach Delay (s/veh)		38.1			63.7			11.9			10.3	
Approach LOS		D			E			B			B	
Queue Length 50th (ft)	39	4	0	58	5		40	176	3	31	163	0
Queue Length 95th (ft)	69	19	22	93	20		68	365	16	68	330	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		287			252			2308			286	
Turn Bay Length (ft)	375		230				230		245	215		
Base Capacity (vph)	231	171	257	243	142		470	2872	1470	128	2743	1265
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.03	0.16	0.27	0.04		0.19	0.41	0.03	0.27	0.40	0.02

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 135.8 (97%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 85			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.41			
Intersection Signal Delay (s/veh): 13.5		Intersection LOS: B	
Intersection Capacity Utilization 57.4%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: IL 59 & Duke Parkway/Everton Drive



Intersection	
Int Delay, s/veh	4.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	34	2	29	20	21	2	0	3	50	2	2
Future Vol, veh/h	2	34	2	29	20	21	2	0	3	50	2	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	130	-	120	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	27	100	30	20	0	50	0	67	2	0	0
Mvmt Flow	2	40	2	34	24	25	2	0	4	59	2	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	48	0	0	42	0	0	139	162	41	136	139	24
Stage 1	-	-	-	-	-	-	46	46	-	92	92	-
Stage 2	-	-	-	-	-	-	93	116	-	45	47	-
Critical Hdwy	4.1	-	-	4.4	-	-	7.6	6.5	6.87	7.12	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.6	5.5	-	6.12	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.6	5.5	-	6.12	5.5	-
Follow-up Hdwy	2.2	-	-	2.47	-	-	3.95	4	3.903	3.518	4	3.3
Pot Cap-1 Maneuver	1572	-	-	1404	-	-	733	734	872	834	756	1059
Stage 1	-	-	-	-	-	-	859	861	-	915	823	-
Stage 2	-	-	-	-	-	-	808	803	-	969	860	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1572	-	-	1404	-	-	710	715	872	810	736	1059
Mov Cap-2 Maneuver	-	-	-	-	-	-	710	715	-	810	736	-
Stage 1	-	-	-	-	-	-	858	859	-	893	803	-
Stage 2	-	-	-	-	-	-	785	784	-	964	858	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.38	3.16	9.54	9.8
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	799	1572	-	-	1404	-	-	814
HCM Lane V/C Ratio	0.007	0.001	-	-	0.024	-	-	0.078
HCM Control Delay (s/veh)	9.5	7.3	-	-	7.6	-	-	9.8
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0.1	-	-	0.3

Intersection	
Int Delay, s/veh	3.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	18	8	23	0	24	36
Future Vol, veh/h	18	8	23	0	24	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	19	8	24	0	25	38

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	113	24	0	0	24	0
Stage 1	24	-	-	-	-	-
Stage 2	88	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	889	1058	-	-	1604	-
Stage 1	1004	-	-	-	-	-
Stage 2	940	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	875	1058	-	-	1604	-
Mov Cap-2 Maneuver	875	-	-	-	-	-
Stage 1	1004	-	-	-	-	-
Stage 2	925	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.02	0	2.91
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	924	720	-
HCM Lane V/C Ratio	-	-	0.03	0.016	-
HCM Control Delay (s/veh)	-	-	9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	6.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	2	6	16	2	38	6	25	0	16	38	1
Future Vol, veh/h	1	2	6	16	2	38	6	25	0	16	38	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	0	0	17	0	0	0	0	0	0	0	0	0
Mvmt Flow	1	2	7	19	2	46	7	30	0	19	46	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	48	0	0	10	0	0	72	95	6	84	76	25
Stage 1	-	-	-	-	-	-	8	8	-	64	64	-
Stage 2	-	-	-	-	-	-	64	87	-	20	12	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
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	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1572	-	-	1623	-	-	924	799	1083	908	818	1057
Stage 1	-	-	-	-	-	-	1018	893	-	952	846	-
Stage 2	-	-	-	-	-	-	952	827	-	1004	890	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1572	-	-	1623	-	-	860	788	1083	862	808	1057
Mov Cap-2 Maneuver	-	-	-	-	-	-	860	788	-	862	808	-
Stage 1	-	-	-	-	-	-	1017	892	-	940	835	-
Stage 2	-	-	-	-	-	-	888	817	-	969	889	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.81	2.07	9.71	9.74
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	801	174	-	-	432	-	-	826
HCM Lane V/C Ratio	0.047	0.001	-	-	0.012	-	-	0.08
HCM Control Delay (s/veh)	9.7	7.3	0	-	7.2	0	-	9.7
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	34	0	1198	1072	42
Future Vol, veh/h	0	34	0	1198	1072	42
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	85
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	3	3	0
Mvmt Flow	0	36	0	1274	1140	45

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	570	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	*786	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %		0		-	-	-
Mov Cap-1 Maneuver	-	*786	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	9.8	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	786	-	-
HCM Lane V/C Ratio	-	0.046	-	-
HCM Control Delay (s/veh)	-	9.8	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	710	25	22	808	14	29	0	30	30	2	6
Future Vol, veh/h	9	710	25	22	808	14	29	0	30	30	2	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	215	-	-	355	-	-	-	-	50	-	-	-
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	2	0	0	1	8	0	0	0	0	0	0
Mvmt Flow	9	747	26	23	851	15	31	0	32	32	2	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	865	0	0	774	0	0	1252	1691	387	1297	1697	433
Stage 1	-	-	-	-	-	-	779	779	-	904	904	-
Stage 2	-	-	-	-	-	-	473	912	-	393	793	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1006	-	-	851	-	-	*225	121	617	205	120	*863
Stage 1	-	-	-	-	-	-	*359	409	-	511	504	-
Stage 2	-	-	-	-	-	-	*813	499	-	609	403	-
Platoon blocked, %	0	-	-		-	-	0	0		0	0	0
Mov Cap-1 Maneuver	1006	-	-	851	-	-	*211	117	617	187	115	*863
Mov Cap-2 Maneuver	-	-	-	-	-	-	*211	117	-	187	115	-
Stage 1	-	-	-	-	-	-	*356	405	-	497	490	-
Stage 2	-	-	-	-	-	-	*782	485	-	572	399	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.1	0.24	17.9	26.64
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	211	617	1006	-	-	851	-	-	206
HCM Lane V/C Ratio	0.144	0.051	0.009	-	-	0.027	-	-	0.194
HCM Control Delay (s/veh)	24.9	11.1	8.6	-	-	9.3	-	-	26.6
HCM Lane LOS	C	B	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	0.5	0.2	0	-	-	0.1	-	-	0.7

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	3	15	34	8	48	31
Future Vol, veh/h	3	15	34	8	48	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	16	36	8	51	33

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	19	0	91	11
Stage 1	-	-	-	-	11	-
Stage 2	-	-	-	-	80	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1611	-	914	1076
Stage 1	-	-	-	-	1017	-
Stage 2	-	-	-	-	948	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1611	-	894	1076
Mov Cap-2 Maneuver	-	-	-	-	894	-
Stage 1	-	-	-	-	1017	-
Stage 2	-	-	-	-	927	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	5.9	9.12
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	957	-	-	1457	-
HCM Lane V/C Ratio	0.087	-	-	0.022	-
HCM Control Delay (s/veh)	9.1	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	87	68	39	0	2
Future Vol, veh/h	0	87	68	39	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	92	72	41	0	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	92
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	-	0	971
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	971
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0	0	8.72
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	971
HCM Lane V/C Ratio	-	-	-	0.002
HCM Control Delay (s/veh)	-	-	-	8.7
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	0

Butterfield Road and Barkley Avenue Queue Comparison Table

Table 9
QUEUE COMPARISON

Intersection	Weekday Morning Peak Hour	Weekday Evening Peak Hour	Saturday Midday Peak Hour
	95th percentile	95th percentile	95th percentile
Butterfield Road with Barkley Avenue			
• Southbound Approach (Existing Conditions)	50’	60’	25’
• Southbound Approach (No Build Conditions)	62’	88’	25’
• Southbound Approach (Proposed Conditions)	70’	95’	25’
• Northbound Approach (Existing Conditions)	25’	25’	25’
• Northbound Approach (No Build Conditions)	25’	25’	25’
• Northbound Approach (Proposed Conditions)	25’	27’	25’

Attachment L

City of Warrenville
3S258 Manning Avenue
Warrenville, IL 60555
(630) 836 3050 tel
(630) 393 1531 fax
www.warrenville.il.us

MEMORANDUM

Date: Apil 30, 2025

To: Dream Clean Holdings, LLC

From: Kristine Hocking, P.E., CFM
Assistant Community Development Director
City of Warrenville

Re: Dream Clean Carwash / Starbucks
Engineering/SWM/Public Works Review #2
PRELIMINARY ENGINEERING - APPROVED WITH CONDITIONS

We have completed our 2ND review for the Dream Clean and Starbucks with regards to the DuPage County Stormwater and Flood Plain Ordinance, Warrenville's Subdivision Control and Ordinance, and Public Works requirements. We have reviewed the following documents related to this project:

1. Preliminary Civil Plan, prepared by WMA, dated April 15, 2025.
2. Site Plan, prepared by WMA, dated April 15, 2025.
3. Arch Site Plan, prepared by ArchAmerica, dated April 4, 2025.
4. Plat of Resubdivision, prepared by WMA, dated April 11, 2025.
5. Photometric Plan, prepared by PG Enlighten, dated February 18, 2025.
6. Landscape Plan, prepared by WMA, dated April 15, 2025.
7. Auto Turn Exhibit, prepared by WMA, dated February 10, 2025.
8. Traffic Impact Study, prepared by KLOA, dated April 17, 2025.

ENGINEERING SUMMARY

ACCESS: Access is provided to the site via Estes, Barkley and Duke Parkway. The Estes right-in and right-out will be upgraded to account for commercial traffic. A new right-in, right-out is proposed on Duke Parkway. A full access is proposed on Barkley Avenue.

STORMWATER DETENTION: Detention has been provided for in the regional stormwater detention pond to the south of Thorton's Gas Station. All storm sewers onsite should be designed to convey the 100-year flow.

BEST MANAGEMENT PRACTICES: The regional stormwater detention pond was planted with native vegetation, which satisfies the Stormwater Ordinance requirement for Best Management Practices.

SPECIAL MANAGEMENT AREAS: There are no special management areas on the site.

SEWER & WATER: There is an existing sanitary sewer and watermain around the site.

EROSION CONTROL: Erosion control measures are required for this development. The Applicant should provide proposed erosion control measures on the final engineering plans with the building permit. Standard City Notes shall be incorporated.

PERMITS: A City of Warrenville Stormwater and Flood Plain Certification is required due to the site disturbance. City of Warrenville Building Permits will be required as each building is constructed. A Notice of Intent (NOI) must be submitted to the Illinois Environmental Protection Agency (IEPA) before the start of construction. A Notice of Termination must be submitted to the IEPA once the site is fully restored. IEPA sanitary sewer and watermain permits will be required.

SITE LIGHTING: A photometric plan was submitted for the entire site including the shared access drive. The fixtures conform to the Zoning Ordinance requirements, however the average footcandles for the shared access drive, parking area, and waiting area all **exceed** the requirements and will have to be updated. ***See comments.***

REVIEW COMMENTS

The reviewed documents have been stamped **"APPROVED WITH CONDITIONS**". Please submit Final Engineering plans and a disposition of the comments with the Final PUD submittal.

GENERAL:

1. Provide Final Engineering Plans which would include but not limited to layout, utilities, grading, erosion control/SWPP, ADA parking spot and access aisle grades, ADA driveway crossing detail and construction details. Plans shall be stamped by Professional Engineer.
2. Provide a final stormwater memo that compares the impervious area assumed in the original stormwater detention calculations to the impervious area of the proposed Starbucks/Dream Clean site plan and make an assumption for the Lot 1 plan.
3. Provide storm sewer calculations for the 100-year flow.
4. Public sidewalk shall be Class SI with a minimum 6.1 bag mix in accordance with Section 1020 of IDOT Standard Specification and shall include fibrous reinforcement of one-half inch length synthetic fiber added at a rate of 1.5 pounds per cubic yard of concrete.
5. Include Estes Street Cross Section detail.
6. Submit a Stormwater Certification Application (attached)
7. Submit any submittal/correspondence with IDOT permitting.
8. Submit any correspondence with Aurora for the RinRout on Duke Parkway (Permit).

PRELIMINARY CIVIL PLAN:

9. Review the ADA parking spots, access aisle, and route to ensure compliance with IAC. Add additional spot grades as necessary.
10. Include revised striping on Route 59 for the right turn lane on final engineering plans.
11. During the building permit, provide a lighting plan with details, conduit, wiring, and connection point to the existing system.

12. To be consistent with the City's Standard Specifications (on City's website), Mac Wrap and external chimney seals will be required on all sanitary manholes, public or private and the water main should be PVC. These shall be noted on the final engineering plans.
13. The valve for the car wash water service should be located as close to the connection to the main as possible and noted on the final engineering plans.
14. Provide a directional signage plan (stop signs, etc).
15. Submit gap analysis for TIF assistance.
16. Include the City's standard erosion control, utility standard specifications, decorative light pole details, sign specs, etc in the final engineering plans. These can be found on the City's Website, under Community Development, Engineering. https://www.warrenville.il.us/291/Engineering

TRAFFIC IMPACT AND CIRCULATION:

17. All previous comments have been addressed. Consider circulation related signage for no right turn on Barkley from site.

PHOTOMETRIC PLAN:

18. Update the photometric plan to conform to the Zoning Ordinance Performance Standards for Illumination.
    a. These uses are considered a 'medium' level of activity and require the average to not exceed 2.0 F/C, with average to minimums between 3:1 and 4:1 and the max to min ratio of around 15:1.
    b. The photometric calculation summary should include labels for the Starbucks parking lot and drive through lane.
    c. Provide cut sheets for the fixtures to ensure full cutoff lenses and horizontal 90 degrees with no option to tilt.
    d. Illumination level at north lot line not to exceed 0.1 f/c except at drive aisle.
    e. Mounting heights shall have a maximum of 26-feet.

SUBDIVISION PLAT:

19. Include provisions for the new 10-Foot Easement for Watermain (public) as well as the provisions for the easement for sanitary sewer (private).

ESTIMATED FEES:

20. Submit an EOPCC. This includes roadway improvements, storm sewer, erosion control, public utilities (watermain), street lighting and landscaping.
21. Stormwater Management Review Fee: $1,500 is required per City code section 8-5-3. This has been paid.
22. Stormwater Inspection Fee: $500 plus 2.5% of EOPCC for Public Improvements (Stormwater Management & Erosion Control).
23. Final Engineering Review and Inspection: Based upon the EOPCC for Public Improvements (Non-Stormwater Management/Erosion Control).

24. Development Security: 110% of the total EOPCC for Public and Stormwater Improvements. This can be a cash bond, Letter of Credit, or a Performance and Payment Surety Bond.
25. Satisfy the recapture agreement obligations under City Ordinance O2017-11. This amount is estimated around $73,000 for the Duke Sewer and Water Recapture and $65,000 for the Duke Roadway Improvement Recapture. Actual amounts will be calculated at time of site development issuance.

Thunder Hearing & Sound, LLC
847 South Randall Road, #218 Elgin, IL 60123
855-566-7488 www.ThunderHearing.com

Warrenville Dream Clean Sound Impact Study

March 14th, 2025

Prepared for:
Dream Clean Car Wash – 625 Greenleaf, Wilmette, IL 60091

Thunder Hearing & Sound was asked to study the noise radiated from the proposed Dream Clean Car Wash facility North of Duke Parkway and East of Route 59 in Warrenville, IL. As shown in **FIGURE 1**, this plan includes a 152-foot tunnel with automated wash equipment and 20 vacuum stalls. Because these operations generate noise, we were asked to evaluate the potential impact of this noise on the adjacent residential community.

Applicable Noise Regulations

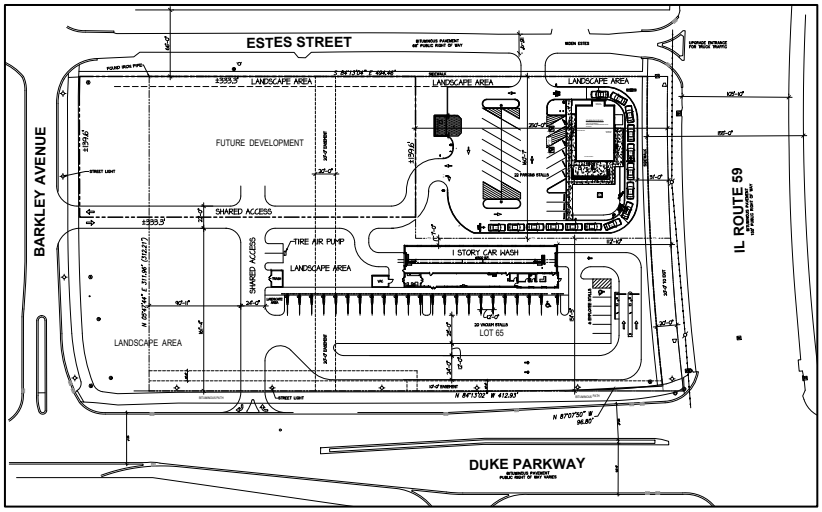


Figure 1 – Site Plan.

The City of Warrenville noise code limits sound by groups of frequencies (called octave bands). However, the upper and lower frequencies of these bands were changed in the 1970s. We mathematically converted these limits to the modern octave-band frequencies over nine octaves ranging from 32 Hz to 8,000 Hz - nearly the full range of hearing. For simplicity, when no particular frequency dominates the sound (like a humming or squealing sound), these limits can be logarithmically summed to establish a single, overall noise level limit. Also included in the code are adjustments to be made for nighttime (-5 dB) and commercial properties (+5 dB).

For noise radiated from commercial property to residential property, the equivalent overall limit is 60 dB(A) for the daytime hours and 55 dB(A) for the nighttime hours (7:00 PM to 7:00 AM). For noise radiated from commercial property to business property, the overall limit is 67 dB(A) for the daytime hours and 62 dB(A) for the nighttime hours (7:00 PM to 7:00 AM). For reference, 60 dB(A) is the level of casual conversation while 50 dB(A) is half as loud and about the level of a dishwasher.

Ambient Noise Assessment

Regardless of any numerical limit, the impact of a noise source depends primarily on its audibility. To assess the degree of audibility, we evaluated the existing ambient noise by visiting the site on Tuesday, February 25th, 2025. During our visit, we inspected the topography of the site, examined the surrounding area, characterized the ambient noise, identified its sources, and set up professional-grade equipment to record the noise.

Figure 2 – Ambient Sampling Location

The recording ran for a nominal 24-hours to sample the background noise during a typical day at the location shown in **FIGURE 2**. This location was chosen because the distance to Route 59, the major noise source in the area, was similar to the nearest homes.

The recordings were analyzed to generate ambient sound level data at 1-second intervals. The result of this analysis can be seen in **FIGURE 3**. This graph calls out several events of loud cars and trucks passing by. The primary noise source was traffic from Route 59 with a higher truck mix than typical, likely due to the nearby truck stop. There was some construction noise in the area, but it did not cause an appreciable change in the ambient noise levels.

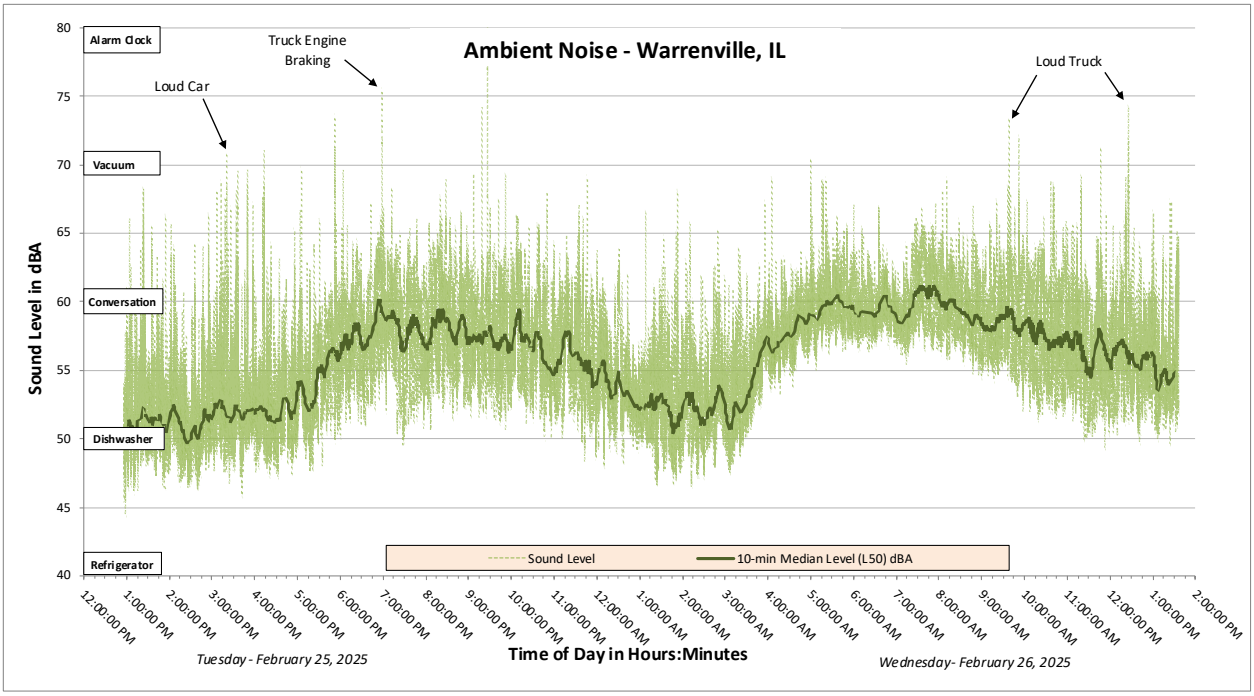


Figure 3 – Sound Level Trace of Ambient Noise

The thin green line in **FIGURE 3** shows the sound level each second. To better visualize the trend of the ambient noise, we computed the 10-minute median level, shown as the thick green line. Also known as the L50 level, the median level is a common acoustical measure that gives the level of sound exceeded 50% of the time. This median level is a good measure of the background ambient noise. During the recording, the 1-hour median levels (L_{A50}) ranged from **51 dBA to 60 dBA**.

Source Noise

To assess the sound emissions of the site we captured sound from a similar car wash (Drive Well Auto Spa in Mount Prospect, IL) with the same equipment planned for the Dream Clean car wash and a 151 ft tunnel. The 18 total dryers/blowers at this car wash are shown in **FIGURE 4**. We set up professional-grade equipment to record the noise and then analyzed the recordings in our lab to calculate the sound levels due to the car wash. Based on this analysis, the car wash produces a sound level of **77 dBA 50 ft from the exit** and **63 dBA 50 ft from the entrance** when under a full load of cars. We used the same approach for the vacuums and found the vacuums were **63 dBA at 50 ft** for normal activity.

Figure 4 – Mount Prospect Car Wash Dryers

Sound Modeling

To predict the sound levels radiated from Dream Clean Car Wash, we used an internationally accepted software program called SoundPlan™. This program calculates the sound level at millions of distant points based on the source sound levels, the topography of the site, reflections from buildings, the ground reflections from the parking lot, absorption by the atmosphere, diffraction from vegetation, and shielding from berms and structures. The program calculates the time-averaged levels based on the source data we input, in this case, our measured data from Drive Well Auto Spa in Mount Prospect, IL. Based on these calculations, the program generated color sound-level contours surrounding the site.

We positioned the noise sources as shown in **FIGURE 1** (the site plan), with the west side of the car wash as the exit and the east side as the entrance. We placed a sound source in each vacuum stall for the model. Each noise source was given a usage pattern from a similar car wash, with low usage in the morning and peak usage in the evening (5:00 PM – 7:00 PM). The peak usage represents the car wash at full capacity with the blowers on 100% of the time and doors open; a worst-case scenario.

Table 1 – Perceptual Difference as a Function of the Decibel Increase

Decibel Increase	Perceptual Difference	Impact
1-2 dB	Negligible	None
3-4 dB	Just Noticeable	Slight
5-6 dB	Clearly Noticeable	Mild
7-8 dB	Strongly Noticeable	Moderate
9-10 dB	Doubling in Loudness	Substantial

FIGURE 5 shows the projected audibility contours during the daytime. To create the contours, we set the green color on the legend to 51 dBA, the lowest ambient noise level during the day (1:00 PM to 3:00 PM). Each color change on the contours represents a change of 3 dB, which is a "just noticeable" change (see **TABLE 1**). The red line is the Warrenville residential daytime limit of 60 dBA. We chose four points - represented by blue dots - to extract the calculated sound levels from the program.

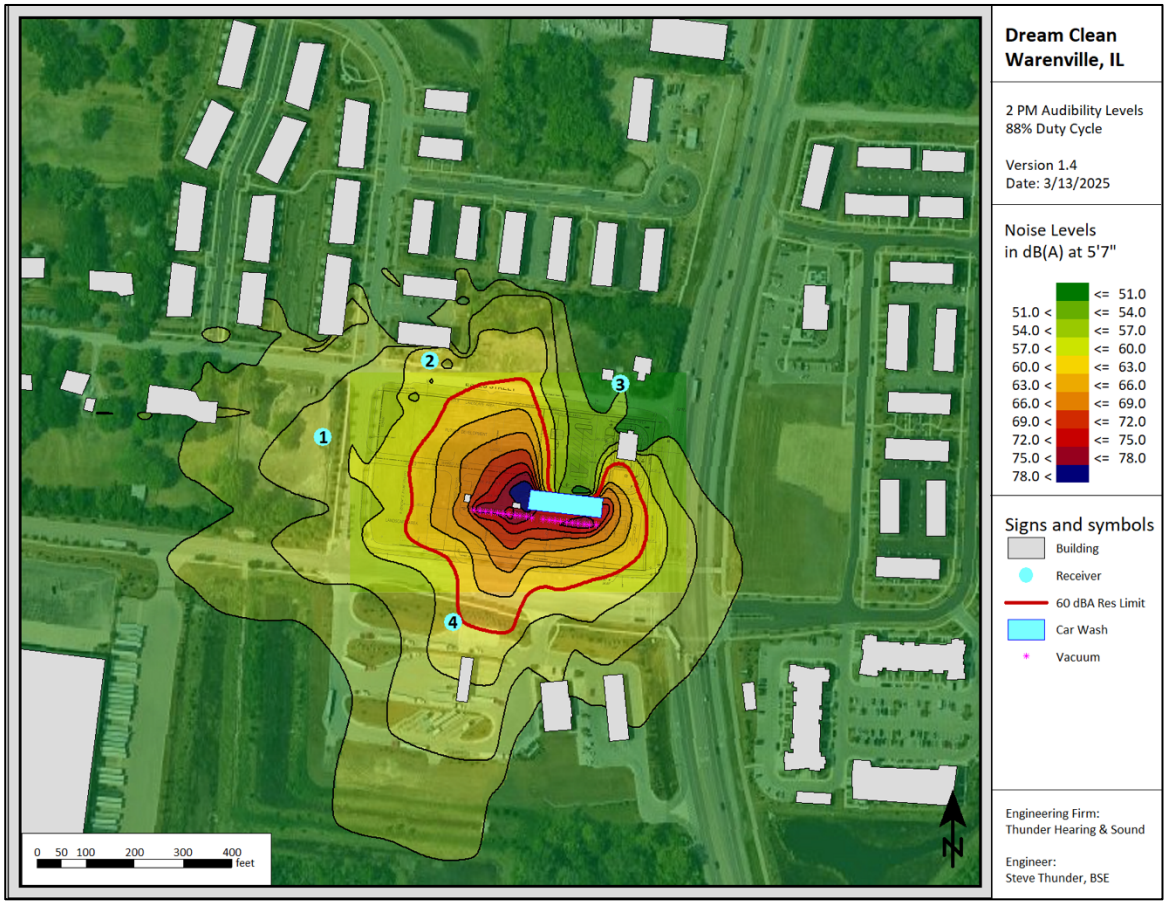


Figure 5 – Audibility level contours from 1:00 PM – 3:00 PM

As shown in **FIGURE 5**, we expect the noise levels from the Dream Clean facility to be above the ambient level for all four points at 2:00 PM. However, impact is determined by how much the noise is above the ambient at a given time. For example, a level 2 dB above the ambient would not be perceptible and would be considered no impact (see **TABLE 1**). A full table of levels for each location and each hour is attached at the end of this report.

While **FIGURE 5** shows the 2-dimensional radiation of sound from the site, we also prepared a time-series graph showing the hourly time-averaged level of the projected sound levels compared with the hourly ambient levels at location #2 (3S515 Barkley Ave). In **FIGURE 6**, the green area is the measured ambient noise level for the area; the blue bars are the projected sound levels from the car wash at location #2; and the red dashed line is the Warrenville noise limit (see the *Applicable Noise Regulations* section above).

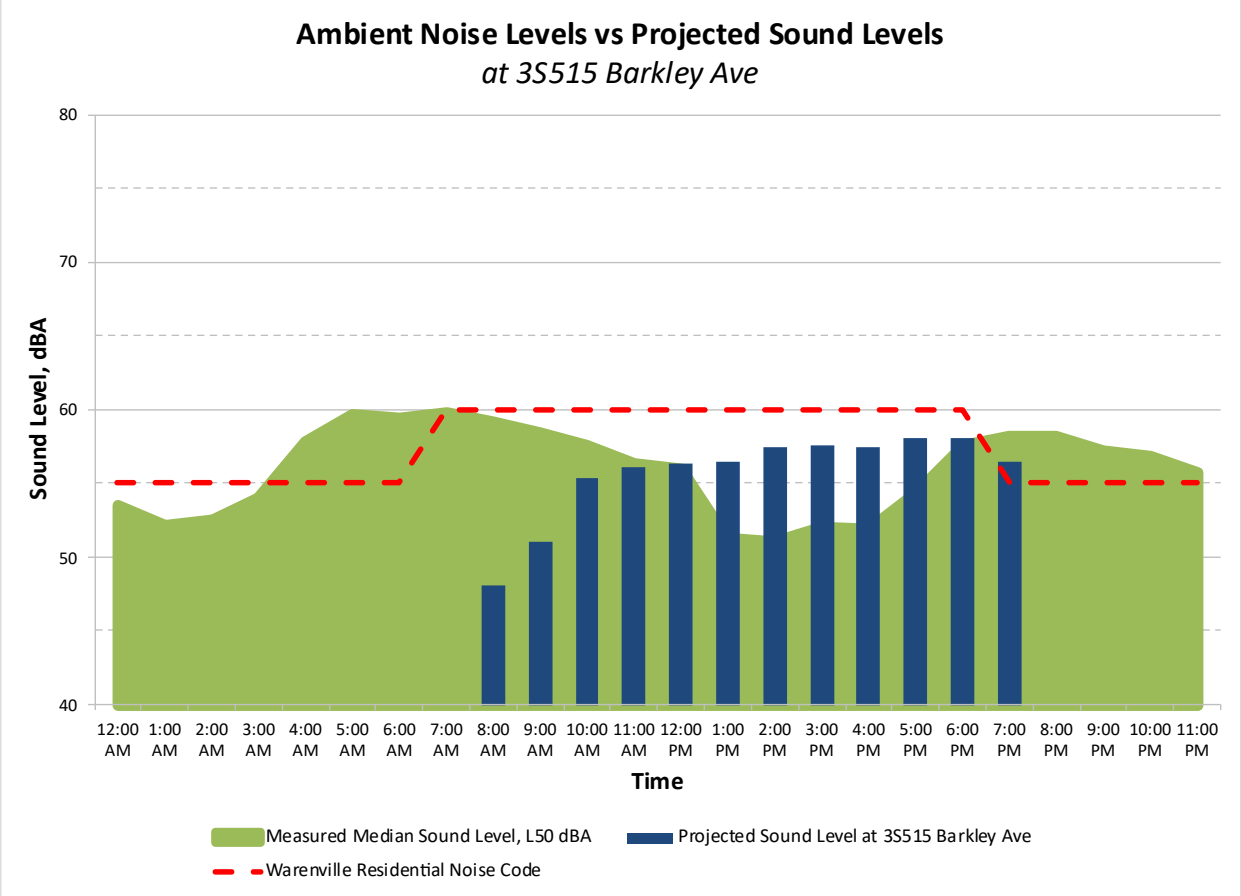


Figure 6 – Hourly sound levels for the existing ambient noise (green area) compared with the hourly sound levels generated by Dream Clean Car Wash at location #2 (blue bars)

When interpreting **FIGURE 6**, the projected hourly sound levels generated by the Dream Clean facility (shown by the bars) should be compared against 1) the red-dashed line showing the Warrenville daytime and nighttime noise limits of 60 and 55 dBA, respectively, and 2) the green area showing the ambient noise.

As seen in **FIGURE 6,** the Dream Clean noise (blue bars) is below the Warrenville noise limit (red-dashed line) through the 6:00 PM hour. Accordingly, the noise from this facility would **meet the Warrenville noise code** until about 7:00 PM. After 7:00 PM the limit drops by 5 dB, but that ambient noise is higher than the limit. When this occurs, the ambient noise becomes the defacto limit. This is because it would not be possible to have a valid measurement of the car wash noise when the ambient noise is higher than the car wash noise. Additionally, because the noise would not exceed the ambient noise, there would be no impact. In other words, noise that is hardly audible poses no adverse effect, and would meet the intent of the noise code.

Despite meeting the Village code, some impact may occur at location #2 (3S515 Barkley Ave) in the afternoon hours. Although unusual, the noise at this location appears to be the lowest in the 1:00-5:00 PM timeframe. Typically, the lowest ambient noise is during the middle of the night because that's when traffic is the lowest. Therefore, it's likely the midday ambient noise is normally higher. This makes our analysis that, shows a mild impact in the afternoon, conservative. We also note that when the southeast corner of Barkley Ave and Estes St is developed, the buildings would act as barriers and reduce any impact.

Conclusion

Our comprehensive study of the noise radiated from the proposed Dream Clean facility has yielded insightful findings. Based on the measurement of sound generated by noise sources at a similar facility, the use of a sophisticated sound modeling program, the assessment of the existing ambient noise levels, and the measurement methodology stipulated by the State of Illinois, we have determined that:

1. The Dream Clean Car Wash will not exceed the Warrenville residential noise code limits.

2. The Dream Clean Car Wash will not exceed the Warrenville business noise code limits.

3. The projected noise levels are generally lower than the existing ambient noise, indicating minimal impact, especially during the morning and evening commutes.

4. A small increase in noise (mild impact) is possible from 1:00-5:00 PM at 3S515 Barkley Ave, but this will be mitigated when future buildings are constructed in the area.

This is not to say that the noise will be inaudible at all times. For example, when a car wash occurs at the same time as a lull in traffic, that car wash would likely be audible. But as the US EPA advocates, to assess the long-term annoyance of a noise source, logarithmic time-averaging must be used in the analysis. Consistent with the requirements in the State of Illinois noise code, we used a one-hour time reference in our analysis.

Submitted by:

Steve Thunder, BSE
Acoustical Engineer

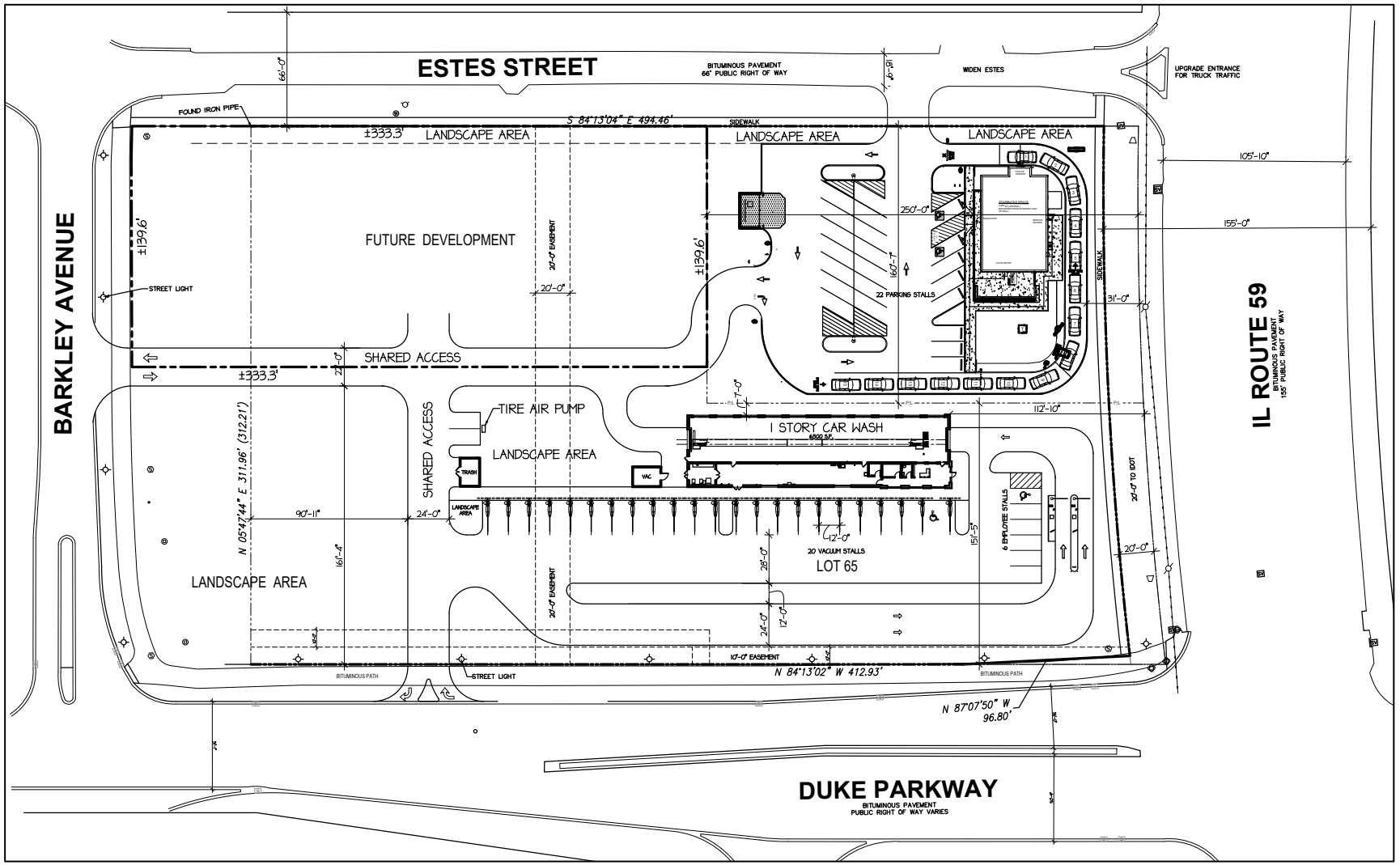


Figure 1 – Site Plan.

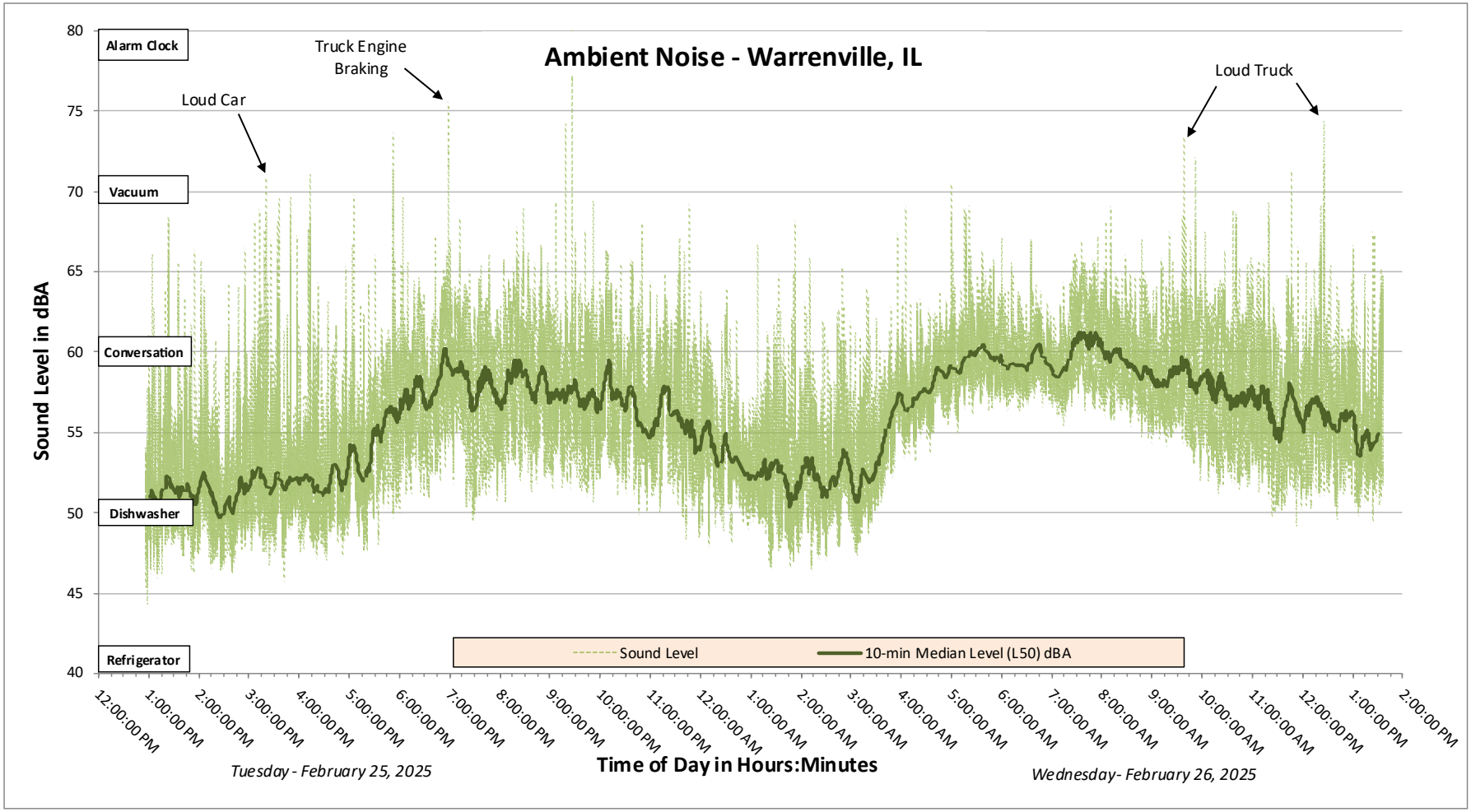


Figure 3 – Sound Level Trace of Ambient Noise

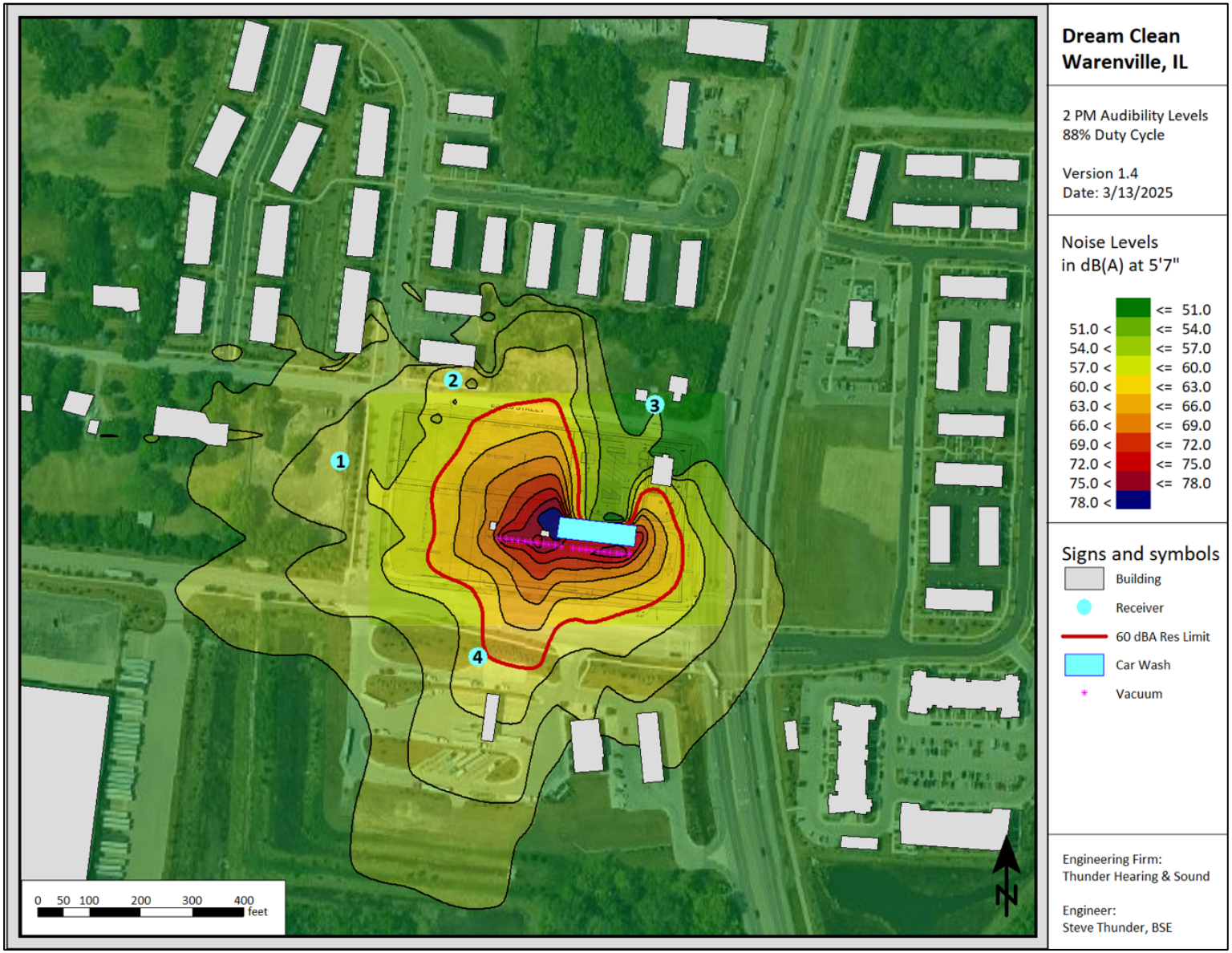


Figure 5 – Audibility level contours from 1:00 PM – 3:00 PM

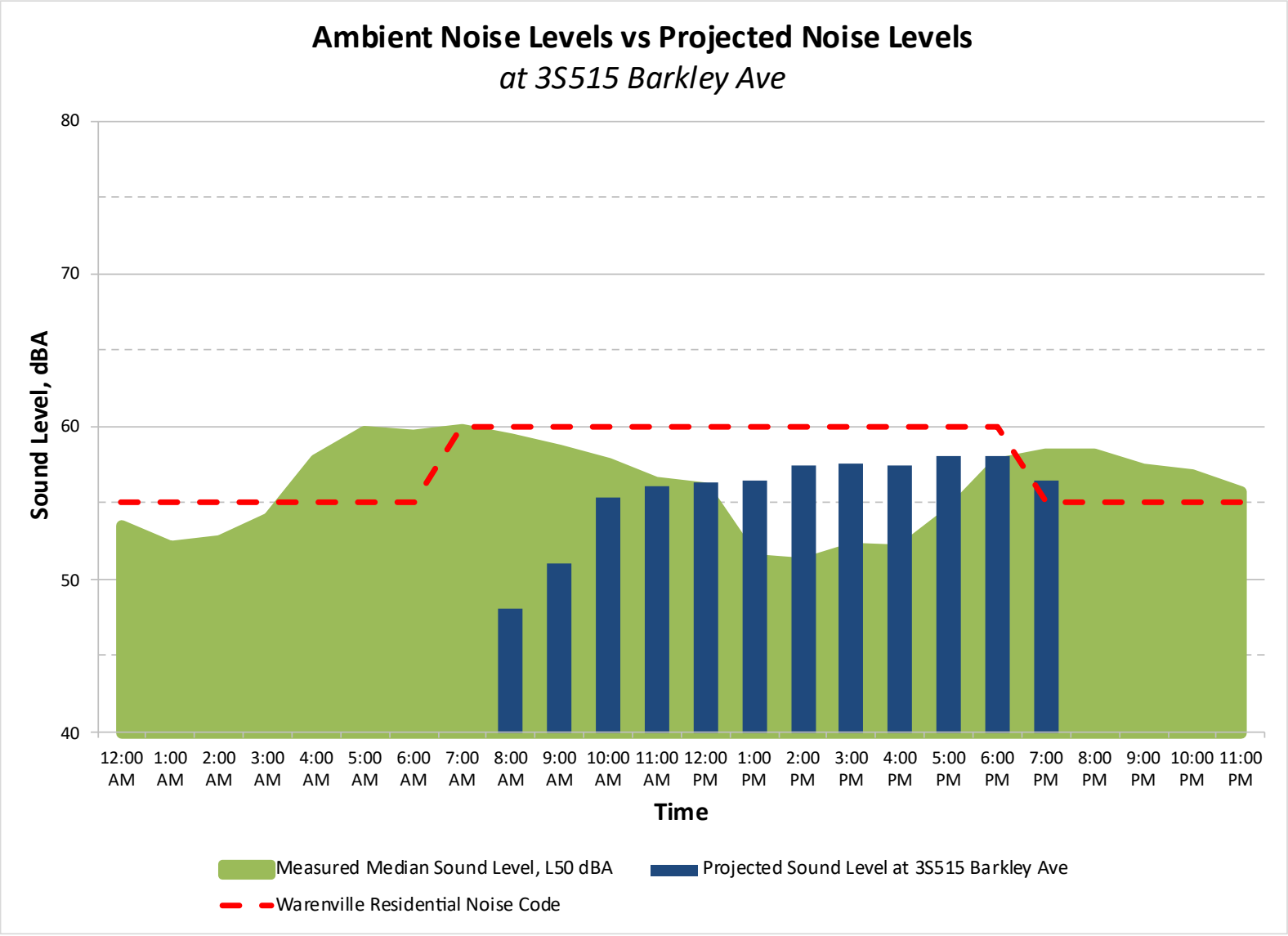


Figure 6 – Hourly sound levels for the existing ambient noise (green area) compared with the hourly sound levels generated by Dream Clean Car Wash at location #2 (blue bars)

Receiver	Obj.-No.		7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM		Daytime Limit	Nighttime Limit (7pm - 7am)
30W121 Estes St	1			47	50	54	55	55	55	56	56	56	57	57	55			60	55
3S515 Barkley Ave	2			48	51	55	56	56	57	58	58	57	58	58	57			60	55
30W020 Estes St	3			41	44	49	49	50	50	51	51	51	51	51	50			60	55
Thorntons	4			50	53	58	58	59	59	60	60	60	60	60	59			67	62
Ambient Noise			60	59	58	58	56	56	51	51	52	52	54	58	58	58			
			All values in dBA																

Attachment N

ESTES STREET
BITUMINOUS PAVEMENT
66' PUBLIC RIGHT OF WAY
WIDEN ESTES
UPGRADE ENTRANCE FOR TRUCK TRAFFIC
66'-0"
PLM
FOUND IRON PIPE
S84°13'04"E
494.47
SIDEWALK
LANDSCAPE AREA
±333.3'
STREET LIGHT
BARKLEY AVENUE
±139.6'
311.96
FUTURE DEVELOPMENT
20'-0" EASEMENT
20'-0"
±139.6'
105'-10"
250'-0"
155'-0"
160'-1"
22 PARKING STALLS
STARBUCKS SPACE
PICK-UP WINDOW
MAIN ENTRY
SERVICE ACCESS
PATIO ENTRY
PATIO
SIDEWALK
3'-0"
SHARED ACCESS
±333.3'
21'-0"
TIRE AIR PUMP
7'-2"
112'-10"
P.O.L.
1 STORY CAR WASH
6500 S.F.
42'-10"
14'-0"
7'-2"
TRASH
LANDSCAPE AREA
SHARED ACCESS
N05°47'44"E
90'-11"
24'-0"
LANDSCAPE AREA
VAC
20'-0"
12'-0"
151'-5"
6 EMPLOYEE STALLS
19 VACUUM STALLS
LOT 65
24'-0"
26'-0"
24'-0"
20'-0" TO LOOT
20'-0"
LANDSCAPE AREA
161'-4"
20'-0" EASEMENT
22'-0"
16'-0"
STORM SEWER EASEMENT PER DOC. R2017-050730
10'-0" EASEMENT
N84°13'02"W
412.93
N87°07'50"W 96.80
BITUMINOUS PATH
BITUMINOUS PATH
IL ROUTE 59
BITUMINOUS PAVEMENT
155' PUBLIC RIGHT OF WAY
DUKE PARKWAY
BITUMINOUS PAVEMENT
PUBLIC RIGHT OF WAY VARIES

ARCHAMERICA
34121 N. US 45, Suite 213
Grayslake, Illinois 60030
Phone 847-336-6600
Fax 847-336-6601

Car Wash

WARRENVILLE, ILLINOIS

APRIL 4, 2025

Archamerica Job No. 24086

Site Plan

0 15' 30' 60' 120'

N