

**VILLAGE OF DOWNERS GROVE**  
**Report for the Village**  
**2/6/2018**

<b>SUBJECT:</b>	<b>SUBMITTED BY:</b>
2410 Ogden Avenue - Special Use	Stan Popovich, AICP Director of Community Development

**SYNOPSIS**

The petitioner is requesting Special Use approval to operate an automobile dealership at 2410 Ogden Avenue.

**STRATEGIC PLAN ALIGNMENT**

The goals for 2017-2019 include *Strong and Diverse Local Economy*.

**FISCAL IMPACT**

n/a

**RECOMMENDATION**

Approval on the February 13, 2018 active agenda per the Plan Commission's unanimous 6:0 positive recommendation. The Plan Commission found that the proposal is an appropriate use in the district, compatible with the Comprehensive Plan and meets all standards for approval of a Special Use per Section 28.12.050.

**BACKGROUND**Property Information & Zoning Request

The petitioner is proposing to redevelop the site of an existing one-story vacant building (formerly a restaurant) with a new two-story, 8,500 square-foot automobile dealership. The proposed building will be near the center of the lot and parking will wrap around the building on all sides with automobile display concentrated in the rear. The eastern curb cut onto Ogden Avenue will be removed, while the western curb cut will be improved.

The new building's modern design will consist primarily of steel, masonry and concrete. The street facing elevation includes tinted window panes, framing, metal clad panels and upwards slanted eaves. The southern half of the side elevations maintain the window panes, and the north half incorporates two different variations of metal clad panels. The rear elevation is mostly brown colored metal clad paneling with horizontal lines and glazed overhead doors leading to the service area.

The interior will consist of a front sales area, interior vehicle display, service bays, customer waiting area, and reception. The smaller second floor will also have offices and a common area. The rear service area has five vehicle bays for maintenance, washing/detailing, and a photographic marketing area.

### Compliance with the Comprehensive Plan

The Comprehensive Plan's Future Land Use Map designates this property as Corridor Commercial. The plan calls for the concentration of auto dealerships within this western section of the corridor and to promote uses that have a regional draw. The proposal also achieves the Comprehensive Plan's aesthetic, site and screening improvement goals. The proposed use at this property is consistent with the Comprehensive Plan.

### Compliance with the Zoning Ordinance

The property is zoned B-3, General Services and Highway Business. An automobile dealership use is an allowable Special Use in the B-3 zoning district. The new building and redeveloped site will be compliant with the required B-3 bulk standards. The trash enclosure will be screened, and the photometric plan demonstrates that the light trespass will not exceed code requirements. The proposed use and site is consistent with the Zoning Ordinance.

### Engineering\Public Improvements

Post Construction Best Management Practices (PCBMPs) are not required since the proposal results in a decrease in impervious area. The existing detention area and utility connections will remain the same. The traffic study concluded that the single full movement access drive will be adequate in accommodating the projected traffic and onsite vehicle deliveries. The impact on the existing road network will be minimal. The owner will dedicate land to be incorporated into the Ogden Avenue right-of-way. A public sidewalk and an internal pedestrian connection is proposed.

### Public Comment

No member of the public spoke at the public hearing. After the Plan Commission meeting, two members of the public contacted staff and expressed concerns regarding traffic, light glare, and the general number of automobile dealerships in the Village. Staff explained and reviewed the proposal including the site plan, traffic study, landscaping/screening and photometric plans with the residents.

## **ATTACHMENTS**

Ordinance

Aerial Map

Staff Report with attachments dated January 8, 2018

Draft Minutes of the Plan Commission Hearing dated January 8, 2018

**ORDINANCE NO. \_\_\_\_\_****AN ORDINANCE AUTHORIZING A SPECIAL USE FOR 2410 OGDEN AVENUE  
TO PERMIT AN AUTOMOBILE DEALERSHIP**

WHEREAS, the following described property, to wit:

LOTS 18, 19, 20, 21 AND 22 IN BLOCK 1 IN ARTHUR T. MCINTOSH AND CO'S FOURTH OGDEN AVENUE SUBDIVISION, BEING A SUBDIVISION IN THE SOUTH HALF OF SECTION 1, TOWNSHIP 38 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED APRIL 9, 1925 AS DOCUMENT 190962, IN DUPAGE COUNTY, ILLINOIS.

Commonly known as: 2410 Ogden Avenue, Downers Grove, IL 60515  
PINs: 08-01-303-014; -015; -016; -017

(hereinafter referred to as the "Property") is presently zoned in the "*B-3, General Services and Highway Business District*" under the Comprehensive Zoning Ordinance of the Village of Downers Grove; and

WHEREAS, such petition was referred to the Plan Commission of the Village of Downers Grove, and said Plan Commission has given the required public notice, has conducted a public hearing for the petition on January 8, 2018 and has made its findings and recommendations, all in accordance with the statutes of the State of Illinois and the ordinances of the Village of Downers Grove; and,

WHEREAS, the Plan Commission has recommended approval of the Special Use, subject to certain conditions; and,

WHEREAS, the Village Council finds that the evidence presented in support of said petition, as stated in the aforesaid findings and recommendations of the Plan Commission, is such as to establish the following:

1. That the proposed use is expressly authorized as a Special Use in the district in which it is to be located;
2. That the proposed use at the proposed location is necessary or desirable to provide a service or a facility that is in the interest of public convenience and will contribute to the general welfare of the neighborhood or community.
3. That the proposed use will not, in the particular case, be detrimental to the health, safety or general welfare of persons residing or working in the vicinity or be injurious to property values or improvements in the vicinity.

NOW, THEREFORE, BE IT ORDAINED by the Council of the Village of Downers Grove, in DuPage County, Illinois, as follows:

SECTION 1. That Special Use of the Property is hereby granted to allow construction of an automobile dealership.

SECTION 2. This approval is subject to the following conditions:

1. The Special Use shall substantially conform to the staff report dated January 8, 2018; engineering drawings prepared by Damas Consulting Group dated December 1, 2017 and last revised on December 20, 2017 and architectural drawings prepared by Phorma Designs, Inc. dated December 1, 2017 and last revised December 14, 2017, except as such plans may be modified to conform to the Village codes and ordinances.
2. All test drives are limited to arterial streets as defined in the Comprehensive Plan.
3. All vehicle deliveries must be completed on private property. Vehicles may not be dropped off or picked up on Ogden Avenue.
4. A pedestrian connection must be provided from the public right-of-way to the main building entrance in conformance with the Zoning Ordinance.
5. The building shall be equipped with an automatic fire suppression system and an automatic and manual fire alarm system.
6. Prior to the issuance of a building permit, an administrative lot consolidation shall be completed that dedicates additional IDOT right-of-way.
7. A sidewalk easement shall be granted to the Village.

SECTION 3. The above conditions are hereby made part of the terms under which the Special Use is granted. Violation of any or all of such conditions shall be deemed a violation of the Village of Downers Grove Zoning Ordinance, the penalty for which may include, but is not limited to, a fine and/or revocation of the Special Use granted herein.

SECTION 4. It is the Petitioner's obligation to maintain compliance with all applicable Federal, State, County and Village laws, ordinances, regulations, and policies.

SECTION 5. That all ordinances or parts of ordinances in conflict with the provisions of this ordinance are hereby repealed.

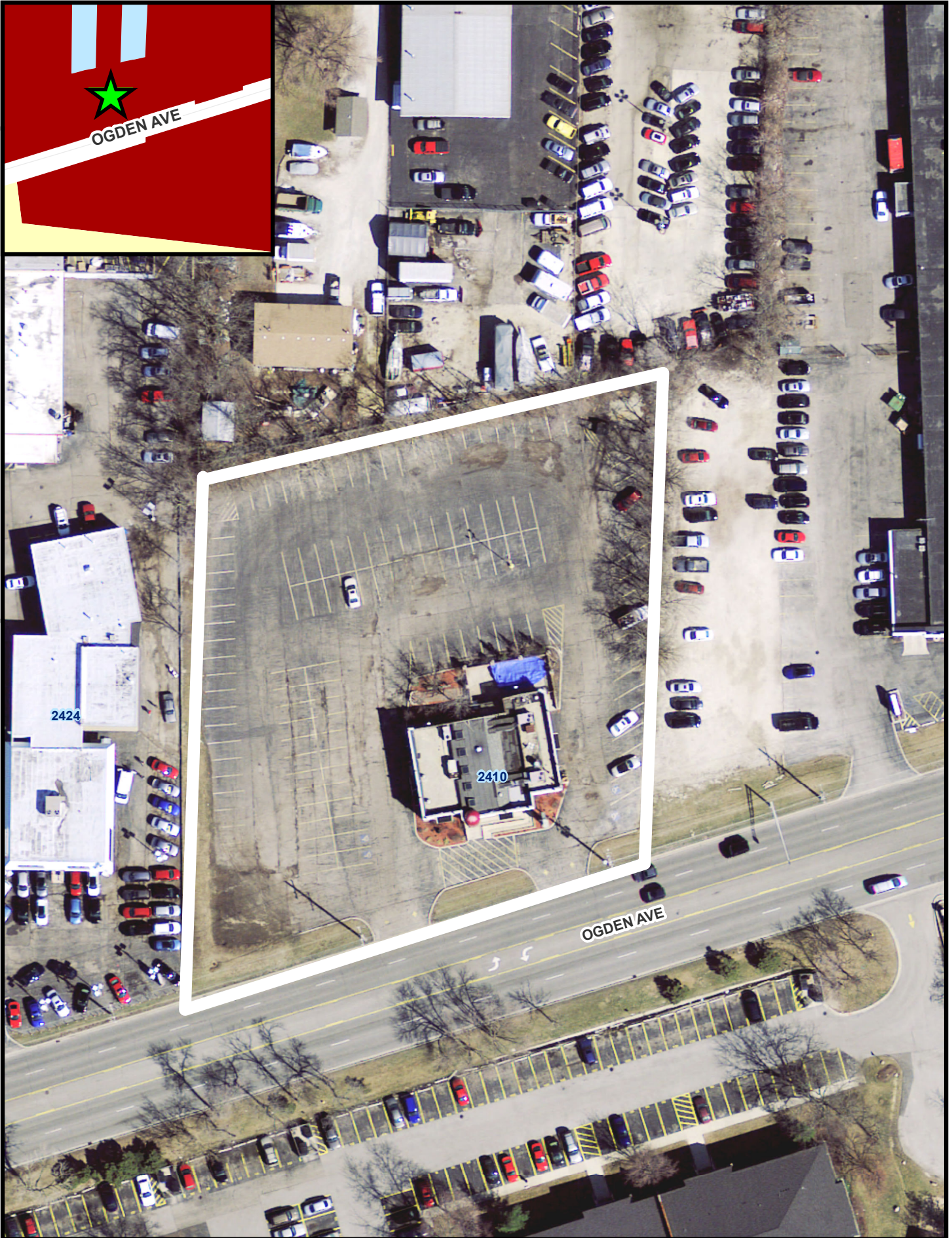
\_\_\_\_\_  
Mayor

Passed:

Published:

Attest: \_\_\_\_\_

Village Clerk



0 30 60 Feet

# 2410 Ogden Avenue-Location Map





**VILLAGE OF DOWNERS GROVE  
REPORT FOR THE PLAN COMMISSION  
JANUARY 8, 2018 AGENDA**

<b>SUBJECT:</b>	<b>TYPE:</b>	<b>SUBMITTED BY:</b>
17-PLC-0039 2410 Ogden Avenue	Special Use	Scott Williams, AICP Planner

**REQUEST**

The petitioner is requesting approval of a Special Use to construct a personal vehicle sales business at 2410 Ogden Avenue.

**NOTICE**

The application has been filed in conformance with applicable procedural and public notice requirements.

**GENERAL INFORMATION**

**OWNER:** Agri-Pes, LLC  
857 Willow Lane  
Willowbrook, IL 60527

**APPLICANT:** Agent: Anas Alkhatib  
Agri-Pes, LLC  
857 Willow Lane  
Willowbrook, IL 60527

**PROPERTY INFORMATION**

**EXISTING ZONING:** B-3, General Services and Highway Business  
**EXISTING LAND USE:** Vacant Restaurant  
**PROPERTY SIZE:** 65,030 sq. ft. (1.5 acres)  
**PINS:** 08-01-303-014, -015, -016, -017

**SURROUNDING ZONING AND LAND USES**

	<b>ZONING</b>	<b>FUTURE LAND USE</b>
<b>NORTH:</b>	B-3, General Services and Highway Business M-1, Light Manufacturing	Corridor Commercial Corridor Commercial
<b>SOUTH:</b>	B-3, General Services and Highway Business	Corridor Commercial
<b>WEST:</b>	B-3, General Services and Highway Business	Corridor Commercial
<b>EAST:</b>	B-3, General Services and Highway Business	Corridor Commercial

**ANALYSIS****SUBMITTALS**

This report is based on the following documents, which are on file with the Department of Community Development:

1. Project Narrative
2. Plat of Survey
3. Plat of Consolidation
4. Engineering Plans
5. Architectural Plans
6. Landscape Plan
7. Photometric Plan
8. Traffic Study

### **PROJECT DESCRIPTION**

The owner of the property is proposing to construct a personal vehicle sales business at the property located on the north side of Ogden Avenue, approximately 385 feet east of Cross Street, commonly known as 2410 Ogden Avenue. The property is zoned B-3, General Services and Highway Business. Personal vehicle sales business is an allowable Special Use in the B-3 zoning district.

Currently, the subject property is improved with a one-story vacant building (formerly a restaurant) and a surface parking lot. The property consists of five lots of record. The site is accessed currently by two existing Ogden Avenue curb-cuts.

#### Proposed Development

*Site Design:* The petitioner is proposing to construct a two-story, 8,500 square foot building. The proposed building will be sited in the center of the lot, and the parking will wrap around the building on all sides. Multiple rows of parking are shown in the rear yard. A trash enclosure is located to the side of the primary structure at the northeast corner.

The existing eastern Ogden Avenue curb-cut has been eliminated. Turning exhibits demonstrate that the curb-cut and drive aisle widths are sufficient for onsite vehicle unloading/loading. An internal pedestrian connection leads from the main entrance to the proposed public sidewalk.

*Parking:* The parking area will consist of 92 parking spaces including display vehicles, employee parking, service parking and customer parking. The outdoor automobile display and service parking is shown in the rear and western side yards. Employee parking is concentrated in the eastern side yard. Guest or customer parking is located in the street yard.

*Elevations:* The new building's modern design will consist primarily of steel, masonry and concrete. The south elevation includes tinted window panes, framing, metal clad panels and upwards slanted eaves. The southern half of the side elevations maintain the window panes, and the north half incorporates two different variations of metal clad panels. The rear elevation is mostly a brown colored metal clad paneling with vertical lines and glazed overhead doors leading to the service area. Parapet walls fully screen the rooftop mechanical units.

*Floor Plans:* The interior will consist of a front sales area, interior vehicle display, service bays, customer waiting area, and reception. The smaller second floor will also have offices and a common area. The rear service area has five vehicle bays for maintenance, washing/detailing, and a photographic marketing area.

*Landscaping/Screening:* The petitioner is proposing landscaping around the perimeter of the property and interior islands, in conformance with the Village requirements. The new trash area will be screened with a metal clad panel gate and walls over concrete masonry unit (CMU) block walls. Additional landscaping will be planted between the enclosure and Ogden Avenue. The submitted photometric plan indicates that the new light fixtures will not adversely spill over on the adjacent properties.

**COMPLIANCE WITH THE COMPREHENSIVE PLAN**

The Comprehensive Plan's Future Land Use Map designates this property as Corridor Commercial. The plan calls for the concentration of auto dealerships within this western section of the corridor and to promote uses that have a regional draw. The petitioner's redesigned site plan reduces the number of curb cuts, includes a dumpster enclosure, new parking lot landscape islands and the beautification of Ogden Avenue with dense landscaping, all of which are Comprehensive Plan goals.

The proposed personal vehicle sales business at this property is consistent with the Comprehensive Plan.

**COMPLIANCE WITH ZONING ORDINANCE**

The property is zoned B-3, General Services and Highway Business. The proposed personal vehicle sales business is an allowable Special Use in the B-3 District per Section 5.010 of the Zoning Ordinance. The new building and redeveloped site will be compliant with the required B-3 bulk standards. The table below identifies the required regulations and what is proposed:

<b>2410 Ogden Avenue</b>	<b>Required</b>	<b>Proposed</b>
South Setback (Street Yard – Ogden Avenue) - Building	75 ft.	99 ft.
East Setback (Side Yard ) - Building	0 ft.	75 ft.
West Setback (Side Yard) - Building	30 ft.	63 ft.
North Setback (Rear Yard) - Building	0 ft.	92 ft.
South Setback (Street Yard Ogden Avenue) - Parking	50 ft.	50.5 ft.
Landscaped Open Space	6,503 sf. (10%)	12,648 sf. (20%)
Street yard landscaped open space	3,251 sf	6,261 sf
Floor Area Ratio	0.75 (max)	0.13
Building Height	60 ft. (max)	27.75 ft.
Parking Spaces	21	92

The proposed use and site is consistent with the Zoning Ordinance.

**ENGINEERING/PUBLIC IMPROVEMENTS**

Post Construction Best Management Practices (PCBMPs) are not required since the proposal results in a decrease in impervious area. There is no existing floodplain or wetlands on the property. The existing detention in the southwest corner of the site is to be maintained. Storm sewers will connect to the existing detention area and outlet to an existing storm sewer along Ogden Avenue.

The existing water service and sanitary services will be replaced. The Sanitary District provided conceptual approval for the proposed redevelopment.

Vehicle deliveries will be made on site by vehicle carriers. No vehicle deliveries or other business activities will be permitted to take place on Ogden Avenue. The traffic study concluded that the single full movement access drive will be adequate in accommodating the traffic projected to be generated by the proposed development. The study also stated there will be a low volume of traffic generated during



17-PLC-0039; 2410 Ogden Avenue  
January 8, 2018

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peak travel hours, and the impact on adjacent levels of service will be minimal. Staff concurs with the findings of the traffic study. The proposed personal vehicle sales business and site plan has received conceptual approval from IDOT.

The petitioner is proposing a sidewalk along Ogden Avenue. Because it would be constructed on private property, enacting a sidewalk easement is a condition of approval. This easement will be conveyed through the required plat of consolidation.

#### **PUBLIC SAFETY REQUIREMENTS**

The Fire Prevention Division has reviewed the proposed plans and will require the building include a fire alarm and sprinkler system that meet the Village's code requirements. The proper fire department connection and hydrant are shown on the plans.

The proposed development provides sufficient access for emergency vehicles. The site layout permits Fire Department apparatus the opportunity to enter and exit the site from the Ogden Avenue curb cut. The loop around the building provides good access around the building and property as needed.

#### **NEIGHBORHOOD COMMENT**

Notice was provided to all property owners 250 feet or less from the property in addition to posting public hearing notice signs and publishing the legal notice in the *Downers Grove Suburban Life*. Staff has received one informational inquiry.

#### **FINDINGS OF FACT**

The petitioner is requesting a Special Use to construct a personal vehicle sales business at 2410 Ogden Avenue. Staff finds that the proposal meets the standards for granting a Special Use as outlined below:

##### ***Section 28.12.050.H Approval Criteria***

*No special use may be recommended for approval or approved unless the respective review or decision-making body determines that the proposed special use is constituent with and in substantial compliance with all Village Council policies and plans and that the applicant has presented evidence to support each of the following conclusions:*

- 1. That the proposed use is expressly authorized as a Special Use in the district in which it is to be located;***

The property is located in the B-3, General Service and Highway Business zoning district. Under Section 5.010 of the Zoning Ordinance, personal vehicle sales business is listed as an allowable Special Use in the B-3 zoning district. This standard has been met.

- 2. That the proposed use at the proposed location is necessary or desirable to provide a service or a facility that is in the interest of public convenience and will contribute to the general welfare of the neighborhood or community.***

The proposed plan will allow the petitioner to redevelop a vacant site which in turn will enhance the Ogden Avenue corridor and provide vehicle sales and services to the local residents, businesses and the larger region. The proposed use is in the interest of the public convenience and will contribute to the general welfare of the area by providing growth and employment opportunities. The petitioner's proposed use will meet various Comprehensive Plan goals. This standard has been met.

- 3. That the proposed use will not, in the particular case, be detrimental to the health, safety or general welfare of persons residing or working in the vicinity or be injurious to property values or improvements in the vicinity.***

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January 8, 2018

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The proposed use will not be detrimental to the health, safety or general welfare of persons residing in or working in the vicinity and will not be injurious to property values or improvements in the vicinity. The petitioner will be redeveloping a vacant property. The proposed development will meet all applicable Village regulations including the Stormwater Ordinance. Additionally, specific conditions will be placed on the subject property to ensure that there will be no or minimal secondary impacts to the surrounding properties, including loading/unloading and test driving restrictions. This standard has been met.

## **RECOMMENDATIONS**

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The proposed Special Use for personal vehicle sales business at 2410 Ogden Avenue is consistent with the Comprehensive Plan, the Zoning Ordinance and surrounding zoning and land use classifications. Based on the findings listed above, staff recommends the Plan Commission recommend the Village Council **approve** the Special Use as requested in case 17-PLC-0039 subject to the following conditions:

1. The Special Use shall substantially conform to the staff report; engineering drawings prepared by Damas Consulting Group dated December 1, 2017 and last revised on December 20, 2017 and architectural drawings prepared by Phorma Designs, Inc. dated December 1, 2017 and last revised December 14, 2017, except as such plans may be modified to conform to the Village codes and ordinances.
2. All test drives are limited to arterial streets as defined in the Comprehensive Plan.
3. All vehicle deliveries must be completed on private property. Vehicles may not be dropped off or picked up in Ogden Avenue.
4. A pedestrian connection must be provided from the public right-of-way to the main building entrance in conformance with the Zoning Ordinance.
5. The building shall be equipped with an automatic suppression system and an automatic and manual fire alarm system.
6. An administrative lot consolidation shall be completed prior to the issuance of a building permit.
7. A sidewalk easement shall be granted to the Village.

Staff Report Approved By:



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Stanley J. Popovich, AICP  
Director of Community Development

SP; sw  
-att



0 30 60 Feet

# 2410 Ogden Avenue-Location Map



**Phorma Designs, Inc.**

2092 Gardner Circle E. Suite 1  
Aurora, IL. 60503

**Architectural & Planning**

Tel: (630)229-6498  
Fax: (630)982-3795

**BRIEF PROJECT DESCRIPTION**

The proposed building project located at 2410 Ogden Ave. in Downers Grove, IL property is designated to be a new Auto Dealership in the business of selling and buying vehicles along with minor maintenance towards vehicles. The said property is currently zoned as a B3 business district with the applicant applying for special use of the property. The site of approximately 46,000 square feet shall be remodeled with new curb and parking pavement appeal with additional required new landscaping and parking lot lighting.

The proposed Auto Dealership gross building of approximately 8,500 square feet shall be constructed of but not limited to concrete, masonry, steel, metal clad panels and drywall materials. All finishes shall consist of commercial grade designation. The structure shall be of steel, concrete and masonry construction along with new mechanical HVAC systems of RTU's placed on roof and interior space heaters hung from roof joists in auto bay area. New plumbing domestic water and separate fire suppression water lines shall be put in place for the new building along with new electrical panels and transformer feed if required.

The proposed Auto Dealership shall consist of a sales area, interior vehicle display, customer waiting area, reception and conference/office areas along with employee break room space. The other portion of the proposed building shall consist of a 5 vehicle bays for maintenance, washing/detailing and photo marketing area.

The dealership will operate from 10 AM to 8 AM (Monday through Friday) and 11 AM to 6 PM (Saturday and Sunday).

The building will include 5 employees in sales and management and 2 in the service area. The delivery of vehicles will be scheduled on a weekly bases and all loading and unloading of the inventory shall take place within the dealership lot.

All employees are to park east of the building only. And the day to day operations shall include an Auto retail (selling and buying) and some minor service to the dealership own inventory (no Auto service will be open for the public). Detailing of cars and photographing of new Auto to be conducted on the site.

Listed below is additional site and building information as follows –

**Project Description**

This project consists of 1.50-acres. This site is located in Dupage County North Along Ogden Ave . The address of the property is 2400 Ogden Ave Downers Grove, IL. The proposed development will be a new Auto Dealership with parking lot.



PHORMA DESIGNS, Inc. ♦ 2092 Gardner Cir. E. Suite 1 ♦ Aurora, IL. ♦ 60504 ♦ (630)229-6498 ♦ (630)982-3795 ♦

[www.phormadesigns.com](http://www.phormadesigns.com) ♦ [pchabez@phormadesigns.com](mailto:pchabez@phormadesigns.com)

**Phorma Designs, Inc.**

2092 Gardner Circle E. Suite 1  
Aurora, IL. 60503

**Architectural & Planning**

Tel: (630)229-6498  
Fax: (630)982-3795

Existing Conditions

The subject property existing lot is used for the existing restaurant building and parking lot, The existing building and parking lot to be removed There is no existing flood plain or wetland on the lot.

Proposed Development

The proposed development is to include new building with foot print of 7000 SF and proposed parking lot with total of 101 parking spaces. The development is not going to have any negative impact to the existing storm water runoff.

Floodplains and Wetlands

There is no jurisdictional wetland or floodplain on the lot. There is not LPDA on the site.

Storm Water Management

SITE AREA = 1.50 ACRE

The Existing Site Condition Impervious area= 54,628 SF

Building=3737 SF

Concrete Sidewalk/Concrete patio=1583 SF

Asphalt Parking lot=49,308 SF

Green area=10,760 SF

-Proposed site condition decreases impervious area from the existing condition, PCBMP is not required for this site

Proposed Site condition:

Total Site Area = 1,5 ACRE

Area breakdown :

Building = 7000 SF

Concrete Sidewalk/Concrete pad = 870 SF

Asphalt Parking lot = 42,710 SF

Green area = 14,808 SF

Total Impervious area = 50,580 SF

The site out flow to the culvert located at the southeast corner of the lot. The existing detention area southwest of the site to be maintained (no change) the site out flow will be connected to the existing storm manhole.



## **Narrative**

### *Storm Management Submittal*

#### Project Description

This project consists of 1.50-acres. This site is located in Dupage County North Along Ogden Ave . The address of the property is 2400 Ogden Ave Downers Grove, IL. The proposed development will be a new Auto Dealership with parking lot.

#### Existing Conditions

The subject property existing lot is used for the exiting restaurant building and parking lot, The existing building and parking lot to be removed There is no existing flood plain or wetland on the lot.

#### Proposed Development

The proposed development is to include new building with foot print of 7000 SF and proposed parking lot with total of 101 parking spaces. the development is not going to have any negative impact to the existing storm water runoff.

#### Floodplains and Wetlands

There is no jurisdictional wetland or floodplain on the lot. There is not LPDA on the site.

#### Storm Water Management

SITE AREA = 1.50 ACRE

The Existing Site Condition Impervious area= 54,628 SF

Building=3737 SF

Concrete Sidewalk/Concrete patio=1583 SF

Asphalt Parking lot=49,308 SF

Green area=10,760 SF

-Proposed site condition decreases impervious area from the existing condition, PCBMP is not required for this site

#### Proposed Site condition:

Total Site Area = 1,5 ACRE

Area breakdown :

Building=7000 SF

Concrete Sidewalk/Concrete pad=870 SF

Asphalt Parking lot=42,710 SF

Green area=14,808 SF

Total Impervious area=50,580 SF

The site out flow to the culvert located at the southeast corner of the lot. The existing detention area southwest of the site to be maintained (no change) the site out flow will be connected to the existing storm manhole

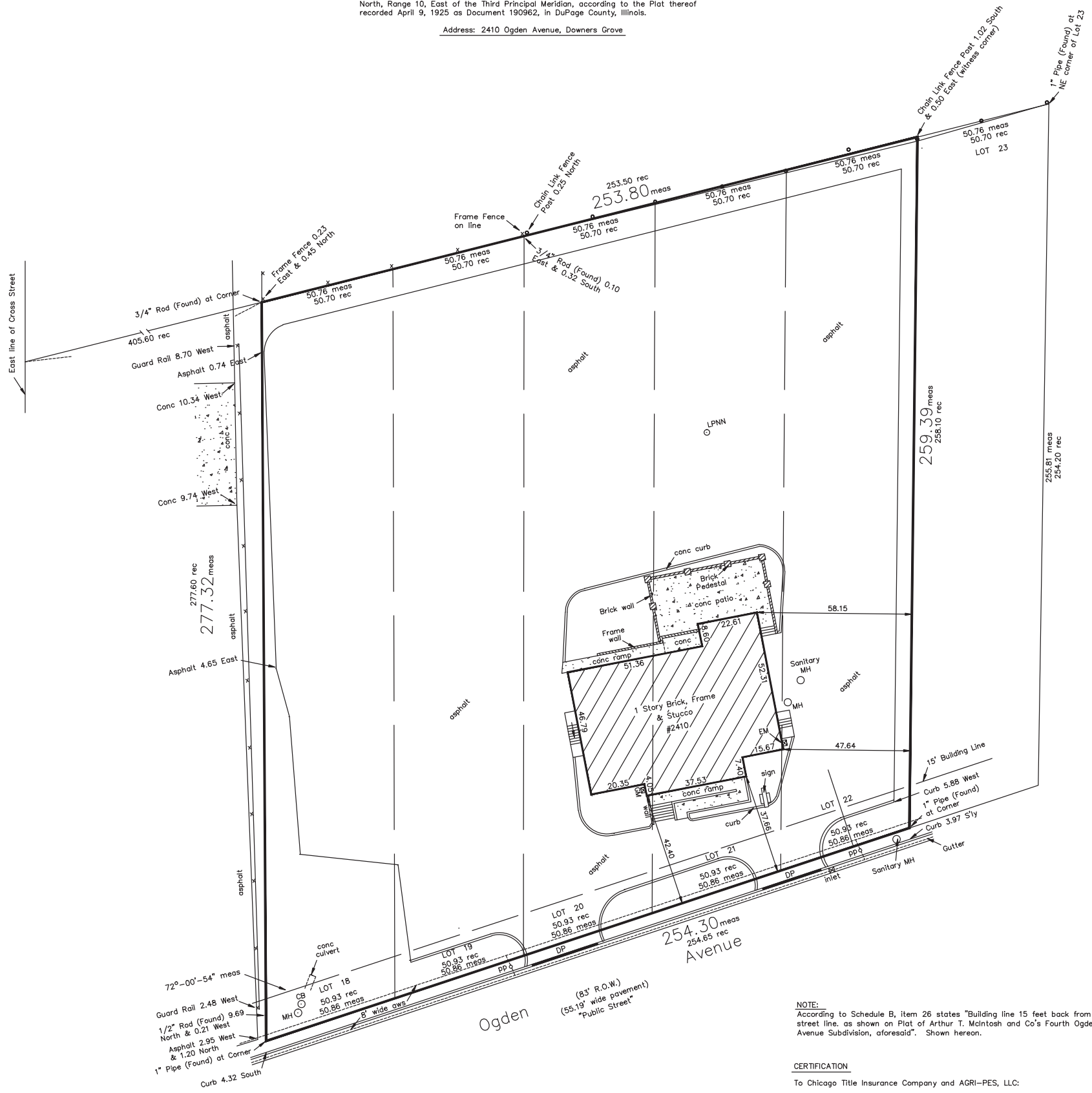


KABAL SURVEYING COMPANY  
 Land Surveying Services  
 ALTA/NSPS Land Title Survey

Lots 18, 19, 20, 21 and 22 in Block 1 in Arthur T. McIntosh and Co's Fourth Ogden Avenue Subdivision, being a subdivision in the South half of Section 1, Township 38 North, Range 10, East of the Third Principal Meridian, according to the Plat thereof recorded April 9, 1925 as Document 190962, in DuPage County, Illinois.

Address: 2410 Ogden Avenue, Downers Grove

2411 Hawthorne Avenue  
 Westchester, Illinois 60154  
 (708) 562-2652  
 Fax (708) 562-7314  
 email: kabal-surveying@comcast.net  
 website: KabaSurveyingCompany.com  
 Registration No. 184-003061



**NOTE:**  
 According to Schedule B, item 26 states "Building line 15 feet back from street line, as shown on Plat of Arthur T. McIntosh and Co's Fourth Ogden Avenue Subdivision, aforesaid". Shown hereon.

**CERTIFICATION**  
 To Chicago Title Insurance Company and AGRI-PES, LLC:  
 This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2016 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS and does not include Table A. The fieldwork was completed on April 24, 2017.  
 Date of Plat or Map: April 24, 2017  
 Stephen J. Balek Registration Number 035-001712

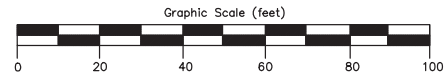
**LEGEND**  
 meas = measured, S = South, pp = power pole  
 rec = record, E = East, W = West, LP = light pole  
 R.O.W. = right-of-way, BS = bumper stop  
 conc = concrete, wv = water valve, MH = manhole  
 pch = porch, N = North, EM = electric meter  
 DP = depressed curb, GM = gas meter  
 aw = aerial wire, CB = catch basin  
 Area of property is approximately 65,360 square feet

"X" in box indicates that hereon drawn plat was ordered as a non-monumented survey  
 Please check Legal Description with Deed and report any discrepancy immediately.  
 Surveyed April 24, 20 17  
 Building Located April 24, 20 17

Scale: 1 inch = 30 ft.  
 Order No. 170405  
 Ordered By: Wade Joyner, Attorney at Law



Chicago Title Insurance Company  
 Order No. 17SA3716035AU  
 Effective Date: February 16, 2017  
 Proposed Insured: AGRI-PES, LLC



This professional service conforms to the current Illinois minimum standards for an ALTA/NSPS survey

STATE OF ILLINOIS }  
 COUNTY OF COOK } ss  
 I, STEPHEN J. BALEK, an Illinois Professional Land Surveyor, hereby certify that I have surveyed the property described above and the plat hereon drawn is a correct representation of said survey.  
 Dimensions are in feet and decimal parts thereof and are corrected to a temperature of 62 degrees Fahrenheit.

ORIGINAL SEAL IN RED

Illinois Professional Land Surveyor No. 035-001712  
 My license expires on November 30, 2018

SEND TAX BILL TO:

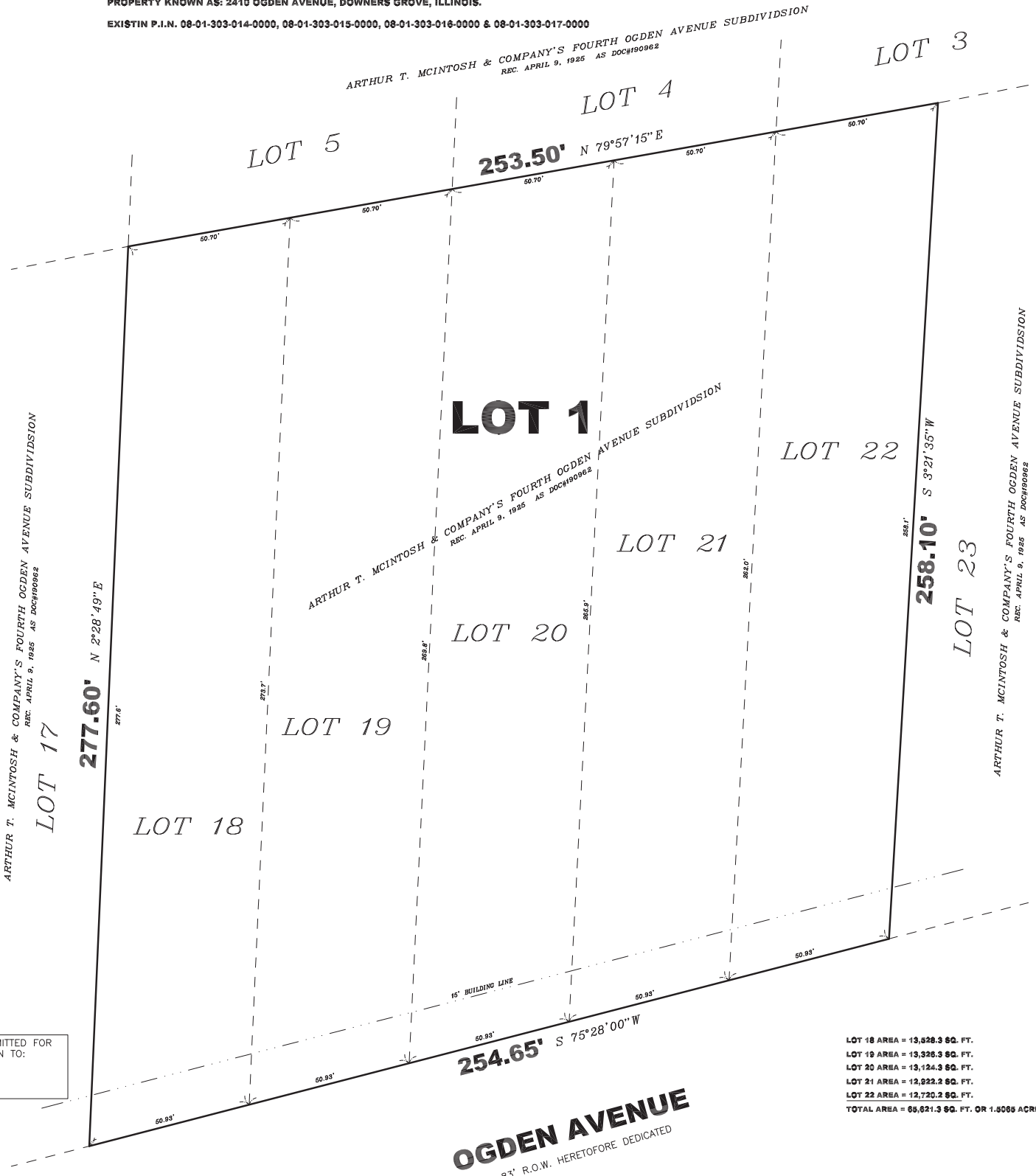
# ANAS ALKHATIB PLAT OF CONSOLIDATION

OF

LOTS 18, 19, 20, 21 AND 22 IN BLOCK 1 IN ARTHUR T. MCINTOSH AND COMPANY'S FOURTH OGDEN AVENUE SUBDIVISION, BEING A SUBDIVISION IN THE SOUTH 1/2 OF SECTION 1, TOWNSHIP 38 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED APRIL 9, 1925 AS DOCUMENT 190962, IN DUPAGE COUNTY, ILLINOIS.

PROPERTY KNOWN AS: 2410 OGDEN AVENUE, DOWNERS GROVE, ILLINOIS.

EXISTIN P.I.N. 08-01-303-014-0000, 08-01-303-015-0000, 08-01-303-016-0000 & 08-01-303-017-0000



THIS PLAT HAS BEEN SUBMITTED FOR RECORDING BY AND RETURN TO:

OWNER AND TAX BILL ADDRESS:

PREPARED BY:  
**CHICAGOLAND SURVEY COMPANY INC.**  
 PROFESSIONAL DESIGN FIRM LICENSE NO: 184-005262 EXPIRES 04/30/2019  
 6501 W. 65TH STREET CHICAGO, ILLINOIS 60638 (773) 271-9447  
 CHICAGOLANDSURVEY@SBCGLOBAL.NET



ORDERED BY: ANAS ALKHATIB  
FILE NO.: 132-43

OWNER'S CERTIFICATE  
 STATE OF ILLINOIS )  
 COUNTY OF DUPAGE ) SS

THIS IS TO CERTIFY THAT \_\_\_\_\_ IS THE OWNER OF THE LAND DESCRIBED AND SHOWN ON THIS CONSOLIDATION PLAT, AND THAT AS SUCH OWNER HAS CAUSED THE SAME TO BE SURVEYED AND CONSOLIDATED FOR THE USES AND PURPOSES THEREIN SET FORTH AS ALLOWED AND PROVIDED BY STATUTES AND THAT SAID OWNER HEREBY ACKNOWLEDGES AND ADOPTS THE SAME UNDER THE STYLE THEREON INDICATED.

DATED THIS \_\_\_\_\_ DAY OF \_\_\_\_\_ A.D., 20\_\_\_\_.

OWNER \_\_\_\_\_  
 NOTARY CERTIFICATE  
 STATE OF ILLINOIS )  
 COUNTY OF DUPAGE ) SS

I, \_\_\_\_\_, A NOTARY PUBLIC, IN AND FOR SAID COUNTY, IN THE STATE AFORESAID, DO HEREBY CERTIFY THAT \_\_\_\_\_

PERSONALLY KNOW TO ME TO BE THE SOME PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT AS THE OWNER APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT THEY SIGNED AND DELIVERED THE CONSOLIDATED PLAT AS THEIR OWN FREE AND VOLUNTARY ACT FOR THE USES AND PURPOSES THEREIN SET FORTH.

GIVEN UNDER MY HAND AND OFFICIAL SEAL  
THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, A.D., 20\_\_\_\_.

NOTARY SIGNATURE \_\_\_\_\_

CITY CLERK CERTIFICATE  
 STATE OF ILLINOIS )  
 COUNTY OF DUPAGE ) SS

I, \_\_\_\_\_, CITY CLERK OF THE CITY OF DOWNERS GROVE, 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 REGULATION OF SAID CITY. IN WITNESS WHEREOF, I HAVE HERETO SET MY HAND AND SEAL OF THE CITY OF DOWNERS GROVE, ILLINOIS

DATED THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, A.D., 20\_\_\_\_.

CITY CLERK \_\_\_\_\_

CITY COUNCIL CERTIFICATE  
 STATE OF ILLINOIS )  
 COUNTY OF DUPAGE ) SS

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

DATED AT DOWNERS GROVE, DUPAGE COUNTY, ILLINOIS.  
THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, A.D., 20\_\_\_\_.

MAYOR \_\_\_\_\_

ATTEST: \_\_\_\_\_

CITY CLERK \_\_\_\_\_

CITY COLLECTOR CERTIFICATE  
 STATE OF ILLINOIS )  
 COUNTY OF DUPAGE ) SS

I, \_\_\_\_\_, COLLECTOR FOR THE CITY OF DOWNERS GROVE, 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 DOWNERS GROVE, DUPAGE COUNTY, ILLINOIS.  
THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, A.D., 20\_\_\_\_.

CITY COLLECTOR \_\_\_\_\_

CITY ENGINEER'S CERTIFICATE  
 STATE OF ILLINOIS )  
 COUNTY OF DUPAGE ) SS

MAIL TO:

I, \_\_\_\_\_, CITY ENGINEER FOR THE CITY OF DOWNERS GROVE, ILLINOIS, HEREBY CERTIFY THAT THE LAND IMPROVEMENTS DESCRIBED IN THE PLAT, AND THE PLANS AND SPECIFICATION THEREOF, MEET THE MINIMUM REQUIREMENTS OF SAID CITY AND HAVE BEEN APPROVED BY ALL PUBLIC AUTHORITIES HAVING JURISDICTION THEREOF.

DATED AT DOWNERS GROVE, DUPAGE COUNTY, ILLINOIS.  
THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, A.D., 20\_\_\_\_.

CITY ENGINEER \_\_\_\_\_

DUPAGE COUNTY RECORDER'S CERTIFICATE  
 STATE OF ILLINOIS )  
 COUNTY OF DUPAGE ) SS

THIS INSTRUMENT \_\_\_\_\_, WAS FILED FOR RECORD IN THE RECORDER'S OFFICE OF DU PAGE COUNTY, ILLINOIS.

ON THE \_\_\_\_\_ DAY OF \_\_\_\_\_, A.D., 20\_\_\_\_.

AT \_\_\_\_\_ O'CLOCK \_\_\_\_\_ M. AND WAS RECORDED IN BOOK \_\_\_\_\_ OF PLATS ON PAGE \_\_\_\_\_

RECORDER OF DEEDS \_\_\_\_\_

COUNTY CLERK'S CERTIFICATE  
 STATE OF ILLINOIS )  
 COUNTY OF DUPAGE ) SS

I, \_\_\_\_\_, COUNTY CLERK OF DUPAGE COUNTY, ILLINOIS, DO HEREBY, THAT I FIND NO DELINQUENT GENERAL TAXES, NO UNPAID CURRENT GENERAL TAXES, NO UNPAID FORFEITED TAXES, NO DELINQUENT OR UNPAID SPECIAL ASSESSMENTS, NO REDEEMABLE TAX SALES AGAINST ANY OF LAND SHOWN ON THIS PLAT.

GIVEN UNDER MY HAND AND SEAL AT DOWNERS GROVE, DUPAGE COUNTY, ILLINOIS.

THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, A.D., 20\_\_\_\_.

COUNTY CLERK, DUPAGE COUNTY, ILLINOIS.

STATE OF ILLINOIS )  
 COUNTY OF DUPAGE ) SS

I, ROGER P. JACOB, ILLINOIS PROFESSIONAL LAND SURVEYOR, NO. 3384, DO HEREBY CERTIFY THAT AT THE REQUEST OF THE OWER, THEREOF, I HAVE SURVEYED AND CONSOLIDATED THE FOLLOWING DESCRIBED PROPERTY:

LOTS 18,19,20,21 AND 22 IN BLOCK 1 IN ARTHUR T. MCINTOSH AND COMPANY'S FOURTH OGDEN AVENUE SUBDIVISION, BEING A SUBDIVISION IN THE SOUTH 1/2 OF SECTION 1, TOWNSHIP 38 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED APRIL 9, 1925 AS DOCUMENT NUMBER 190962, IN DUPAGE COUNTY, ILLINOIS.

CONTAINING 65,621.3 SQUARE FEET OR 1.5065 ACRES MORE OR LESS.

I FURTHER CERTIFY THAT THE PLAT HEREON DRAWN IS A CORRECT REPRESENTATION OF SAID SURVEY AND SUBDIVISION WHICH WAS PREPARED IN COMPLIANCE WITH THE LAWS OF THE STATE OF ILLINOIS.

I FURTHER CERTIFY THAT THE PROPERTY DESCRIBED AND SHOWN ON THE PLAT HEREON DRAWN IS WITHIN ON CORPORATE LIMITS OF THE CITY OF DOWNERS GROVE, ILLINOIS WHICH HAS ADOPTED AN OFFICIAL COMPREHENSIVE PLAN AND IS EXERCISING THE SPECIAL POWERS AUTHORIZED BY THE STATE OF ILLINOIS ACCORDING TO 65 ILCS 5/11-12-6 AS HERETOFORE AND HEREAFTER AMENDED

I FURTHER CERTIFY THAT ACCORDING TO THE FLOOD INSURANCE RATE MAPS, COMMUNITY PANEL NUMBER 17043 C 0803 H, WITH AN EFFECTIVE DATE OF DECEMBER 16, 2004, THIS SITE APPEARS TO BE LOCATED IN ZONE "X" (AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) TO THE BEST OF MY KNOWLEDGE AND BELIEF.

GIVEN UNDER MY HAND AND SEAL THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, IN THE YEAR 20\_\_\_\_.

ROGER P. JACOB  
ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 3384



STATE OF ILLINOIS )  
 COUNTY OF COOK ) S.S.

THIS IS TO CERTIFY THAT THIS PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE BY ME, OR BY PERSONS UNDER MY DIRECT SUPERVISION AND CONTROL, THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.

DATED THIS \_\_\_\_\_ 27 TH \_\_\_\_\_ DAY OF \_\_\_\_\_ NOVEMBER \_\_\_\_\_ 2017.

By: *Roger P. Jacob*  
ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 3384

LICENSE EXPIRES 11/30/2018







# 2410 W. OGDEN AVE, DOWNERS GROVE

PROPOSED SCOPE: DEMOLISH EXISTING BUILDING, DESIGN AND BUILD NEW CAR DEALERSHIP  
PER APPLICABLE CODES ADOPTED BY THE CITY OF DOWNERS GROVE

## DRAWINGS INDEX

- A1 PROPOSED SITE PLAN, APPLICABLE CODES, DRAWINGS INDEX
- F1 PROPOSED VEHICLE TURNING EXHIBIT
- L1 PROPOSED LANDSCAPE PLAN
- A2 PROPOSED FLOOR PLANS
- A3 PROPOSED EXTERIOR ELEVATIONS
- A4 PROPOSED BUILDING SECTIONS
- A5 PROPOSED LIGHTING PHOTOMETRICS
- A6 PROPOSED BUILDING PERSPECTIVES

## CODES ADOPTED BY THE CITY OF DOWNERS GROVE

1. CURRENT DOWNERS GROVE ZONING ORDINANCE
2. CURRENT DOWNERS GROVE STORMWATER AND FLOOD PLAN ORDINANCE
3. 2015 INTERNATIONAL BUILDING CODE WITH D.G. AMENDMENTS
4. 2014 NATIONAL ELECTRICAL CODE WITH D.G. AMENDMENTS
5. CURRENT STATE OF ILLINOIS PLUMBING CODE WITH D.G. AMENDMENTS (INCLUDING WATERSENSE LABELED FIXTURE REQUIREMENTS)
6. 2015 INTERNATIONAL MECHANICAL CODE WITH D.G. AMENDMENTS
7. 2015 INTERNATIONAL FUEL GAS CODE WITH D.G. AMENDMENTS
8. 2015 INTERNATIONAL ENERGY CONSERVATION CODE WITH D.G. AMENDMENTS AND STATE OF ILLINOIS AMENDMENTS
9. 2015 INTERNATIONAL PROPERTY MAINTENANCE CODE WITH D.G. AMENDMENTS
10. 2015 INTERNATIONAL FIRE CODE WITH D.G. AMENDMENTS
11. 2015 INTERNATIONAL SWIMMING POOL AND SPA CODE WITH D.G. AMENDMENTS
12. 2003 LIFE SAFETY CODE (NFPA 101)
13. CURRENT STATE OF ILLINOIS ACCESSIBILITY CODE

## SITE AND BUILDING DATA

OCCUPANCY USE	(B) BUSINESS	CONSTRUCTION TYPE	TYPE 2B
LAND USE, ZONING	COMMERCIAL, B3		
LOT SIZE	65,030 SF	1.49 ACRES	
PROPOSED BUILDING GROSS AREA	7,000 SF		
TOTAL PROPOSED FIRST FLOOR AREA	6,376 SF		
PROPOSED SHOWROOM AREA	3,523 SF	2 SPACES PER 1,000 SQ. FT.	7 SPACES
PROPOSED SECOND FLOOR	1,300 SF		
LOT COVERAGE	11%		
LANDSCAPE AREA & PERCENTAGE	12,648 SF (20%)		
STREET YARD OPEN SPACE	6,261 SF (9.6%)		

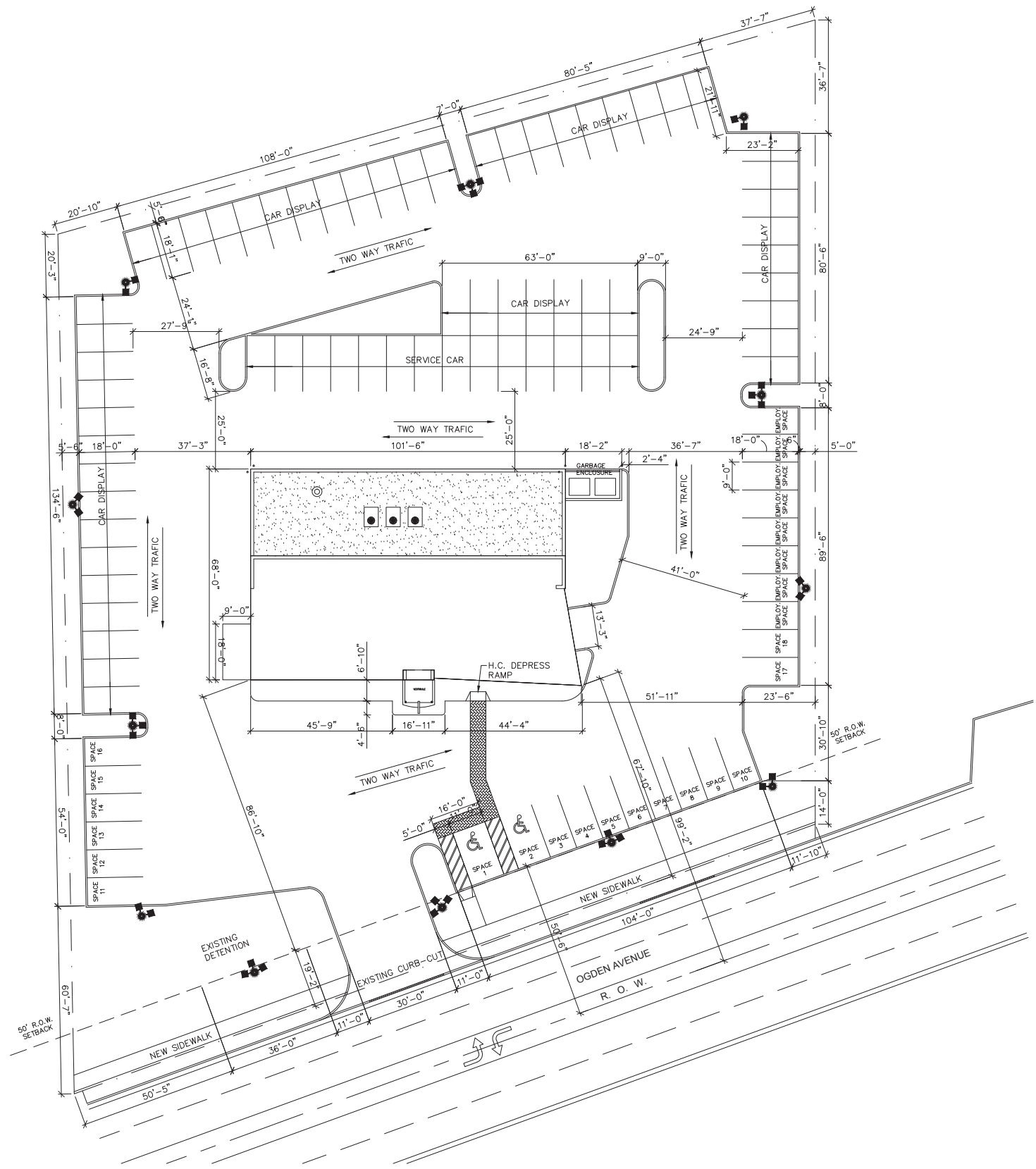
## COMMERCIAL VEHICLE SALES PARKING REQUIREMENTS

DESCRIPTION	AREA SF	CODE	REQUIRED	PROVIDED
SHOWROOM AREA	3,523	2 SPACES PER 1,000 SF OF SHOWROOM AREA	7	5
OUTDOOR DISPLAY AREA	8,424	0.4 SPACES PER 1,000 SF OF OUTDOOR AREA	4	52
SERVICE AREA	5 BAYS	2 SPACES PER SERVICE BAY.	10	14
GUEST PARKING		NOT INCLUDED IN OVERALL SUBTOTAL	-	26
EMPLOYEE PARKING		NOT INCLUDED IN OVERALL SUBTOTAL	-	8
		TOTAL	21	71

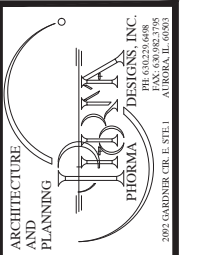
\* MINIMUM MOTOR VEHICLE PARKING REQUIREMENT AS FOLLOWS:  
- 2 SPACES PER 1,000 SQ. FT. OF SHOWROOM AREA, PLUS 0.4 SPACES  
1,000 SQ.FT. OF OUTDOOR DISPLAY SPACE, PLUS 2 CARS PER SERVICE BAY

## GENERAL NOTES

1. ALL WORK SHALL CONFORM TO THE APPLICABLE CODES AND ORDINANCES OF THE VILLAGE OF DOWNERS GROVE & THE STATE OF ILLINOIS ACCESSIBILITY CODE
2. ALL WORK SHALL CONFORM TO THE SPECIFICATIONS AND QUALITY STANDARDS AS EXPRESSED IN THE DRAWINGS WHICH FORM A PART OF THE CONTRACT DOCUMENTS
3. START OF THE WORK BY THE CONTRACTORS SHALL SIGNIFY THE ACCEPTANCE OF THE EXISTING SITE CONDITIONS
4. ALL DEBRIS AND WASTE MATERIALS AND EQUIPMENT SHALL BE TRANSPORTED OFF OF THE PREMISES AND LEGALLY DISPOSED OF. ALL ITEMS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND DISPOSAL OF SUCH ITEMS SHALL BECOME THEIR RESPONSIBILITY EXCEPT FOR EXISTING MATERIALS PROPOSED FOR RE-USE
5. THE ARCHITECT SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES OR FOR ANY SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THIS PROJECT
6. THE ARCHITECT SHALL NOT BE RESPONSIBLE FOR ANY ADDITIONAL EXPENDITURES THAT MIGHT BE NECESSARY AFTER CONSTRUCTION BEGINS



**PROPOSED SITE PLAN**  
SCALE 1"=20'-0"



CONSULTANT:

CLIENT:

ARCHITECT LIC.:

I hereby certify these drawings have been prepared by my direct supervision and to the best of my knowledge comply with all applicable codes of local and State of Illinois.  
I have prepared, or caused to be prepared under my direct supervision, the attached plans and specifications and state that to the best of my knowledge and belief and to the extent of my contractual obligation, they were prepared in accordance with the Environmental Business Act (625 ILCS 25/2) and the Illinois Accessibility Code (77 ILCS 106.100-900).  
**LICENSE EXPIRES:**

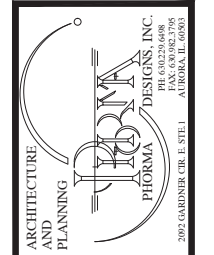
**NEW AUTO DEALERSHIP AT  
2410 OGDEN AVE.  
DOWNERS GROVE, IL.  
PROPOSED SITE PLAN**

NO.	REVISIONS	DATE	DESCRIPTION	BY
1	ZONING REVIEW	12-14-17		PC
2				
3				
4				

PROJECT NO.: 17108  
DATE: 12.01.17  
ISSUED: DD  
DRAWN BY: PCJ  
CHECKED BY: PCJ  
FILENAME: RAD-SITEPLAN.DWG  
SHEET NO.:

**A1**

PHORMA DESIGNS, INC. COPYRIGHT 2011 ALL RIGHTS RESERVED



CONSULTANT:

CLIENT:

ARCHITECT LIC.:

I hereby certify these drawings have been prepared under my direct supervision and to the best of my knowledge and belief, with all applicable codes of local and State of Illinois.  
I have prepared or caused to be prepared under my direct supervision, the mechanical plans and specifications and shall, to the best of my knowledge and belief, and to the extent of my contractual obligations, they are in accordance with the Environmental Planning Act (625 ILCS 25/2) and the Illinois Accessibility Code (77 ILCS 406/1-80).

LICENSE EXPIRES:

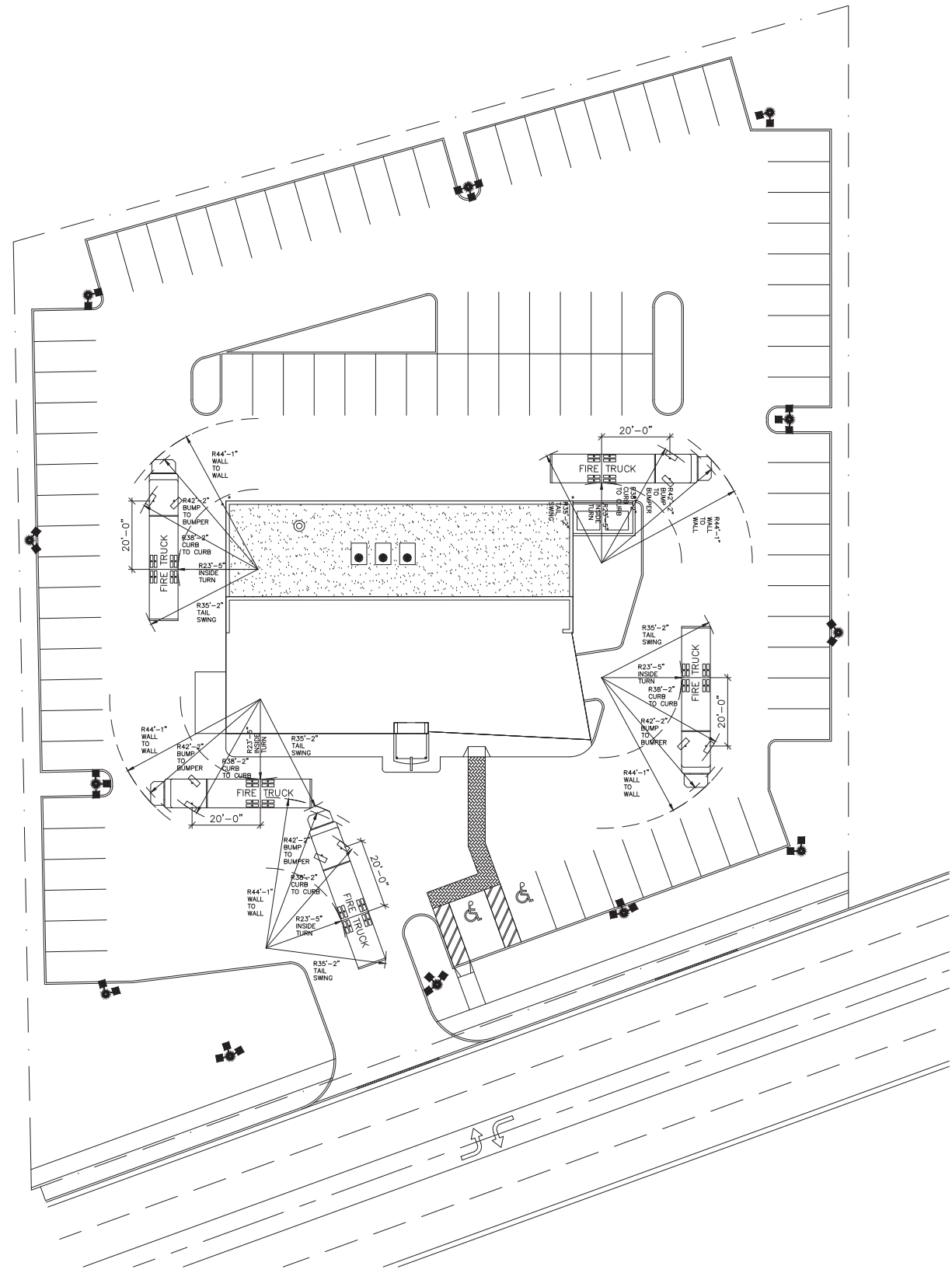
**NEW AUTO DEALERSHIP AT  
2410 OGDEN AVE.  
DOWNERS GROVE, IL.**

**PROP. VEHICLE TURNING EXHIBIT**

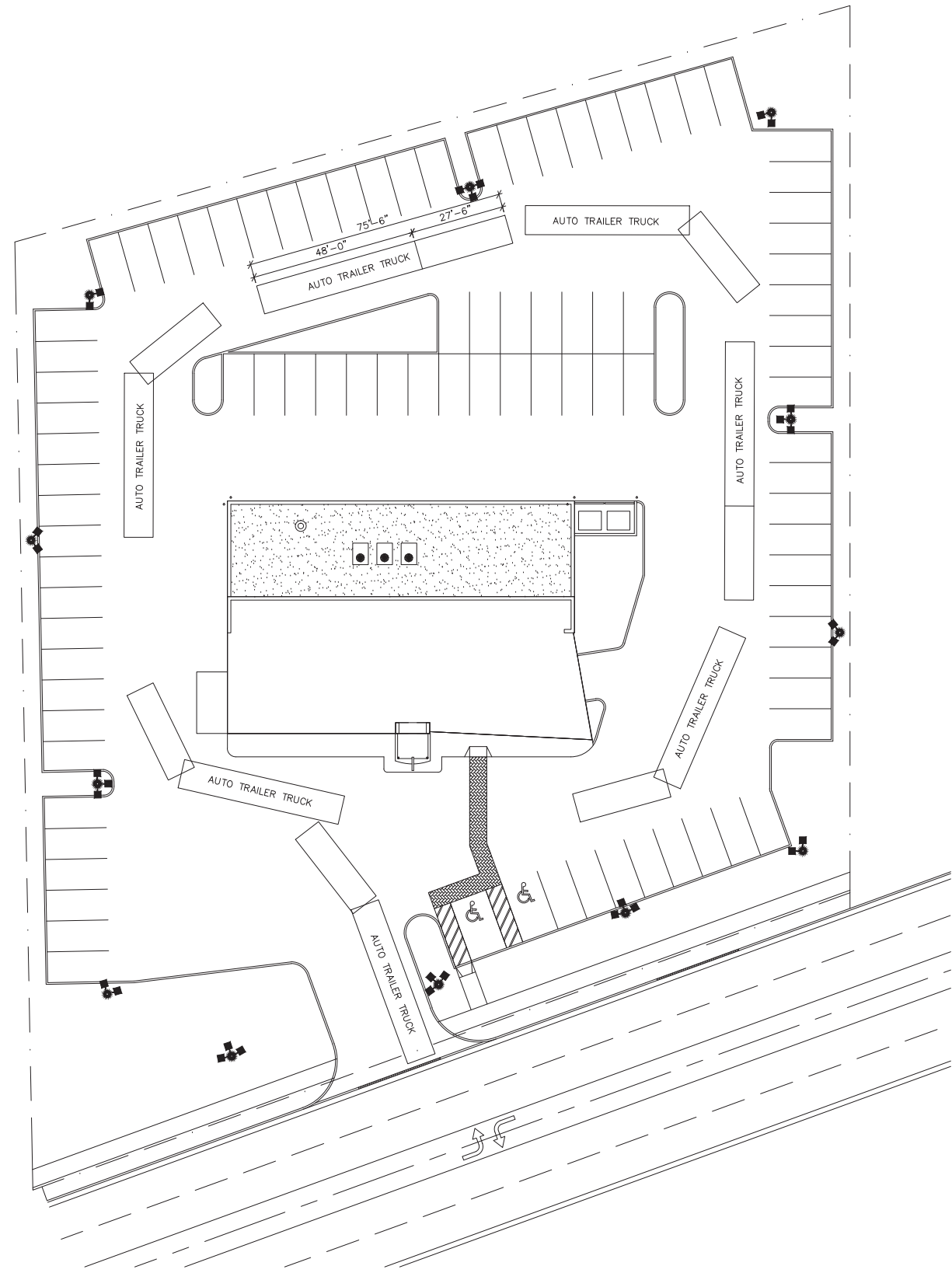
NO.	DATE	DESCRIPTION	BY
1	12-14-17	ZONING REVIEW	PC

PROJECT NO.: 17108  
 DATE: 12.01.17  
 ISSUED: DD  
 DRAWN BY: PCJ  
 CHECKED BY: PCJ  
 FILENAME: RAD-SITEPLAN.DWG  
 SHEET NO.:

**F1**



**PROPOSED FIRE TRUCK TURNING EXHIBIT**  
 SCALE 1"=20'-0"



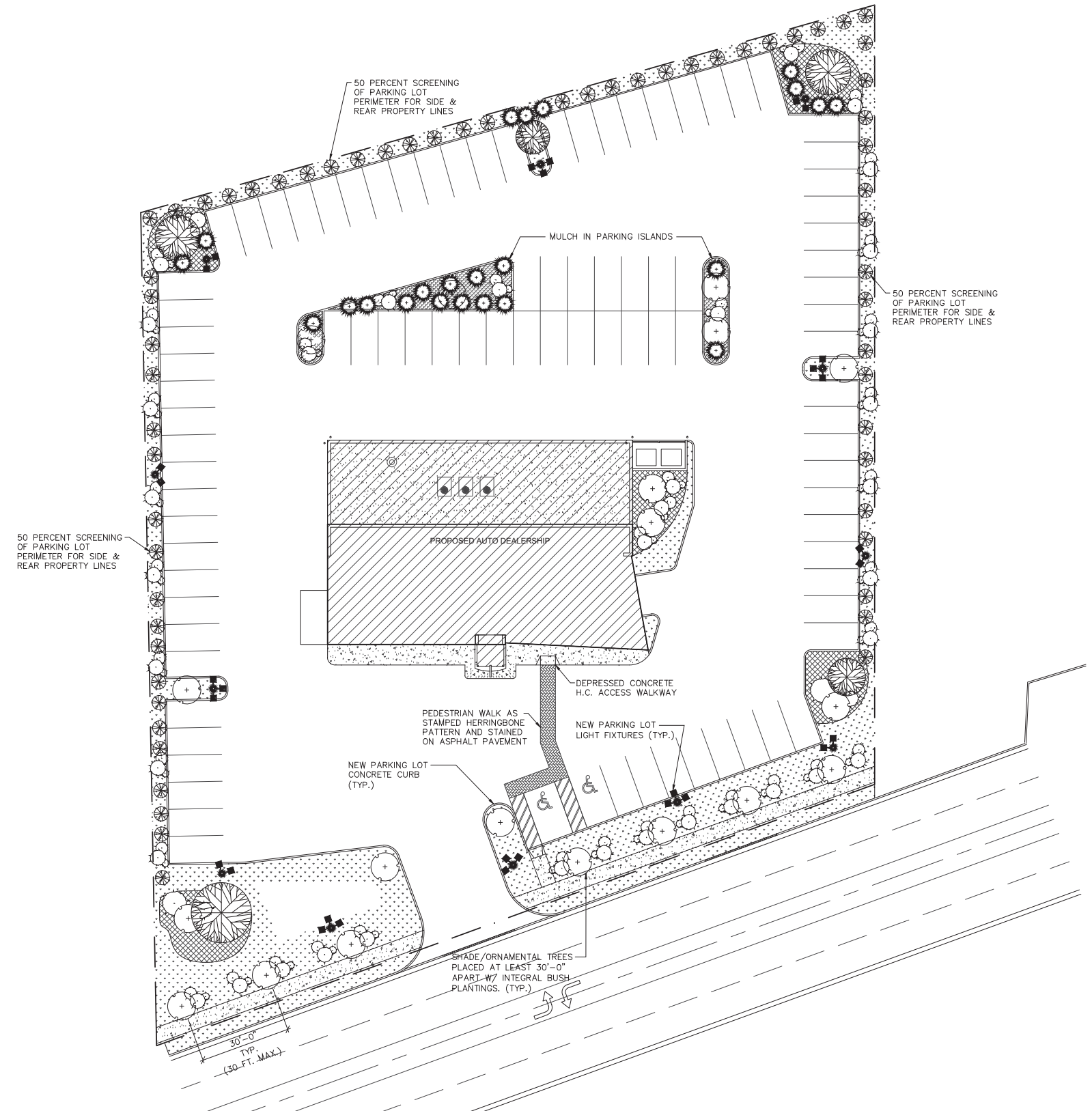
**PROPOSED AUTO CARRIER TURNING EXHIBIT**  
 SCALE 1"=20'-0"

LEGEND OF SYMBOLS			
SYMBOL	NAME	ACTUAL NAME	MATURE HEIGHT
	CANOPY TREE	AUTUMN BLAZE RED MAPLE	30-40 FT.
	EVERGREEN TREE	EMERALD GREEN ARBOVITAE	12-14 FT.
	UNDERSTORY TREE	BLOODGOOD JAPANESE MAPLE	10-15 FT.
	EVERGREEN SHRUB	GREEN VELVET BOXWOOD	4-6 FT.
	DECIDUOUS SHRUB	DIABLO NINE BARK	6-8 FT.
	MULCH	HARDWOOD MULCH CHIPS 2 TO 3 INCHES DEEP WITHIN SOIL PLANTING BEDS.	
	PERENNIALS	CREeping THYME	3 INCHES
	GRASS	CLASS 1 LAWN MIXTURE PER IDOT SPECIFICATION FOR SEED W/ STRAW OR SOD PLANTING.	
	PROPERTY LINE		
	SETBACK LINE		
	CENTER RIGHT OF WAY		
	BUILDINGS		
	CONCRETE SIDEWALK		

NOTE:  
THE ABOVE LANDSCAPE BLOCKS DEPICT THE WIDTH OF THE CANOPY AT MATURITY. LANDSCAPE PLANS SUBMITTED TO THE CITY OF AURORA FOR APPROVAL MUST BE SCALED TO DEPICT THE WIDTH OF CANOPY AT THE TIME OF INSTALLATION.

LANDSCAPE NOTES:

- 1) ALL ORNAMENTAL TREES SHALL BE AT LEAST 4 FEET IN HEIGHT AT THE TIME OF INSTALL.
- 2) ALL SHADED TREES SHALL BE AT LEAST 2.5 INCH CALIPER AT THE TIME OF INSTALL.
- 3) ALL PLANTING SHRUBS SHALL BE AT LEAST 8 INCHES IN HEIGHT AT THE TIME OF INSTALL.
- 4) ALL ORNAMENTAL PLANTINGS (GRASSES AND PERENNIALS SHALL BE AT LEAST 12 INCHES IN HEIGHT AT THE TIME OF INSTALL.



**PROPOSED LANDSCAPE PLAN**  
SCALE 1"=20'-0"



CONSULTANT:

CLIENT:

ARCHITECT LIC.:

I hereby certify these drawings have been prepared under my direct supervision and to the best of my knowledge comply with all applicable codes of local and State of Illinois.  
I have prepared or caused to be prepared under my direct supervision, the attached plans and specifications and state that, to the best of my knowledge and belief, they conform to the requirements of the Environmental Protection Act (625 ILCS 210) and the Illinois Accessibility Code (71 ILCS 120-0.00).

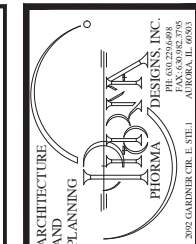
LICENSE EXPIRES:

**NEW AUTO DEALERSHIP AT  
2410 OGDEN AVE.  
DOWNERS GROVE, IL.  
PROPOSED LANDSCAPE PLAN**

NO.	DATE	DESCRIPTION	BY
1	12-14-17	ZONING REVIEW	PC

PROJECT NO.: 17108  
DATE: 10.08.17  
ISSUED: DD  
DRAWN BY: PCJ  
CHECKED BY: PCJ  
FILENAME: RAD-SITEPLAN.DWG  
SHEET NO.:

**L1**



CONSULTANT:

CLIENT:

ARCHITECT LIC.:

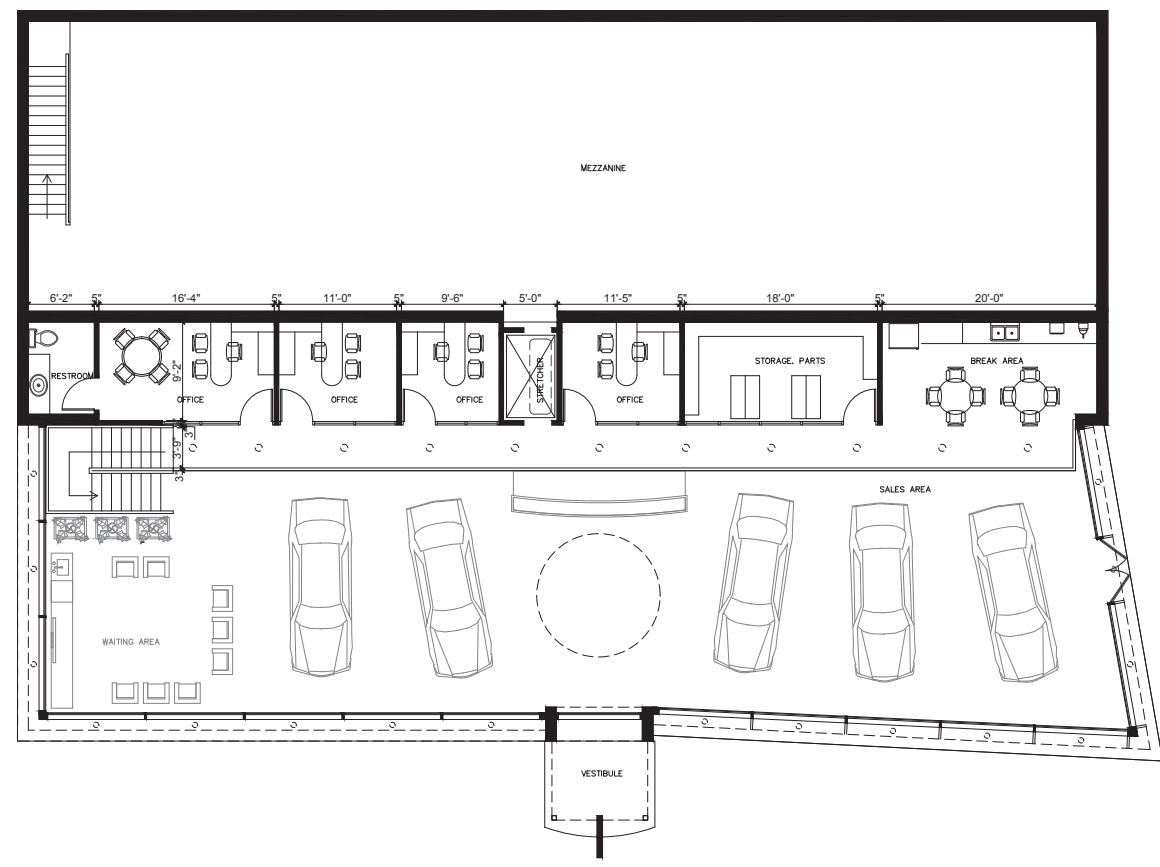
LICENSE EXPIRES:

NEW AUTO DEALERSHIP AT  
2410 OGDEN AVE.  
DOWNERS GROVE, IL.  
PROPOSED FLOOR PLANS

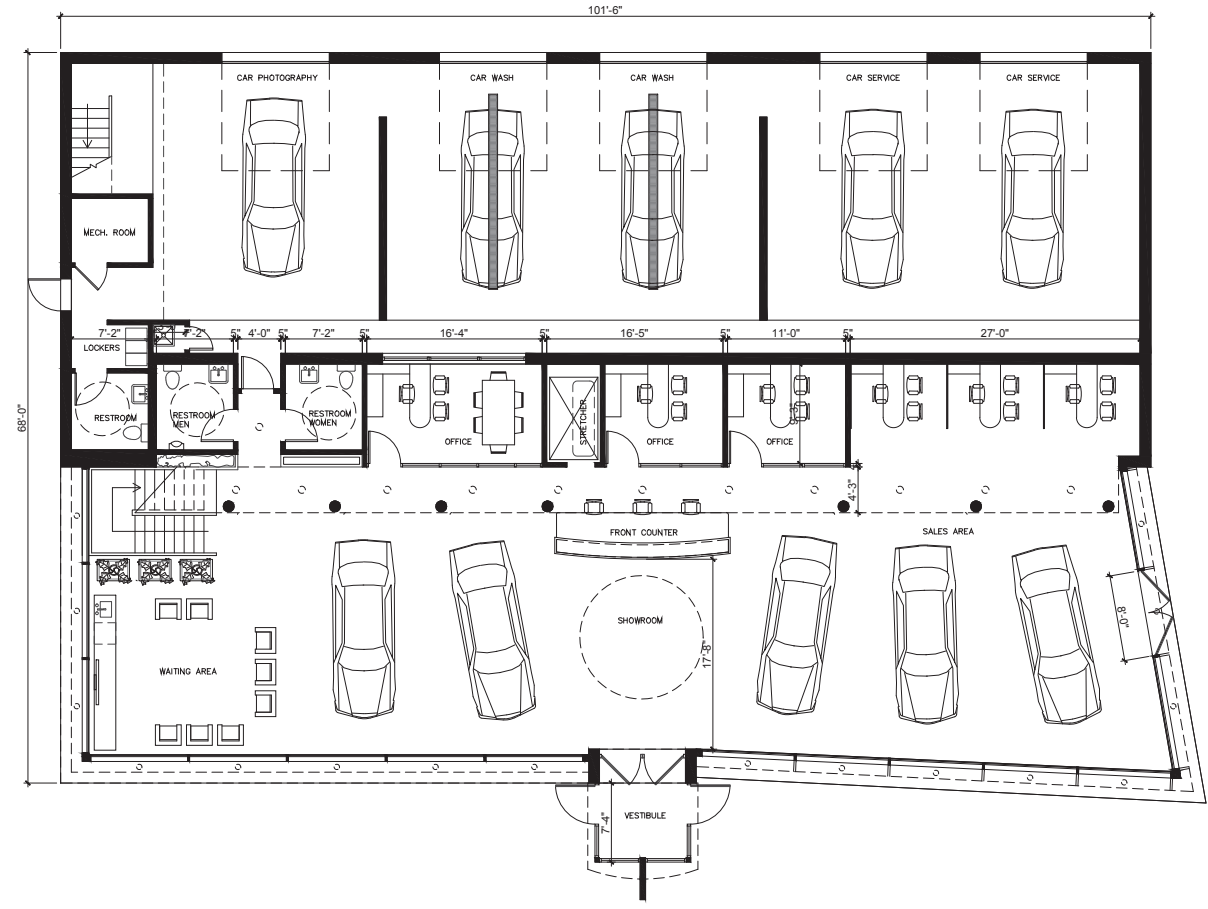
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2			
3			
4			

PROJECT NO.: 17108  
DATE: 12.01.17  
ISSUED: DD  
DRAWN BY: PCJ  
CHECKED BY: PCJ  
FILENAME: RAD-YBASEPLANS.DWG  
SHEET NO.:

**A2**



SECOND FLOOR PLAN



FIRST FLOOR PLAN

**PROPOSED FLOOR PLANS**  
SCALE 1/8"=1'-0"







CONSULTANT:

CLIENT:

ARCHITECT LIC.:

I hereby certify these drawings have been prepared under my direct supervision and to the best of my knowledge comply with all applicable codes of local and State of Alabama.  
I have prepared or caused to be prepared under my direct supervision, the attached plans and specifications and state that, to the best of my knowledge and belief, they conform to the requirements of the Environmental Response Act (ERA) 36-25-21 and the Historic Preservation Code (HPC) 36-25-22, in Alabama Code 36-25.

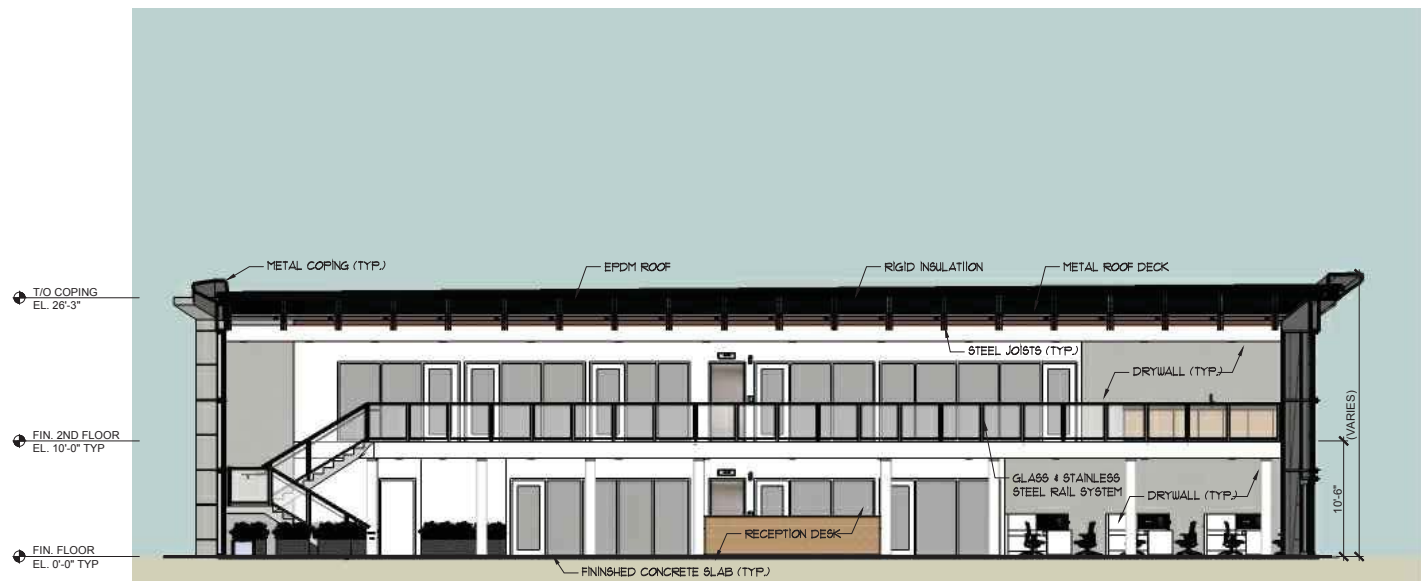
LICENSE EXPIRES:

**NEW AUTO DEALERSHIP AT  
2410 OGDEN AVE.  
DOWNERS GROVE, IL.  
PROPOSED BUILDING SECTIONS**

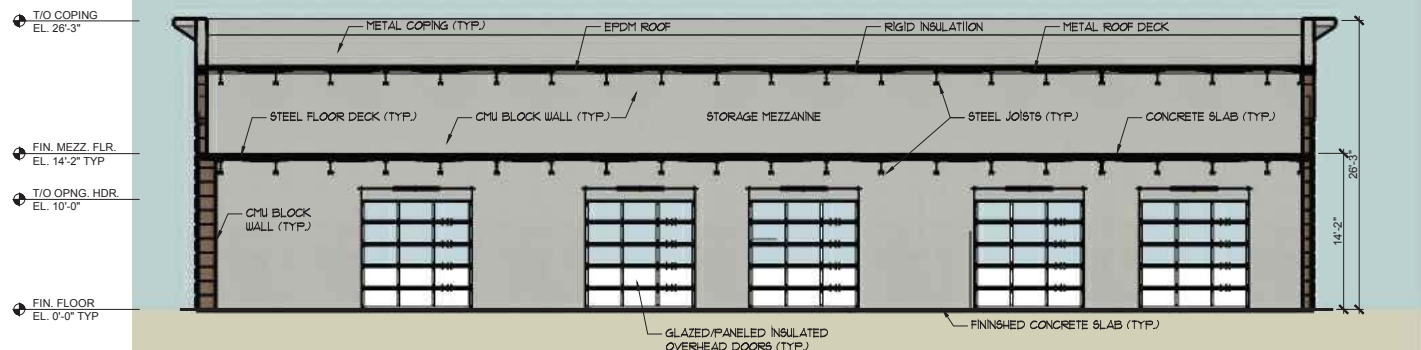
NO.	DATE	DESCRIPTION	BY
1	12-14-17	ZONING REVIEW	PC

PROJECT NO.: 17108  
 DATE: 12.01.17  
 ISSUED: DD  
 DRAWN BY: PCJ  
 CHECKED BY: PCJ  
 FILENAME: 240-1802-0101.280  
 SHEET NO.:

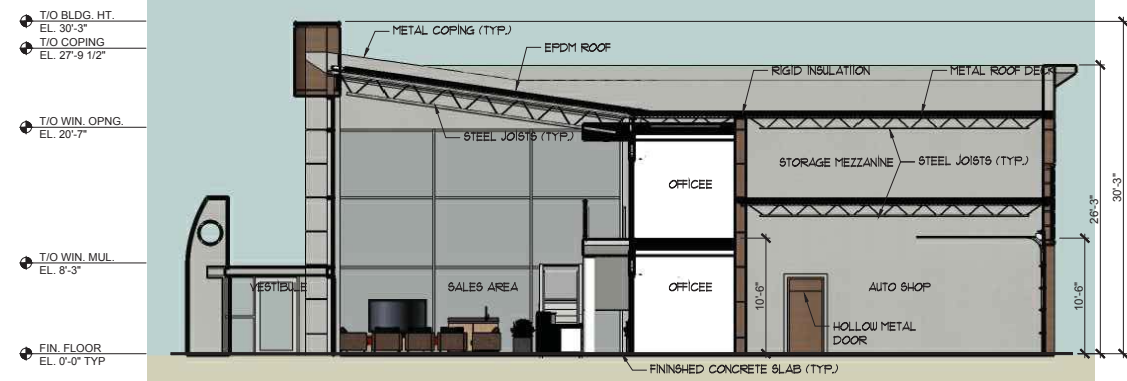
**A4**



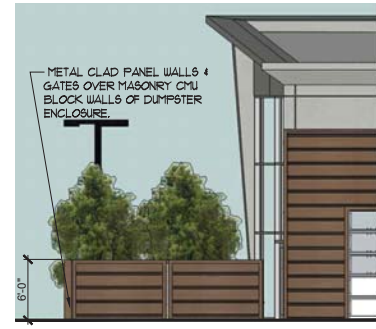
**BUILDING SECTION**  
SCALE 1/8"=1'-0"



**BUILDING SECTION**  
SCALE 1/8"=1'-0"



**BUILDING SECTION**  
SCALE 1/8"=1'-0"



T/O ENCLOSURE EL. 6'-0"  
 FIN. FLOOR EL. 0'-0" TYP.

**DUMPSTER ENCLOSURE ELEVATION**  
SCALE 1/8"=1'-0"



# HIGHLINE S2

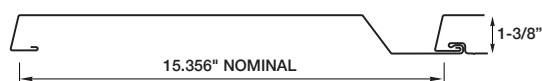
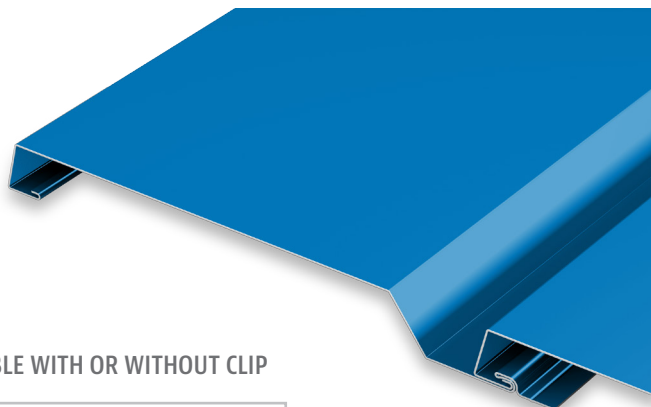
## PRECISION SERIES WALL PANELS

### MATERIALS

.050 aluminum      22 gauge steel

### SPECS

15.356" Wide      1-3/8" High



### AVAILABLE WITH OR WITHOUT CLIP



### PRODUCT FEATURES

- ▶ No-clip panel or clip installation for expansion/contraction
- ▶ Multiple rib patterns provide a variety of looks and design options
- ▶ Panel depth of 1-3/8"
- ▶ Cost-effective installation
- ▶ Horizontal or vertical installation

- ▶ Panel lengths: 30' maximum for steel; 22' maximum for aluminum; longer lengths available on clip panels; 4' min. steel and aluminum

### MATERIAL

- ▶ 15 stocked colors (22 gauge steel)
- ▶ 29 stocked colors (.050 aluminum)
- ▶ Galvalume Plus available

### TESTS

- ▶ ASTM E283
- ▶ ASTM E331

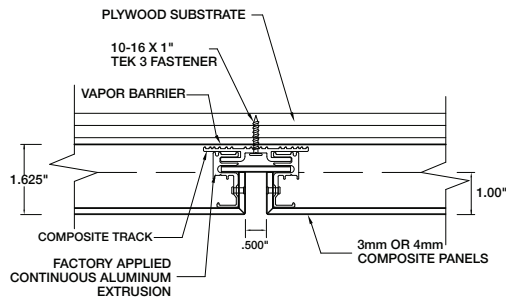
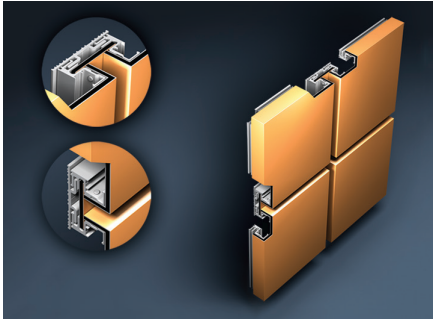
### FLORIDA BUILDING PRODUCT APPROVALS

Please refer to [pac-clad.com](http://pac-clad.com) or your local factory for specific product approval numbers for Precision Series panels.

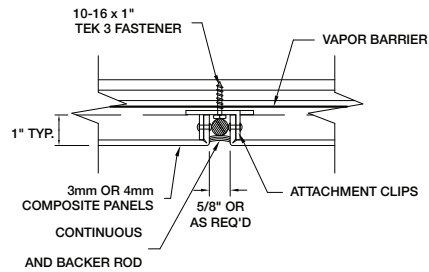
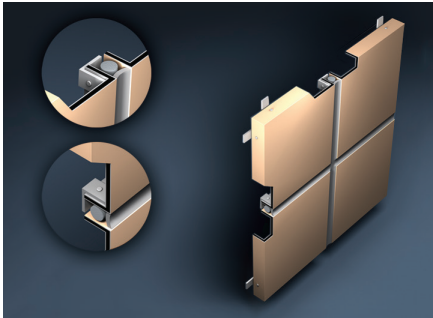
Note: Line drawings may not be to scale.

# COMPOSITE WALL PANELS

## PAC-3000 RS



## PAC-3000 CS



### PRODUCT FEATURES

- ▶ Available in a wide variety of non-PAC-CLAD colors and finishes
- ▶ Consult Petersen rep for color options (extra fee applies for PAC-CLAD colors)
- ▶ Precise fabrication to meet exacting tolerances
- ▶ Rout-and-return fabrication
- ▶ Welded corners available

### MATERIALS

- ▶ 3mm, 4mm, 6mm – Composite
- ▶ .063 - .125 Mill Finish Aluminum
- ▶ Zinc
- ▶ Stainless steel
- ▶ Anodized aluminum

### TESTS

- ▶ ASTM E283\*
  - ▶ ASTM E330\*
  - ▶ ASTM E331\*
- \* Composite material only



ARCHITECTURE AND PLANNING  
**PHORIA DESIGNS, INC.**  
 PHORIA  
 205 GARDNER CIRCLE, STEEL  
 ALABAMA, U.S.A.

CONSULTANT:  
**KSA LIGHTING & CONTROLS**

CLIENT:

ARCHITECT LIC.:

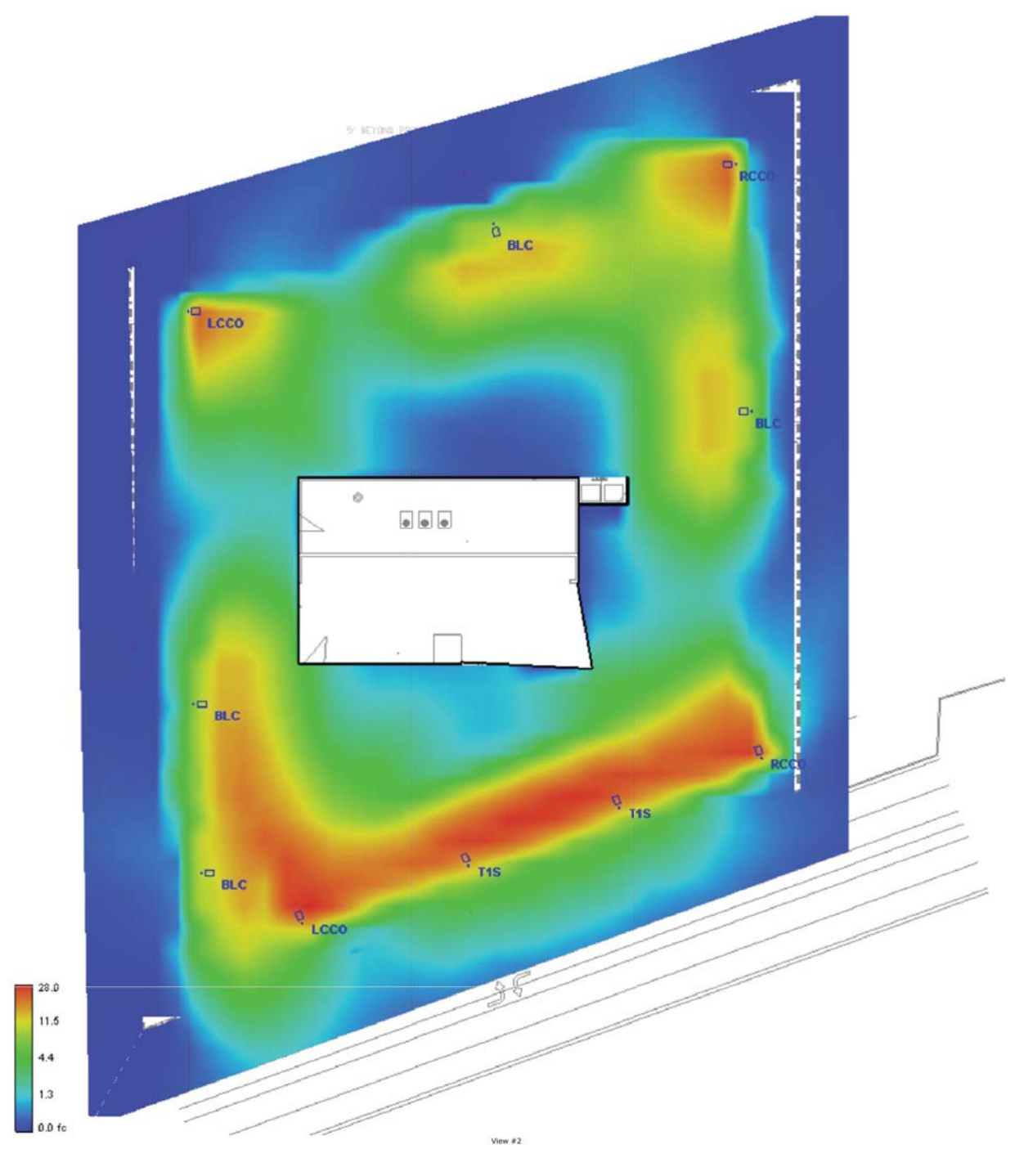
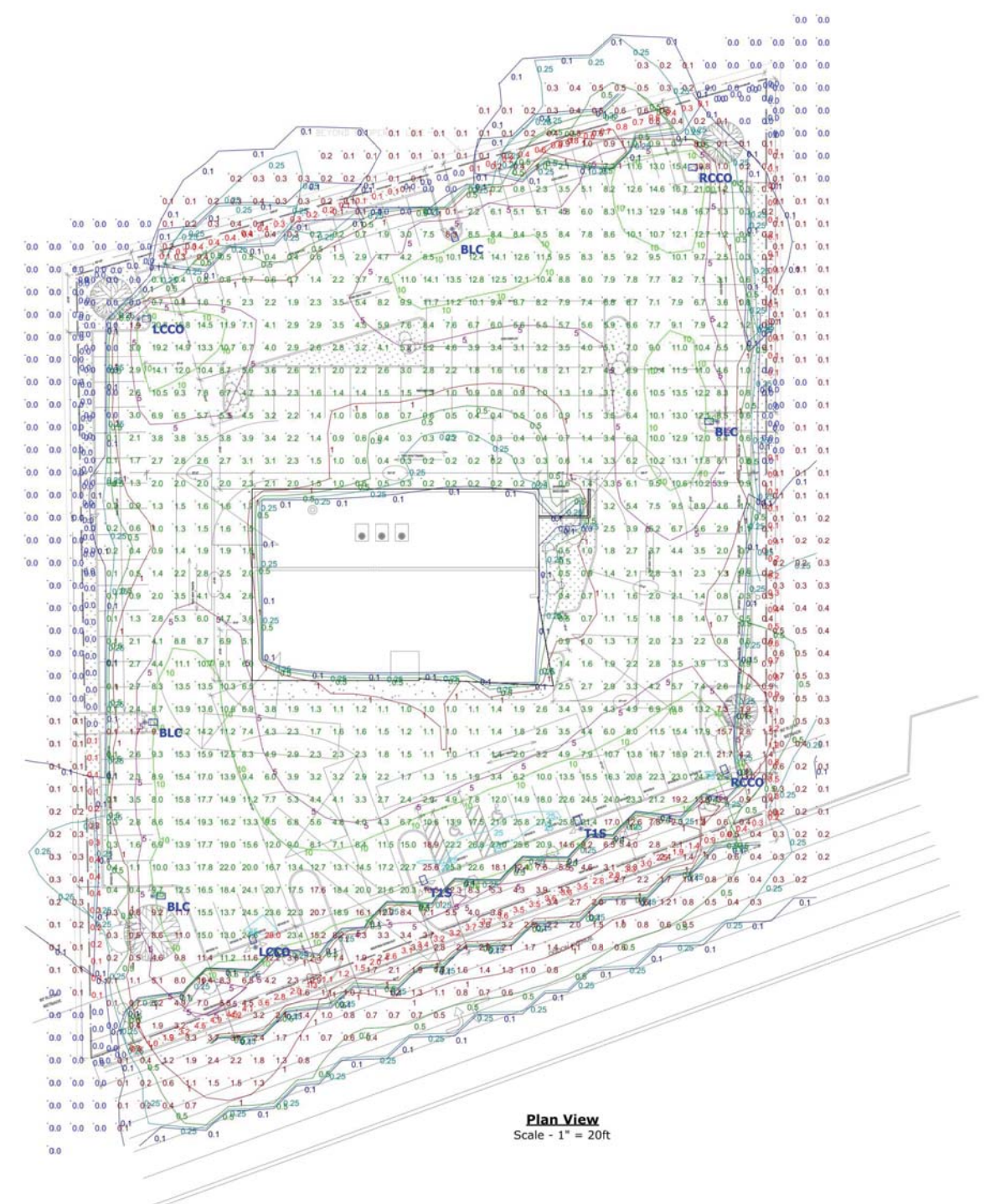
**NEW AUTO DEALERSHIP AT 2410 OGDEN AVE. DOWNERS GROVE, IL.**

REVISIONS

NO.	DATE	DESCRIPTION	BY	PC
12-14-17		ZONING REVIEW		

PROJECT NO.: 17108  
 DATE: 12.01.17  
 ISSUED: DD  
 DRAWN BY: PCJ  
 CHECKED BY: PCJ  
 FILENAME: 2410-OGDEN PHOTOMETRIC  
 SHEET NO.:

**A5**



Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
	T1S	2	Lithonia Lighting	DSX2 LED P8 40K T1S MVOLT	DSX2 LED P8 40K T1S MVOLT	LED	1	DSX2_LED_P8_40K_T1S_MVOLT.ies	49133	0.95	431
	BLC	4	Lithonia Lighting	DSX2 LED P8 40K BLC MVOLT	DSX2 LED P8 40K BLC MVOLT	LED	1	DSX2_LED_P8_40K_BLC_MVOLT.ies	40324	0.95	431
	RCCO	2	Lithonia Lighting	DSX2 LED P8 40K RCCO MVOLT	DSX2 LED P8 40K RCCO MVOLT	LED	1	DSX2_LED_P8_40K_RCCO_MVOLT.ies	30005	0.95	431
	LCCO	2	Lithonia Lighting	DSX2 LED P8 40K LCCO MVOLT	DSX2 LED P8 40K LCCO MVOLT	LED	1	DSX2_LED_P8_40K_LCCO_MVOLT.ies	30005	0.95	431

Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
1. PAVED AREAS ONLY - GRADE LEVEL	✕	6.1 fc	28.0 fc	0.0 fc	N/A	N/A
2. WHOLE PARCEL TO PROPERTY LINES - GRADE LEVEL	+	5.7 fc	28.0 fc	0.0 fc	N/A	N/A
3. BEYOND PROPERTY LINE - 15' ZONE	◇	0.5 fc	4.2 fc	0.0 fc	N/A	N/A
4. WEST PROPERTY LINE	□	0.1 fc	0.4 fc	0.0 fc	N/A	N/A
5. NORTH PROPERTY LINE	□	0.3 fc	0.8 fc	0.0 fc	N/A	N/A
6. EAST PROPERTY LINE	□	0.3 fc	1.2 fc	0.0 fc	N/A	N/A
7. SOUTH PROPERTY LINE (OGDEN AVE.)	□	2.4 fc	4.9 fc	0.0 fc	N/A	N/A

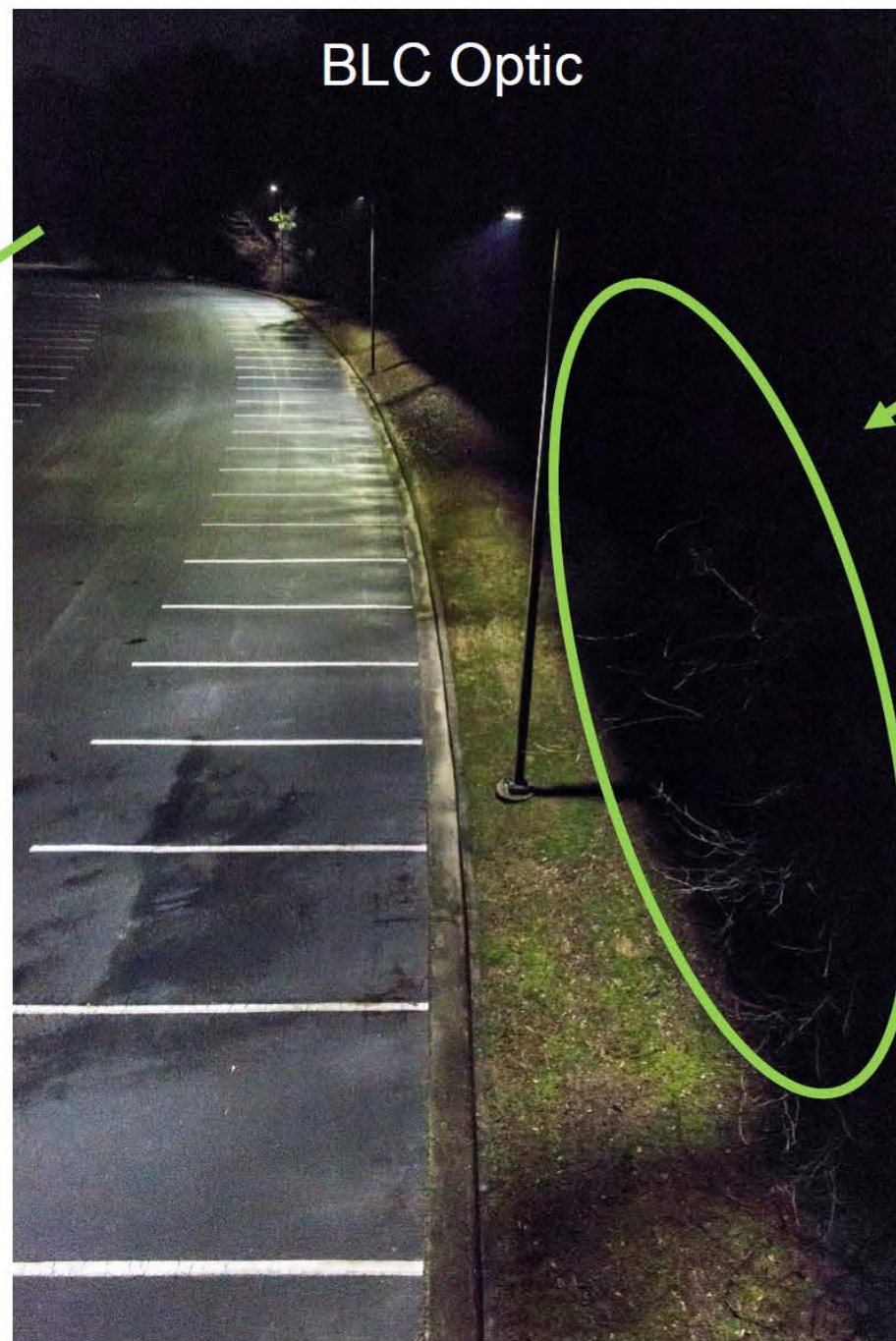
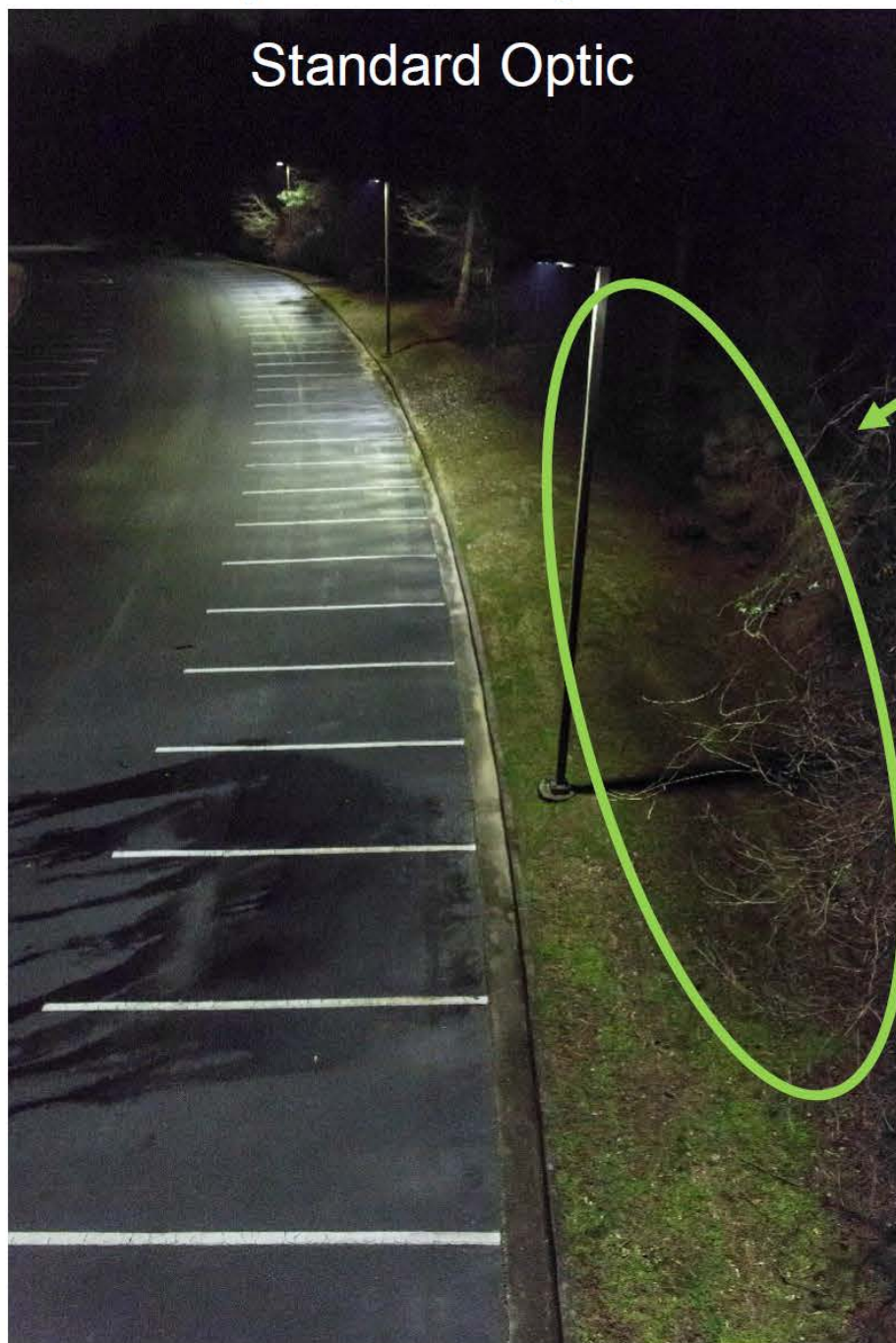
**NOTES:**  
 1. CALCULATION POINTS ARE AT GRADE LEVEL.  
 2. FIXTURES ARE MOUNTED AT 23'-0" ABOVE GRADE (20' POLES ON 3' CONCRETE BASES).  
 3. CALCULATIONS PROVIDED ARE NOT A GUARANTEE OF PERFORMANCE. ACTUAL LIGHT LEVELS MAY VARY.\*\*

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# BLC Optics – (From Above)





**PERSPECTIVE RENDERINGS**

SCALE: NTS



ARCHITECTURE AND PLANNING CONSULTANT:

CLIENT:

ARCHITECT LIC.:

I hereby certify these drawings have been prepared under my direct supervision and to the best of my knowledge comply with all applicable codes of local and State of Illinois.  
I have prepared, or caused to be prepared under my direct supervision, the attached plans and specifications and make them to the best of my knowledge and belief true and correct in all particulars.  
I am duly licensed under the Environmental Services Act in the State of Illinois and the Environmental Services Act in the State of Georgia.  
PHORIA DESIGNS, INC.  
PH. 602.226.6808  
2025 GARDNER CURTIS ST. #100  
ALPHARETTA, GA 30201

LICENSE EXPIRES:

**NEW AUTO DEALERSHIP AT  
2410 OGDEN AVE.  
DOWNERS GROVE, IL.  
PROPOSED BUILDING PERSPECTIVES**

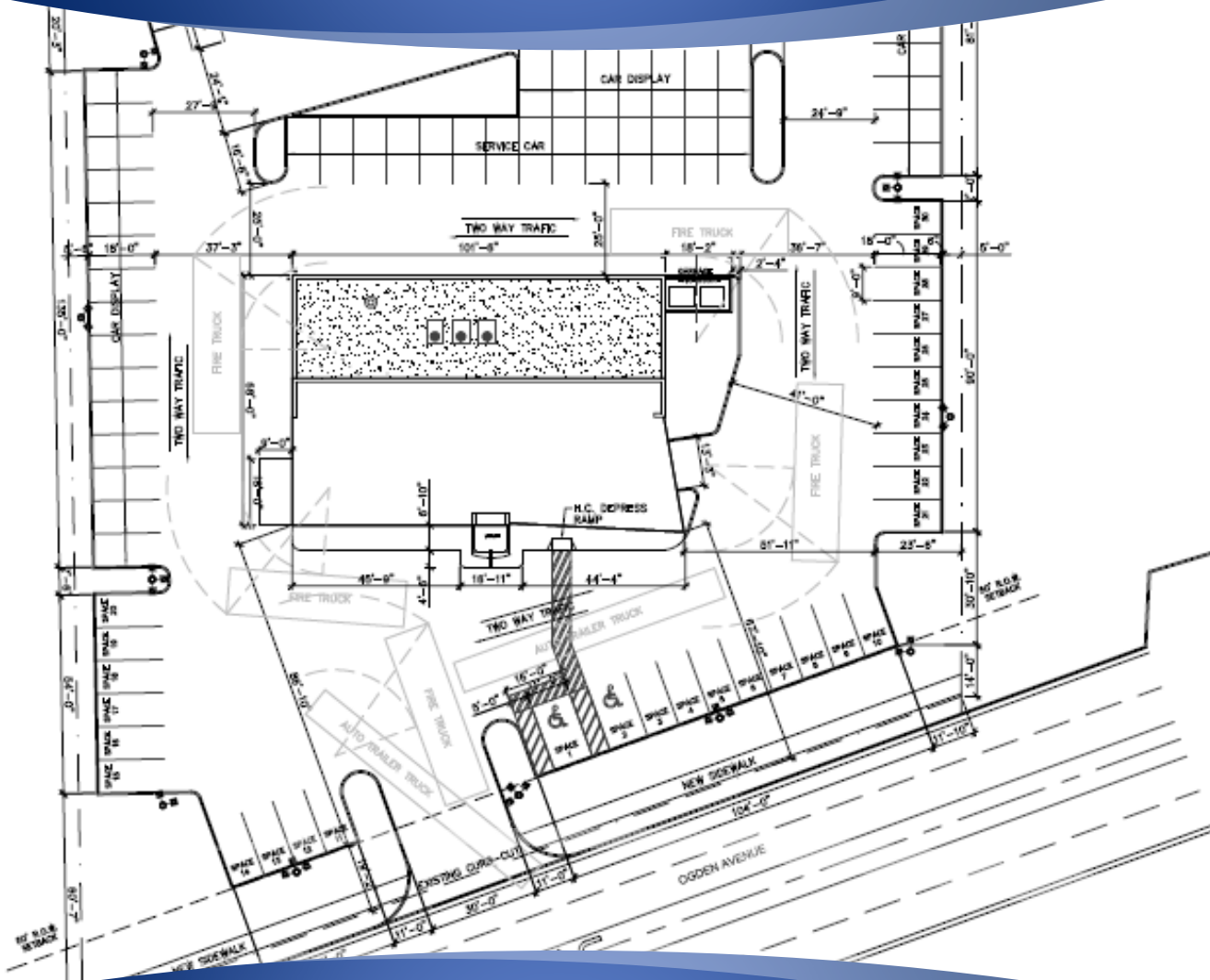
REVISIONS		BY	PC
NO.	DATE	DESCRIPTION	ZONING REVIEW
1	12-14-17		
2			
3			
4			

PROJECT NO.: 17108  
DATE: 12.01.17  
ISSUED: DD  
DRAWN BY: PCJ  
CHECKED BY: PCJ  
FILENAME: 180-1858 RENDERING  
SHEET NO.:

**A6**

# Traffic Impact Study Proposed Used Car Dealership

Downers Grove, Illinois



December 12, 2017

# 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 the proposed used car dealership to be located on the north side of Ogden Avenue approximately 600 feet east of Cross Street in Downers Grove, Illinois. As proposed, the site will be developed with an approximately 7,000 square-foot building with an approximately 3,500 square-foot showroom and a five-bay service center. Access to the development will be provided via the existing westerly full movement curb cut serving the site. A total of 101 parking spaces will be provided with 30 spaces reserved for guest parking.

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 area.

The sections of this report present the following:

- Existing roadway conditions
- A description of the proposed 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 and weekday evening peak hours
- Recommendations with respect to adequacy of the site access and adjacent roadway system

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

1. Existing Condition - Analyzes the capacity of the existing roadway system using existing peak hour traffic volumes in the surrounding area.
2. Future Condition - The future projected traffic volumes include the existing traffic volumes increased by an ambient area growth factor (growth not attributable to any particular development) and the traffic estimated to be generated by the proposed subject development.



Site Location

Figure 1





Aerial View of Site Location

Figure 2

## 2. Existing Conditions

Existing transportation conditions in the vicinity of the site were documented based on a field visit conducted by KLOA, Inc. in order to obtain a database for projecting future 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 occupied by a vacant building, is located on the north side of Ogden Avenue approximately 600 feet east of Cross Street. Land uses in the vicinity of the site are primarily commercial to the west, north, and east and residential to the south and include Gerber Collision and Glass to the east, Premier Auto Auctions, Riggs Brothers Tops and Interiors, R & D Fence, and the Downers Grove Park District to the north, Max Madsen Mitsubishi and Culvers to the west, and Auto Extreme, Inc. and Fairway Grove Condominiums to the south.

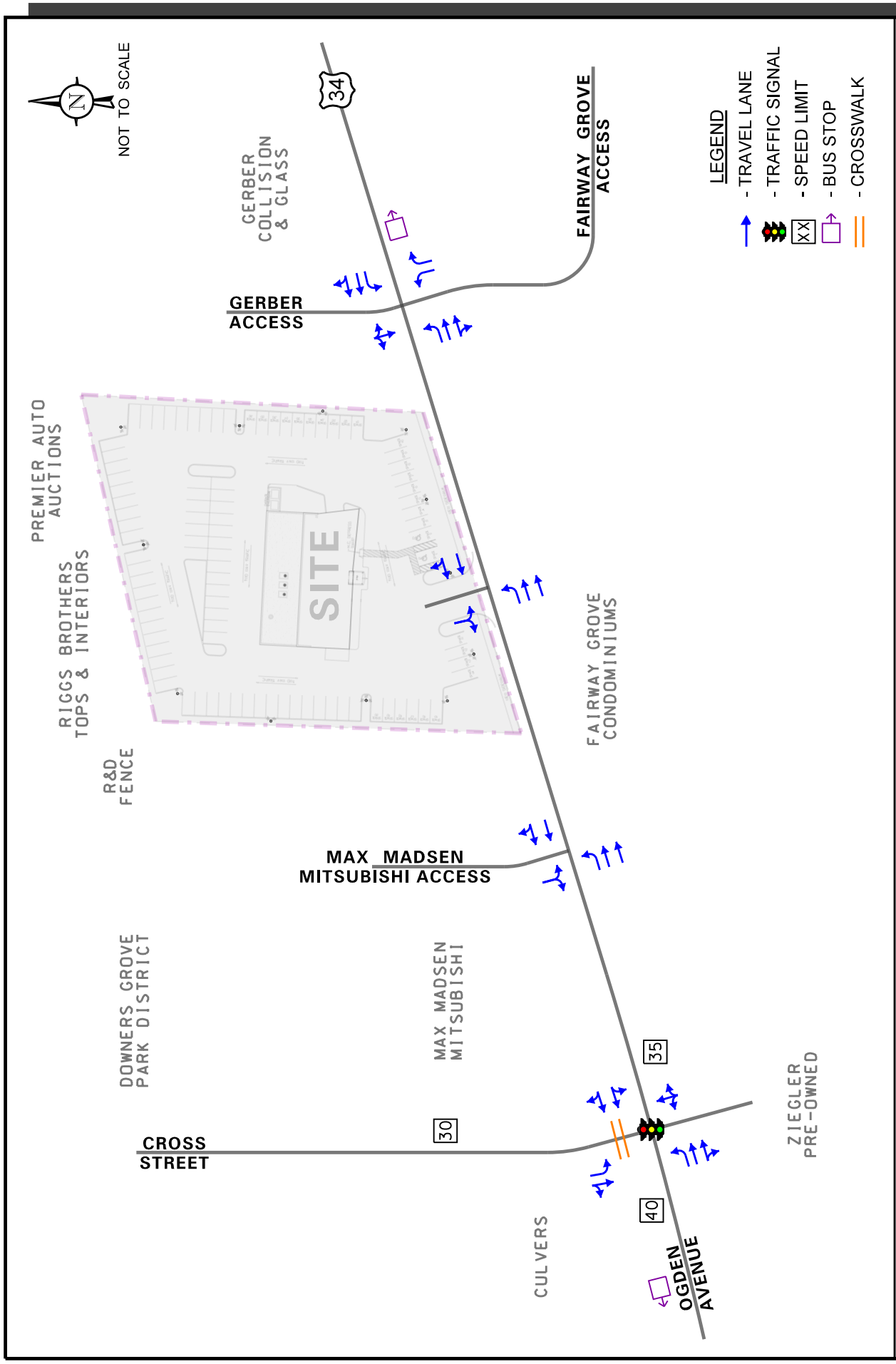
### Existing Roadway System Characteristics

The characteristics of the existing roadways near the development are described below. **Figure 3** illustrates the existing roadway characteristics.

*Ogden Avenue* is generally an east-west arterial roadway that in the vicinity of the site provides two through lanes in each direction separated by a center, two-way left-turn lane. At its signalized intersection with Cross Street, Ogden Avenue provides an exclusive left-turn lane and two exclusive through lanes on the eastbound approach and an exclusive through lane and a shared through/right-turn lane on the westbound approach. At its unsignalized intersection with the Max Madsen Mitsubishi access drive, Ogden Avenue provides two exclusive through lanes on the eastbound approach and an exclusive through lane and a shared through/right-turn lane on the westbound approach with eastbound left-turn movements accommodated via the center, two-way left-turn lane. At its unsignalized intersection with the Gerber Collision & Glass and Fairway Grove access drives, Ogden Avenue provides an exclusive through lane and a shared through/right-turn lane on both approaches with left turns onto the access drives accommodated via the existing center, two-way left-turn lane. Ogden Avenue is under the jurisdiction of the Illinois Department of Transportation (IDOT), carries an annual average daily traffic volume (AADT) volume of 30,600 vehicles (IDOT AADT 2016), and has a posted speed limit of 35 miles per hour east of Cross Street and a posted speed limit of 40 miles per hour west of Cross Street.

*Cross Street* is a north-south local roadway that has an offset intersection with Ogden Avenue. The north leg of the intersection extends from Ogden Avenue to Warrenville Road, provides access to the commercial developments along Cross Street, and has signalized intersections with both roadways. At its signalized intersection with Ogden Avenue, the north leg of Cross Street provides an exclusive left-turn lane, an exclusive right-turn lane, and a standard style crosswalk. The south leg of this intersection is the full movement access drive serving Auto Extreme, Inc. This access drive provides one inbound lane and one outbound lane. Cross Street is under the jurisdiction of the DuPage County Division of Transportation, carries an AADT volume of 7,442 vehicles (DuDOT AADT 2010), and has a posted speed limit of 30 miles per hour.

*Proposed Used Car Dealership  
Downers Grove, Illinois*



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

Job No: 17-273      Figure: 3

Existing Roadway Characteristics

Used Car Dealership  
Downers Grove, Illinois

## Existing Traffic Volumes

In order to determine current traffic conditions in the vicinity of the site, KLOA, Inc. conducted peak period traffic counts using Miovision Scout Video Collection Units on Wednesday, November 15, 2017 during the weekday morning (7:00 A.M. to 9:00 A.M.) and weekday evening (4:00 P.M. to 6:00 P.M.) peak periods at the following intersections:

- Ogden Avenue with Cross Street/Auto Extreme, Inc. Access Drive
- Ogden Avenue with the Max Madsen Mitsubishi Access Drive
- Ogden Avenue with Fairway Grove/Gerber Collision and Glass Access Drives

The results of the traffic counts showed that the weekday morning peak hour of traffic occurs from 7:15 A.M. to 8:15 A.M. and the weekday evening peak hour of traffic occurs from 4:30 P.M. to 5:30 P.M. **Figure 4** illustrates the existing peak hour traffic volumes. Copies of the traffic count summary sheets are included in the Appendix.

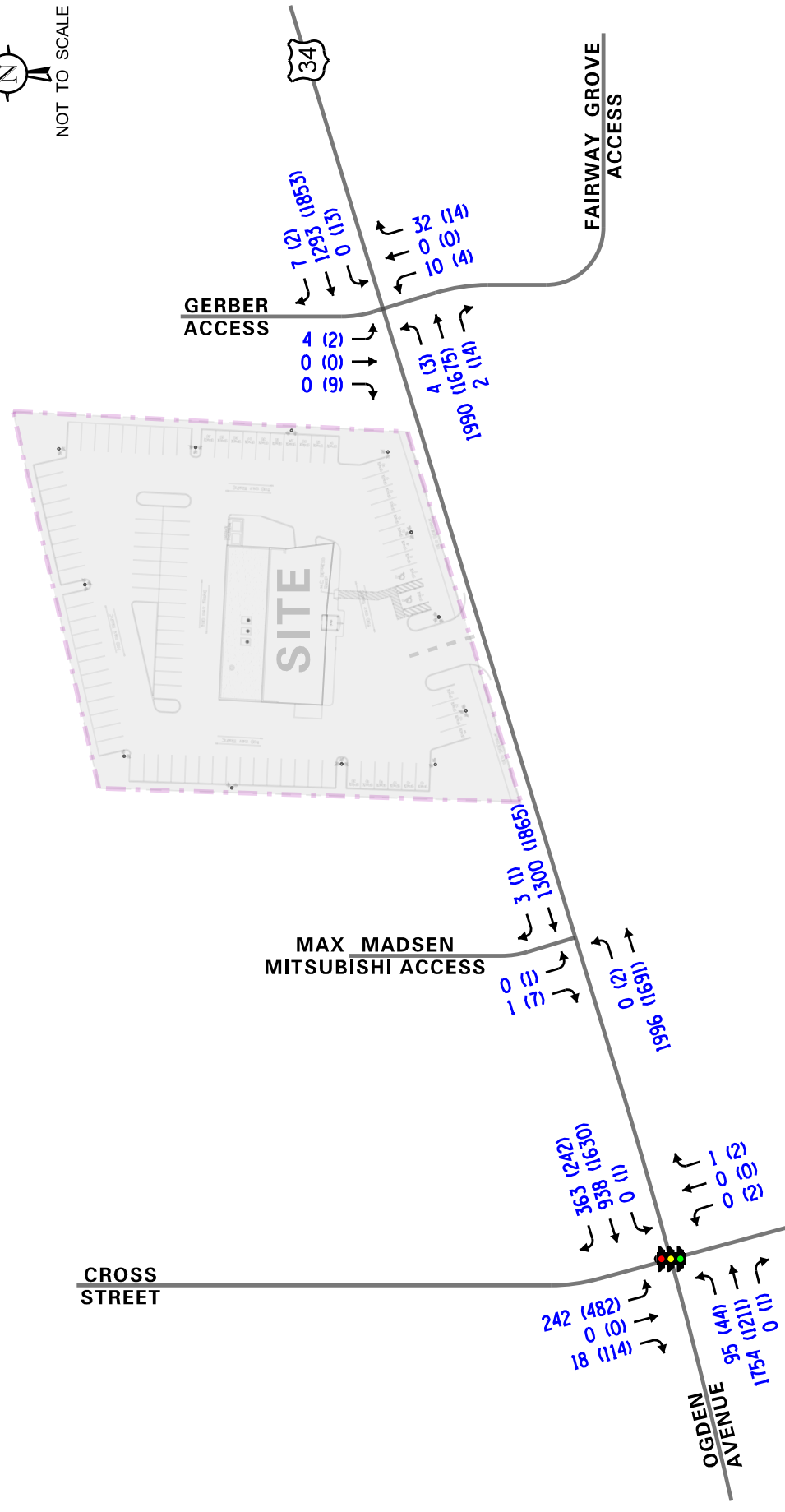
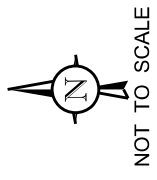
## Crash Analysis

KLOA, Inc. obtained crash data for the past five years (2010 to 2014) for the intersections of Ogden Avenue with Cross Street, Ogden Avenue with the Max Madsen Mitsubishi access drive, and Ogden Avenue with the Gerber/Fairway Grove access drives. The crash data for the intersection of Ogden Avenue with Cross Street is summarized in **Table 1**. A review of the crash data indicated that the intersection of Ogden Avenue with the Max Madsen Mitsubishi access drive experienced only one crash in 2011, 2012, and 2015 and zero crashes in 2013 and 2014. Only one crash involved a turning vehicle at this intersection. Furthermore, the intersection of Ogden Avenue with the Gerber/Fairway Grove access drives experienced zero crashes in 2011 and 2015, one crash in 2012 and 2014, and two crashes in 2013. None of the crashes at this intersection involved a turning vehicle. Additionally, the crash data indicated there were no fatalities reported at any of the intersections.

Table 1  
OGDEN AVENUE WITH CROSS STREET – CRASH SUMMARY

Year	Type of Crash Frequency						Total
	Angle	Object	Rear End	Sideswipe	Turning	Other	
2011	0	0	2	0	2	0	4
2012	0	0	1	0	0	0	1
2013	0	0	1	0	3	0	4
2014	0	0	3	0	2	0	5
2015	0	0	0	0	4	0	4
<b>Total</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>18</b>
<b>Average</b>	<b>0</b>	<b>0</b>	<b>1.4</b>	<b>0</b>	<b>2.2</b>	<b>0</b>	<b>3.6</b>

**DISCLAIMER:** The motor vehicle crash data referenced herein was provided by the Illinois Department of Transportation. The author is responsible for any data analyses and conclusions drawn.



Existing Traffic Volumes

Used Car Dealership  
Downers Grove, Illinois

### 3. Traffic Characteristics of the Proposed Development

In order 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 will generate.

#### Proposed Site and Development Plan

As proposed, the plans call for developing the site with an approximately 7,000 square-foot used car dealership that will provide an approximately 3,500 square-foot showroom. Additionally, a five-bay service center will be provided. Access to the used car dealership will be provided via the existing full movement curb cut that is located approximately 250 feet east of the Max Madsen Mitsubishi full movement access drive. This access drive provides one inbound lane and one outbound lane and outbound movements should be under stop sign control. Left turns onto the access drive will be accommodated via the existing center, two-way left-turn lane on Ogden Avenue. It should be noted that the proposed access system will result in the elimination of the existing easterly full movement curb cut on Ogden Avenue along the site frontage. A total of 101 parking spaces will be provided with 30 spaces reserved for guest parking. A copy of the preliminary site plan depicting the proposed development and access is included in the Appendix.

#### Directional Distribution

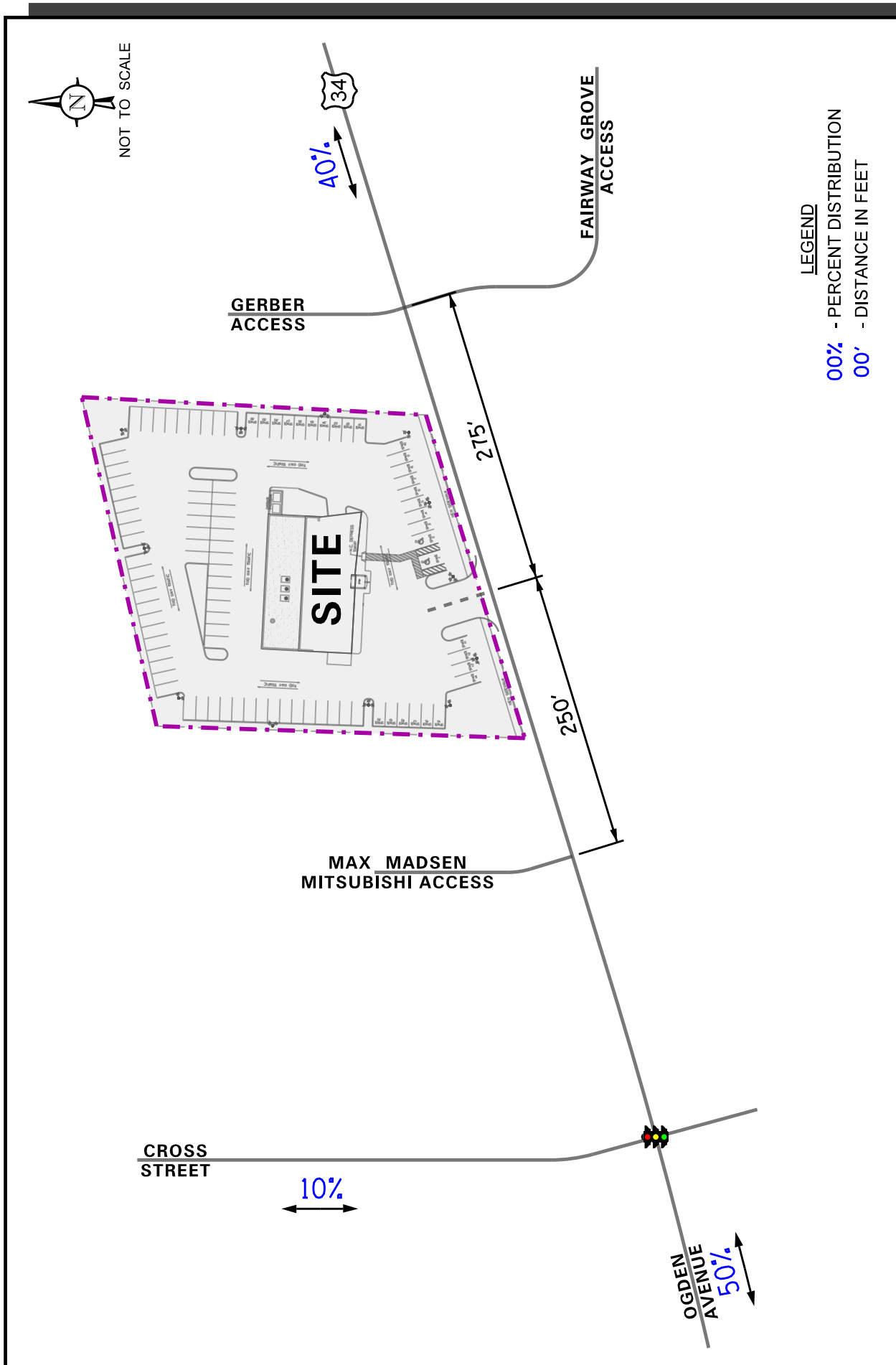
The directions from which employees and patrons of the used car dealership will approach and depart the site were estimated based on existing travel patterns, as determined from the traffic counts. **Figure 5** illustrates the directional distribution of the development-generated traffic.

#### Estimated Site Traffic Generation

The estimates of traffic to be generated by the development are based upon the proposed land use type and size. The volume of traffic generated for the auto dealership was estimated using data published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 9<sup>th</sup> Edition. The ITE rates and equations used are included in the Appendix. **Table 2** tabulates the vehicle trips anticipated for this development for the weekday morning and weekday evening peak hours.

Table 2  
ESTIMATED SITE-GENERATED TRAFFIC VOLUMES

ITE Land Use Code	Type/Size	Weekday Morning Peak Hour			Weekday Evening Peak Hour			Daily Two-Way Trips
		In	Out	Total	In	Out	Total	
841	Auto Dealership (7,000 s.f.)	10	3	13	7	11	18	226



Estimated Directional Distribution

Used Car Dealership  
 Downers Grove, Illinois

## 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 subject development.

### Development Traffic Assignment

The estimated weekday morning and evening 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 total new traffic assignment for the commercial development is illustrated in **Figure 6**.

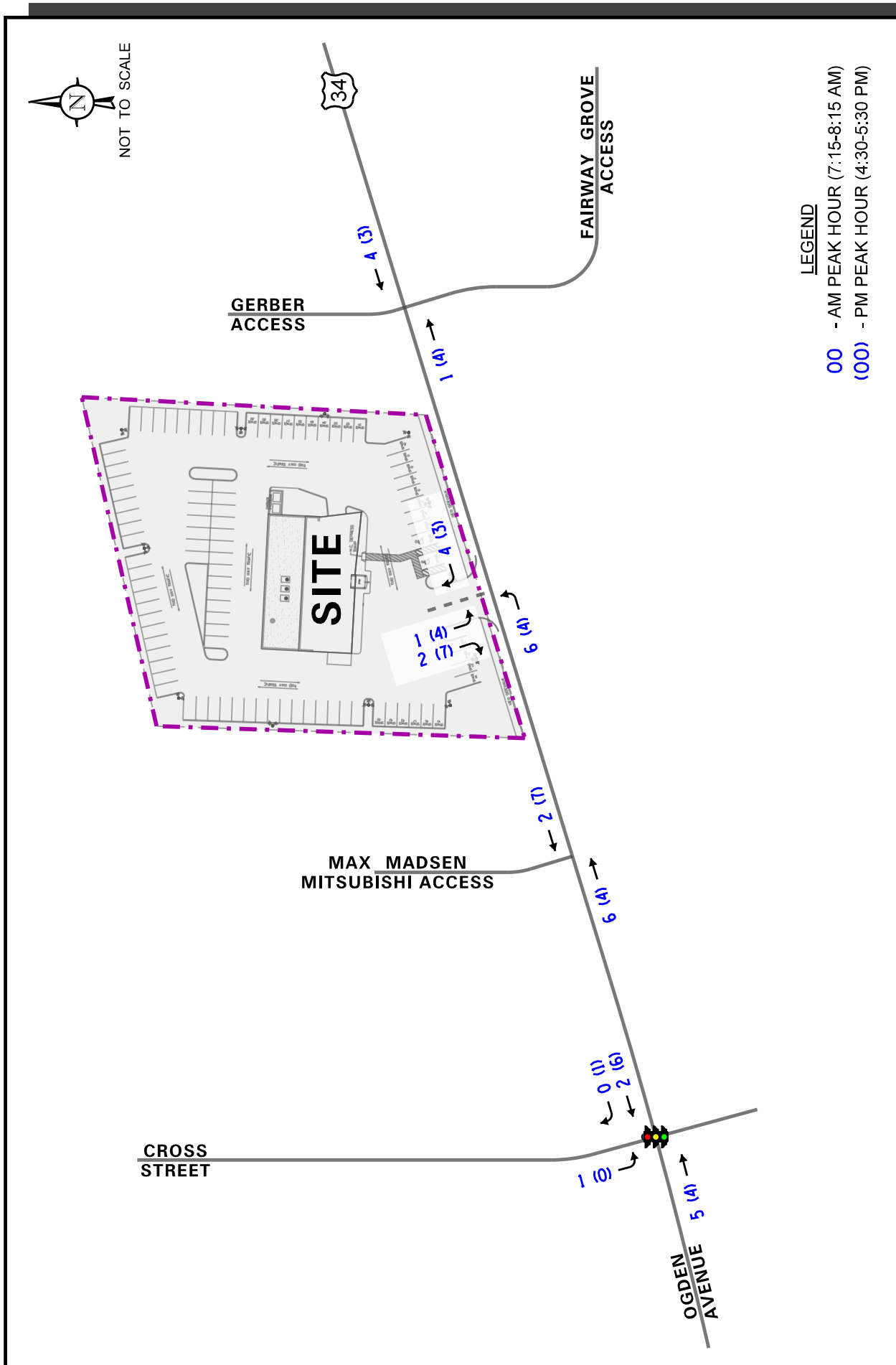
### Background Traffic Conditions

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 ADT projections provided by the Chicago Metropolitan Agency for Planning (CMAP) in a letter dated December 11, 2017, an increase of approximately four-tenths of a percent per year for six years (buildout year plus five years) was applied to project Year 2023 conditions. A copy of the CMAP 2040 projections letter is included in the Appendix.

### Total Projected Traffic Volumes

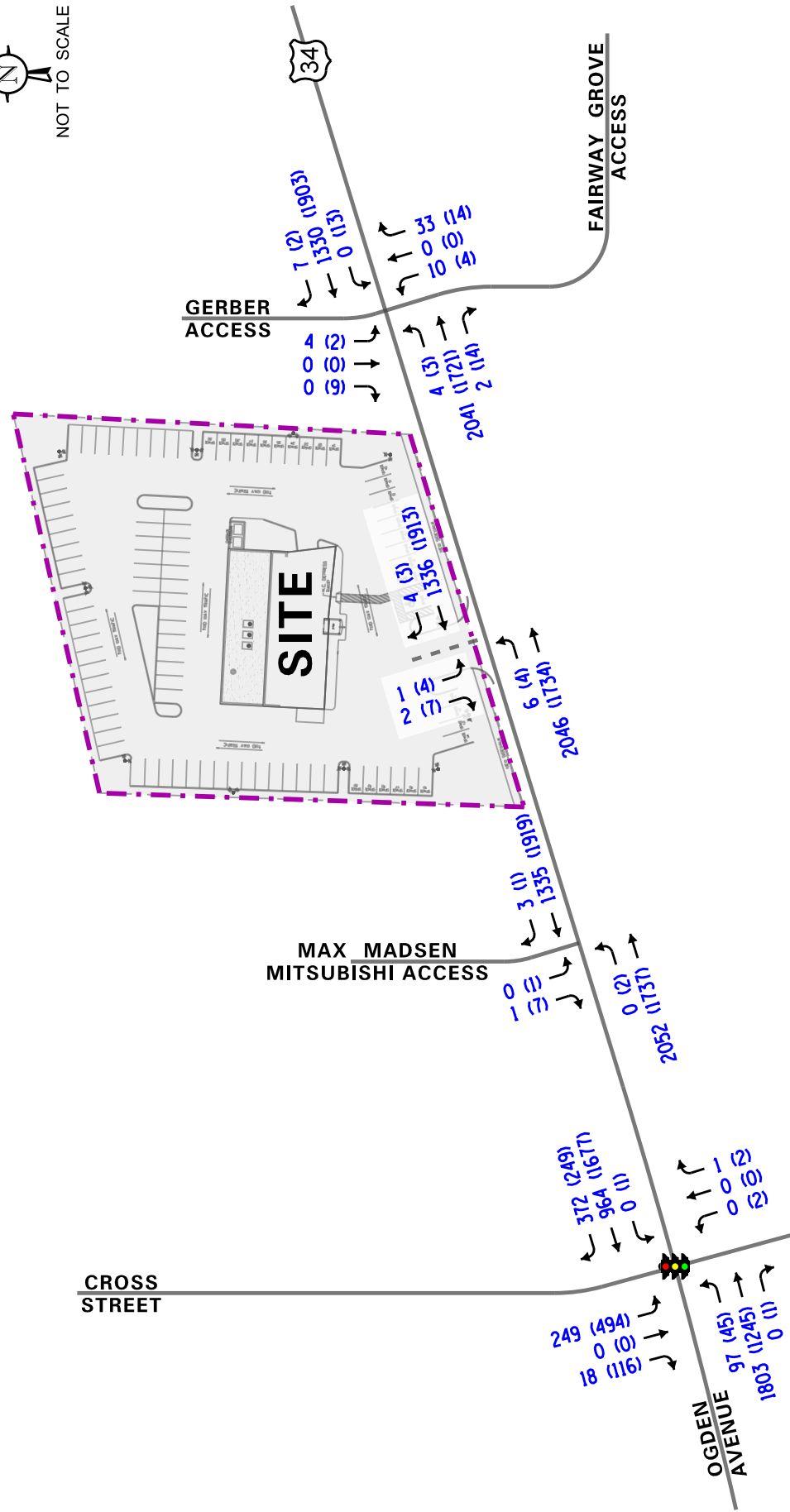
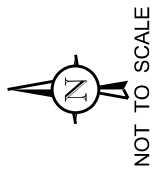
The development-generated traffic was added to the existing traffic volumes accounting for background growth to determine the Year 2023 total projected traffic volumes, shown in **Figure 7**.





Estimated Site-Generated Traffic Volumes

Used Car Dealership  
 Downers Grove, Illinois



**LEGEND**

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

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



Year 2023 Total Projected Traffic Volumes

Used Car Dealership  
Downers Grove, Illinois

## 5. Traffic Analysis and Recommendations

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

### Traffic Analyses

Roadway and adjacent or nearby intersection analyses were performed for the weekday morning and weekday evening peak hours for the existing (Year 2017) and future projected (Year 2023) traffic volumes.

The traffic analyses were performed using the methodologies outlined in the Transportation Research Board's *Highway Capacity Manual (HCM), 2010* and analyzed using the HCS 7 computer software. The analyses for the intersection of Ogden Avenue with Cross Street were completed utilizing actual cycle lengths and phasings.

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 and Year 2023 total projected conditions are presented in **Tables 3** and **4**, respectively. A discussion of the intersections follows. Summary sheets for the capacity analyses are included in the Appendix.

Table 3  
CAPACITY ANALYSIS RESULTS – EXISTING TRAFFIC CONDITIONS

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Ogden Avenue with Cross Street/Auto Extreme, Inc. Access Drive <sup>1</sup>				
• Overall	A	9.5	E	64.4
• Eastbound Approach	A	1.5	A	4.2
• Westbound Approach	A	5.9	B	16.0
• Northbound Approach	D	48.9	D	41.9
• Southbound Approach	F	84.7	F	99+
Ogden Avenue with Max Madsen Mitsubishi Access Drive <sup>2</sup>				
• Southbound Approach	B	14.2	C	24.7
• Westbound Left Turns	B	12.2	C	17.3
Ogden Avenue with Gerber/Fairway Grove Access Drives <sup>2</sup>				
• Northbound Approach	F	55.7	D	30.7
• Southbound Approach	E	47.7	D	32.0
• Eastbound Left Turns	B	12.1	C	17.2
• Westbound Left Turns	C	18.5	C	15.8
LOS = Level of Service Delay is measured in seconds. 1 – Signalized Access Drive 2 – Unsignalized Access Drive				

Table 4  
CAPACITY ANALYSIS RESULTS - YEAR 2023 PROJECTED TRAFFIC CONDITIONS

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Ogden Avenue with Cross Street/Auto Extreme, Inc. Access Drive <sup>1</sup>				
• Overall	B	10.0	E	68.3
• Eastbound Approach	A	1.6	A	4.3
• Westbound Approach	A	6.1	B	17.4
• Northbound Approach	D	48.9	D	42.0
• Southbound Approach	F	89.5	F	99+
Ogden Avenue with Max Madsen Mitsubishi Access Drive <sup>2</sup>				
• Southbound Approach	B	14.5	C	25.9
• Westbound Left Turns	B	12.4	C	17.9
Ogden Avenue with Gerber/Fairway Grove Access Drives <sup>2</sup>				
• Northbound Approach	F	60.7	D	32.4
• Southbound Approach	E	50.4	D	33.8
• Eastbound Left Turns	B	12.4	C	17.8
• Westbound Left Turns	C	19.2	C	16.3
Ogden Avenue with Proposed Full Movement Access Drive <sup>2</sup>				
• Southbound Approach	C	21.8	E	36.0
• Westbound Left-Turns	B	12.4	C	17.8
LOS = Level of Service Delay is measured in seconds. 1 – Signalized Access Drive 2 – Unsignalized Access Drive				

## Discussion and Recommendations

The following summarizes how the intersections are projected to operate and identify any roadway and traffic control improvements to accommodate the development traffic.

### *Ogden Avenue with Cross Street*

The results of the capacity analysis indicate that overall this intersection currently operates at level of service (LOS) A during the weekday morning peak hour and at LOS E during the weekday evening peak hour. It should be noted that the delays experienced during the weekday evening peak hour are a result of the southbound approach which operates at LOS F during the weekday evening peak hour due to the limited amount of greentime allocated to this approach. Under Year 2023 projected conditions, this intersection overall is projected to operate at LOS B during the weekday morning peak hour with increases in delay of less than one second and is projected to continue operating at LOS E during the weekday evening peak hours with increases in delay of approximately four seconds. It should be noted that the increases in delay at this intersection are primarily due to the increase in background growth as the proposed development is projected to increase the volume of traffic traversing this intersection by less than one-half percent. As such, the proposed development traffic will have a limited impact on the operations of this intersection.

### *Ogden Avenue with Max Madsen Mitsubishi Access Drive*

The results of the capacity analysis indicate that the southbound approach currently operates at LOS B during the weekday morning peak hour and at LOS C during the weekday evening peak hour. Under Year 2023 conditions, the southbound approach will continue to operate at existing levels of service during the peak hours with increases in delay of approximately one second or less. Additionally, eastbound left-turns onto the access drive are projected to continue operating at LOS B during the weekday morning peak hour and at LOS C during the weekday evening peak hour with increases in delay of less than one second and 95<sup>th</sup> percentile queues of one to two vehicles. As such, the proposed development traffic will have a limited impact on the operations of this intersection and no roadway or traffic control improvements will be required.

### *Ogden Avenue with Gerber/Fairway Grove Access Drives*

The results of the capacity analysis indicate that the northbound approach currently operates at LOS F during the weekday morning peak hour and at LOS D during the weekday evening peak hour. Additionally, the southbound approach currently operates at LOS E during the weekday morning peak hour and at LOS D during the weekday evening peak hour. However, this level of service is expected for access driveways that have unsignalized intersections with major roadways such as Ogden Avenue. Under Year 2023 projected conditions, the northbound and southbound approaches are projected to continue operating at existing levels of service during the peak hours with increase in delay of approximately five seconds or less. Additionally, eastbound and westbound left-turns onto the access drives are projected to continue operating at LOS C or better during the peak hours with increases in delay of less than one second and 95<sup>th</sup> percentile queues of one to two vehicles. As such, the proposed development traffic will have a limited impact on the operations of this intersection and no roadway or traffic control improvements will be required.

*Ogden Avenue with Proposed Full Movement Access Drive*

The results of the capacity analysis indicate that outbound movements from the proposed access drive are projected to operate at LOS C during the weekday morning peak hour and at LOS E during the weekday evening peak hour with 95<sup>th</sup> percentile queues of one to two vehicles. As previously indicated, this LOS is expected for access driveways that have an unsignalized intersection with a major roadway such as Ogden Avenue. Additionally, eastbound left-turns onto the access drive are projected to operate at LOS B during the weekday morning peak hour and at LOS C during the weekday evening peak hour with 95<sup>th</sup> percentile queues of one to two vehicles which can be accommodated within the existing center, two-way left-turn lane. As such, the proposed access driveway will be adequate in accommodating the traffic projected to be generated by the proposed development

## 6. Conclusion

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

- The proposed development will generate a low volume of traffic, approximately 13 trips during the weekday morning peak hour and 18 trips during the weekday evening peak hour.
- The development-generated traffic will not have a significant impact on area roadways.
- Providing a single full movement access drive off Ogden Avenue will be adequate in accommodating the traffic projected to be generated by the proposed development and will eliminate an existing curb cut on Ogden Avenue along the site frontage.



# Appendix

Traffic Count Summary Sheets  
ITE Rates and Equations  
Site Plan  
CMAP 2040 Projections Letter  
Level of Service Criteria  
Capacity Analysis Summary Sheets

## Traffic Count Summary Sheets







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

Rosemont, Illinois, United States 60018  
(847)518-9990

Count Name: Ogdan Avenue with Cross Street  
Site Code:  
Start Date: 11/15/2017  
Page No: 4

### Turning Movement Peak Hour Data (4:30 PM)

Start Time	Cross Street Eastbound					Ogdan Avenue Westbound					Access Drive Northbound					Cross Street 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	9	295	0	1	304	0	0	365	62	0	427	0	1	0	0	0	0	0	126	0	44	1	170	902
4:45 PM	0	13	281	0	0	294	0	0	438	61	0	499	0	0	0	1	0	0	1	109	0	24	0	133	927
5:00 PM	0	12	279	0	0	291	0	1	403	56	0	460	0	0	0	0	1	0	0	126	0	23	0	149	900
5:15 PM	0	10	345	1	0	356	0	0	411	63	0	474	0	1	0	1	1	2	0	121	0	23	0	144	976
Total	0	44	1200	1	1	1245	0	1	1617	242	0	1860	0	2	0	2	2	4	0	482	0	114	1	596	3705
Approach %	0.0	3.5	96.4	0.1	-	-	0.0	0.1	86.9	13.0	-	-	0.0	50.0	0.0	50.0	-	-	0.0	80.9	0.0	19.1	-	-	-
Total %	0.0	1.2	32.4	0.0	-	33.6	0.0	0.0	43.6	6.5	-	50.2	0.0	0.1	0.0	0.1	-	0.1	0.0	13.0	0.0	3.1	-	16.1	-
PHF	0.000	0.846	0.870	0.250	-	0.874	0.000	0.250	0.923	0.960	-	0.932	0.000	0.500	0.000	0.500	-	0.500	0.000	0.956	0.000	0.648	-	0.876	0.949
% Lights	0	43	1183	1	-	1227	0	1	1606	242	-	1849	0	2	0	2	-	4	0	478	0	114	-	592	3672
% Lights	-	97.7	98.6	100.0	-	98.6	-	100.0	99.3	100.0	-	99.4	-	100.0	-	100.0	-	100.0	-	99.2	-	100.0	-	99.3	99.1
Buses	0	0	2	0	-	2	0	0	3	0	-	3	0	0	0	0	-	0	0	1	0	0	-	1	6
% Buses	-	0.0	0.2	0.0	-	0.2	-	0.0	0.2	0.0	-	0.2	-	0.0	-	0.0	-	0.0	-	0.2	-	0.0	-	0.2	0.2
Single-Unit Trucks	0	0	12	0	-	12	0	0	4	0	-	4	0	0	0	0	-	0	0	3	0	0	-	3	19
% Single-Unit Trucks	-	0.0	1.0	0.0	-	1.0	-	0.0	0.2	0.0	-	0.2	-	0.0	-	0.0	-	0.0	-	0.6	-	0.0	-	0.5	0.5
Articulated Trucks	0	1	3	0	-	4	0	0	4	0	-	4	0	0	0	0	-	0	0	0	0	0	-	0	8
% Articulated Trucks	-	2.3	0.3	0.0	-	0.3	-	0.0	0.2	0.0	-	0.2	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.2
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
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	-	2	-	-	-	-	-	1	-
% 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

Count Name: Ogdén Avenue with Max Madsen  
Access  
Site Code:  
Start Date: 11/15/2017  
Page No: 1

### Turning Movement Data

Start Time	Ogdén Avenue Eastbound					Ogdén Avenue Westbound					Max Madsen Access Drive Southbound					
	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Right	Thru	Peds	App. Total	U-Turn	Left	Right	Peds	App. Total	Int. Total
7:00 AM	0	0	441	0	441	0	0	302	0	302	0	0	0	0	0	743
7:15 AM	0	0	530	0	530	0	1	312	0	313	0	0	0	0	0	843
7:30 AM	0	0	532	0	532	0	0	305	0	305	0	0	1	0	1	838
7:45 AM	0	0	515	0	515	0	2	368	0	368	0	0	0	0	0	875
Hourly Total	0	0	2018	0	2018	0	3	1277	0	1280	0	0	1	0	1	3299
8:00 AM	0	0	419	0	419	0	0	311	0	311	0	0	0	0	0	730
8:15 AM	1	1	417	0	419	0	3	340	0	343	0	0	0	0	0	762
8:30 AM	0	0	417	0	417	0	0	350	0	350	0	2	0	0	2	769
8:45 AM	0	2	400	0	402	0	1	362	0	363	0	1	0	0	1	766
Hourly Total	1	3	1653	0	1657	0	4	1363	0	1367	0	3	0	0	3	3027
*** BREAK ***																
4:00 PM	0	0	396	0	396	0	0	461	0	461	0	1	0	0	1	858
4:15 PM	0	0	378	0	378	0	0	469	0	469	0	0	0	0	0	847
4:30 PM	0	1	411	0	412	0	1	430	0	431	0	1	2	1	3	846
4:45 PM	0	0	401	0	401	0	0	488	0	488	0	0	2	0	2	891
Hourly Total	0	1	1586	0	1587	0	1	1848	0	1849	0	2	4	1	6	3442
5:00 PM	0	0	401	0	401	0	0	476	0	476	0	0	2	0	2	879
5:15 PM	0	1	478	0	479	0	0	471	0	471	0	0	1	1	1	951
5:30 PM	0	1	368	0	369	0	1	511	0	512	0	0	0	0	0	881
5:45 PM	0	0	375	0	375	0	0	414	0	414	0	0	0	0	0	789
Hourly Total	0	2	1622	0	1624	0	1	1872	0	1873	0	0	3	1	3	3500
Grand Total	1	6	6879	0	6886	0	9	6360	0	6369	0	5	8	2	13	13268
Approach %	0.0	0.1	99.9	-	-	0.0	0.1	99.9	-	-	0.0	38.5	61.5	-	-	-
Total %	0.0	0.0	51.8	-	51.9	0.0	0.1	47.9	-	48.0	0.0	0.0	0.1	-	0.1	-
Lights	1	6	6767	-	6774	0	9	6256	-	6265	0	5	8	-	13	13052
% Lights	100.0	100.0	98.4	-	98.4	-	100.0	98.4	-	98.4	-	100.0	100.0	-	100.0	98.4
Buses	0	0	38	-	38	0	0	35	-	35	0	0	0	-	0	73
% Buses	0.0	0.0	0.6	-	0.6	-	0.0	0.6	-	0.5	-	0.0	0.0	-	0.0	0.6
Single-Unit Trucks	0	0	49	-	49	0	0	42	-	42	0	0	0	-	0	91
% Single-Unit Trucks	0.0	0.0	0.7	-	0.7	-	0.0	0.7	-	0.7	-	0.0	0.0	-	0.0	0.7
Articulated Trucks	0	0	25	-	25	0	0	27	-	27	0	0	0	-	0	52
% Articulated Trucks	0.0	0.0	0.4	-	0.4	-	0.0	0.4	-	0.4	-	0.0	0.0	-	0.0	0.4
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	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-





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

Rosemont, Illinois, United States 60018  
(847)518-9990

Count Name: Ogdan Avenue with Max Madsen Access  
Site Code:  
Start Date: 11/15/2017  
Page No: 3

### Turning Movement Peak Hour Data (4:30 PM)

Start Time	Ogdan Avenue Eastbound					Ogdan Avenue Westbound					Max Madsen Access Drive Southbound					
	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Right	Peds	App. Total	Int. Total
4:30 PM	0	1	411	0	412	0	430	1	0	431	0	1	2	1	3	846
4:45 PM	0	0	401	0	401	0	488	0	0	488	0	0	2	0	2	891
5:00 PM	0	0	401	0	401	0	476	0	0	476	0	0	2	0	2	879
5:15 PM	0	1	478	0	479	0	471	0	0	471	0	0	1	1	1	951
Total	0	2	1691	0	1693	0	1865	1	0	1866	0	1	7	2	8	3567
Approach %	0.0	0.1	99.9	-	-	0.0	99.9	0.1	-	-	0.0	12.5	87.5	-	-	-
Total %	0.0	0.1	47.4	-	47.5	0.0	52.3	0.0	-	52.3	0.0	0.0	0.2	-	0.2	-
PHF	0.000	0.500	0.884	-	0.884	0.000	0.955	0.250	-	0.956	0.000	0.250	0.875	-	0.667	0.938
Lights	0	2	1669	-	1671	0	1853	1	-	1854	0	1	7	-	8	3533
% Lights	-	100.0	98.7	-	98.7	-	99.4	100.0	-	99.4	-	100.0	100.0	-	100.0	99.0
Buses	0	0	5	-	5	0	3	0	-	3	0	0	0	-	0	8
% Buses	-	0.0	0.3	-	0.3	-	0.2	0.0	-	0.2	-	0.0	0.0	-	0.0	0.2
Single-Unit Trucks	0	0	12	-	12	0	5	0	-	5	0	0	0	-	0	17
% Single-Unit Trucks	-	0.0	0.7	-	0.7	-	0.3	0.0	-	0.3	-	0.0	0.0	-	0.0	0.5
Articulated Trucks	0	0	5	-	5	0	4	0	-	4	0	0	0	-	0	9
% Articulated Trucks	-	0.0	0.3	-	0.3	-	0.2	0.0	-	0.2	-	0.0	0.0	-	0.0	0.3
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-





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

Rosemont, Illinois, United States 60018  
(847)518-9990

Count Name: Ogdan Avenue with Access Drives  
Site Code:  
Start Date: 11/15/2017  
Page No: 1

Turning Movement Data

Start Time	Ogdan Avenue Eastbound					Ogdan Avenue Westbound					Fairway Grove Access Northbound					Gerber Access Southbound																
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total							
7:00 AM	0	0	439	0	0	439	0	0	301	2	0	303	0	0	0	0	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0	748
7:15 AM	0	1	521	0	0	522	0	0	310	0	0	310	0	3	0	7	0	10	0	1	0	0	0	0	0	1	0	0	0	1	843	
7:30 AM	0	0	533	1	0	534	0	0	315	3	0	318	0	0	0	8	0	8	0	0	0	0	0	0	0	0	0	0	0	0	860	
7:45 AM	0	1	507	0	0	508	0	0	358	3	0	361	0	4	0	8	0	12	0	0	0	0	0	0	0	0	0	0	0	0	881	
Hourly Total	0	2	2000	1	0	2003	0	0	1284	8	0	1292	0	7	0	29	0	36	0	1	0	0	0	0	0	1	0	0	0	1	3332	
8:00 AM	0	2	420	1	0	423	0	0	310	1	0	311	0	3	0	9	0	12	0	3	0	0	0	0	0	3	0	0	0	3	749	
8:15 AM	0	2	408	4	0	414	0	5	337	1	0	343	0	1	0	5	0	6	0	1	0	1	0	0	0	1	0	1	0	2	765	
8:30 AM	0	2	412	0	0	414	0	1	335	3	0	339	0	2	0	5	0	7	0	1	0	0	3	0	0	1	0	3	0	4	764	
8:45 AM	0	3	401	1	0	405	0	0	367	0	0	367	0	2	0	5	0	7	0	0	0	0	2	0	0	0	0	2	0	2	781	
Hourly Total	0	9	1641	6	0	1656	0	6	1349	5	0	1360	0	8	0	24	0	32	0	5	0	6	0	0	0	5	0	6	0	11	3059	
*** BREAK ***																																
4:00 PM	0	1	395	2	0	398	1	2	453	2	0	458	0	0	0	2	0	2	0	1	0	0	1	0	0	1	0	0	0	2	860	
4:15 PM	0	1	374	2	0	377	0	2	454	2	0	458	0	1	0	8	0	9	0	1	0	2	0	0	0	1	0	2	0	3	847	
4:30 PM	0	1	406	2	0	409	0	4	438	2	0	444	0	0	0	3	0	3	0	0	0	0	1	0	0	0	0	1	0	1	857	
4:45 PM	0	2	396	4	0	402	0	4	488	0	0	492	0	2	0	6	0	8	0	1	0	0	4	0	0	1	0	4	0	5	907	
Hourly Total	0	5	1571	10	0	1586	1	12	1833	6	0	1852	0	3	0	19	0	22	0	3	0	8	0	0	0	3	0	8	0	11	3471	
5:00 PM	0	0	395	2	0	397	0	3	458	0	0	461	0	1	0	2	0	3	0	0	0	0	4	0	0	0	0	4	0	4	865	
5:15 PM	0	0	468	6	0	474	0	2	469	0	0	471	0	1	0	3	0	4	0	1	0	0	3	0	0	1	0	0	0	1	950	
5:30 PM	0	0	370	2	0	372	0	5	496	0	0	501	0	0	0	1	0	1	0	1	0	0	0	0	0	1	0	0	0	1	875	
5:45 PM	0	1	372	4	0	377	0	4	420	1	0	425	0	0	0	3	0	3	0	1	0	0	1	0	0	1	0	1	0	2	807	
Hourly Total	0	1	1605	14	0	1620	0	14	1843	1	0	1858	0	2	0	9	0	11	0	3	0	5	0	0	0	3	0	5	0	8	3497	
Grand Total	0	17	6817	31	0	6865	1	32	6309	20	0	6362	0	20	0	81	0	101	0	12	0	19	0	0	0	12	0	19	0	31	13359	
Approach %	0.0	0.2	99.3	0.5	-	-	0.0	0.5	99.2	0.3	-	-	0.0	19.8	0.0	80.2	-	-	0.0	38.7	0.0	61.3	-	-	0.0	38.7	0.0	61.3	-	-	-	
Total %	0.0	0.1	51.0	0.2	-	51.4	0.0	0.2	47.2	0.1	-	47.6	0.0	0.1	0.0	0.6	-	0.8	0.0	0.1	0.0	0.1	-	-	0.0	0.1	0.0	0.1	-	0.2	-	
Lights	0	16	6703	31	-	6750	1	32	6205	20	-	6258	0	20	0	81	-	101	0	10	0	19	-	-	0	10	0	19	-	29	13138	
% Lights	-	94.1	98.3	100.0	-	98.3	100.0	100.0	98.4	100.0	-	98.4	-	100.0	-	100.0	-	100.0	-	83.3	-	100.0	-	-	-	83.3	-	100.0	-	93.5	98.3	
Buses	0	0	38	0	0	38	0	0	36	0	0	36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	74	
% Buses	-	0.0	0.6	0.0	-	0.6	0.0	0.0	0.6	0.0	-	0.6	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	-	-	0.0	-	0.0	-	0.0	0.6	
Single-Unit Trucks	0	1	51	0	-	52	0	0	44	0	-	44	0	0	0	0	-	0	0	2	0	0	-	-	0	2	0	0	-	2	98	
% Single-Unit Trucks	-	5.9	0.7	0.0	-	0.8	0.0	0.0	0.7	0.0	-	0.7	-	0.0	-	0.0	-	0.0	-	16.7	-	0.0	-	-	-	16.7	-	0.0	-	6.5	0.7	
Articulated Trucks	0	0	25	0	-	25	0	0	24	0	-	24	0	0	0	0	-	0	0	0	0	0	-	-	0	0	0	0	-	0	49	
% Articulated Trucks	-	0.0	0.4	0.0	-	0.4	0.0	0.0	0.4	0.0	-	0.4	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	-	-	0.0	-	0.0	-	0.0	0.4	
Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	-	





## ITE Rates and Equations

# Automobile Sales (841)

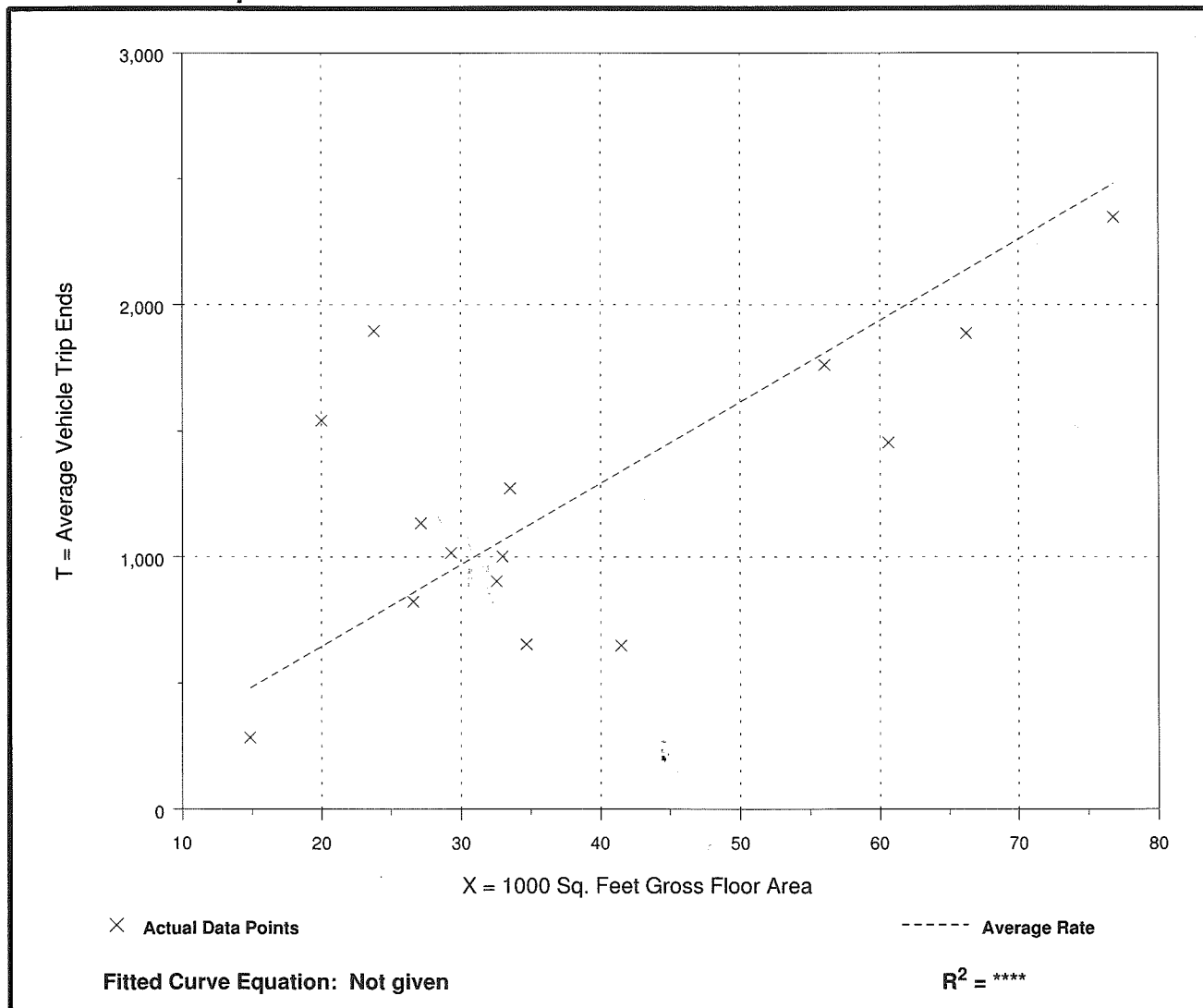
**Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area  
On a: Weekday**

Number of Studies: 15  
Average 1000 Sq. Feet GFA: 38  
Directional Distribution: 50% entering, 50% exiting

### Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
32.30	15.64 - 79.66	15.70

### Data Plot and Equation



# Automobile Sales (841)

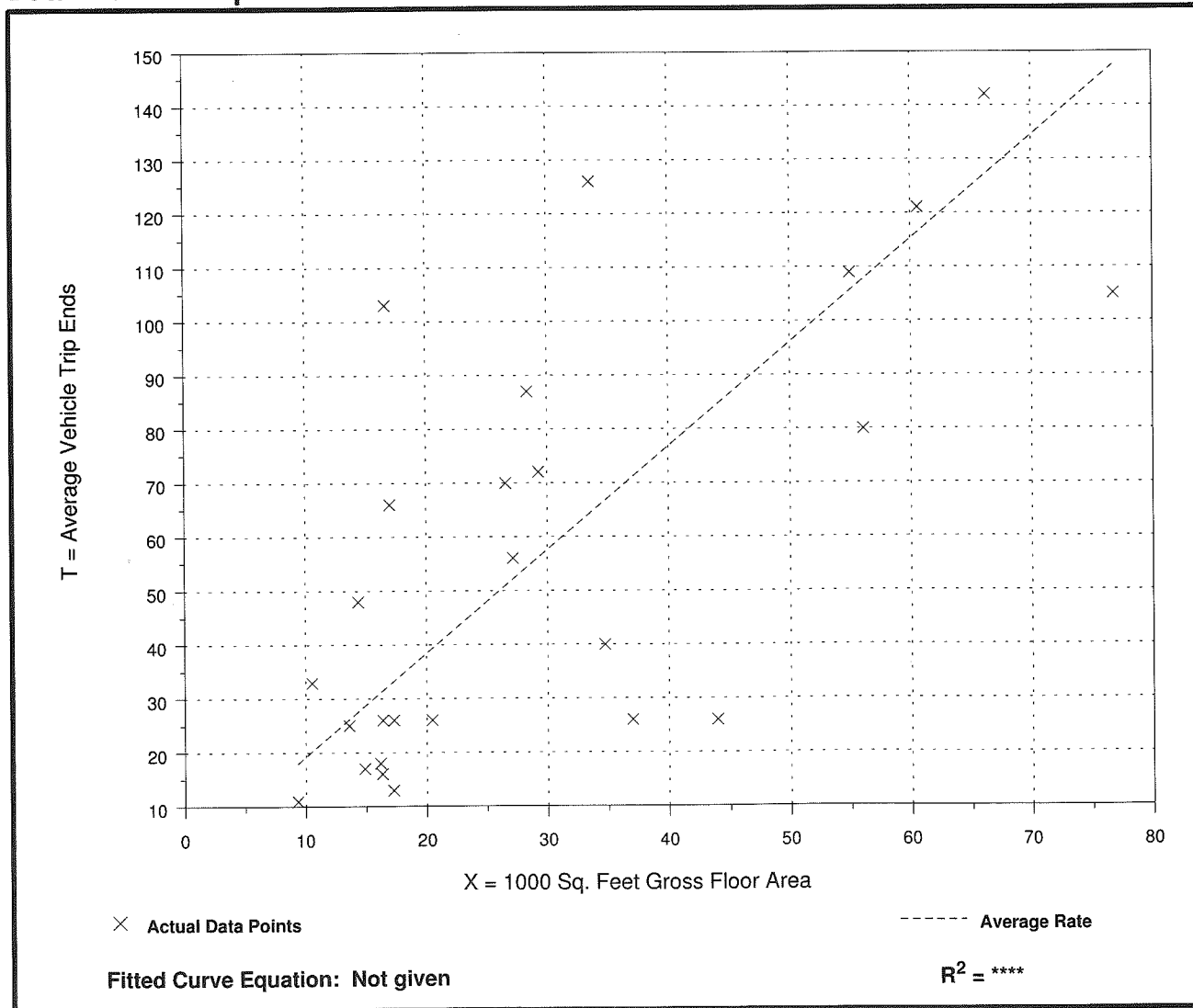
**Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area**  
**On a: Weekday,**  
**Peak Hour of Adjacent Street Traffic,**  
**One Hour Between 7 and 9 a.m.**

Number of Studies: 26  
 Average 1000 Sq. Feet GFA: 30  
 Directional Distribution: 75% entering, 25% exiting

### Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
1.92	0.59 - 6.17	1.72

### Data Plot and Equation



# Automobile Sales (841)

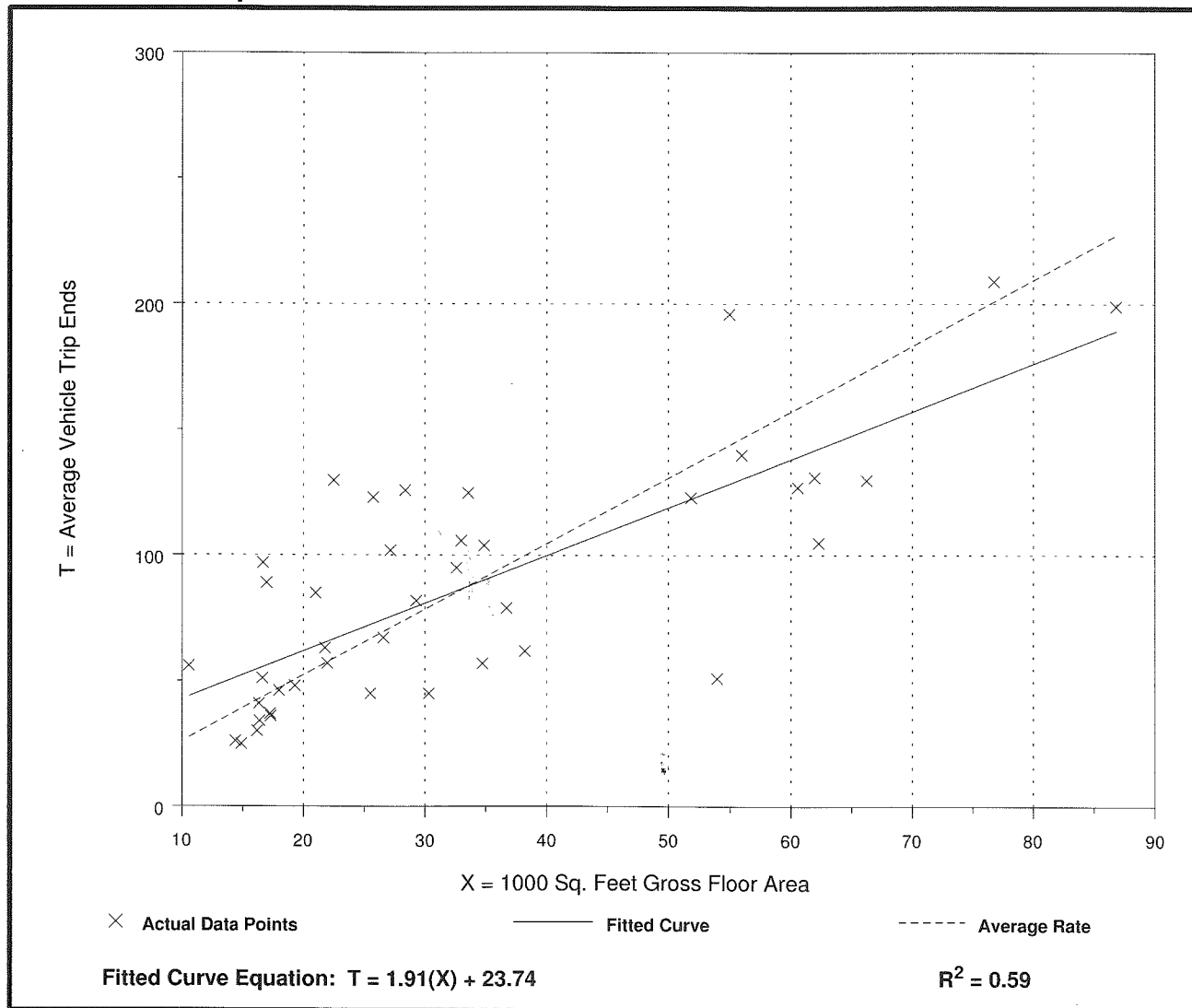
**Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area**  
**On a: Weekday,**  
**Peak Hour of Adjacent Street Traffic,**  
**One Hour Between 4 and 6 p.m.**

Number of Studies: 41  
 Average 1000 Sq. Feet GFA: 33  
 Directional Distribution: 40% entering, 60% exiting

### Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
2.62	0.94 - 5.81	1.90

### Data Plot and Equation



# Site Plan





# CMAP 2040 Projections Letter



## Chicago Metropolitan Agency for Planning

233 South Wacker Drive  
Suite 800  
Chicago, Illinois 60606

312 454 0400  
www.cmap.illinois.gov

December 11, 2017

Brendan S. May  
Consultant  
Kenig, Lindgren, O'Hara and Aboona, Inc.  
9575 West Higgins Road  
Suite 400  
Rosemont, IL 60018

**Subject: Ogden Avenue (US 34) @ Cross Street  
IDOT**

Dear Mr. May:

In response to a request made on your behalf and dated December 11, 2017, we have developed year 2040 average daily traffic (ADT) projections for the subject location.

ROAD SEGMENT	Current ADT	Year 2040 ADT
Ogden Ave, @ Cross St	30,600	34,100
Ogden Ave east of Cross St	36,609	40,700
Ogden Ave west of Cross St	34,195	38,100
Cross St north of Ogden Ave	7,442	8,300

Traffic projections are developed using existing ADT data provided in the request letter and the results from the October 2017 CMAP Travel Demand Analysis. The regional travel model uses CMAP 2040 socioeconomic projections and assumes the implementation of the GO TO 2040 Comprehensive Regional Plan for the Northeastern Illinois area.

If you have any questions, please call me at (312) 386-8806.

Sincerely,

Jose Rodriguez, PTP, AICP  
Senior Planner, Research & Analysis

cc: Quigley (IDOT)  
S:\AdminGroups\ResearchAnalysis\TrafficForecasts\_CY2017\DownersGrove\du-69-17\du-69-17.docx

## Level of Service Criteria

## LEVEL OF SERVICE CRITERIA

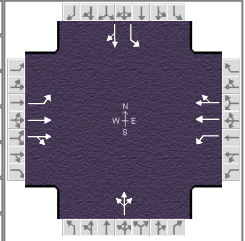
<b>Signalized Intersections</b>		
<b>Level of Service</b>	<b>Interpretation</b>	<b>Average Control Delay (seconds per vehicle)</b>
A	Favorable progression. Most vehicles arrive during the green indication and travel through the intersection without stopping.	≤10
B	Good progression, with more vehicles 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.	>80.0
<b>Unsignalized Intersections</b>		
<b>Level of Service</b>	<b>Average Total Delay (SEC/VEH)</b>	
A	0 - 10	
B	> 10 - 15	
C	> 15 - 25	
D	> 25 - 35	
E	> 35 - 50	
F	> 50	

Source: *Highway Capacity Manual*, 2010.

# Capacity Analysis Summary Sheets

### HCS7 Signalized Intersection Input Data

General Information				Intersection Information			
Agency	KLOA, Inc.			Duration, h	0.25		
Analyst	BSM	Analysis Date	Dec 12, 2017	Area Type	Other		
Jurisdiction	IDOT	Time Period	AM Peak Hour	PHF	0.96		
Urban Street	Ogden Avenue	Analysis Year	2017	Analysis Period	1 > 7:00		
Intersection	Ogden Avenue with Cro...	File Name	Ogden Avenue with Cross Street - AMEX.xus				
Project Description	AM Existing Peak Hour						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	95	1754	0	0	938	363	0	0	1	242	0	18

Signal Information				Signal Timing (s)										
Cycle, s	140.0	Reference Phase	2	Green	4.2	97.3	23.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Offset, s	0	Reference Point	Begin	Yellow	3.5	4.5	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Uncoordinated	No	Simult. Gap E/W	On	Red	0.0	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Force Mode	Fixed	Simult. Gap N/S	On											

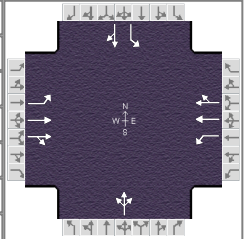
Traffic Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	95	1754	0	0	938	363	0	0	1	242	0	18
Initial Queue (Q <sub>b</sub> ), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s <sub>0</sub> ), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N <sub>m</sub> ), man/h	None			None			None			None		
Heavy Vehicles (P <sub>HV</sub> ), %	0	2		0	3			0		2	0	
Ped / Bike / RTOR, /h	0	0		0	0	0	0	0	0	0	0	0
Buses (N <sub>b</sub> ), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	4	3	3	4	3	3	3	3	3	3	3
Upstream Filtering (I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (W), ft	12.0	12.0		12.0	12.0			12.0		12.0	12.0	
Turn Bay Length, ft	100	0		50	0			0		300	0	
Grade (P <sub>g</sub> ), %		0			0			0			0	
Speed Limit, mi/h	40	40	40	35	35	35	15	15	15	30	30	30

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G <sub>max</sub> ) or Phase Split, s	14.0	111.0		97.0		29.0		29.0
Yellow Change Interval (Y), s	3.5	4.5		4.5		4.5		4.5
Red Clearance Interval (R <sub>c</sub> ), s	0.0	1.5		1.5		1.5		1.5
Minimum Green (G <sub>min</sub> ), s	3	15	6	15	6	8	3	8
Start-Up Lost Time (lt), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (e), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (PT), s	3.0	7.0	2.0	7.0	2.0	4.0	2.0	4.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	Yes	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

### HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	KLOA, Inc.			Duration, h	0.25		
Analyst	BSM	Analysis Date	Dec 12, 2017	Area Type	Other		
Jurisdiction	IDOT	Time Period	AM Peak Hour	PHF	0.96		
Urban Street	Ogden Avenue	Analysis Year	2017	Analysis Period	1 > 7:00		
Intersection	Ogden Avenue with Cro...	File Name	Ogden Avenue with Cross Street - AMEX.xus				
Project Description	AM Existing Peak Hour						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h	95	1754	0	0	938	363	0	0	1	242	0	18

Signal Information				Signal Timing (s)													
Cycle, s	140.0	Reference Phase	2	Green	4.2	97.3	23.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Offset, s	0	Reference Point	Begin	Yellow	3.5	4.5	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Uncoordinated	No	Simult. Gap E/W	On	Red	0.0	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Force Mode	Fixed	Simult. Gap N/S	On														

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2		6		8		4
Case Number	1.0	4.0		6.3		8.0		6.0
Phase Duration, s	7.7	111.0		103.3		29.0		29.0
Change Period, ( Y+R <sub>c</sub> ), s	3.5	6.0		6.0		6.0		6.0
Max Allow Headway ( MAH ), s	4.0	0.0		0.0		5.1		5.1
Queue Clearance Time ( g <sub>s</sub> ), s	4.1					2.1		25.0
Green Extension Time ( g <sub>e</sub> ), s	0.1	0.0		0.0		1.4		0.0
Phase Call Probability	1.00					1.00		1.00
Max Out Probability	0.09					0.00		1.00

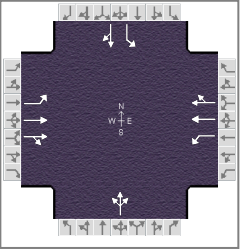
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	99	1827	0	0	706	649		0		252	19	
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1810	1870	0	259	1856	1679		0		1416	1610	
Queue Service Time ( g <sub>s</sub> ), s	2.1	0.0	0.0	0.0	8.0	20.1		0.0		22.9	1.4	
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	2.1	0.0	0.0	0.0	8.0	20.1		0.0		23.0	1.4	
Green Ratio ( g/C )	0.74	0.75		0.69	0.69	0.69				0.16	0.16	
Capacity ( c ), veh/h	331	2806		51	1289	1167				283	265	
Volume-to-Capacity Ratio ( X )	0.299	0.651	0.000	0.000	0.548	0.556		0.000		0.890	0.071	
Back of Queue ( Q ), ft/ln ( 95 th percentile)	34	21.2	0	0	103.3	247.5		0		426	25.8	
Back of Queue ( Q ), veh/ln ( 95 th percentile)	1.4	0.8	0.0	0.0	4.0	9.9		0.0		16.8	1.0	
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.34	0.00	0.00	0.00	0.00	0.00		0.00		1.42	0.00	
Uniform Delay ( d <sub>1</sub> ), s/veh	7.3	0.0		0.0	1.9	6.6				59.5	49.5	
Incremental Delay ( d <sub>2</sub> ), s/veh	0.5	1.2	0.0	0.0	1.7	1.9		0.0		27.8	0.2	
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Control Delay ( d ), s/veh	7.8	1.2		0.0	3.5	8.5				87.3	49.6	
Level of Service ( LOS )	A	A			A	A				F	D	
Approach Delay, s/veh / LOS	1.5		A	5.9		A	48.9		D	84.7		F
Intersection Delay, s/veh / LOS	9.5						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.0	B	2.2	B	2.9	C	2.9	C
Bicycle LOS Score / LOS	2.1	B	1.6	B	0.5	A	0.9	A

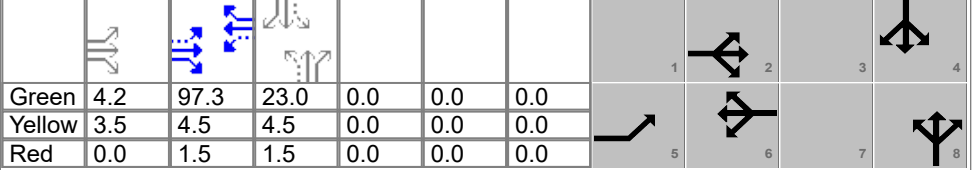


### HCS7 Signalized Intersection Intermediate Values

General Information				Intersection Information			
Agency	KLOA, Inc.			Duration, h	0.25		
Analyst	BSM	Analysis Date	Dec 12, 2017	Area Type	Other		
Jurisdiction	IDOT	Time Period	AM Peak Hour	PHF	0.96		
Urban Street	Ogden Avenue	Analysis Year	2017	Analysis Period	1 > 7:00		
Intersection	Ogden Avenue with Cro...	File Name	Ogden Avenue with Cross Street - AMEX.xus				
Project Description	AM Existing Peak Hour						



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	95	1754	0	0	938	363	0	0	1	242	0	18

Signal Information				Signal Phases									
Cycle, s	140.0	Reference Phase	2										
Offset, s	0	Reference Point	Begin	Green	4.2	97.3	23.0	0.0	0.0	0.0	0.0	0.0	0.0
Uncoordinated	No	Simult. Gap E/W	On	Yellow	3.5	4.5	4.5	0.0	0.0	0.0	0.0	0.0	0.0
Force Mode	Fixed	Simult. Gap N/S	On	Red	0.0	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0

Saturation Flow / Delay	L	T	R	L	T	R	L	T	R	L	T	R
Lane Width Adjustment Factor (f <sub>w</sub> )	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles and Grade Factor (f <sub>HVg</sub> )	1.000	0.984	1.000	1.000	0.977	1.000	1.000	1.000	1.000	0.984	1.000	0.914
Parking Activity Adjustment Factor (f <sub>p</sub> )	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Bus Blockage Adjustment Factor (f <sub>bb</sub> )	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Area Type Adjustment Factor (f <sub>a</sub> )	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Lane Utilization Adjustment Factor (f <sub>LU</sub> )	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Left-Turn Adjustment Factor (f <sub>LT</sub> )	0.952	0.000		0.136	0.000		1.000	0.847		0.745	0.000	
Right-Turn Adjustment Factor (f <sub>RT</sub> )		1.000	1.000		0.905	0.905		0.000	0.847		0.847	0.847
Left-Turn Pedestrian Adjustment Factor (f <sub>LPB</sub> )	1.000			1.000			1.000			1.000		
Right-Turn Ped-Bike Adjustment Factor (f <sub>RPB</sub> )			1.000			1.000			1.000			1.000
Work Zone Adjustment Factor (f <sub>wz</sub> )	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Movement Saturation Flow Rate (s), veh/h	1810	3741	0	259	2556	979	0	0	1610	1416	0	1610
Proportion of Vehicles Arriving on Green (P)	0.03	1.00	0.00	0.00	0.93	0.69	0.00	0.00	0.16	0.16	0.00	0.16
Incremental Delay Factor (k)	0.11	0.50			0.50	0.50				0.42	0.15	

Signal Timing / Movement Groups	EBL	EBT/R	WBL	WBT/R	NBL	NBT/R	SBL	SBT/R
Lost Time (t <sub>L</sub> )	3.5	6.0		6.0		6.0		6.0
Green Ratio (g/C)	0.74	0.75		0.69		0.16		0.16
Permitted Saturation Flow Rate (s <sub>p</sub> ), veh/h/ln	408	0		259		1416		1416
Shared Saturation Flow Rate (s <sub>sh</sub> ), veh/h/ln						0		
Permitted Effective Green Time (g <sub>p</sub> ), s	99.3	0.0		0.0		0.0		23.0
Permitted Service Time (g <sub>u</sub> ), s	77.1	0.0		0.0		0.0		22.9
Permitted Queue Service Time (g <sub>ps</sub> ), s	7.1			0.0				22.9
Time to First Blockage (g <sub>t</sub> ), s	0.0	0.0		0.0		23.0		0.0
Queue Service Time Before Blockage (g <sub>ts</sub> ), s								
Protected Right Saturation Flow (s <sub>R</sub> ), veh/h/ln								
Protected Right Effective Green Time (g <sub>R</sub> ), s								

Multimodal	EB	WB	NB	SB
Pedestrian F <sub>w</sub> / F <sub>v</sub>	1.389	0.00	2.107	0.00
Pedestrian F <sub>s</sub> / F <sub>delay</sub>	0.000	0.059	0.000	0.156
Pedestrian M <sub>corner</sub> / M <sub>cw</sub>				
Bicycle c <sub>b</sub> / d <sub>b</sub>	1500.00	4.38	328.57	48.89
Bicycle F <sub>w</sub> / F <sub>v</sub>	-3.64	1.59	-3.64	0.45

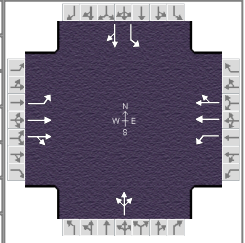
**--- Messages ---**

WARNING: Since queue spillover from turn lanes and spillback into upstream intersections is not accounted for in the HCM procedures, use of a simulation tool may be advised in situations where the Queue Storage Ratio exceeds 1.0.

**--- Comments ---**

### HCS7 Signalized Intersection Input Data

General Information				Intersection Information			
Agency	KLOA, Inc.			Duration, h	0.25		
Analyst	BSM	Analysis Date	Dec 12, 2017	Area Type	Other		
Jurisdiction	IDOT	Time Period	PM Peak Hour	PHF	0.95		
Urban Street	Ogden Avenue	Analysis Year	2017	Analysis Period	1 > 7:00		
Intersection	Ogden Avenue with Cro...	File Name	Ogden Avenue with Cross Street - PMEX.xus				
Project Description	PM Existing Peak Hour						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	44	1211	1	1	1630	249	2	0	2	482	0	114

Signal Information				Signal Timing (s)									Signal Phases				
Cycle, s	140.0	Reference Phase	2														
Offset, s	0	Reference Point	Begin	Green	3.2	89.3	32.0	0.0	0.0	0.0							
Uncoordinated	No	Simult. Gap E/W	On	Yellow	3.5	4.5	4.5	0.0	0.0	0.0							
Force Mode	Fixed	Simult. Gap N/S	On	Red	0.0	1.5	1.5	0.0	0.0	0.0							

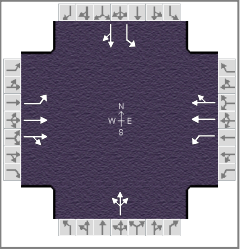
Traffic Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	44	1211	1	1	1630	249	2	0	2	482	0	114
Initial Queue (Q <sub>b</sub> ), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s <sub>0</sub> ), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N <sub>m</sub> ), man/h		None			None			None			None	
Heavy Vehicles (P <sub>HV</sub> ), %	2	1		0	1			0		1	0	
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N <sub>b</sub> ), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	4	3	3	4	3	3	3	3	3	3	3
Upstream Filtering (I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (W), ft	12.0	12.0		12.0	12.0			12.0		12.0	12.0	
Turn Bay Length, ft	100	0		0	0			0		300	0	
Grade (P <sub>g</sub> ), %		0			0			0			0	
Speed Limit, mi/h	40	40	40	35	35	35	15	15	15	30	30	30

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G <sub>max</sub> ) or Phase Split, s	11.0	102.0		91.0		38.0		38.0
Yellow Change Interval (Y), s	3.5	4.5		4.5		4.5		4.5
Red Clearance Interval (R <sub>c</sub> ), s	0.0	1.5		1.5		1.5		1.5
Minimum Green (G <sub>min</sub> ), s	3	15	6	15	6	8	3	8
Start-Up Lost Time (I <sub>t</sub> ), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (e), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (PT), s	3.0	7.0	2.0	7.0	2.0	4.0	2.0	4.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	Yes	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

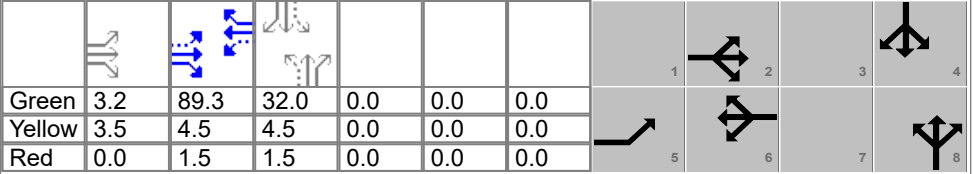
Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

### HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	KLOA, Inc.			Duration, h	0.25		
Analyst	BSM	Analysis Date	Dec 12, 2017	Area Type	Other		
Jurisdiction	IDOT	Time Period	PM Peak Hour	PHF	0.95		
Urban Street	Ogden Avenue	Analysis Year	2017	Analysis Period	1> 7:00		
Intersection	Ogden Avenue with Cro...	File Name	Ogden Avenue with Cross Street - PMEX.xus				
Project Description	PM Existing Peak Hour						



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	44	1211	1	1	1630	249	2	0	2	482	0	114

Signal Information				Signal Timing (s)											
Cycle, s	140.0	Reference Phase	2	Green	3.2	89.3	32.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Offset, s	0	Reference Point	Begin	Yellow	3.5	4.5	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Uncoordinated	No	Simult. Gap E/W	On	Red	0.0	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Force Mode	Fixed	Simult. Gap N/S	On												

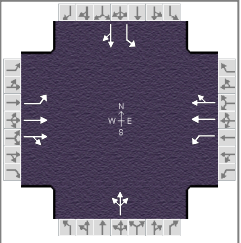
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2		6		8		4
Case Number	1.0	4.0		6.3		8.0		6.0
Phase Duration, s	6.7	102.0		95.3		38.0		38.0
Change Period, ( Y+R <sub>c</sub> ), s	3.5	6.0		6.0		6.0		6.0
Max Allow Headway ( MAH ), s	4.0	0.0		0.0		5.1		5.1
Queue Clearance Time ( g <sub>s</sub> ), s	3.2					10.7		34.0
Green Extension Time ( g <sub>e</sub> ), s	0.0	0.0		0.0		3.8		0.0
Phase Call Probability	1.00					1.00		1.00
Max Out Probability	0.69					0.03		1.00

Movement Group Results	EB			WB			NB			SB			
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R	
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14	
Adjusted Flow Rate ( v ), veh/h	46	638	638	1	989	989		4		507	120		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1781	1885	1885	441	1885	1799		1153		1426	1610		
Queue Service Time ( g <sub>s</sub> ), s	1.2	7.4	7.4	0.1	36.6	50.3		0.0		23.3	8.7		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	1.2	7.4	7.4	0.8	36.6	50.3		8.7		32.0	8.7		
Green Ratio ( g/C )	0.67	0.69	0.69	0.64	0.64	0.64		0.23		0.23	0.23		
Capacity ( c ), veh/h	154	1293	1292	330	1202	1147		302		289	368		
Volume-to-Capacity Ratio ( X )	0.301	0.494	0.494	0.003	0.823	0.862		0.014		1.757	0.326		
Back of Queue ( Q ), ft/ln ( 95 th percentile)	32.1	99.1	98.7	0.6	314.8	556.3		5.4		1553.1	161.4		
Back of Queue ( Q ), veh/ln ( 95 th percentile)	1.3	3.9	3.9	0.0	12.5	22.3		0.2		61.6	6.5		
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.32	0.00	0.00	0.00	0.00	0.00		0.00		5.18	0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh	20.0	2.2	2.2	9.5	6.5	10.4		41.9		60.4	45.0		
Incremental Delay ( d <sub>2</sub> ), s/veh	1.1	1.3	1.3	0.0	6.4	8.6		0.0		354.5	0.7		
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0		
Control Delay ( d ), s/veh	21.0	3.6	3.6	9.5	13.0	19.0		41.9		415.0	45.7		
Level of Service ( LOS )	C	A	A	A	B	B		D		F	D		
Approach Delay, s/veh / LOS	4.2		A	16.0		B		41.9		D	344.3		F
Intersection Delay, s/veh / LOS	64.4						E						

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.1	B	2.2	B	2.9	C	2.9	C
Bicycle LOS Score / LOS	1.6	B	2.1	B	0.5	A	1.5	B

### HCS7 Signalized Intersection Intermediate Values

General Information				Intersection Information			
Agency	KLOA, Inc.			Duration, h	0.25		
Analyst	BSM	Analysis Date	Dec 12, 2017	Area Type	Other		
Jurisdiction	IDOT	Time Period	PM Peak Hour	PHF	0.95		
Urban Street	Ogden Avenue	Analysis Year	2017	Analysis Period	1 > 7:00		
Intersection	Ogden Avenue with Cro...	File Name	Ogden Avenue with Cross Street - PMEX.xus				
Project Description	PM Existing Peak Hour						



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	44	1211	1	1	1630	249	2	0	2	482	0	114

Signal Information				Signal Phases									
Cycle, s	140.0	Reference Phase	2										
Offset, s	0	Reference Point	Begin	Green	3.2	89.3	32.0	0.0	0.0	0.0	0.0	0.0	0.0
Uncoordinated	No	Simult. Gap E/W	On	Yellow	3.5	4.5	4.5	0.0	0.0	0.0	0.0	0.0	0.0
Force Mode	Fixed	Simult. Gap N/S	On	Red	0.0	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0

Saturation Flow / Delay	L	T	R	L	T	R	L	T	R	L	T	R
Lane Width Adjustment Factor (f <sub>w</sub> )	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles and Grade Factor (f <sub>HVg</sub> )	0.984	0.992	1.000	1.000	0.992	1.000	1.000	1.000	1.000	0.992	1.000	1.000
Parking Activity Adjustment Factor (f <sub>p</sub> )	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Bus Blockage Adjustment Factor (f <sub>bb</sub> )	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Area Type Adjustment Factor (f <sub>a</sub> )	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Lane Utilization Adjustment Factor (f <sub>LU</sub> )	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Left-Turn Adjustment Factor (f <sub>LT</sub> )	0.952	0.000		0.232	0.000		0.652	0.607		0.751	0.897	
Right-Turn Adjustment Factor (f <sub>RT</sub> )		1.000	1.000		0.954	0.954		0.000	0.607		0.847	0.847
Left-Turn Pedestrian Adjustment Factor (f <sub>LPB</sub> )	1.000			1.000			1.000			1.000		
Right-Turn Ped-Bike Adjustment Factor (f <sub>RPB</sub> )			1.000			1.000			1.000			1.000
Work Zone Adjustment Factor (f <sub>wz</sub> )	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Movement Saturation Flow Rate (s), veh/h	1781	3767	3	441	3208	477	576	0	576	1426	0	1610
Proportion of Vehicles Arriving on Green (P)	0.02	0.91	0.69	0.64	0.85	0.64	0.23	0.00	0.23	0.23	0.00	0.23
Incremental Delay Factor (k)	0.11	0.50	0.50	0.50	0.50	0.50		0.15		0.50	0.15	

Signal Timing / Movement Groups	EBL	EBT/R	WBL	WBT/R	NBL	NBT/R	SBL	SBT/R
Lost Time (t <sub>L</sub> )	3.5	6.0		6.0		6.0		6.0
Green Ratio (g/C)	0.67	0.69		0.64		0.23		0.23
Permitted Saturation Flow Rate (s <sub>p</sub> ), veh/h/ln	220	0		441		1292		1426
Shared Saturation Flow Rate (s <sub>sh</sub> ), veh/h/ln						0		
Permitted Effective Green Time (g <sub>p</sub> ), s	91.3	0.0		89.3		32.0		32.0
Permitted Service Time (g <sub>u</sub> ), s	39.0	0.0		88.6		23.3		23.3
Permitted Queue Service Time (g <sub>ps</sub> ), s	13.9			0.1		0.0		23.3
Time to First Blockage (g <sub>i</sub> ), s	0.0	0.0		0.0		2.0		0.0
Queue Service Time Before Blockage (g <sub>fs</sub> ), s						0.1		
Protected Right Saturation Flow (s <sub>R</sub> ), veh/h/ln								
Protected Right Effective Green Time (g <sub>R</sub> ), s								

Multimodal	EB			WB			NB			SB		
Pedestrian F <sub>w</sub> / F <sub>v</sub>	1.389	0.00		1.557	0.00		2.107	0.00		2.107	0.00	
Pedestrian F <sub>s</sub> / F <sub>delay</sub>	0.000	0.078		0.000	0.089		0.000	0.150		0.000	0.150	
Pedestrian M <sub>corner</sub> / M <sub>cw</sub>												
Bicycle c <sub>b</sub> / d <sub>b</sub>	1371.43	6.91		1275.16	9.19		457.15	41.66		457.15	41.66	
Bicycle F <sub>w</sub> / F <sub>v</sub>	-3.64	1.09		-3.64	1.63		-3.64	0.01		-3.64	1.04	

**--- Messages ---**

WARNING: If demand exceeds capacity, a multiple-period analysis should be conducted.

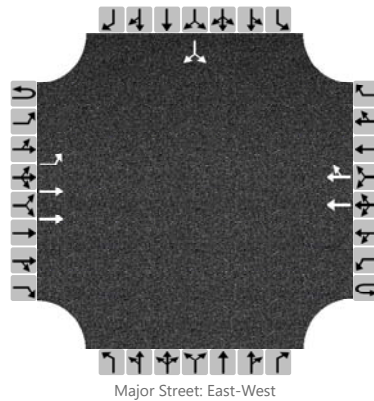
WARNING: Since queue spillover from turn lanes and spillback into upstream intersections is not accounted for in the HCM procedures, use of a simulation tool may be advised in situations where the Queue Storage Ratio exceeds 1.0.

**--- Comments ---**

# HCS7 Two-Way Stop-Control Report

General Information				Site Information			
Analyst	BSM	Intersection	Ogden with Max Madsen				
Agency/Co.	KLOA, Inc.	Jurisdiction	IDOT				
Date Performed	12/12/2017	East/West Street	Ogden Avenue				
Analysis Year	2017	North/South Street	Max Madsen Access				
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.94				
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25				
Project Description	17-273 - Downers Grove						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6	7	8	9		10	11	12	
Priority																
Number of Lanes	0	1	2	0	0	0	2	0	0	0	0		0	0	0	
Configuration		L	T				T	TR							LR	
Volume, V (veh/h)		0	1996				1300	3						0		1
Percent Heavy Vehicles (%)		0												0		0
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized	No				No				No				No			
Median Type/Storage					Left Only								1			

## Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.5		6.9
Critical Headway (sec)		4.10												6.80		6.90
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.20												3.50		3.30

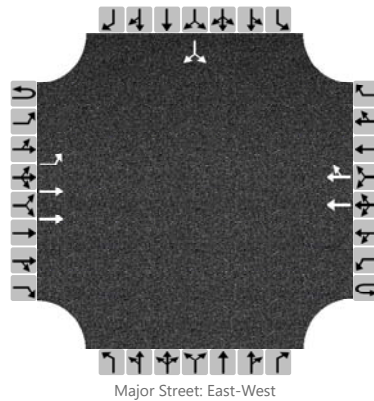
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0														1
Capacity, c (veh/h)		501														391
v/c Ratio		0.00														0.00
95% Queue Length, Q <sub>95</sub> (veh)		0.0														0.0
Control Delay (s/veh)		12.2														14.2
Level of Service, LOS		B														B
Approach Delay (s/veh)	0.0												14.2			
Approach LOS													B			

# HCS7 Two-Way Stop-Control Report

General Information				Site Information			
Analyst	BSM			Intersection	Ogden with Max Madsen		
Agency/Co.	KLOA, Inc.			Jurisdiction	IDOT		
Date Performed	12/12/2017			East/West Street	Ogden Avenue		
Analysis Year	2017			North/South Street	Max Madsen Access		
Time Analyzed	PM Peak Hour			Peak Hour Factor	0.94		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	17-273 - Downers Grove						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	1	2	0	0	0	2	0		0	0	0		0	0	0
Configuration		L	T				T	TR							LR	
Volume, V (veh/h)		2	1691				1865	1							1	7
Percent Heavy Vehicles (%)		0												0		0
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized	No				No				No				No			
Median Type/Storage					Left Only								1			

## Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.5		6.9
Critical Headway (sec)		4.10												6.80		6.90
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.20												3.50		3.30

## Delay, Queue Length, and Level of Service

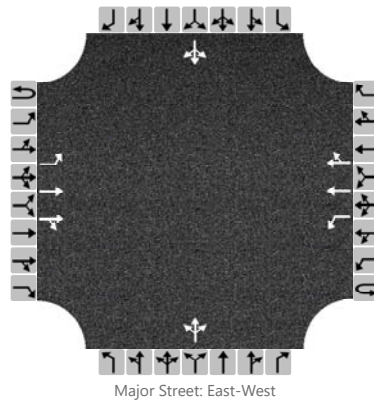
Flow Rate, v (veh/h)		2														8
Capacity, c (veh/h)		295														190
v/c Ratio		0.01														0.04
95% Queue Length, Q <sub>95</sub> (veh)		0.0														0.1
Control Delay (s/veh)		17.3														24.7
Level of Service, LOS		C														C
Approach Delay (s/veh)	0.0												24.7			
Approach LOS													C			



# HCS7 Two-Way Stop-Control Report

General Information				Site Information			
Analyst	BSM			Intersection	Ogden with Gerber/Fairway		
Agency/Co.	KLOA, Inc.			Jurisdiction	IDOT		
Date Performed	12/12/2017			East/West Street	Ogden Avenue		
Analysis Year	2017			North/South Street	Gerber/Fairway Access		
Time Analyzed	AM Peak Hour			Peak Hour Factor	0.95		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	17-273 - Downers Grove						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	1	2	0	0	1	2	0		0	1	0		0	1	0
Configuration		L	T	TR		L	T	TR			LTR				LTR	
Volume, V (veh/h)		4	1990	2		0	1293	7		10	0	32		4	0	0
Percent Heavy Vehicles (%)		0				0				0	0	0		0	0	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized	No				No				No				No			
Median Type/Storage					Left Only								1			

## Critical and Follow-up Headways

Base Critical Headway (sec)																
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																

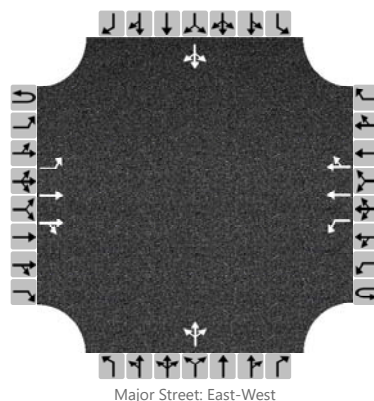
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		4			0					45				4	
Capacity, c (veh/h)		509			267					114				88	
v/c Ratio		0.01			0.00					0.39				0.05	
95% Queue Length, Q <sub>95</sub> (veh)		0.0			0.0					1.6				0.1	
Control Delay (s/veh)		12.1			18.5					55.7				47.7	
Level of Service, LOS		B			C					F				E	
Approach Delay (s/veh)		0.0			0.0					55.7			47.7		
Approach LOS										F			E		

# HCS7 Two-Way Stop-Control Report

General Information				Site Information			
Analyst	BSM			Intersection	Ogden with Gerber/Fairway		
Agency/Co.	KLOA, Inc.			Jurisdiction	IDOT		
Date Performed	12/12/2017			East/West Street	Ogden Avenue		
Analysis Year	2017			North/South Street	Gerber/Fairway Access		
Time Analyzed	PM Peak Hour			Peak Hour Factor	0.94		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	17-273 - Downers Grove						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	1	2	0	0	1	2	0		0	1	0		0	1	0
Configuration		L	T	TR		L	T	TR			LTR				LTR	
Volume, V (veh/h)		3	1675	14		13	1853	2		4	0	14		2	0	9
Percent Heavy Vehicles (%)		0				0				0	0	0		0	0	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized	No				No				No				No			
Median Type/Storage					Left Only								1			

## Critical and Follow-up Headways

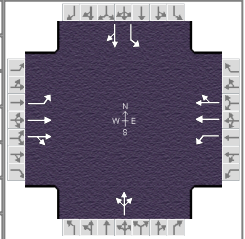
Base Critical Headway (sec)																
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																

## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		3			14					19				12		
Capacity, c (veh/h)		298			348					159				145		
v/c Ratio		0.01			0.04					0.12				0.08		
95% Queue Length, Q <sub>95</sub> (veh)		0.0			0.1					0.4				0.3		
Control Delay (s/veh)		17.2			15.8					30.7				32.0		
Level of Service, LOS		C			C					D				D		
Approach Delay (s/veh)		0.0			0.1					30.7				32.0		
Approach LOS										D				D		

### HCS7 Signalized Intersection Input Data

General Information				Intersection Information			
Agency	KLOA, Inc.			Duration, h	0.25		
Analyst	BSM	Analysis Date	Dec 12, 2017	Area Type	Other		
Jurisdiction	IDOT	Time Period	AM Peak Hour	PHF	0.96		
Urban Street	Ogden Avenue	Analysis Year	2023	Analysis Period	1 > 7:00		
Intersection	Ogden Avenue with Cro...	File Name	Ogden Avenue with Cross Street - AMPR.xus				
Project Description	AM Projected Peak Hour						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	97	1803	0	0	964	372	0	0	1	249	0	18

Signal Information				Signal Timing (s)									Signal Phases				
Cycle, s	140.0	Reference Phase	2														
Offset, s	0	Reference Point	Begin	Green	4.3	97.2	23.0	0.0	0.0	0.0							
Uncoordinated	No	Simult. Gap E/W	On	Yellow	3.5	4.5	4.5	0.0	0.0	0.0							
Force Mode	Fixed	Simult. Gap N/S	On	Red	0.0	1.5	1.5	0.0	0.0	0.0							

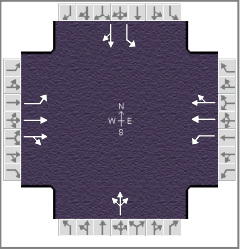
Traffic Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	97	1803	0	0	964	372	0	0	1	249	0	18
Initial Queue (Q <sub>b</sub> ), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s <sub>0</sub> ), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N <sub>m</sub> ), man/h		None			None			None			None	
Heavy Vehicles (P <sub>HV</sub> ), %	0	2		0	3			0		2	0	
Ped / Bike / RTOR, /h	0	0		0	0	0	0	0	0	0	0	0
Buses (N <sub>b</sub> ), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	4	3	3	4	3	3	3	3	3	3	3
Upstream Filtering (I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (W), ft	12.0	12.0		12.0	12.0			12.0		12.0	12.0	
Turn Bay Length, ft	100	0		0	0			0		300	0	
Grade (P <sub>g</sub> ), %		0			0			0			0	
Speed Limit, mi/h	40	40	40	35	35	35	15	15	15	30	30	30

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G <sub>max</sub> ) or Phase Split, s	14.0	111.0		97.0		29.0		29.0
Yellow Change Interval (Y), s	3.5	4.5		4.5		4.5		4.5
Red Clearance Interval (R <sub>c</sub> ), s	0.0	1.5		1.5		1.5		1.5
Minimum Green (G <sub>min</sub> ), s	3	15	6	15	6	8	3	8
Start-Up Lost Time (lt), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (e), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (PT), s	3.0	7.0	2.0	7.0	2.0	4.0	2.0	4.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	Yes	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

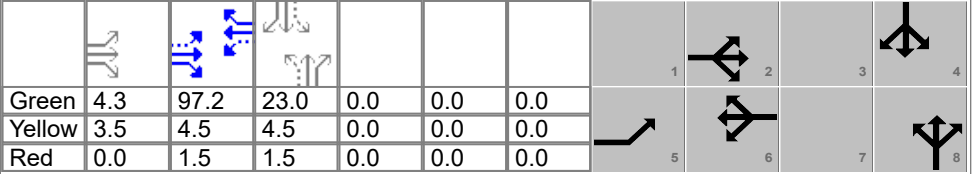
Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

### HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	KLOA, Inc.			Duration, h	0.25		
Analyst	BSM	Analysis Date	Dec 12, 2017	Area Type	Other		
Jurisdiction	IDOT	Time Period	AM Peak Hour	PHF	0.96		
Urban Street	Ogden Avenue	Analysis Year	2023	Analysis Period	1 > 7:00		
Intersection	Ogden Avenue with Cro...	File Name	Ogden Avenue with Cross Street - AMPR.xus				
Project Description	AM Projected Peak Hour						



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	97	1803	0	0	964	372	0	0	1	249	0	18

Signal Information				Phase Diagram									
Cycle, s	140.0	Reference Phase	2										
Offset, s	0	Reference Point	Begin										
Uncoordinated	No	Simult. Gap E/W	On										
Force Mode	Fixed	Simult. Gap N/S	On										
		Green	4.3	97.2	23.0	0.0	0.0	0.0					
		Yellow	3.5	4.5	4.5	0.0	0.0	0.0					
		Red	0.0	1.5	1.5	0.0	0.0	0.0					

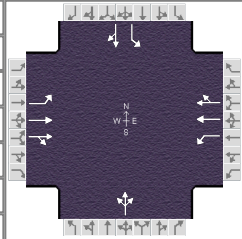
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2		6		8		4
Case Number	1.0	4.0		6.3		8.0		6.0
Phase Duration, s	7.8	111.0		103.2		29.0		29.0
Change Period, ( Y+R <sub>c</sub> ), s	3.5	6.0		6.0		6.0		6.0
Max Allow Headway ( MAH ), s	4.0	0.0		0.0		5.1		5.1
Queue Clearance Time ( g <sub>s</sub> ), s	4.2					2.1		25.0
Green Extension Time ( g <sub>e</sub> ), s	0.1	0.0		0.0		1.4		0.0
Phase Call Probability	1.00					1.00		1.00
Max Out Probability	0.10					0.00		1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	101	1878	0	0	724	667		0		259	19	
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1810	1870	0	246	1856	1680		0		1416	1610	
Queue Service Time ( g <sub>s</sub> ), s	2.2	0.0	0.0	0.0	8.4	21.2		0.0		22.9	1.4	
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	2.2	0.0	0.0	0.0	8.4	21.2		0.0		23.0	1.4	
Green Ratio ( g/C )	0.74	0.75		0.69	0.69	0.69				0.16	0.16	
Capacity ( c ), veh/h	321	2806		51	1289	1167				283	265	
Volume-to-Capacity Ratio ( X )	0.315	0.669	0.000	0.000	0.562	0.572		0.000		0.915	0.071	
Back of Queue ( Q ), ft/ln ( 95 th percentile)	34.8	22.9	0	0	107.7	257.8		0		446.3	25.8	
Back of Queue ( Q ), veh/ln ( 95 th percentile)	1.4	0.9	0.0	0.0	4.2	10.3		0.0		17.6	1.0	
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.35	0.00	0.00	0.00	0.00	0.00		0.00		1.49	0.00	
Uniform Delay ( d <sub>1</sub> ), s/veh	7.6	0.0		0.0	1.9	6.7				59.8	49.5	
Incremental Delay ( d <sub>2</sub> ), s/veh	0.6	1.3	0.0	0.0	1.8	2.0		0.0		32.7	0.2	
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Control Delay ( d ), s/veh	8.2	1.3		0.0	3.7	8.7				92.4	49.6	
Level of Service ( LOS )	A	A			A	A				F	D	
Approach Delay, s/veh / LOS	1.6		A	6.1		A	48.9		D	89.5		F
Intersection Delay, s/veh / LOS	10.0						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.0	B	2.2	B	2.9	C	2.9	C
Bicycle LOS Score / LOS	2.1	B	1.6	B	0.5	A	0.9	A

### HCS7 Signalized Intersection Intermediate Values

General Information				Intersection Information			
Agency	KLOA, Inc.			Duration, h	0.25		
Analyst	BSM	Analysis Date	Dec 12, 2017	Area Type	Other		
Jurisdiction	IDOT	Time Period	AM Peak Hour	PHF	0.96		
Urban Street	Ogden Avenue	Analysis Year	2023	Analysis Period	1 > 7:00		
Intersection	Ogden Avenue with Cro...	File Name	Ogden Avenue with Cross Street - AMPR.xus				
Project Description	AM Projected Peak Hour						



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	97	1803	0	0	964	372	0	0	1	249	0	18

Signal Information				Signal Phases									
Cycle, s	140.0	Reference Phase	2										
Offset, s	0	Reference Point	Begin	Green	4.3	97.2	23.0	0.0	0.0	0.0	0.0	0.0	0.0
Uncoordinated	No	Simult. Gap E/W	On	Yellow	3.5	4.5	4.5	0.0	0.0	0.0	0.0	0.0	0.0
Force Mode	Fixed	Simult. Gap N/S	On	Red	0.0	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0

Saturation Flow / Delay	L	T	R	L	T	R	L	T	R	L	T	R
Lane Width Adjustment Factor (f <sub>w</sub> )	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles and Grade Factor (f <sub>HVg</sub> )	1.000	0.984	1.000	1.000	0.977	1.000	1.000	1.000	1.000	0.984	1.000	0.914
Parking Activity Adjustment Factor (f <sub>p</sub> )	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Bus Blockage Adjustment Factor (f <sub>bb</sub> )	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Area Type Adjustment Factor (f <sub>a</sub> )	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Lane Utilization Adjustment Factor (f <sub>LU</sub> )	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Left-Turn Adjustment Factor (f <sub>LT</sub> )	0.952	0.000		0.130	0.000		1.000	0.847		0.745	0.000	
Right-Turn Adjustment Factor (f <sub>RT</sub> )		1.000	1.000		0.905	0.905		0.000	0.847		0.847	0.847
Left-Turn Pedestrian Adjustment Factor (f <sub>LPB</sub> )	1.000			1.000			1.000			1.000		
Right-Turn Ped-Bike Adjustment Factor (f <sub>RPB</sub> )			1.000			1.000			1.000			1.000
Work Zone Adjustment Factor (f <sub>wz</sub> )	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Movement Saturation Flow Rate (s), veh/h	1810	3741	0	246	2560	975	0	0	1610	1416	0	1610
Proportion of Vehicles Arriving on Green (P)	0.03	1.00	0.00	0.00	0.93	0.69	0.00	0.00	0.16	0.16	0.00	0.16
Incremental Delay Factor (k)	0.11	0.50			0.50	0.50				0.44	0.15	

Signal Timing / Movement Groups	EBL	EBT/R	WBL	WBT/R	NBL	NBT/R	SBL	SBT/R
Lost Time (t <sub>L</sub> )	3.5	6.0		6.0		6.0		6.0
Green Ratio (g/C)	0.74	0.75		0.69		0.16		0.16
Permitted Saturation Flow Rate (s <sub>p</sub> ), veh/h/ln	394	0		246		1416		1416
Shared Saturation Flow Rate (s <sub>sh</sub> ), veh/h/ln						0		
Permitted Effective Green Time (g <sub>p</sub> ), s	99.2	0.0		0.0		0.0		23.0
Permitted Service Time (g <sub>u</sub> ), s	76.0	0.0		0.0		0.0		22.9
Permitted Queue Service Time (g <sub>ps</sub> ), s	8.0			0.0				22.9
Time to First Blockage (g <sub>i</sub> ), s	0.0	0.0		0.0		23.0		0.0
Queue Service Time Before Blockage (g <sub>fs</sub> ), s								
Protected Right Saturation Flow (s <sub>R</sub> ), veh/h/ln								
Protected Right Effective Green Time (g <sub>R</sub> ), s								

Multimodal	EB			WB			NB			SB		
Pedestrian F <sub>w</sub> / F <sub>v</sub>	1.389	0.00		1.557	0.00		2.107	0.00		2.107	0.00	
Pedestrian F <sub>s</sub> / F <sub>delay</sub>	0.000	0.059		0.000	0.075		0.000	0.156		0.000	0.156	
Pedestrian M <sub>corner</sub> / M <sub>cw</sub>												
Bicycle c <sub>b</sub> / d <sub>b</sub>	1500.00	4.38		1388.94	6.53		328.57	48.89		328.57	48.89	
Bicycle F <sub>w</sub> / F <sub>v</sub>	-3.64	1.63		-3.64	1.15		-3.64	0.00		-3.64	0.46	

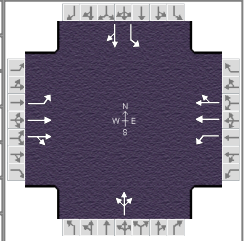
**--- Messages ---**

WARNING: Since queue spillover from turn lanes and spillback into upstream intersections is not accounted for in the HCM procedures, use of a simulation tool may be advised in situations where the Queue Storage Ratio exceeds 1.0.

**--- Comments ---**

### HCS7 Signalized Intersection Input Data

General Information				Intersection Information			
Agency	KLOA, Inc.			Duration, h	0.25		
Analyst	BSM	Analysis Date	Dec 12, 2017	Area Type	Other		
Jurisdiction	IDOT	Time Period	PM Peak Hour	PHF	0.95		
Urban Street	Ogden Avenue	Analysis Year	2023	Analysis Period	1 > 7:00		
Intersection	Ogden Avenue with Cro...	File Name	Ogden Avenue with Cross Street - PMPR.xus				
Project Description	PM Projected Peak Hour						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	45	1245	1	1	1677	249	2	0	2	494	0	116

Signal Information				Signal Timing (s)									Signal Phases				
Cycle, s	140.0	Reference Phase	2														
Offset, s	0	Reference Point	Begin	Green	3.3	89.2	32.0	0.0	0.0	0.0							
Uncoordinated	No	Simult. Gap E/W	On	Yellow	3.5	4.5	4.5	0.0	0.0	0.0							
Force Mode	Fixed	Simult. Gap N/S	On	Red	0.0	1.5	1.5	0.0	0.0	0.0							

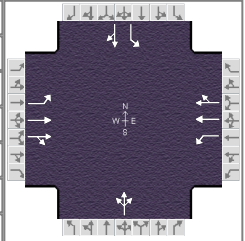
Traffic Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	45	1245	1	1	1677	249	2	0	2	494	0	116
Initial Queue (Q <sub>b</sub> ), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s <sub>0</sub> ), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N <sub>m</sub> ), man/h		None			None			None			None	
Heavy Vehicles (P <sub>HV</sub> ), %	2	1		0	1			0		1	0	
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N <sub>b</sub> ), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	4	3	3	4	3	3	3	3	3	3	3
Upstream Filtering (I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (W), ft	12.0	12.0		12.0	12.0			12.0		12.0	12.0	
Turn Bay Length, ft	100	0		0	0			0		300	0	
Grade (P <sub>g</sub> ), %		0			0			0			0	
Speed Limit, mi/h	40	40	40	35	35	35	15	15	15	30	30	30

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G <sub>max</sub> ) or Phase Split, s	11.0	102.0		91.0		38.0		38.0
Yellow Change Interval (Y), s	3.5	4.5		4.5		4.5		4.5
Red Clearance Interval (R <sub>c</sub> ), s	0.0	1.5		1.5		1.5		1.5
Minimum Green (G <sub>min</sub> ), s	3	15	6	15	6	8	3	8
Start-Up Lost Time (lt), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (e), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (PT), s	3.0	7.0	2.0	7.0	2.0	4.0	2.0	4.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	Yes	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

### HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	KLOA, Inc.			Duration, h	0.25		
Analyst	BSM	Analysis Date	Dec 12, 2017	Area Type	Other		
Jurisdiction	IDOT	Time Period	PM Peak Hour	PHF	0.95		
Urban Street	Ogden Avenue	Analysis Year	2023	Analysis Period	1> 7:00		
Intersection	Ogden Avenue with Cro...	File Name	Ogden Avenue with Cross Street - PMPR.xus				
Project Description	PM Projected Peak Hour						



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	45	1245	1	1	1677	249	2	0	2	494	0	116

Signal Information				Signal Timing and Control									
Cycle, s	140.0	Reference Phase	2										
Offset, s	0	Reference Point	Begin	Green	3.3	89.2	32.0	0.0	0.0	0.0	0.0	0.0	0.0
Uncoordinated	No	Simult. Gap E/W	On	Yellow	3.5	4.5	4.5	0.0	0.0	0.0	0.0	0.0	0.0
Force Mode	Fixed	Simult. Gap N/S	On	Red	0.0	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2		6		8		4
Case Number	1.0	4.0		6.3		8.0		6.0
Phase Duration, s	6.8	102.0		95.2		38.0		38.0
Change Period, ( Y+R <sub>c</sub> ), s	3.5	6.0		6.0		6.0		6.0
Max Allow Headway ( MAH ), s	4.0	0.0		0.0		5.1		5.1
Queue Clearance Time ( g <sub>s</sub> ), s	3.2					10.9		34.0
Green Extension Time ( g <sub>e</sub> ), s	0.0	0.0		0.0		3.9		0.0
Phase Call Probability	1.00					1.00		1.00
Max Out Probability	0.72					0.04		1.00

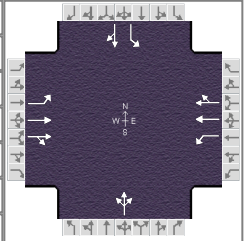
Movement Group Results	EB			WB			NB			SB			
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R	
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14	
Adjusted Flow Rate ( v ), veh/h	47	656	656	1	1014	1014		4		520	122		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1781	1885	1885	426	1885	1801		1144		1426	1610		
Queue Service Time ( g <sub>s</sub> ), s	1.2	7.8	7.8	0.1	39.9	54.2		0.0		23.1	8.9		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	1.2	7.8	7.8	1.2	39.9	54.2		8.9		32.0	8.9		
Green Ratio ( g/C )	0.67	0.69	0.69	0.64	0.64	0.64		0.23		0.23	0.23		
Capacity ( c ), veh/h	145	1293	1292	320	1202	1148		300		287	368		
Volume-to-Capacity Ratio ( X )	0.326	0.507	0.507	0.003	0.844	0.883		0.014		1.811	0.332		
Back of Queue ( Q ), ft/ln ( 95 th percentile)	36.7	102.8	102.3	0.6	334	596.8		5.4		1624.6	164.6		
Back of Queue ( Q ), veh/ln ( 95 th percentile)	1.4	4.1	4.1	0.0	13.3	23.9		0.2		64.5	6.6		
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.37	0.00	0.00	0.00	0.00	0.00		0.00		5.42	0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh	22.2	2.2	2.2	9.6	6.8	10.8		41.9		60.5	45.1		
Incremental Delay ( d <sub>2</sub> ), s/veh	1.3	1.4	1.4	0.0	7.3	9.9		0.0		378.6	0.7		
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0		
Control Delay ( d ), s/veh	23.5	3.6	3.7	9.6	14.1	20.7		42.0		439.1	45.8		
Level of Service ( LOS )	C	A	A	A	B	C		D		F	D		
Approach Delay, s/veh / LOS	4.3		A	17.4		B		42.0		D	364.3		F
Intersection Delay, s/veh / LOS	68.3						E						

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.1	B	2.2	B	2.9	C	2.9	C
Bicycle LOS Score / LOS	1.6	B	2.2	B	0.5	A	1.5	B



### HCS7 Signalized Intersection Intermediate Values

General Information				Intersection Information			
Agency	KLOA, Inc.			Duration, h	0.25		
Analyst	BSM	Analysis Date	Dec 12, 2017	Area Type	Other		
Jurisdiction	IDOT	Time Period	PM Peak Hour	PHF	0.95		
Urban Street	Ogden Avenue	Analysis Year	2023	Analysis Period	1 > 7:00		
Intersection	Ogden Avenue with Cro...	File Name	Ogden Avenue with Cross Street - PMPR.xus				
Project Description	PM Projected Peak Hour						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h	45	1245	1	1	1677	249	2	0	2	494	0	116

Signal Information				Signal Timing										
Cycle, s	140.0	Reference Phase	2											
Offset, s	0	Reference Point	Begin	Green	3.3	89.2	32.0	0.0	0.0	0.0				
Uncoordinated	No	Simult. Gap E/W	On	Yellow	3.5	4.5	4.5	0.0	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On	Red	0.0	1.5	1.5	0.0	0.0	0.0				

Saturation Flow / Delay	L	T	R	L	T	R	L	T	R	L	T	R
Lane Width Adjustment Factor ( $f_w$ )	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles and Grade Factor ( $f_{HVg}$ )	0.984	0.992	1.000	1.000	0.992	1.000	1.000	1.000	1.000	0.992	1.000	1.000
Parking Activity Adjustment Factor ( $f_p$ )	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Bus Blockage Adjustment Factor ( $f_{bb}$ )	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Area Type Adjustment Factor ( $f_a$ )	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Lane Utilization Adjustment Factor ( $f_{LU}$ )	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Left-Turn Adjustment Factor ( $f_{LT}$ )	0.952	0.000		0.224	0.000		0.647	0.602		0.751	0.000	
Right-Turn Adjustment Factor ( $f_{RT}$ )		1.000	1.000		0.956	0.956		0.000	0.602		0.847	0.847
Left-Turn Pedestrian Adjustment Factor ( $f_{LPB}$ )	1.000			1.000			1.000			1.000		
Right-Turn Ped-Bike Adjustment Factor ( $f_{RPB}$ )			1.000			1.000			1.000			1.000
Work Zone Adjustment Factor ( $f_{WZ}$ )	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Movement Saturation Flow Rate (s), veh/h	1781	3767	3	426	3221	466	572	0	572	1426	0	1610
Proportion of Vehicles Arriving on Green (P)	0.02	0.91	0.69	0.64	0.85	0.64	0.23	0.00	0.23	0.23	0.00	0.23
Incremental Delay Factor (k)	0.11	0.50	0.50	0.50	0.50	0.50		0.15		0.50	0.15	

Signal Timing / Movement Groups	EBL	EBT/R	WBL	WBT/R	NBL	NBT/R	SBL	SBT/R
Lost Time ( $t_L$ )	3.5	6.0		6.0		6.0		6.0
Green Ratio (g/C)	0.67	0.69		0.64		0.23		0.23
Permitted Saturation Flow Rate ( $s_p$ ), veh/h/ln	210	0		426		1289		1426
Shared Saturation Flow Rate ( $s_{sh}$ ), veh/h/ln						0		
Permitted Effective Green Time ( $g_p$ ), s	91.2	0.0		89.2		32.0		32.0
Permitted Service Time ( $g_u$ ), s	35.0	0.0		88.2		23.1		23.1
Permitted Queue Service Time ( $g_{ps}$ ), s	16.4			0.1		0.0		23.1
Time to First Blockage ( $g_i$ ), s	0.0	0.0		0.0		2.0		0.0
Queue Service Time Before Blockage ( $g_{fs}$ ), s						0.1		
Protected Right Saturation Flow ( $s_R$ ), veh/h/ln								
Protected Right Effective Green Time ( $g_R$ ), s								

Multimodal	EB			WB			NB			SB		
Pedestrian $F_w / F_v$	1.389	0.00		1.557	0.00		2.107	0.00		2.107	0.00	
Pedestrian $F_s / F_{delay}$	0.000	0.078		0.000	0.089		0.000	0.150		0.000	0.150	
Pedestrian $M_{corner} / M_{cw}$												
Bicycle $c_b / d_b$	1371.43	6.91		1274.74	9.20		457.15	41.66		457.15	41.66	
Bicycle $F_w / F_v$	-3.64	1.12		-3.64	1.67		-3.64	0.01		-3.64	1.06	

**--- Messages ---**

WARNING: If demand exceeds capacity, a multiple-period analysis should be conducted.

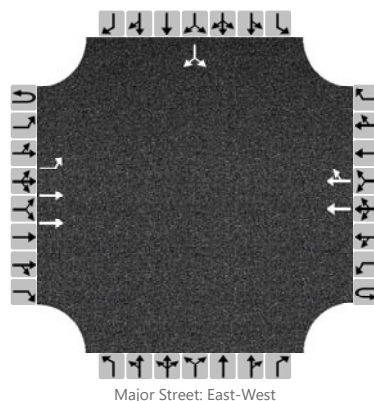
WARNING: Since queue spillover from turn lanes and spillback into upstream intersections is not accounted for in the HCM procedures, use of a simulation tool may be advised in situations where the Queue Storage Ratio exceeds 1.0.

**--- Comments ---**

# HCS7 Two-Way Stop-Control Report

General Information				Site Information			
Analyst	BSM			Intersection	Ogden with Max Madsen		
Agency/Co.	KLOA, Inc.			Jurisdiction	IDOT		
Date Performed	12/12/2017			East/West Street	Ogden Avenue		
Analysis Year	2023			North/South Street	Max Madsen Access		
Time Analyzed	AM Peak Hour			Peak Hour Factor	0.94		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	17-273 - Downers Grove						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	1	2	0	0	0	2	0		0	0	0		0	0	0
Configuration		L	T				T	TR							LR	
Volume, V (veh/h)		0	2052				1335	3						0		1
Percent Heavy Vehicles (%)		0												0		0
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized	No				No				No				No			
Median Type/Storage					Left Only								1			

## Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.5		6.9
Critical Headway (sec)		4.10												6.80		6.90
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.20												3.50		3.30

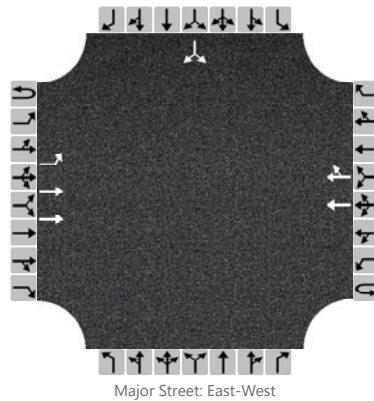
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0														1
Capacity, c (veh/h)		485														380
v/c Ratio		0.00														0.00
95% Queue Length, Q <sub>95</sub> (veh)		0.0														0.0
Control Delay (s/veh)		12.4														14.5
Level of Service, LOS		B														B
Approach Delay (s/veh)	0.0												14.5			
Approach LOS													B			

# HCS7 Two-Way Stop-Control Report

General Information				Site Information			
Analyst	BSM			Intersection	Ogden with Max Madsen		
Agency/Co.	KLOA, Inc.			Jurisdiction	IDOT		
Date Performed	12/12/2017			East/West Street	Ogden Avenue		
Analysis Year	2023			North/South Street	Max Madsen Access		
Time Analyzed	PM Peak Hour			Peak Hour Factor	0.94		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	17-273 - Downers Grove						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	1	2	0	0	0	2	0		0	0	0		0	0	0
Configuration		L	T				T	TR							LR	
Volume, V (veh/h)		2	1737				1919	1						1		7
Percent Heavy Vehicles (%)		0												0		0
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized	No				No				No				No			
Median Type/Storage					Left Only								1			

## Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.5		6.9
Critical Headway (sec)		4.10												6.80		6.90
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.20												3.50		3.30

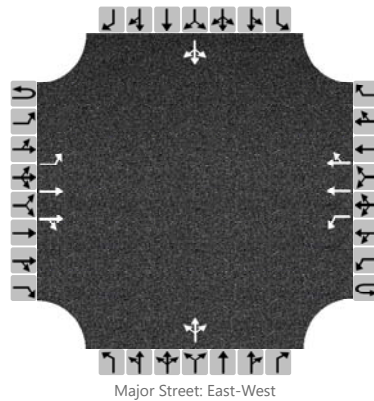
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		2														8
Capacity, c (veh/h)		280														181
v/c Ratio		0.01														0.04
95% Queue Length, Q <sub>95</sub> (veh)		0.0														0.1
Control Delay (s/veh)		17.9														25.9
Level of Service, LOS		C														D
Approach Delay (s/veh)	0.0												25.9			
Approach LOS													D			

# HCS7 Two-Way Stop-Control Report

General Information				Site Information			
Analyst	BSM			Intersection	Ogden with Gerber/Fairway		
Agency/Co.	KLOA, Inc.			Jurisdiction	IDOT		
Date Performed	12/12/2017			East/West Street	Ogden Avenue		
Analysis Year	2023			North/South Street	Gerber/Fairway Access		
Time Analyzed	AM Peak Hour			Peak Hour Factor	0.95		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	17-273 - Downers Grove						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	1	2	0	0	1	2	0		0	1	0		0	1	0
Configuration		L	T	TR		L	T	TR			LTR				LTR	
Volume, V (veh/h)		4	2041	2		0	1330	7		10	0	33		4	0	0
Percent Heavy Vehicles (%)		0				0				0	0	0		0	0	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized	No				No				No				No			
Median Type/Storage					Left Only								1			

## Critical and Follow-up Headways

Base Critical Headway (sec)																
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																

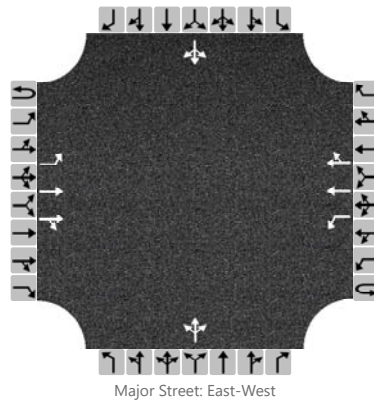
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		4				0					46				4		
Capacity, c (veh/h)		491				254					108				83		
v/c Ratio		0.01				0.00					0.42				0.05		
95% Queue Length, Q <sub>95</sub> (veh)		0.0				0.0					1.8				0.1		
Control Delay (s/veh)		12.4				19.2					60.7				50.4		
Level of Service, LOS		B				C					F				F		
Approach Delay (s/veh)		0.0				0.0				60.7				50.4			
Approach LOS										F				F			

# HCS7 Two-Way Stop-Control Report

General Information				Site Information			
Analyst	BSM			Intersection	Ogden with Gerber/Fairway		
Agency/Co.	KLOA, Inc.			Jurisdiction	IDOT		
Date Performed	12/12/2017			East/West Street	Ogden Avenue		
Analysis Year	2023			North/South Street	Gerber/Fairway Access		
Time Analyzed	PM Peak Hour			Peak Hour Factor	0.94		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	17-273 - Downers Grove						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	1	2	0	0	1	2	0		0	1	0		0	1	0
Configuration		L	T	TR		L	T	TR			LTR				LTR	
Volume, V (veh/h)		3	1721	14		13	1903	2		4	0	14		2	0	9
Percent Heavy Vehicles (%)		0				0				0	0	0		0	0	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized	No				No				No				No			
Median Type/Storage					Left Only								1			

## Critical and Follow-up Headways

Base Critical Headway (sec)																
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																

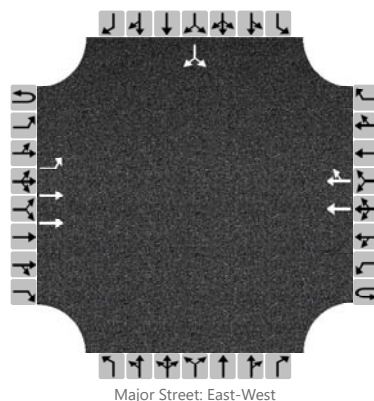
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		3			14					19				12		
Capacity, c (veh/h)		284			334					150				137		
v/c Ratio		0.01			0.04					0.13				0.09		
95% Queue Length, Q <sub>95</sub> (veh)		0.0			0.1					0.4				0.3		
Control Delay (s/veh)		17.8			16.3					32.4				33.8		
Level of Service, LOS		C			C					D				D		
Approach Delay (s/veh)		0.0			0.1					32.4				33.8		
Approach LOS										D				D		

# HCS7 Two-Way Stop-Control Report

General Information				Site Information			
Analyst	BSM	Intersection	Ogden with Proposed Acces				
Agency/Co.	KLOA, Inc.	Jurisdiction	IDOT				
Date Performed	12/12/2017	East/West Street	Ogden Avenue				
Analysis Year	2023	North/South Street	Proposed Access Drive				
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.95				
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25				
Project Description	17-273 - Downers Grove						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Priority																	
Number of Lanes	0	1	2	0	0	0	2	0		0	0	0		0	0	0	
Configuration		L	T				T	TR							LR		
Volume, V (veh/h)		6	2046				1336	4							1	2	
Percent Heavy Vehicles (%)		0												0		0	
Proportion Time Blocked																	
Percent Grade (%)																0	
Right Turn Channelized		No			No				No				No				
Median Type/Storage		Left Only								1							

## Critical and Follow-up Headways

Base Critical Headway (sec)																
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																

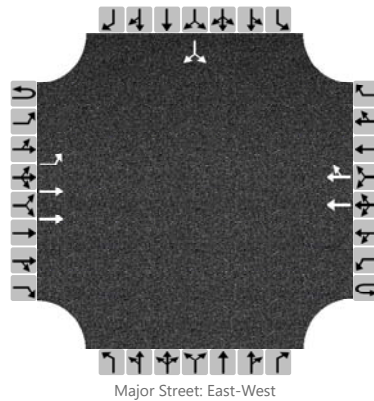
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		6														3	
Capacity, c (veh/h)		490														217	
v/c Ratio		0.01														0.01	
95% Queue Length, Q <sub>95</sub> (veh)		0.0														0.0	
Control Delay (s/veh)		12.4														21.8	
Level of Service, LOS		B														C	
Approach Delay (s/veh)		0.0								21.8							
Approach LOS										C							

# HCS7 Two-Way Stop-Control Report

General Information				Site Information			
Analyst	BSM			Intersection	Ogden with Proposed Acces		
Agency/Co.	KLOA, Inc.			Jurisdiction	IDOT		
Date Performed	12/12/2017			East/West Street	Ogden Avenue		
Analysis Year	2023			North/South Street	Proposed Access Drive		
Time Analyzed	PM Peak Hour			Peak Hour Factor	0.95		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	17-273 - Downers Grove						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	1	2	0	0	0	2	0		0	0	0		0	0	0
Configuration		L	T				T	TR							LR	
Volume, V (veh/h)		4	1734				1913	3						4		7
Percent Heavy Vehicles (%)		0												0		0
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized	No				No				No				No			
Median Type/Storage					Left Only								1			

## Critical and Follow-up Headways

Base Critical Headway (sec)																
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																

## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		4														11
Capacity, c (veh/h)		286														127
v/c Ratio		0.01														0.09
95% Queue Length, Q <sub>95</sub> (veh)		0.0														0.3
Control Delay (s/veh)		17.8														36.0
Level of Service, LOS		C														E
Approach Delay (s/veh)	0.0												36.0			
Approach LOS													E			



## DRAFT MINUTES

**VILLAGE OF DOWNERS GROVE  
PLAN COMMISSION MEETING**

**17-PLC-0039: A petition seeking approval of a Special Use to construct an automobile dealership. The property is currently zoned B-3, General Services and Highway Business. The property is located on the north side of Ogden Avenue, approximately 385 feet east of Cross Street, commonly known as 2410 Ogden Avenue, Downers Grove, IL (PINs 08-01-303-014, -015, -016, -017). Anas Alkhatib agent of Agri-Pes, LLC, Petitioner; Agri-Pes, LLC, Owner.**

Mr. Scott Williams stated that the subject property is zoned B-3 and the petitioner proposes construction of an automobile dealership. He described the surrounding properties, and noted that the site has two access points to Ogden Avenue. The easternmost curb cut along Ogden Avenue will be eliminated. The site has been vacant for about two years and has little existing landscaping. He noted on the site plan the parking areas available on the site. He also pointed out the location of the trash enclosure. The petitioner meets or exceeds all zoning requirements for the location. He noted that there is sufficient space for both vehicle carriers and Fire Department vehicles.

Mr. Williams noted that the property line is almost on the street, and Public Works has requested the granting of a sidewalk easement. The petitioner's landscaping plan meets or exceeds Code requirements as well. The proposed 8500 square foot building is two-story and consists of the actual showroom, as well as rear service bays. He described the elevation as primarily steel, masonry and concrete with a brown colored metal clad paneling, and glazed overhead doors. He said the applicant has submitted a photometric plan with an average foot-candle rating of .1 at centerline of Ogden Avenue. With regard to the Comprehensive Plan Future Land Use Map, the location is shown as Corridor-Commercial.

Mr. Williams said that Staff believes the Special Use criteria have been met as it is an authorized special use, is a redevelopment of a vacant site, it meets the Comprehensive Plan and there have been conditions specific to limiting any potential adverse impact on adjacent properties including test drives in residential areas. Staff recommends approval subject to the seven conditions listed on page 5 of Staff's report dated January 8, 2018.

Ms. Johnson asked about plans for signage. Mr. Williams replied that signage shown will be facing Ogden Avenue.

Mr. Maurer clarified that their only request is for a Special Use for an auto dealership on Ogden Avenue in Downers Grove.

Ch. Gassen called upon the Petitioner to make its presentation.

Paul Chabez, Jr., of Phorma Designs, Inc. of Aurora, said they are taking the existing property that has an abandoned restaurant and replacing that building with a new building, new pavement, and new curb. The dealership will operate between the hours

Plan Commission Meeting Jan. 8, 2018

## DRAFT MINUTES

of 10 AM to 8 PM, Monday through Friday, and 11 AM to 6 PM on Saturday and Sunday. The delivery of vehicles will be scheduled on a weekly basis, with all loading and unloading taking place on the dealership lot.

Ch. Gassen said she thought that automobile dealerships were not allowed to be opened on Sundays. Ms. Leitschuh said she was not sure if there is a law limiting activity on Sunday.

Ms. Johnson noted a different address for Agri-Pes as 857 Willow Lane and asked that the address be corrected. She said she was also surprised to see customer parking in the street yard on their proposed site. Mr. Chabez said they planned to have customer parking in front with automobile display in the back.

Mr. Boyle asked about them reusing the existing building, and Mr. Chabez said the location and condition was not usable. Mr. Boyle asked about the storm drainage.

Mr. Anas Alkhatib replied that the correct address is 857 Willow Lane. As to the existing drainage, the plan is to sheet flow to the southwest corner of the property where there is a culvert that connects to the storm sewer. They will add catch basins to the site, and will keep the same volume and same optimal release.

In response to what kind of automobiles will be sold, Mr. Alkhatib said it is to be high-end used cars with service and detailing available. They will have the site staffed every day.

Ch. Gassen called on the public for comments. There were no comments. She then closed the public portion of the hearing.

Ch. Gassen asked about the sidewalk easement, and Mr. Williams said the Village requested that so they can have access for repair and maintenance.

Mr. Maurer said this proposal looks better than what has been there, and he sees no reason to oppose this. They are asking for a Special Use that's allowed in that Zoning District. He sees it as a benefit.

**Mr. Maurer moved with regard to File 17-PLC-0039 that the Plan Commission forward a positive recommendation to the Village Council to approve this request subject to Staff's seven conditions listed on page 5 of Staff's report dated January 8, 2018. Mr. Boyle seconded the Motion.**

**AYES: Mr. Maurer, Mr. Boyle, Ms. Johnson, Mr. Kulovany, Ms. Rollins,  
Ch. Gassen**

**NAYS: None**

**The Motion passed unanimously.**

Mr. Williams said this item would also be forwarded to the Village Council for their review at their February 6, 2018 meeting.

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